

# NEC

MODEL NP-NC900C-A  
NP-NC900C-A+

DLP Cinema® Projector

## SERVICE MANUAL

PART No. 3N9911183 (5th Edition)

Better Service

Better Reputation

Better Profit



<b>Copyright</b>	<b>Contents</b>	<b>1. Safety precautions</b>
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**SAFETY CAUTION:**

Before servicing this chassis, it is important that the service technician read and follow the "Safety Precautions" and "Product Safety Notice" in this Service Manual.

**WARNING:**

SHOCK HAZARD - Use an isolation transformer when servicing.

# NEC

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## SAFETY PRECAUTIONS

### CAUTION



**RISK OF ELECTRIC SHOCK  
DO NOT OPEN**



**CAUTION:** TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



This symbol warns the user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any part inside of this unit.



This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore, it should be read carefully in order to avoid any problems.

### ATTENTION



**RISQUE D'ELECTROCUTION  
NE PAS OUVRIR**



**MISE EN GARDE:** AFIN DE REDUIRE LES RISQUES D' ELECTROCUTION, NE PAS DEPOSER LE COUVERCLE, IL N'Y A AUCUNE PIECE UTILISABLE A L'INTERIEUR DE CET APPAREIL. NE CONFIER LES TRAVAUX D'ENTRETIEN QU'A UN PERSONNEL QUALIFIE.



Ce symbole a pour but de prévenir l' utilisateur de la présence d' une tension dangereuse, non isolée se trouvant à l' intérieur de l' appareil. Elle est d' une intensité suffisante pour constituer un risque d' électrocution. Eviter le contact avec les pièces à l' intérieur de cet appareil.




Ce symbole a pour but de prévenir l' utilisateur de la présence d' importantes instructions concernant l' entretien et le fonctionnement de cet appareil. Par conséquent, elles doivent être lues attentivement afin d' éviter des problèmes.



### WARNING

**HEATSINK MAY BE ENERGIZED.  
TEST BEFORE TOUCHING.**

Heat sink located on the power board, is electrified.

 mark is putted on the primary heat sink.

Pay attention to this area.

## SAFETY PRECAUTIONS

---

During servicing carefully observe the following.


### 1. OBSERVE ALL PRECAUTIONS

Items and locations that require special care during servicing, such as the cabinet, chassis, and parts are labelled with individual safety instructions. Carefully comply with these instructions and all precautions in the instruction manual.

### 2. BE CAREFUL OF ELECTRIC SHOCK

The chassis carries an AC voltage. If you touch the chassis while it is still alive, you will get a severe shock. If you think the chassis is alive, use an isolating transformer or gloves, or pull out the plug before replacing any parts.

### 3. USE SPECIFIED PARTS

The components have been chosen for minimum flammability and for specific levels of resistance value and withstand voltage. Replacement parts must match these original specifications. Parts whose specifications are particularly vital to safe use and maintenance of the set are marked  on the circuit diagrams and parts list.

Substitution of these parts can be dangerous for you and the customer, so use only specified parts.

### 4. REMOUNT ALL PARTS AND RECONNECT ALL WIRES AS ORIGINALLY INSTALLED

For safety, insulating tape and tubes are used throughout, but some lift-off parts on the printed wiring board require special attention.

All wires are positioned away from high-temperature and high-voltage parts, and, if removed for servicing, they must be retuned precisely to their original positions.

### 5. LAMP

Be very careful of the lamp because it generates high heat while it is used at high voltage. When replacing the bulb, make sure it is cool enough.

### 6. LENS

Do not look into the lens during projection. This is important to avoid damage to the eyes.

### 7. SERVICING

At the time of repair or inspection services, use an earth band (wrist band), without fail.

### 8. RUN A COMPLETE SAFETY CHECK AT THE COMPLETION OF SERVICING

After completion of servicing, confirm that all screws, parts, and wiring, removed or disconnected for servicing, have been returned to their original positions. Also examine if the serviced sections and peripheral areas have suffered from any deterioration as a result of servicing. In addition, check insulation between external metallic parts and blades of wall-outlet plugs. This examination is indispensable in confirming complete establishment of safety.

(Insulation check)

Pull out a plug from a wall outlet to disconnect the connection cable. Then turn on the POWER switch. Use a 500V megger (Note 2) and confirm that the insulation resistance is 1MΩ or more between each terminal of the plug and exposed external metal (Note 1). If the measured value is below the specified level, then it is necessary to inspect and fix the set.

(Note 1)

Exposed external metal....RGB input terminals, control terminals, etc.

(Note 2)

If a 500V megger is not available for an unavoidable reason, then use a circuit tester or the like for inspection.

## MAINTENANCE

### 1. Cleaning the projector

#### 1-1 Cleaning the Cabinet

Refer to the following guide to clean the projector cabinet.

- a. Wipe off dust with a clean dampened cloth.
- b. Moisten the cloth with warm water and mild detergent and wipe the cabinet.
- c. Rinse all detergent from the cloth and wipe the projector again.

#### CAUTION



To prevent discoloration or fading of the case, do not use abrasive alcohol-based cleaners.

#### 1-2 Cleaning the Lens

Refer to the following guide to clean the projector lens.

- a. Apply a little optic lens cleaner to a clean, lint free cloth (do not apply the cleaner directly to the lens).
- b. Lightly wipe the lens in a circular motion.

#### CAUTION



Do not use abrasive cleaners or solvents.

To prevent discoloration or fading, avoid getting cleaner on the projector case.

#### 1-3 Cleaning the Filters

The projector uses two filters to keep the fans free of dust and other particles, and should be cleaned every 500 hours of operation. In dustier environments, it is recommended to clean the filters more frequently. If the filter is dirty or clogged, your projector may overheat. When the message below is displayed the filters must be cleaned.

Please clean filter.

#### Note:

When the Please clean filter message is displayed, please clean or replace all two filters at the same time to synchronize the hours used display.

The Filter Message item should be enabled in the Options menu.

## SPECIFICATIONS

### 1. SPECIFICATIONS

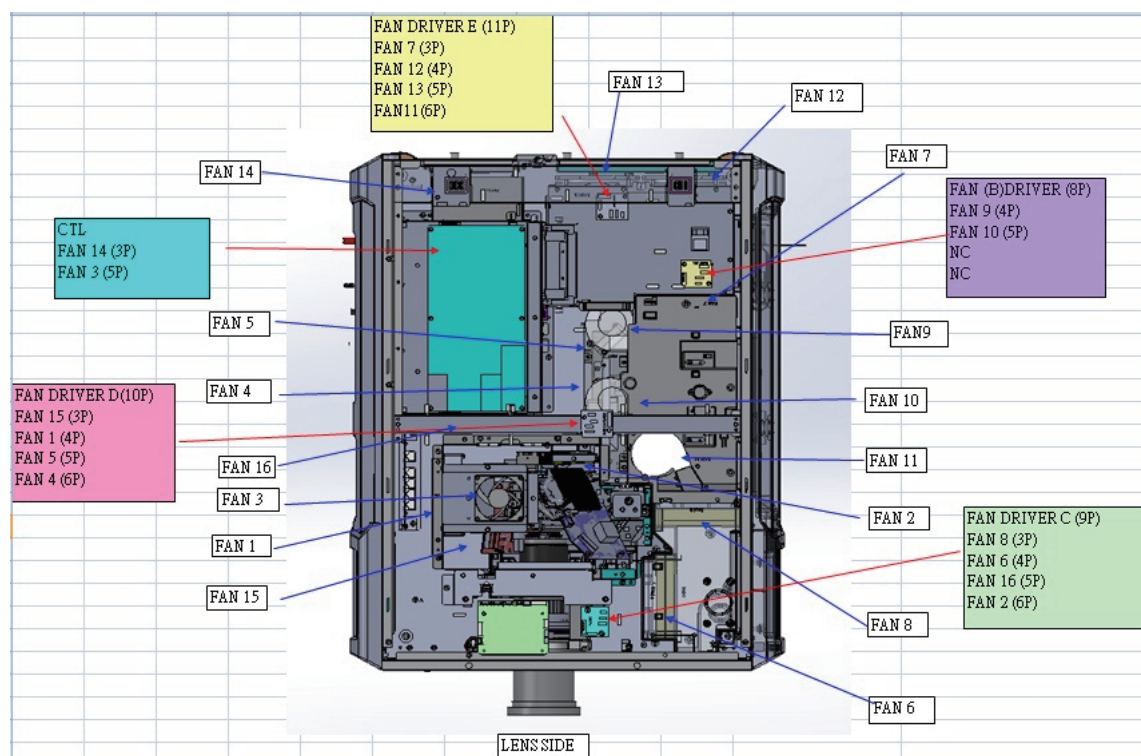
This section provides technical information about the projector's performance.

#### 1-1 Specifications

Model Name	NP-NC900C-A
Projection method	3 chip DLP Cinema ® method
	0.69-inch DC2K chip
Panel resolution	2048 x 1080
Lamp type	350W AC lamp
Screen sizes	7m to 8.1 m @14ft-L/Screen Gain 1.3, Max. 9.5m @14ft-L/Screen Gain 1.8 (Depends on setup conditions)
Contrast ratio	1600: 1 with DCI specified color representation
Lens adjustment function	Motorized lens shift (vertical/horizontal), motorized zoom, motorized focus, douser
Signal input ports	When shipped from factory. Empty (for mounting optional components) (Note 1)
External Control	RS-232C (D-sub 9pin) x1 GPIO port (D-sub 37 pin) x1 Service terminal (stereo mini jack) x1 3D CTL (D-sub 15 pin) x1 USB (Type A) x1 Interlock port x1 Ethernet port (G-bit RJ-45) x1
Power supply voltage	AC 100 to 120V, 50/60Hz signal phase AC 200 to 240V, 50/60Hz signal phase
Input current	10.3 to 7.9 A (100 to 130 V) 5.1 to 4.3 A (200 to 240 V)
Power consumption	1023 W (100 to 130 V) 985 W (200 to 240 V)
Cooling method	Cooling air system (Includes dust filter)
Noise level	Less than 52 dB
Installation	Orientation: Desktop/front, Desktop/rear, Ceiling/front, Ceiling/rear
Net weight	44 kg (Excluding lens)
Dimensions	621mm (W) x 798mm (D) x314mm (H) (Does not include protruding portions, Includes foot.)
Environment	Operating temperature: 10 to 35°C Operating humidity: 10 to 85% (non-condensing) Storage temperature: -10 to 50°C Storage humidity: 10 to 85% (non-condensing) Operating altitude: 0 to 3000m/9800 feet (1600m/5500 feet to 3000m/9800 feet: Set "Fan Speed Mode" to "High Altitude")

## SPECIFICATIONS

### 1-2 Fan Location

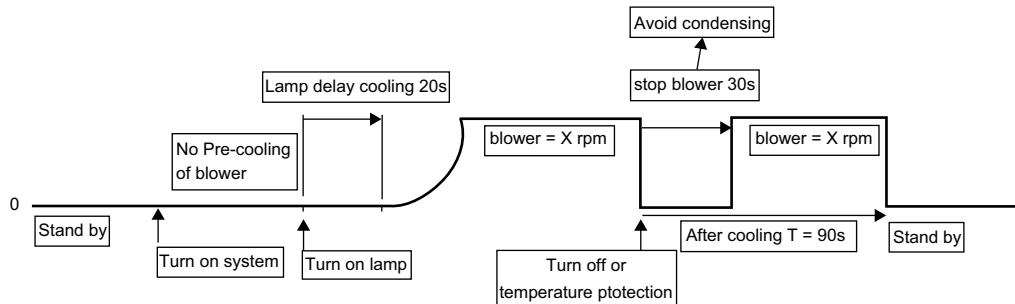


FAN No.	FAN PART No. (TYPE)	CONNECTOR	LOCATION
FAN1	79TY1171(AFB1212H-SM09)	FAN D-4P	FIP inlet (DMD R)
FAN2	79TY1201(AFB-0612HC-F00)	FAN C-6P	DMD B
FAN3	79TY1221(AFB0712VHE-F00)	CTL 5P	PRISM
FAN5	79TY1131(AFB0512VHD-F00)	FAN D-5P	ROD-FRONT(LAMP 1)
FAN4	79TY1121(AFB0512VHD-F00)	FAN D-6P	ROD-REAR (LAMP 2)
FAN6	79GP1121(AFB1212H-SM09)	FAN C-4P	PRISM+SYSTEM-OUT
FAN7	79TM1351(AFB1212H-SM09)	FAN E-3P	LAMP IN
FAN8	79TM1351(AFB1212H-SM09)	FAN C-3P	LAMP-OUT
FAN9	79TM1311(BFB0712HD-SP01)	FAN B-4P	LAMP 2-BURNER
FAN10	79TM1321(BFB0712HD-SP01)	FAN B-5P	LAMP 1-BURNER
FAN11	79TY1211(BFB0712LD-SE01)	FAN P-6P	FOR FAN 8
FAN12	79GP1121(AFB1212H-SM09)	FAN E-4P	POWER IN
FAN13	79TY1161(AFB1212H-SM09)	FAN E-5P	POWER IN
FAN14	79TY1141(AFB1212HHE-CF00)	CTL 3P	NEC MUDULE OUT
FAN15	79TY1191(AFB-0612HC-F00)	FAN D-3P	DMD R
FAN16	79TY1151(AFB1212H-SM09)	FAN E-5P	POWER IN
ICP FAN	79TY1181(EFB0512HA-F00)		On CPU Board

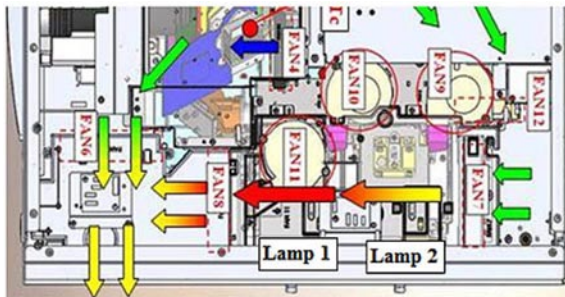
## SPECIFICATIONS

### Normal condition to turn on lamp.

Fan9/Fan10 operation.



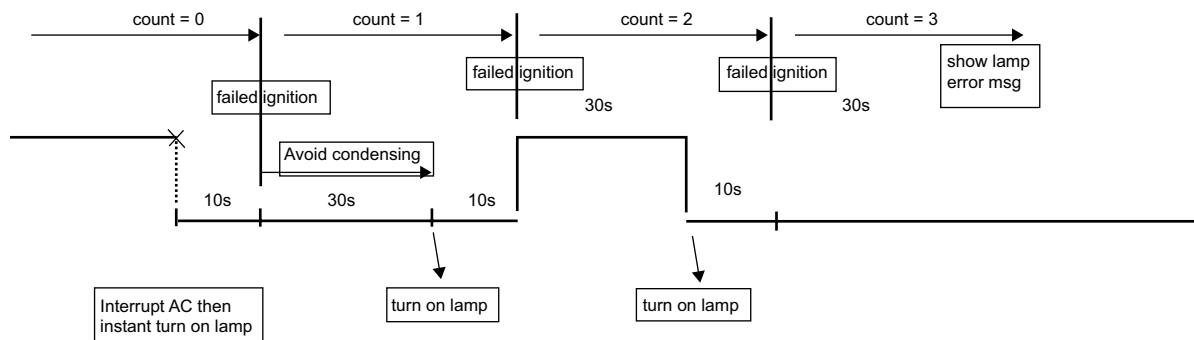
1. Delay Cooling for normal situation is 20s; for abnormal (AC off) is 20s; for lamp mode switch from single lamp to dual lamp is 20s
2. For system fan: After cooling is 90s for all sysytem fans except fan9 and Fan10 (Fan tables of After Cooling follow the last operating status.)
3. For lamp blower. After cooling blower stop 30s when the lamp be switched off. After 30s blower restart and continue cooling for 60s.
4. Lamp mode switch from Dual lamp to Lamp1 only, Fan10 stop running right away and follow lamp blower rule of after cooling. Then, stop the blower.  
from Dual lamp to Lamp2 only, Fan9 stop running right away and follow lamp blower rule of after cooling. Then, stop the blower.  
(please lock lamp mode switch function for 90s)



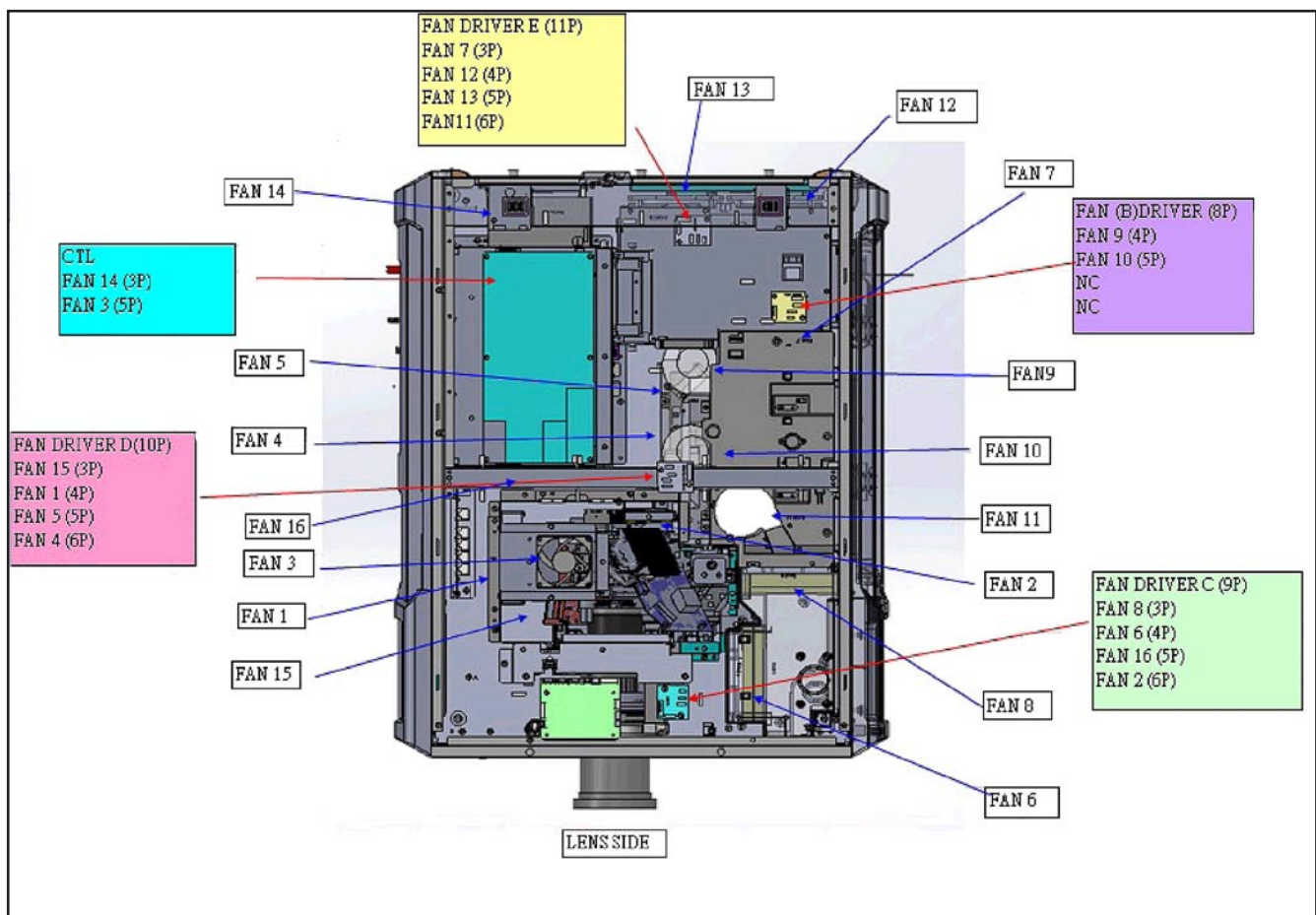
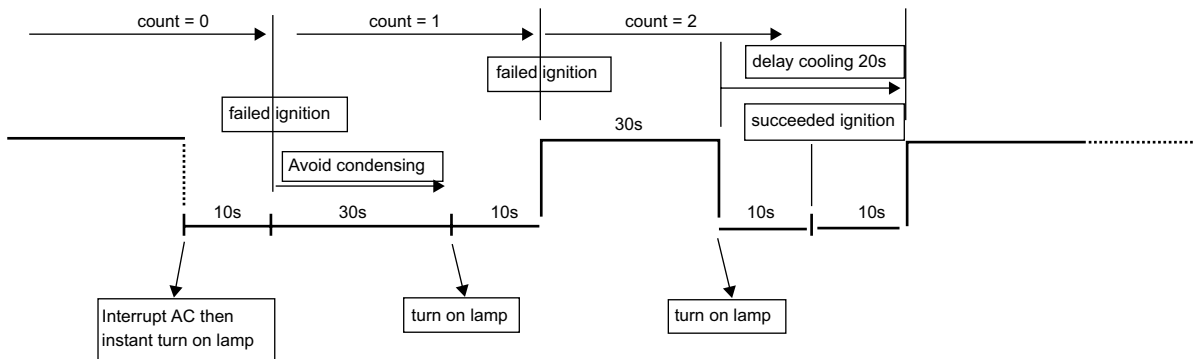
### Two worse cases to turn on lamp.

Fan9/Fan10 operation.

Not lit in the end.









**DLP Cinema® Projector**

**NEC**

# **User's Manual**

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DLP Cinema® Projector

**NC900C-A**

**NEC Display Solutions, Ltd.**

Model No. NP-NC900C-A
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# Important Information

**Precautions:** Please read this manual carefully before using your **NC900C-A** and keep the manual handy for future reference.

The NC900C-A (projector unit) is called the “projector,” and the NC-90MS01 (integrated media server) is called the “media block” or “IMB” in this manual.

- DLP, DLP Cinema and their respective logos are trademarks or registered trademarks of Texas Instruments.
- CineLink is a trademark of Texas Instruments.
- Other product names and manufacturer names described in this manual are the registered trademarks or trademarks of their respective companies.
- The display screens and illustrations shown in this manual may differ slightly from the actual ones.
- GPL/LGPL Software Licenses

The product includes software licensed under GNU General Public License (GPL), GNU Lesser General Public License (LGPL), and others.

For more information on each software, see “readme.pdf” inside the “about GPL&LGPL” folder on the supplied CD-ROM.



## WARNING

TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.



## CAUTION

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT OPEN COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



This symbol warns the user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any part inside of this unit.



This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore, it should be read carefully in order to avoid any problems.

## DOC compliance Notice

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

## Machine Noise Information Regulation - 3. GPSGV,

The highest sound pressure level is less than 70 dB (A) in accordance with EN ISO 7779.



## WARNING

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.



## CAUTION

- In order to reduce any interference with radio and television reception use a signal cable with ferrite core attached. Use of signal cables without a ferrite core attached may cause interference with radio and television reception.
- This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the installation manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

## Important Safeguards

These safety instructions are to ensure the long life of your projector and to prevent fire and shock. Please read them carefully and heed all warnings.

## Installation

1. Consult your dealer for information about transporting and installing the projector. Do not attempt to transport and install the projector yourself.  
The projector must be installed by qualified technicians in order to ensure proper operation and reduce the risk of bodily injury.
2. Place the projector on a flat, level surface in a dry area away from dust and moisture. Tilting the front of the projector up or down from level could reduce lamp life. Do not put the projector on its side when the lamp is on. Doing so may cause damage to the projector.
3. Do not place the projector in direct sunlight, near heaters or heat radiating appliances.
4. Exposure to direct sunlight, smoke or steam could harm internal components.
5. Handle your projector carefully. Dropping or jarring your projector could damage internal components.
6. To carry the projector, a minimum of four persons are required.
7. Do not hold the lens part with your hand. Otherwise the projector may tumble or drop, causing personal injury.
8. Do not place heavy objects on top of the projector.
9. Turn off the projector, and disconnect the power cable before moving the projector.
10. The cooling fan settings need to be configured when using the projector in a location at an altitude of approximately 5500 feet/1600 meters or higher. Consult your dealer in advance.
11. If you wish to have the projector installed on the ceiling;
  - Do not attempt to install the projector yourself.
  - The projector must be installed by qualified technicians in order to ensure proper operation and reduce the risk of bodily injury.
  - In addition, the ceiling must be strong enough to support the projector and the installation must be in accordance with any local building codes.

- Please consult your dealer for more information.

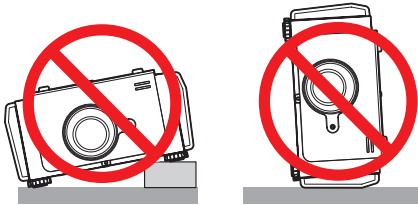
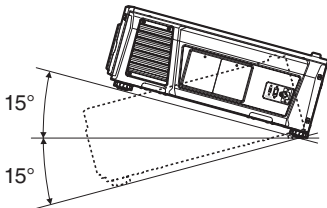


### WARNING

1. Do not cover the lens with the supplied lens cap or equivalent while the projector is on. Doing so can lead to distorting or melting of the cap and burning your hands due to the heat emitted from the light output.
2. Do not place any objects, which are easily affected by heat, in front of the projector lens. Doing so could lead to the object melting from the heat that is emitted from the light output.



Do not tilt the projector forward or back at a greater angle than 15°. Doing so may result in malfunction. When mounting the projector on the ceiling, select an appropriate option for [Fan Tilt Setting].



### Power Supply

1. The projector is so designed that it operates with the power supply voltage described below.
  - AC100–130V 10.3 to 7.9 A 50/60Hz Single-phase
  - AC200–240V 5.1 to 4.3 A 50/60Hz Single-phase
 Ensure that your power supply fits this requirement before attempting to use your projector.
2. The power cable is not included with the projector. Ask your dealer for the power cable to select and purchase. Use a power cable that meets the standards and power supply voltage of the country where you are using the projector. Refer to “2-2. Connecting the Power Cable” (page 17) for details on connecting the power cable.
3. Handle the power cable carefully. A damaged or frayed power cable can cause electric shock or fire.
  - Do not bend or tug the power cable excessively.
  - Do not place the power cable under the projector, or any heavy object.
  - Do not cover the power cable with other soft materials such as rugs.
  - Do not heat the power cable.

4. Placing the power cable and the signal cable closely to each other can cause beat noise. If this happens, keep the two separated so that beat noise is not generated. Beat noise is corruption of the picture often seen as a rolling band moving through the image.
5. Do not touch the projector during a thunder storm. Doing so can cause electrical shock or fire.
6. When installed on the ceiling, install the breaker in a location that is easy to reach by hand.

### Fire and Shock Precautions

1. Ensure that there is sufficient ventilation and that vents are unobstructed to prevent potentially dangerous concentrations of ozone and the build-up of heat inside your projector. Allow at least 12 inches (30cm) of space between your projector and a wall. In particular, clear a space of 27.6 inches (70 cm) or more in front of the air outlet on the rear surface and 19.8 inches (50 cm) or more in front of the air outlet on the lamp side.
2. Prevent foreign objects such as paper clips and bits of paper from falling into your projector. Do not attempt to retrieve any objects that might fall into your projector. Do not insert any metal objects such as a wire or screwdriver into your projector. If something should fall into your projector, disconnect it immediately and have the object removed by a qualified service person.
3. Turn off the projector, unplug the power cable and have the projector serviced by a qualified service personnel under the following conditions:
  - When the power cable or plug is damaged or frayed.
  - If liquid has been spilled into the projector, or if it has been exposed to rain or water.
  - If the projector does not operate normally when you follow the instructions described in this user's manual.
  - If the projector has been dropped or the cabinet has been damaged.
  - If the projector exhibits a distinct change in performance, indicating a need for service.
4. Keep any items such as magnifying glass out of the light path of the projector. The light being projected from the lens is extensive, therefore any kind of abnormal objects that can redirect light coming out of the lens, can cause unpredictable outcome such as fire or injury to the eyes.
5. When using a LAN cable:
 

For safety, do not connect to the connector for peripheral device wiring that might have excessive Voltage.
6. Do not look into the lens while the projector is on. Serious damage to your eyes could result.



7. Do not try to touch the air outlets on the projector during normal projector operation as it is hot.

## Important Information

### Cleaning

1. Turn off the projector and unplug the power cable before cleaning the cabinet or replacing the lamp.
2. Clean the cabinet periodically with a cloth. If heavily soiled, use a mild detergent. Never use strong detergents or solvents such as alcohol or thinner.
3. Use a blower or lens paper to clean the lens, and be careful not to scratch or mar the lens.
4. Do not touch the projector or the power plug with wet hand. Doing so can cause electrical shock or fire.



#### CAUTION

1. Do not unplug the power cable from the wall outlet or projector when the projector is powered on. Doing so can damage the projector.
  - While projecting images
  - While cooling after the projector has been turned off.  
(The POWER button LED blinks in green while the fan is rotating, and "cooling..." is displayed on the LCD screen. The cooling fan continues to work for 90 seconds.)
2. Do not turn off the AC power for 90 seconds after the lamp is turned on and while the POWER indicator is blinking green. Doing so could cause premature lamp failure.
3. Use of a wall outlet with a 20 A or more circuit breaker is recommended.

### Caution on Carrying the Projector/Handling the Optional Lens

When shipping the projector with the lens, remove the lens before shipping the projector. Always attach the dust cap to the lens whenever it is not mounted on the projector. The lens and the lens shift mechanism may encounter damage caused by improper handling during transportation.

#### WARNING TO CALIFORNIA RESIDENTS:

Handling the cables supplied with this product will expose you to lead, a chemical known to the State of California to cause birth defects or other reproductive harm. WASH HANDS AFTER HANDLING

#### Note for US Residents

The lamp in this product contains mercury. Please dispose according to Local, State or Federal Laws.

### Lamp Replacement

1. Use the specified lamp for safety and performance.
2. To replace the lamp, follow all instructions provided on page 52.

3. Due to the lamp being sealed in a pressurized environment, there is a small risk of explosion, if not operated correctly. There is minimal risk involved, if the unit is in proper working order, but if damaged or operated beyond the recommended hours, the risk of explosion increases. Please note that there is a warning system built in, that displays following message when you reach a preset operating time "Lamp1 OverTime" or "Lamp2 OverTime". When you see this message please replace the lamp 1 or lamp 2. If the lamp does explode, smoke will be discharged from the vents located on the back of the unit. Do not stand in front of the vents during the operation. This smoke is comprised of glass in particulate form and Mercury gas, and will not cause harm if kept out of your eyes. If your eyes have been exposed to this gas, please flush your eyes out with water immediately and seek immediate medical attention. Do not rub your eyes! This could cause serious injury.

#### A Lamp Characteristic

The projector has a high-pressure mercury lamp as a light source.

A lamp has a characteristic that its brightness gradually decreases with age. Also repeatedly turning the lamp on and off will increase the possibility of its lower brightness.



#### CAUTION

- DO NOT TOUCH THE LAMP immediately after it has been used. It will be extremely hot. Turn the projector off and then disconnect the power cable. Allow at least one hour for the lamp to cool before handling.
- When removing the lamp from a ceiling-mounted projector, make sure that no one is under the projector. Glass fragments could fall if the lamp has been burned out.

### Disposing of your used product



EU-wide legislation as implemented in each Member State requires that used electrical and electronic products carrying the mark (left) must be disposed of separately from normal household waste.

This includes projectors and their electrical accessories or lamps. When you dispose of such products, please follow the guidance of your local authority and/or ask the shop where you purchased the product.

After collecting the used products, they are reused and recycled in a proper way. This effort will help us reduce the wastes as well as the negative impact such as mercury contained in a lamp to the human health and the environment at the minimum level.

The mark on the electrical and electronic products only applies to the current European Union Member States.

### **For questions relating to unclear points or repairs**

Contact your dealer or the following support branch for questions relating to unclear points, malfunctions and repairs of the product.

#### **In Europe**

Company Name: NEC Display Solutions Europe GmbH  
Address: Landshuter Allee 12-14, D-80637 Muenchen, Germany  
Telephone: +49 89 99699 0  
Fax Line: +49 89 99699 500  
Email Address: [info@nec-displays.com](mailto:info@nec-displays.com)  
WEB Address: <http://www.nec-display-solutions.com>

#### **In North America**

Company Name: NEC Display Solutions of America, Inc.  
Address: 500 Park Boulevard, Suite 1100 Itasca, Illinois 60143, U.S.A.  
Telephone: +1 800 836 0655  
Fax Line: +1 800 356 2415  
Email Address: [pjtechsupport@necdisplay.com](mailto:pjtechsupport@necdisplay.com)  
WEB Address: <http://www.necdisplay.com/>

#### **In China**

Company Name: NEC Solutions (China) Co., Ltd.  
Address: Rm 1903, Shining Building, 35 Xueyuan Rd, Haidian District Beijing 100191, P.R.C.  
Telephone: +8610 59342706

#### **In Hong Kong, Taiwan, Singapore, Malaysia and Indonesia**

Company Name: Strong Westrex, Inc.  
Address: Room 4108 China Resources Building, No. 26 Harbour Road, Wanchai, Hong Kong.  
Telephone: +852 2827 8289  
Fax Line: +852 2827 5993  
Email Address: [hkstrong@netvigator.com](mailto:hkstrong@netvigator.com)

#### **In South Korea**

Company Name: Hyosung ITX Co., Ltd.  
Address: 1F, Ire Building, 2, Yangpyeong-dong 4-ga, Yeongdeungpo-gu, Seoul, Korea 150-967  
Telephone: +82-2-2102-8591  
Fax Line: +82-2-2102-8600  
Email Address: [moneybear@hyosung.com](mailto:moneybear@hyosung.com)  
WEB Address: <http://www.hyosungitx.com>

#### **In Australia and New Zealand**

Company Name: NEC Australia Pty Ltd  
Address: 26 Rodborough Road Frenchs Forest NSW 2086  
Telephone: 131 632 (from anywhere in Australia)  
Email Address: [displays@nec.com.au](mailto:displays@nec.com.au)  
WEB Address: <http://www.nec.com.au>

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# 1.

## What's in the Box? and the Names of the Projector Parts

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### 1-1. Features

- **DLP Cinema® projector**

Complies with the strict projection standards defined by the Digital Cinema Initiatives (DCI) industry group in the United States using leading imaging technology of NEC. It also supports 3D projection and high frame rates (HFR).

- **Reduced installation space and increased freedom through a more compact and lightweight body**

By employing a newly developed 0.69" DLP Cinema chip, DLP Cinema® projector has become even more compact and lightweight than the previous model with dimensions of 621mm (wide) × 798mm (deep) × 314mm (high) and weight of approximately 44kg.

The projector does not need to be connected to an external exhaust duct. It also supports installation on both the floor and ceiling. Therefore the projector delivers reduced installation space and improved freedom. A wide variety of optional lenses (sold separately) are also available for the projector in order to support a wide variety of installation methods (a lens is not mounted when the projector is shipped from the factory).

- **Reduced maintenance time through the lamp replacement at the unit level**

The lamps can be replaced at the unit level. This method makes the lamp replacement easier and greatly reduces the time for maintenance work. The projector consumes less power than the previous model through the adoption of a high-pressure mercury lamp.

By employing a two lamp system, even if one lamp is extinguished, projection can continue using the other lamp although the brightness is degraded (the projector does not comply with DCI standards when using only a single lamp).

- **Equipped with easy to use functions**

(1) Lamp power memory function that can be operated with one touch

The projector is provided with a lamp power memory function for storing the brightness of the images on the screen for each input signal.

Even if you are projecting multiple images that have different settings for brightness, you can project them with the conditions pre-registered for each signal, simply by selecting the corresponding signal.

(2) Frequently used titles can be registered in preset buttons

The projector has been equipped with 16 preset buttons that make it easy to select registered title (input signal). To this projector, 100 titles at most can be registered (input signal registration). Among the registered titles, any 16 titles can be assigned to the preset buttons.

## 1. What's in the Box? and the Names of the Projector Parts

---

(3) You can operate and configure the projector via a network from a PC

You can operate and configure the projector via a network from a PC by using the separately supplied software Digital Cinema Communicator (DCC) for S2.

- **Advanced Dust Protection**

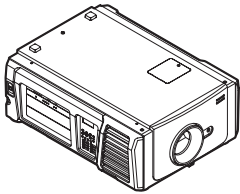
A dust control shield is arranged between each DMD chip of R, G and B, and the spectroscopic/condenser prism. It prevents dust and dirt in the air, and oily particles in smoke associated with event halls from coming into contact with the face of the DMD and causing operating problems.



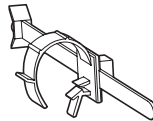
## 1-2. What's in the Box?

Check the content of the accessories.

☐ Projector



☐ Power cable stopper



☐ Dust cap for lens

☐ Service door key x 2



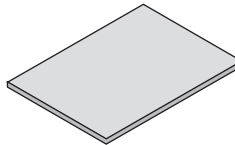
☐ Dummy bracket



☐ CD-ROM (User's Manual)



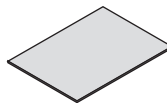
☐ Important Information



☐ Warranty (for Japan)



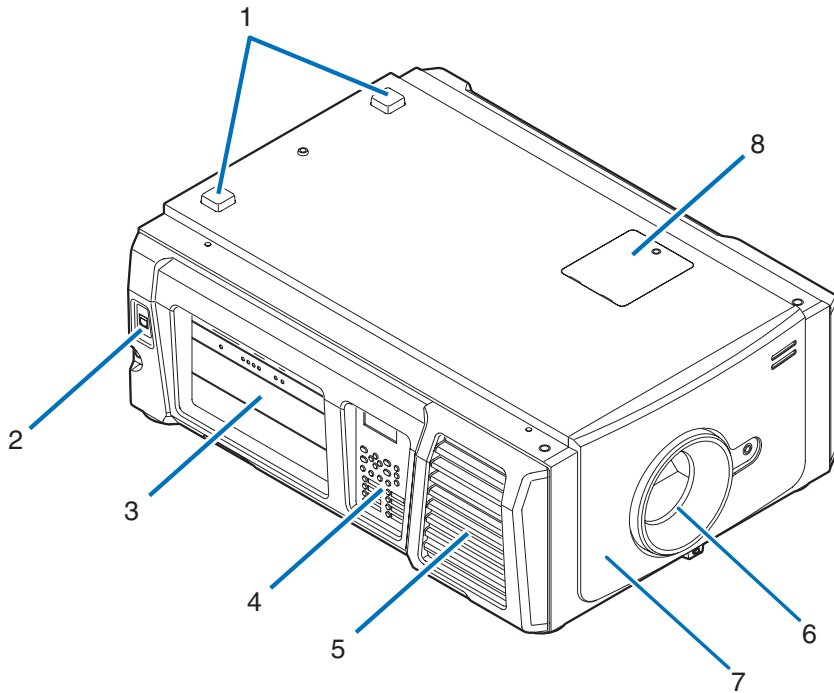
☐ Limited warranty (for North America)



**TIP** In the event that you did not receive all of the accessories outlined above, or some are damaged, contact your dealer/distributor.  
Differs slightly from the drawings in this manual, but there is no problem in actual use.

## 1-3. Names of the Projector Parts

### 1-3-1. Front of the Projector



**1. STATUS indicator**

These indicate the status of the projector. When the projector is operating normally, these light/blink in green or orange. When an error occurs, they light/blink in red. When an error occurs, check the contents of the display on the LCD screen. (See page 68)

**2. LAN port**

The connector for external devices such as a cinema server or a PC installed with the DCC. (See page 13)

**3. Connection terminals**

Various image signal cable are to be connected here. (See page 13)

You can expand signal input terminals by installing the optional signal input board (NC-80LB01-B/NC-80DS01-B).

Contact your dealer/distributor for more information on separately sold optional products.

**4. Control panel**

On the control panel, power to your projector is turned on or off, titles are selected, and various adjustments are made of projected screen. (See page 14)

**5. Air inlet / Air filter**

The air inlet for cooling inside the projector. Do not cover.

An air filter is attached over the air inlet to prevent dust. Refer to "5-3. Replacing the Lamp and the Air Filter" (page 52) on how to replace the air filter.

**6. Lens (optional)**

Images are projected from the lens. Request your dealer/distributor to install or replace the lens.

**7. Interlock connector (inside front of projector)**

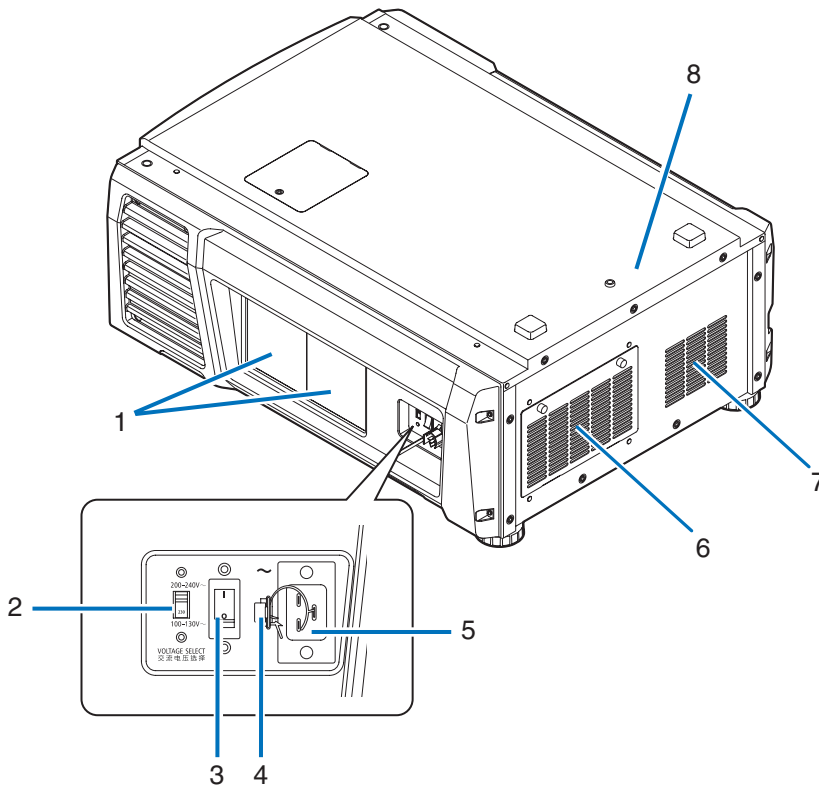
This is the connector for the projector safety device. This is used to control the projector from an external source. Consult with your dealer/distributor about using this.

**8. Notch filter cover**

Remove the cover when replacing the notch filter. Contact your dealer/distributor for details on replacement notch filters.

**NOTE** Do not cover the air inlets and outlet while the projector is in operation. Insufficient ventilation leads to a rise of the internal temperature and may cause a fire or malfunction.

### 1-3-2. Rear of the projector



#### 1. Lamp cover

This opens to allow the lamp to be replaced. Refer to “5-3. Replacing the Lamp and the Air Filter” (page 52) on how to replace the lamp.

#### 2. VOLTAGE SELECT switch

Can be switched to match the voltage of the power supply. (See page 17)

#### 3. Main power switch

While AC power is being supplied, set the main power switch to ON position (1), then your projector will enter a standby state.

#### 4. Power cable stopper

Prevents the power plug from falling out from the projector.

#### 5. AC input

Connects to the AC power cable. The AC power cable is not an accessory. Consult with your dealer/distributor about the AC power cable.

#### 6. Air inlet / Air filter

The air inlet for cooling inside the projector. Do not cover.

An air filter is attached over the air inlet to prevent dust. Refer to “5-3. Replacing the Lamp and the Air Filter” (page 52) on how to replace the air filter.

#### 7. Air Outlet

The air outlet to exhaust heat inside the projector. Do not cover.

## 1. What's in the Box? and the Names of the Projector Parts

### 8. Buzzer (inside rear of projector)

The buzzer rings when the power is turned on or an error has occurred.

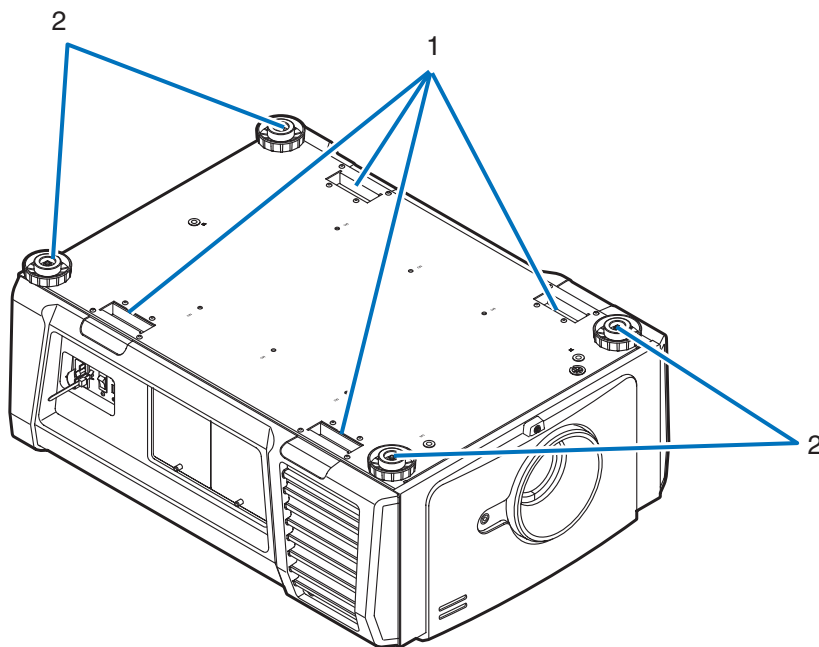
**NOTE** Do not cover the air inlets and outlet while the projector is in operation. Insufficient ventilation leads to a rise of the internal temperature and may cause a fire or malfunction.



#### **CAUTION:**

DO NOT TOUCH THE LAMP immediately after it has been used. It will be extremely hot. Turn the projector off and then disconnect the power cable. Allow at least one hour for the lamp to cool before handling.

### 1-3-3. Bottom of the projector



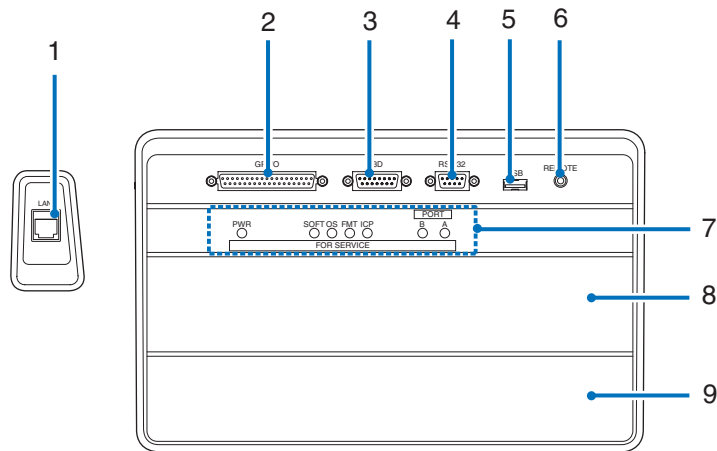
#### 1. Handle (4 locations)

Handles for moving the projector.

#### 2. Level adjusters (in four positions)

In the ordinary installation, you can adjust the projector inclination at 4 positions.

## 1-3-4. Connection terminals



### 1. Ethernet port (LAN) (RJ-45)

The port for interfacing with an image signal server or controlling the projector from a PC via a network. Connect the projector and the PC with a commercially available Ethernet cable (10/100/1000Base-T).

### 2. External control terminal (GP I/O) (D-Sub 37P)

The terminal for externally controlling the projector or connecting a 3D image system to the projector. (See page 81)

### 3. 3D terminal (3D) (D-Sub 15P)

The terminal for connecting a 3D image system to the projector. (See page 86)

### 4. PC control terminal (RS-232) (D-Sub 9P)

The terminal for operating the projector from a PC via an RS-232C or for service personnel to set data for the projector. Connect the projector and the PC with a commercially available RS-232C straight cable.

### 5. USB port (USB) (type A)

The port for the projector maintenance.

### 6. Service terminal (REMOTE) (Stereo mini)

This terminal is used for service purpose only.

### 7. Device management indicator

The indicator for displaying the projector status. Used by service personnel during maintenance.

### 8. Slot B

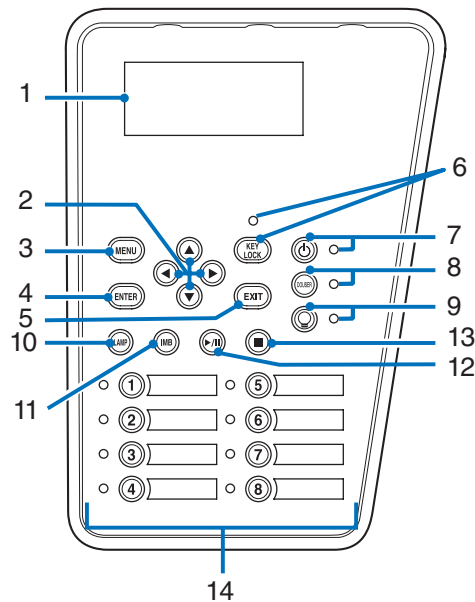
Not used in this projector.

### 9. Slot A

The slot is used for an image media block (IMB) or optional products (page 87). Contact your dealer/distributor for an installation of optional products.

Refer to the IMB instruction manual for details on IMB.

### 1-3-5. Control panel



#### 1. LCD screen

The LCD screen displays menus and setting values for the projector operations.

#### 2. ▲/▼/◀/▶ (UP/DOWN/LEFT/RIGHT) buttons

Press these buttons to select a menu item while a menu is displayed.

#### 3. MENU button

Press this button to display the menu for various settings and adjustments. (See page 42)

#### 4. ENTER button

Press this button to select the menu item.

#### 5. EXIT button

Press this button to return to the previous menu item.

#### 6. KEY LOCK button

Press this button to lock (KEY LOCK) the buttons on the control panel. Buttons on the control panel do not function while KEY LOCK is on.

Pressing the KEY LOCK button for one second or longer while KEY LOCK is off locks the buttons.

Pressing the KEY LOCK button for one second or longer while KEY LOCK is on unlocks the buttons. (See page 33)

**NOTE** KEY LOCK becomes automatically on if no control panel operation takes place in the standby state for 30 seconds by default. (See page 33)

#### 7. POWER button

Press this button for more than three seconds to turn on or off (standby) the projector. (See page 67)

In order to start up the projector, turn on the main power switch for the projector to set the projector in the standby state. (See page 24)

#### 8. DOUSER button

Press this button to open and close the douser. (See page 67)

#### 9. LAMP ON/OFF button

Press this button for five seconds or longer to turn on or off the lamp while the projector is on. (See page 34)

#### 10. LAMP button

Press this button to display the lamp adjustment menu. (See page 31)

### 11. IMB button (planned to be supported in a future update)

This button is operable when the media block is installed in the projector.

Press this button to display the operation menu of the media block.

### 12. Play/pause button (planned to be supported in a future update)

This button is operable when the media block is installed in the projector.

Press this button to play or pause the image contents.

### 13. Stop button (planned to be supported in a future update)

This button is operable when the media block is installed in the projector.

Press this button to stop playing the image contents.

### 14. Preset buttons

Press the preset button to select a title (input signal) assigned to each button. Up to 100 titles (input signals) can be registered to this projector, and any 16 titles from them can be assigned to the preset button. Please request your dealer to register and change the titles of the buttons as required.

The preset button indicators show their assigned title or selection status. (See page 66)

.....

**TIP** To select a title allocated to one of the preset buttons, use the following procedure.

- To select a title allocated to one of "Preset Button1" to "Preset Button8"

Press the button which corresponds to the number of the preset button (button <1> to <8>).

- Press the <1> button to select the "Preset Button1".
- Press the <8> button to select the "Preset Button8".

- To select a title allocated to one of "Preset Button9" to "Preset Button16"

Press the preset button (button <1> to <8>) while holding down the UP button.

- Press the <1> button while holding down the UP button to select the "Preset Button9".
- Press the <8> button while holding down the UP button to select the "Preset Button16".

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# 2.

## Installation and Connection

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### 2-1. Steps for setting up and connecting

Use the following steps for setting up your projector:

- **Step 1**

Setup the screen and projector. (Contact your dealer to carry out the setup.)

- **Step 2**

Connect the power cable to the projector. (See page 17)

- **Step 3**

Connect cables to the image input terminals. (See page 22)

Connect cables to the various control terminals. (See page 22)



## 2-2. Connecting the Power Cable

The power cable is not included with the projector. Use a power cable that meets the standards and power supply voltage of the country where you are using the projector. Ask your dealer for the power cable to select and purchase.

**WARNING:**

Carefully read the contents described in this section before connection and connect the cables according to the proper procedure. Inappropriate handling may cause fatal, serious or other bodily injuries due to fire or electric shock.

**CAUTION:**

- Before connecting the power cables, check that the main power switch of the projector is turned off. Implement the connection with AC power shut off.
- Be sure to ground the equipment to ensure safety. Use a power cable that meets the standards and power supply voltage of the country where you are using the projector (page 78), and always connect the equipment to the ground. If the ground is not connected, it may cause electrical shocks.
- When connecting the power cable plugs to the AC IN and the electrical outlet, securely insert the plugs all the way in. If the connection between the power cable plug and the electrical outlet is loose, the plug area may generate heat, causing burns and accidents.
- Switch the power cable and power supply voltage of the projector to match the projector to the voltage of the electrical outlet you are connecting to. If selected incorrectly, it may cause damage or fires.

**NOTE**

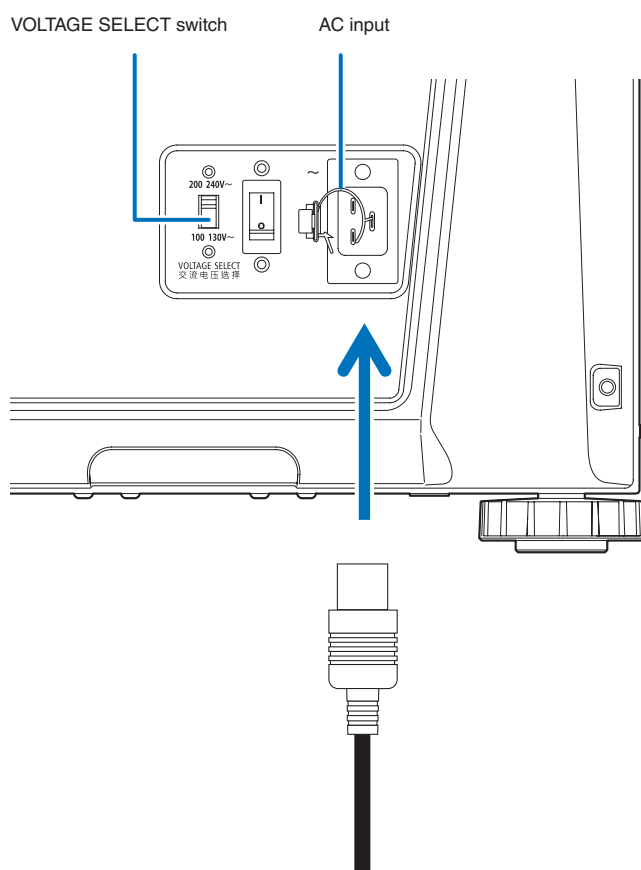
- Install the electric outlet nearby the projector main unit so that the power supply can be cut by unplugging the AC power cable.
- When plugging in or unplugging the AC power cable, make sure that the main power switch is pushed to the [O] position. Failure to do so may cause damage to the projector.
- Do not use a three-phase power supply. Doing so may cause malfunction.

## 2. Installation and Connection

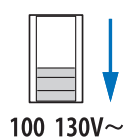
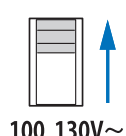
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### **1** Connect the AC power supply cable.

Connect the AC power supply cable to the projector.



**2** Set VOLTAGE SELECT switch according to the voltage being used.

Voltage of power to use	Power cable to use	Position of the VOLTAGE SELECT switch
AC100V outlet	AC100V power cable	"100 130V~" 
AC200V (single phase) outlet	AC200V power cable	"200 240V~" 

**3** Connect the power plug to the electrical outlet.

This completes the connection of the AC power supply cable.

## 2. Installation and Connection

### Attaching the power cable stopper

You can prevent the power plug from falling out from the main unit by using the included power cable stopper.



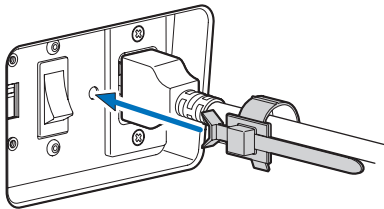
#### CAUTION:

Do not bundle the power cable. Doing this could cause heat or a fire.

#### NOTE

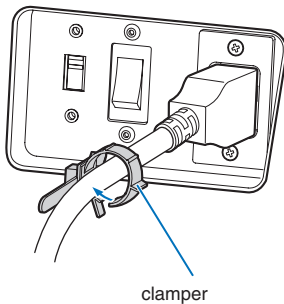
- Do not clamp the power cable with other cables. Doing so can generate noise, which can affect adversely the signal cable.
- Be careful not to insert the band inversely. Once the band is attached, it cannot be removed from the slot.

- 1** Insert the end of band of the power cable stopper into the slot next to the AC IN on the terminal panel.

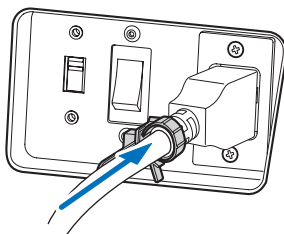


- 2** Use the power cable stopper to clamp the power cable.

Push the clasper to lock it.



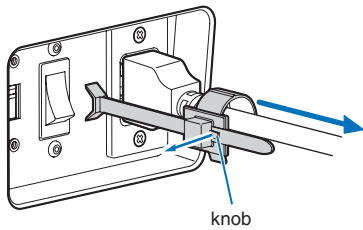
- 3** Slide the clasper to the hilt of the power cable.



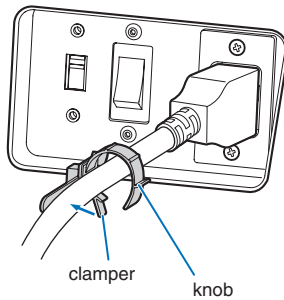
This completes the attachment of the power cable stopper.

### Removing the power cable from the power cable stopper

- 1** Push the clamber of the power cable stopper to unclasp it.



- 2** Push the power cable clamber to open it wide enough to pull out the power cable.



### 2-3. Connecting the image input terminals

The IMB (NC-90MS01) is mounted as standard in this projector. Alternately, you can use an HDSDI input port or DVD-D input port by replacing this with a signal input board (NC-80LB01-B/NC-80DS01-B) which is sold separately.

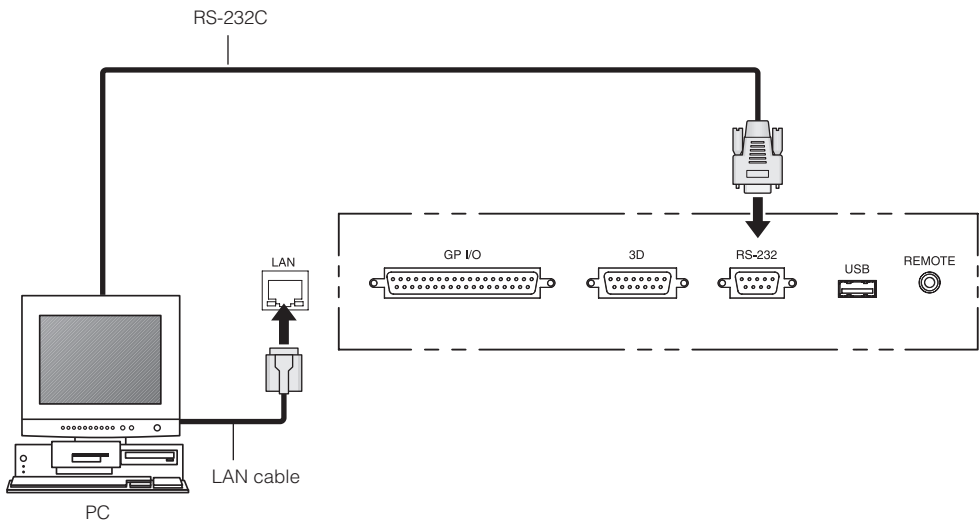
The video input ports that can be used with each board are as follows. Refer to the instruction manual of the IMB or signal input board for details on connecting the video input ports with external equipment.

NC-90MS01	HDMI input port	x 1
	3G SDI input port	x 2
NC-80LB01-B	HDSDI input terminal	x 4
NC-80DS01-B	DVI-D input terminal	x 2

### 2-4. Connecting the various control terminal

For control, your projector comes with such ports as the PC control terminal and the Ethernet port (RJ-45).

- PC control terminal (RS-232)----- Use this terminal when controlling the projector in serial connection from a PC.
- LAN port (LAN) ----- Use this port when controlling the projector in LAN connection from a PC.



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# 3.

## Projection of Images (Basic Operation)

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### 3-1. Steps of projecting images

- **Step 1**

Turn on the power to the projector. (See page 24)

- **Step 2**

Select the title of input signal. (See page 27)

- **Step 3**

Adjust the position and size of the projected screen. (See page 28)

- **Step 4**

Turn off the power to the projector. (See page 35)

## 3-2. Turning your projector on

- Preparation:**
- Connect the power cable to the projector. (See page 17)
  - Supply AC power to the projector.



- NOTE**
- Turn off the main power switch to the projector when supplying or cutting AC power to the projector. Supplying or shutting down the AC power while the main power switch is on will damage the projector.
  - Turning on and off the projector involves a two-step operation; the “main power switch” and the “POWER button”.
  - Turning power on. (See this page)
    - [1] Turn on the “main power switch” of the projector.  
Your projector is set in a standby state.
    - [2] If KEY LOCK is on, press the KEY LOCK button for one second or longer.  
KEY LOCK is off and buttons on the control panel become operable.
    - [3] Press the POWER button three seconds or longer.  
Your projector is turn on.
  - Turning power off. (See page 35)
    - [1] Press the POWER button three seconds or longer.  
Your projector is set in a standby state.
    - [2] Turn off the “main power switch” of the projector.  
Your projector is turned off.

- 1** Remove the lens cap.
- 2** Check that the **VOLTAGE SELECT** switch is set to match the voltage of the power supply you are using.



**CAUTION:**

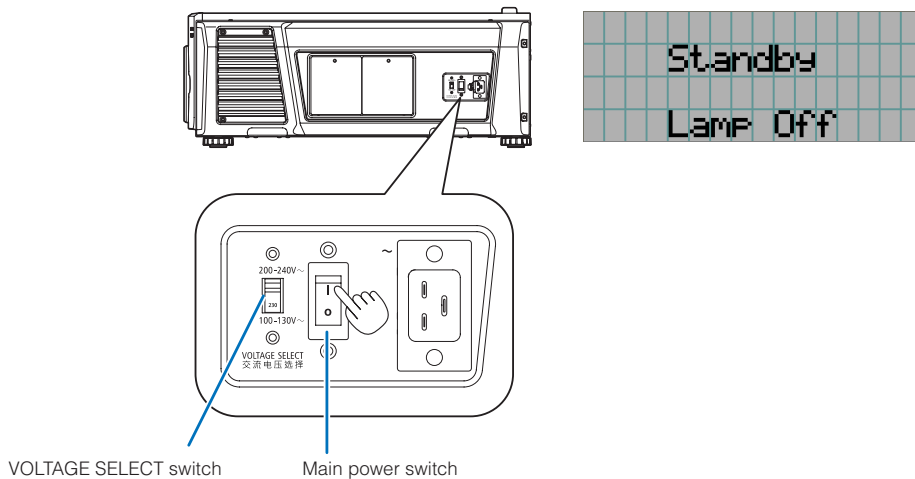
You should select a power cable which is appropriate for the voltage of the electrical outlet you are connecting the projector to, and set the **VOLTAGE SELECT** switch properly. If the selection or setting is wrong, it may cause fires, or damage to the projector.

Voltage of power to use	Position of the VOLTAGE SELECT switch
AC100V outlet	<p>“100 130V–”</p> <p><b>200 240V~</b></p>  <p><b>100 130V~</b></p>
AC200V (single phase) outlet	<p>“200 240V–”</p> <p><b>200 240V~</b></p>  <p><b>100 130V~</b></p>



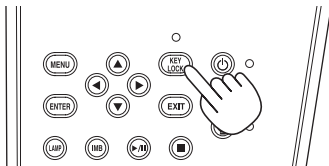
#### 3 Turn on the main power switch on the side of the projector.

A buzzer will ring on the projector. The POWER button indicator will blink green and the STATUS indicator will light orange (standby state). KEY LOCK becomes automatically on if no control panel operation takes place in the standby state for 30 seconds by default. Buttons on the control panel do not function while KEY LOCK is on. (See page 33)



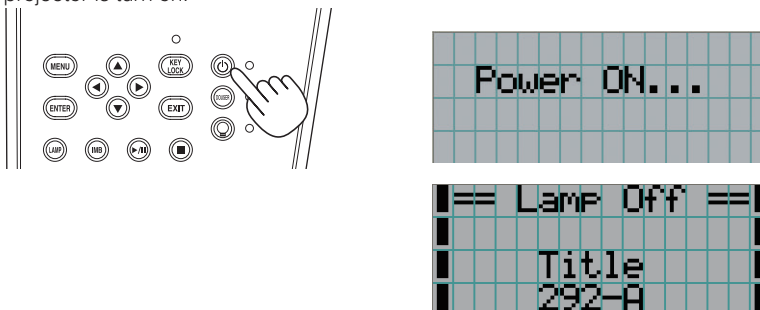
#### 4 If KEY LOCK is on, press the KEY LOCK button for one second or longer.

KEY LOCK becomes off. The KEY LOCK button indicator turns off and buttons on the control panel become operable. (See page 33)



#### 5 Press the POWER button on the control panel of your projector three seconds or longer.

Your projector is turn on.



When the startup of the projector completes, the status of the POWER button, DOUSER button, LAMP ON/OFF button, and preset button (button <1> to <8>) changes as follows.

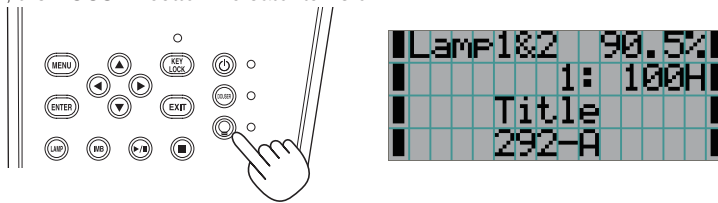
POWER button	Lit green
DOUSER button	Initial settings: Off (douser is off)
LAMP ON/OFF button	Initial settings: Blinking green (lamp is off)
Button <1> to <8>	The preset button which was last selected is lit green

### 3. Projection of Images (Basic Operation)

#### **6** Press the LAMP ON/OFF button on the control panel for five seconds or longer.

The lamp is turned on and the screen glows light about 15 seconds later. The LAMP ON/OFF button indicator blinks in cycles of 2 (and changes to steady green light 90 seconds later).

The douser is closed until the screen glows light (the DOUSER button indicator lights green). When the douser is open, the DOUSER button indicator turns off.



#### **NOTE**

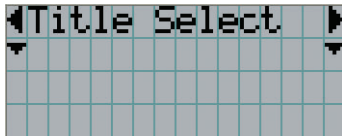
- While your projector is on, be sure to have the lens cap removed from the lens. Otherwise, the lens cap may get deformed due to a heat buildup.
- In the following instances, the power to your projector cannot be turned on even if you press the POWER button.
  - When the inside temperature is abnormally high. The protective function prevents power from turning on. Wait some time (until the projector inside cools down) and then turn on the power.
  - When the STATUS indicator is blinking in red without the lamp lighting up after power-on. Your projector may be in trouble. Check the error display on the LCD screen and contact your dealer/distributor for instructions.
- Note that the image may sometimes flicker until the lamp has stabilized (5 to 10 minutes) after power-on. This is due to the characteristics of the lamp and is not trouble of your projector.

### 3-3. Selecting the title of input signal

This projector allows you to select pre-registered title (input signal) using the preset buttons on the control panel (up to 16 titles). Request your dealer/distributor for details on registering and changing titles. This section explains the steps for selecting registered titles.

- 1** Turn on the power to the image devices connected to the projector.
- 2** Press the MENU button.
- 3** Press the LEFT/RIGHT button to display “Title Select” on the LCD screen.

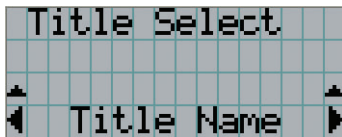
At each press of the LEFT/RIGHT buttons, the display will cycle as “Title Select” ↔ “Configuration” ↔ “(Title Setup)” ↔ “Information.”



- 4** Press the DOWN button.

The title of the input signal is displayed.

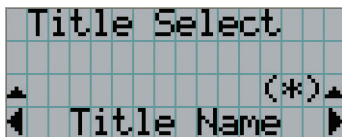
- When you have made a wrong selection, press the UP button. A return will be made to the previous menu.



- 5** Press the LEFT/RIGHT buttons to display “Title of Signal to be Projected” on the LCD screen.
- 6** Press the ENTER button.

The title of the signal to be projected is selected.

- The (\*) mark on the LCD indicates that this is the currently selected item.

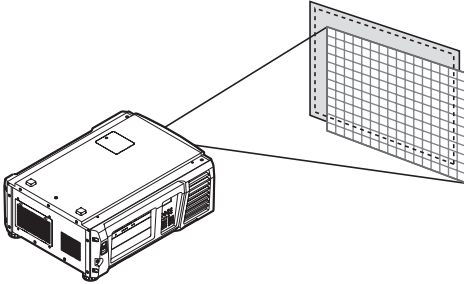


## 3-4. Adjusting the position and the size of projected screen

### 3-4-1. Displaying the test pattern

- 1** Press the MENU button, or select a test pattern from preset buttons (button <1> to <8>).

If you register the test patterns to the preset buttons (<1> to <8> buttons), select the test pattern according to “3-3. Selecting the title of input signal (See page 27)”.

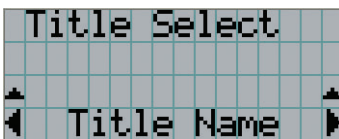


- 2** Press the LEFT/RIGHT button to display “Title Select” on the LCD screen.



- 3** Press the DOWN button.

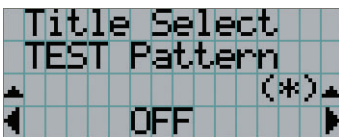
The title of the input signal is displayed.



- 4** Press the LEFT/RIGHT button to display “TEST Pattern” on the LCD screen.

- 5** Press the DOWN button.

The LCD screen enters the mode where you can select a test pattern.



- 6** Press the LEFT/RIGHT button.

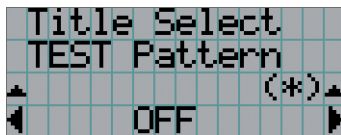
This switches the test pattern name displayed on the LCD screen.

- 7** Display on the LCD the name of the test pattern to be projected, then press the ENTER button.

The test pattern is displayed.



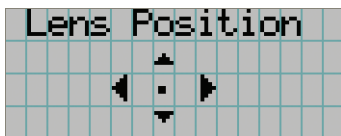
To cancel the test pattern display, select the title of the signal to project or select the "OFF" test pattern.



#### 3-4-2. Adjusting the position of the projected screen (Lens shift)

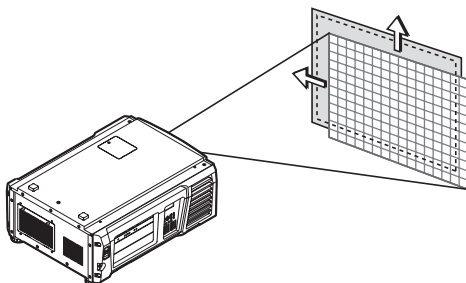
- 1** Press the MENU button.
- 2** Press the LEFT/RIGHT button to display "Configuration" on the LCD screen.
- 3** Press the DOWN button.
- 4** Press the LEFT/RIGHT button to display "Lens Control" on the LCD screen.
- 5** Press the DOWN button.

The screen ("Lens Position") to adjust the position of the projected screen is displayed.



- 6** Press the UP/DOWN/LEFT/RIGHT button.

The position of the projected screen moves in the selected direction.



- 7** Press the EXIT button when adjustment is complete.

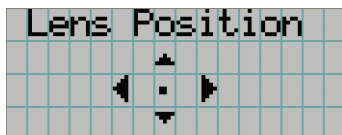
The display will return to a menu one level above (where "Lens Control" is displayed).

### 3. Projection of Images (Basic Operation)

#### 3-4-3. Adjustment of the size (zoom) and focus of the projected screen

- 1** Press the MENU button.
- 2** Press the LEFT/RIGHT button to display “Configuration” on the LCD screen.
- 3** Press the DOWN button.
- 4** Press the LEFT/RIGHT button to display “Lens Control” on the LCD screen.
- 5** Press the DOWN button.

The screen (“Lens Position”) to adjust the position of the projected screen is displayed.



- 6** Press the ENTER button.

The screen to adjust the size and focus of the projected screen is displayed.

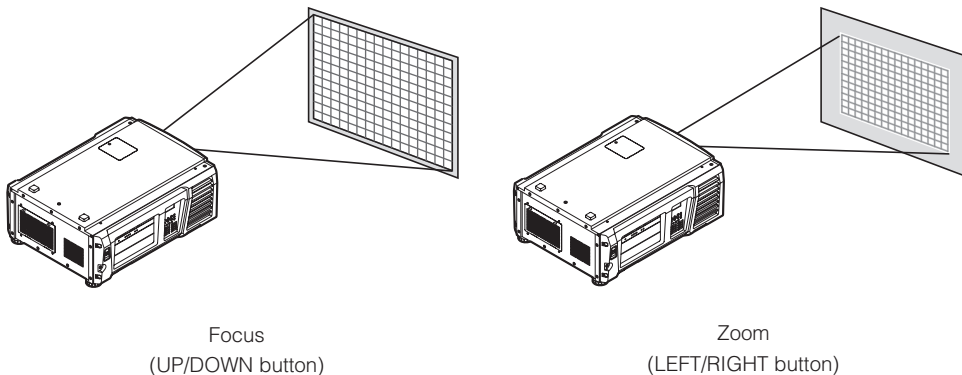
Press the ENTER button to switch the display between “Lens Position” and “Focus Zoom” adjustments.



- 7** Adjust the size and focus of the projected screen.

Press the UP/DOWN button to adjust the focus.

Press the LEFT/RIGHT button to adjust the size.



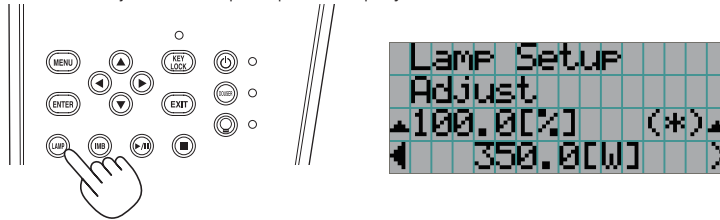
- 8** Press the EXIT button when adjustment is complete.

The display will return to a menu one level above (where “Lens Control” is displayed).

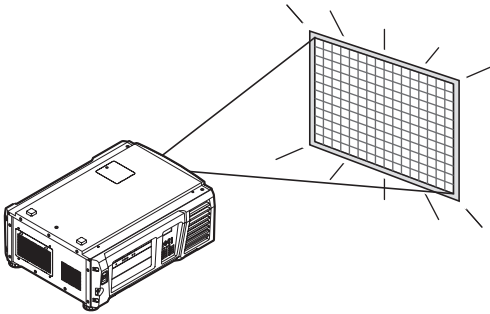
## 3-4-4. Adjusting the brightness of the projected screen (Lamp output)

**1** Press the LAMP button.

The screen to adjust the lamp output is displayed.



**TIP** Press the ENTER button to switch the display between "Lamp Setup (Adjust)" and "Lamp Setup (Lamp Mode)". Note that while the LAMP ON/OFF button indicator is blinking green (page 67), you cannot use the lamp mode settings screen because the lamp cannot be turned off and the lamp mode cannot be set.

**2** Press the DOWN button.**3** Press the LEFT/RIGHT button to adjust the lamp output.

The specified adjustment value is applied.

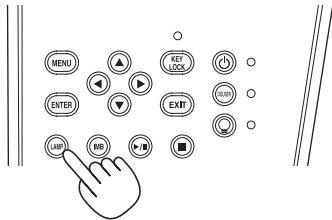
3. Projection of Images (Basic Operation)

3-4-5. Adjusting the brightness of the projected screen (Lamp mode)

**NOTE** While the LAMP ON/OFF button indicator is blinking green (page 67), you cannot use the lamp mode settings screen because the lamp mode cannot be set. Wait until the LAMP ON/OFF button indicator changes from blinking to steady on.

**1** Press the LAMP button.

The screen to adjust the lamp output is displayed.

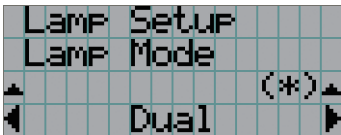


**2** Press the LAMP button while the lamp output adjustment screen is displayed.

The screen to select the lamp mode is displayed.

**TIP** Press the ENTER button to switch the display between "Lamp Setup (Adjust)" and "Lamp Setup (Lamp Mode)".

**3** Press the LEFT/RIGHT button to select the lamp to use.



Dual	Uses lamp 1 and lamp 2 at the same time.
Lamp 1	Uses only lamp 1 (lamp 2 is not used).
Lamp 2	Uses only lamp 2 (lamp 1 is not used).

**4** Press the ENTER button.

- If the lamp is on, the changed settings are applied immediately.
- If the lamp is off, the settings are applied the next time the lamp is turned on.

**NOTE** When the lamp mode is changed, the LAMP ON/OFF button indicator blinks green (See page 67). You cannot change the lamp mode while the LAMP ON/OFF button indicator is blinking. Wait until the LAMP ON/OFF button indicator changes from blinking to steady on.



## 3-5. Preventing misoperations

Buttons on the control panel can be locked (KEY LOCK) to prevent misoperations. Buttons on the control panel do not function while KEY LOCK is on. KEY LOCK must be off to operate these buttons.

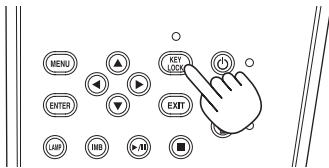
### NOTE

- KEY LOCK is automatically turned on in the following cases.
  - When the projector has entered the standby state by turning on the main power switch of the projector while the AC power is supplied.
  - When the projector has entered the standby state after turning off the power using the POWER button.
- The timing where KEY LOCK is turned on while the projector is in standby state depends on the "Auto Key Lock" setting in the adjustment menu.
  - When Auto Key Lock is enabled, KEY LOCK becomes automatically on if no control panel operation takes place in the standby state for 30 seconds. KEY LOCK becomes automatically on again even after KEY LOCK is turned off if no control panel operation takes place for 30 seconds.
  - When Auto Key Lock is disabled, KEY LOCK becomes automatically on when the projector enters the standby state; however, it stays off after KEY LOCK is turned off.

### 3-5-1. KEY LOCK setting

- Press the KEY LOCK button on the control panel for one second or longer.

KEY LOCK becomes on. The KEY LOCK button indicator lights orange. When you press a button on the control panel of the projector while KEY LOCK is on, "Panel is Locked. (KEY LOCK)" is displayed, and the button will not function. (See page 38)



### 3-5-2. Turning KEY LOCK off

- Press the KEY LOCK button for one second or longer while KEY LOCK is on.

KEY LOCK becomes off. The KEY LOCK button indicator turns off.

## 3-6. Turning on/off the lamp with the projector turned on

**NOTE** The indicators on the control panel blink when the following operations are carried out. (See page 66)

- When you turn the lamp on or change the lamp mode  
The indicators of the POWER button and the LAMP ON/OFF button blink green. The projector cannot be turned off while the POWER button indicator is blinking (in cycles of 2). The lamp cannot be turned off while the LAMP ON/OFF button indicator is blinking.
- When you turn the lamp off  
The LAMP ON/OFF button indicator blinks green. The lamp cannot be turned on while the LAMP ON/OFF button indicator is blinking.

If you operate the POWER button or LAMP ON/OFF button while the indicators are blinking, the LCD screen displays the warning screen below. The POWER button or LAMP ON/OFF button becomes operable when the amount of time remaining reaches 0.

```
*Lamp&Power not*
available now!
left 50 sec
* < OK > *
```

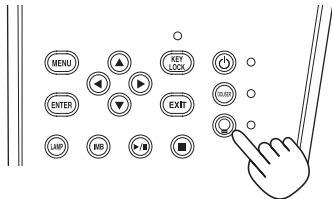
When you turn the lamp on or  
change the lamp mode

```
*Lamp not
available now!
left 83 sec
* < OK > *
```

When you turn the lamp off

### 3-6-1. Turning off the lamp

- Press the LAMP ON/OFF button on the control panel for five seconds or longer.



### 3-6-2. Turning on the lamp

- Press the LAMP ON/OFF button on the control panel for five seconds or longer.

**TIP** The LCD screen displays "Lamp Lit Change" if any of the following events occurs when the lamp mode is set to "Dual".

- One of the lamps has failed to turn on when you turn the lamps on
- One of the lamps has extinguished while the lamps are on

To once again light a lamp which has failed to turn on or extinguished, press both the LAMP ON/OFF button and the MENU button three seconds or longer. However, the lamp cannot be turned on again while the LAMP ON/OFF button indicator is blinking.

## 3-7. Turning your projector off

**NOTE** The indicators on the control panel blink when the following operations are carried out. (See page 66)

- When you turn the lamp on or change the lamp mode  
The indicators of the POWER button and the LAMP ON/OFF button blink green. The projector cannot be turned off while the POWER button indicator is blinking (in cycles of 2). The lamp cannot be turned off while the LAMP ON/OFF button indicator is blinking.

If you operate the POWER button or LAMP ON/OFF button while the indicators are blinking, the LCD screen displays the warning screen below. The POWER button or LAMP ON/OFF button becomes operable when the amount of time remaining reaches 0.

```
*Lamp&Power not*
available now!
left 50 sec
* <   OK   > *
```

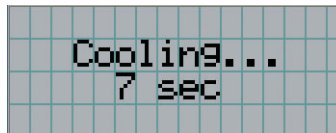
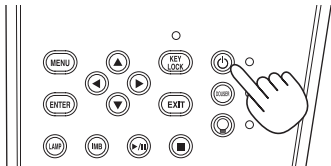
When you turn the lamp on or  
change the lamp mode

### 1 Press the POWER button on the projector control panel for three seconds or longer.

The lamp is turned off, the POWER button indicator blinks green, and the STATUS indicator blinks orange (cooling state).

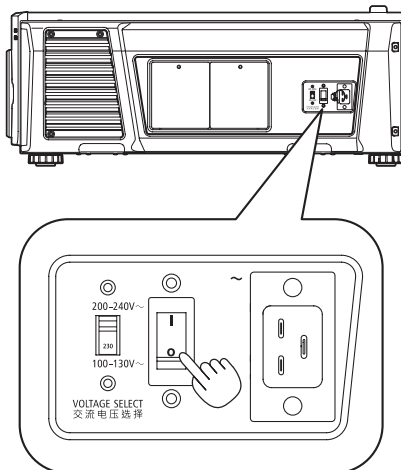
The fan will continue to rotate while cooling, and the amount of time remaining for cooling is displayed on the LCD screen. The cooling-off time is 90 seconds.

When the cooling is finished, the POWER button indicator turns off and the status indicator lights orange (standby state). KEY LOCK becomes automatically on if no control panel operation takes place in the standby state for 30 seconds by default. Buttons on the control panel do not function while KEY LOCK is on. (See page 33)



### 2 Wait till the projector enters standby state before turning off the main power switch of the projector.

The POWER button indicator is turned off and the main power is turned off.



### 3. Projection of Images (Basic Operation)

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#### **3** Turn off the AC power to the projector.

**NOTE** In the following instances, do not turn off the main power switch or disconnect the AC power. Doing so can damage the projector.

- While projecting images
- While the fan is running after the power is turned off (The cooling-off time is 90 seconds)

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# 4.

## Using Menus

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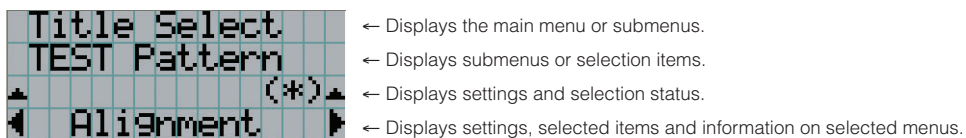
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### 4-1. Basic operation with adjustment menus





To adjust the projector, display the menu on the LCD screen of the projector control panel.

#### 4-1-1. Screen display

The menu display screen is composed of a menu display field (the upper two lines) and a setting item display field (the bottom two lines).



The meanings of symbols in the menu display screen are outlined below.

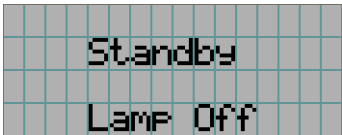
	Indicates that there is a menu of a higher level. Press the UP button to return to a menu one level above.
	Indicates that there is a selected item or menu at the same level. Press the LEFT/RIGHT button to display other selected items or menus.
	Indicates that there is a menu of a lower level. Press the DOWN button to display the menu one level below.
	Indicates that there are setting items of a higher or lower level. Press the UP button to return to a menu one level above. Press the DOWN button to display the setting item one level below.

## 4. Using Menus

When not displaying menus, the following screen is normally displayed.

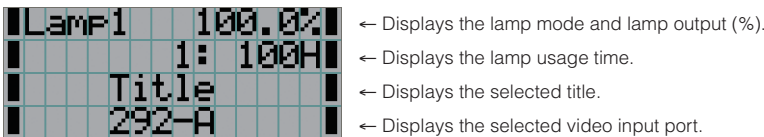
### When in standby

When the projector is in a standby state (the main power switch in on), the following is displayed.



### When power is turned on

When the power is turned on, the following is displayed.

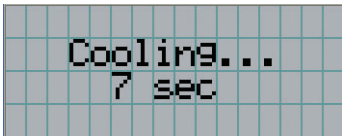


**TIP** When the lamp mode is set to "Dual" (both lamp 1 and lamp 2 turned on; see page 44), the display switches between the lamp 1 and lamp 2 usage times every 10 seconds.



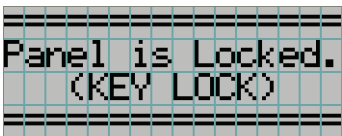
### When the power is turned off

When you press the POWER button on the control panel of the projector for 3 or more seconds, the projector starts cooling. When cooling finishes, the projector enters the standby mode. The amount of time remaining for cooling is displayed as shown below during cooling.



### When a button is pressed while the key lock function is on

If a button on the control panel is pressed while the key lock function is on, the following is displayed and the button will not function.

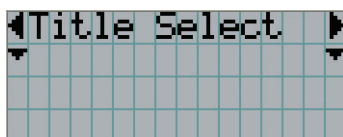


## 4-1-2. Operating menus

**Preparation:** Turn your projector on. (See page 24)

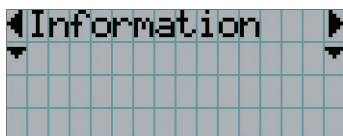
- 1** Press the MENU button on the control panel of your projector.

The menu is displayed in the LCD screen.



- 2** Press the LEFT/RIGHT buttons to display "Information."

At each press of the LEFT/RIGHT buttons, the display will cycle as "Title Select" ↔ "Configuration" ↔ "(Title Setup)" ↔ "Information."

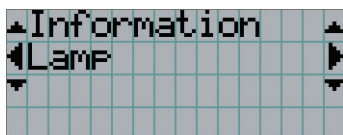


- 3** Press the DOWN button.

The submenu "Lamp" of "Information" is displayed.

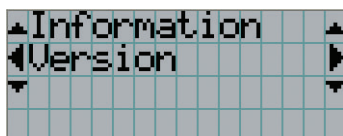
The menu item can be selected by pressing the ENTER button instead of the DOWN button.

To return to the previous state, press the UP button, or the EXIT button.



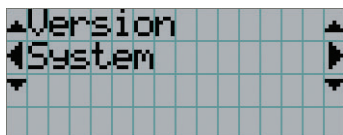
- 4** Press the LEFT/RIGHT button to select the submenu "Version."

At each press of the LEFT/RIGHT button, the display will cycle as "Lamp" ↔ "Preset Button" ↔ "Usage" ↔ "Error Code" ↔ "Version" ↔ "IP Address" ↔ "Setup Date" ↔ "Option Status."



- 5** Press the DOWN button.

The submenu "System" another rank lower than "Version" is displayed.

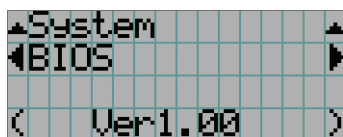


## 4. Using Menus

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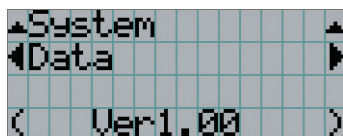
### 6 Press the DOWN button.

The submenu "BIOS" another rank lower than "System" is displayed.



### 7 Press the LEFT/RIGHT button to select the submenu "Data."

At each press of the LEFT/RIGHT button, the display will cycle as "BIOS" ↔ "Firmware" ↔ "Data" ↔ "Lens" ↔ "Serial No." ↔ "Model," and each version information is displayed.



### 8 Press the UP button several times.

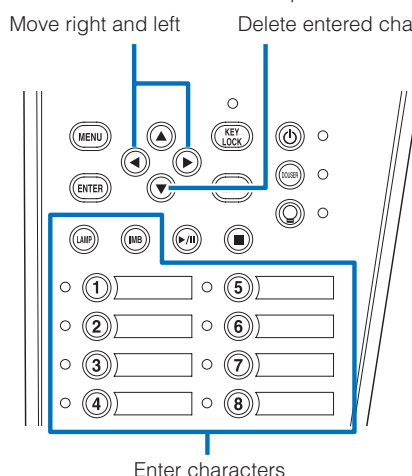
At each press of the UP button, the display will return to a menu one level above.



### 4-1-3. How to enter alphanumeric characters

Alphanumeric characters are entered for items, such as the log file of the specified period is written to USB memory. (See page 73)

Characters can be entered by pressing numeric buttons on the control panel on this projector.



Characters can be entered by pressing each button as shown in the following table.

- To delete a character during entry, press the DOWN button.

#### [Example of Entry]

To enter "XGA" for example, use the following procedure:

- Press the "8" button three times.  
V → W → X
- Press the RIGHT button.  
XG
- Press the "3" button.  
XG
- Press the RIGHT button.  
XGA
- Press the "1" button.  
XGA

Button	Entered character
1	A → B → C → 1 → a → b → c → ! →
2	D → E → F → 2 → d → e → f → " →
3	G → H → I → 3 → g → h → i → # →
4	J → K → L → 4 → j → k → l → \$ →
5	M → N → O → 5 → m → n → o → % →
6	P → Q → R → 6 → p → q → r → & →
7	S → T → U → 7 → s → t → u → ' →
8	V → W → X → 8 → v → w → x → ( →
LAMP	Y → Z → / → 9 → y → z → ? → ) →
IMB	* → , → . → 0 → ; → : → + → - →

## 4-2. Table of adjustment menus

Menus in parentheses are menus for our service personnel. Normally, these menus cannot be used.

Main menu	Submenu		Description	Reference page
Title Select	"Title Memory Name"		Selects the title of the signal to be projected.	43
	TEST Pattern		Selects the test pattern to be projected.	43
Configuration	Lamp Setup	Adjust	Adjusts lamp brightness.	44
		Lamp Mode	Selects the lamp to use.	44
	Lens Control	Lens Position	Adjusts the position of the projected screen.	45
		Focus Zoom	Adjusts the size and focus of the projected screen.	45
	Reset	(FactoryDefault)	Returns the settings to their default values. Selects between preset buttons and titles only, LAN settings only and all settings.	-
		Lamp Usage	Initializes the usage time of the lamp.	46
		Filter Usage	Initializes the usage time of the air filter.	46
		(Fan Usage)	Initializes the usage time of the fan.	-
		(Douser Count)	Resets the number of times the douser has been used.	-
	(Setup)	Douser Setup	Sets the douser open/close state.	-
		Panel Key Lock	Locks the buttons on the projector's control panel so that they cannot be operated.	-
		Auto Key Lock	Enables or disables Auto Key Lock.	-
		3D Connector	Sets the signal input terminal for a 3D image system (3D terminal or GPI/O terminal). Sets the video input port for 3D video systems.	-
		Unlit Mode	Sets the projector operation when the lamp does not turn on.	-
		Off Timer	Sets the time until the projector power is turned off automatically.	-
		Filter Message	Sets the time to display the message indicating the air filter replacement cycle.	-
		Silent Mode	Selects whether to use the status indicator, buzzer, indicators on the control panel and backlight.	-
	(Installation)	Option Slot	Configures the device installed in slot A (only when the projector is in standby mode).	-
		Orientation	Sets the projection method and cooling fan operating mode.	-
		Lens Center	Moves the lens shift position to the center.	-
		Baudrate	Sets the PC control connector (RS-232) data transmission speed (bps).	-
		Date/Time	Sets the date and time on the projector.	-
		New Router Setup	Sets the router with the default settings when the router built-in the projector has been replaced.	-
		Fan Speed Mode	Sets the cooling fan operating mode.	-
(Title Setup)	Preset Button	Preset Button 1–16	Sets the title to be assigned to the preset buttons (<1> to <8> buttons).	47
Information	Lamp	Output	Displays the lamp output setting.	47
		Voltage	Displays the lamp voltage value.	47
	Preset Button	Preset Button 1–16	Displays the titles which are assigned to the preset buttons (<1> to <8> buttons).	47
	Usage		Displays information related to projector usage.	48
	Error Code		Displays the currently occurring error.	48
	Version	System	Displays the model name and various version information about the projector.	48
		SIB	Displays the model and version of the signal input board (SIB).	49
		IMB	Displays the vendor name and version information about the media block (IMB).	49
		Slave	Displays the slave firmware version of the projector.	49
		Ballast	Displays the ballast firmware version of the projector.	49
	IP Address	System	Displays the IP address of the projector.	49
	Setup Date		Displays the date when the projector was set up (starting date of the warranty period).	50
	Option Status		Displays the link status of the device mounted in slot A and projector.	50

## 4-3. Title Select

### 4-3-1. Title select (Title Memory)

Selects the title of the signal to be projected.

You can register up to 100 titles. You can also assign registered titles to the preset buttons (<1> to <8> buttons) on the projector's control panel and call them up directly using those buttons.

Request your dealer/distributor for details on registering and changing titles.

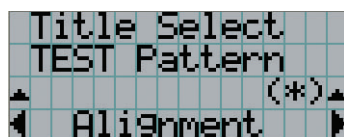


← Displays the currently selected item with asterisk (\*).

← Selects the title to be projected.

### 4-3-2. Test Pattern

Selects the test pattern to be projected.



← Displays the currently selected item with asterisk (\*).

← Selects the test pattern to be projected.

OFF, Alignment, Cross Hatch, Convergence, Red, Green, Blue, White, Black,  
White 50% [IRE], H-Ramp, Logo

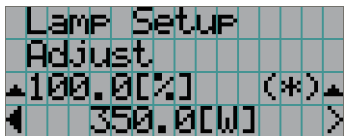
## 4-4. Configuration

Please request your dealer/distributor to perform the settings.

### 4-4-1. Lamp Setup

#### Adjust

Adjusts the lamp output (brightness).

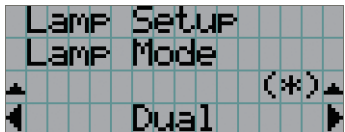


← Displays the current output power value (%) when the lamp rated output is 100%.

← Displays the current power value (W).

#### Lamp Mode

Selects the lamp to use. When "Dual" is selected, lamp 1 and lamp 2 turn on/off at the same time. When "Lamp 1" or "Lamp 2" is selected, the other lamp is not used.



← Displays the currently selected item with asterisk (\*).

← Displays the setting.

Dual	Uses lamp 1 and lamp 2 at the same time.
Lamp 1	Uses only lamp 1 (lamp 2 is not used).
Lamp 2	Uses only lamp 2 (lamp 1 is not used).

#### TIP

- If you change the lamp mode while the lamp is on, the changed settings are applied immediately.
- If you change the lamp mode while the lamp is off, the changed settings are applied the next time the lamp is turned on.

#### NOTE

When the lamp mode is changed, the LAMP ON/OFF button indicator blinks green (See page 67). You cannot change the lamp mode while the LAMP ON/OFF button indicator is blinking. Wait until the LAMP ON/OFF button indicator changes from blinking to steady on.

## 4-4-2. Lens Control

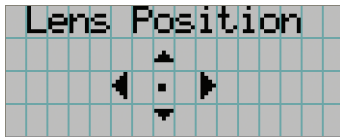
Adjust the position, size, and focus of the projected screen.

Press the ENTER button to switch the display between "Lens Position" and "Focus Zoom" adjustments. Press the EXIT button to return to a menu one level above.

### Lens Position

Adjusts the position of the projected screen.

The projected screen moves in the selected direction as you press the UP/DOWN/LEFT/RIGHT button.

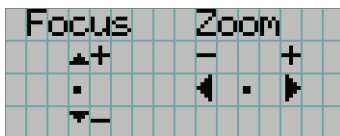


### Focus Zoom

Adjusts the size (Zoom) and focus (Focus) of the projected screen.

Press the UP/DOWN button to adjust the focus.

Press the LEFT/RIGHT button to adjust the size of the projected screen.



## 4. Using Menus

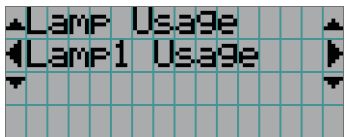
### 4-4-3. Reset

This is used to reset the lamp and air filter usage times.

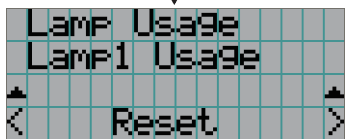
#### Lamp Usage

Resets the lamp usage time. When both lamp 1 and lamp 2 are replaced at the same time, reset the usage times of both lamp 1 and lamp 2.

- [1] Press the LEFT/RIGHT button to select the lamp to reset the usage time of, and then press the ENTER button.
- [2] Press the ENTER button in the "Lamp1 Usage" or "Lamp2 Usage" screen, the confirmation screen will appear.
- [3] Select "Yes" in the confirmation screen, and then press the ENTER button to reset the lamp usage time.



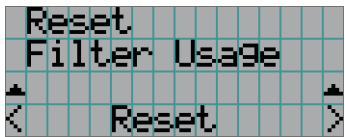
← Selects the lamp to reset the usage time of.



← Press the ENTER button to display the confirmation screen.

#### Filter Usage

Resets the air filter usage time. Press the ENTER button, then select "Yes" in the displayed confirmation screen, and then press the ENTER button to reset the air filter usage time.



← Press the ENTER button to display the confirmation screen.

## 4-5. Title Setup

Sets the title to be assigned to the preset buttons (<1> to <8> buttons) (up to 16 titles).  
Request your dealer/distributor to perform the settings.

## 4-6. Information

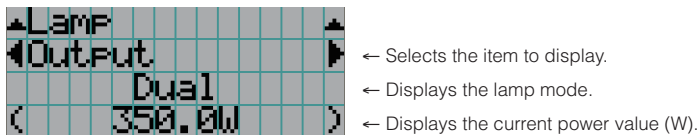
Displays the hours of lamp use, the version information and error codes.

### 4-6-1. Lamp

Displays information relating to the lamp.

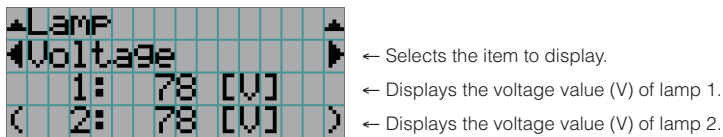
#### Output

Displays the lamp mode and lamp output power value (W).



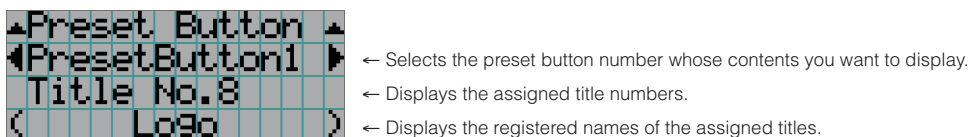
#### Voltage

Displays the voltage value (V) of the currently used lamp.



### 4-6-2. Preset Button

Sets the title to be assigned to the preset buttons (<1> to <8> buttons) on the projector's control panel.

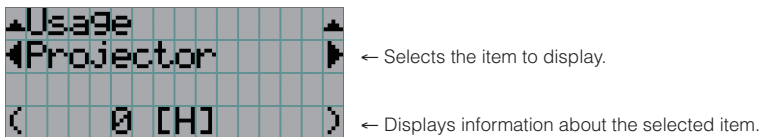


**TIP** To select a title allocated to one of "Preset Button9" to "Preset Button16", press the preset button while holding down the UP button. For example, to select the title allocated to "Preset Button9", press the <1> button while holding down the UP button.

## 4. Using Menus

### 4-6-3. Usage

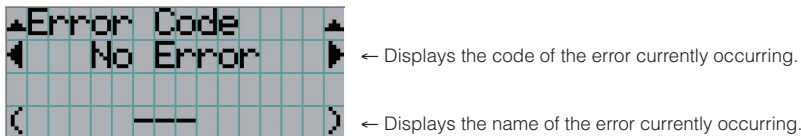
Displays information related to the projector usage, such as the usage time of the projector, lamps, air filters, and fan, and information about the lamp replacement cycle.



Projector	Displays the usage time of the projector.
Lamp	Displays the usage time of the lamp.
Lamp Remaining	Displays the amount of usage time remaining (approximate) from the current usage time with the unused state as 100% and 0% when the lamp needs replacement.
Lamp Strike	Displays the number of times the lamp has been turned on.
Filter	Displays the usage time of the air filter.
Fan	Displays the usage time of the fan.
Douser Count	Displays the number of times the douser has been used.

### 4-6-4. Error Code

Displays the error code when an error occurs.



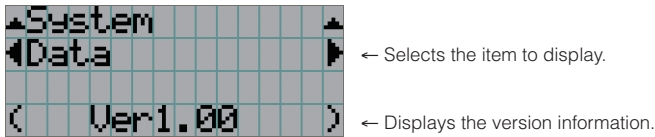
When multiple errors occur, you can display them by pressing the LEFT/RIGHT buttons.

### 4-6-5. Version

Displays version information about the projector, optional boards, and IMB.

#### System

Displays the version information of the projector.

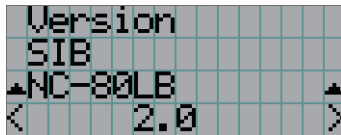


BIOS	Displays the BIOS version of the projector.
Firmware	Displays the firmware version of the projector.
Data	Displays the data version of the projector.
Lens	Displays the firmware version of the lens mount on the projector.
Serial No.	Displays the serial number of the projector.
Model	Displays the model name of the projector.



**SIB**

Displays the model name and version information about the signal input board (SIB). When the projector is in standby mode, the version information displays "---".

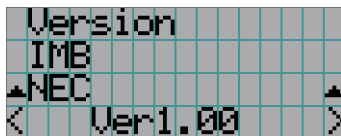


← Displays the model name of the signal input board.

← Displays version information.

**IMB**

Displays the vendor name and version information about the media block (IMB). When the projector is in standby mode, the vendor name is blank and the version information displays "---".

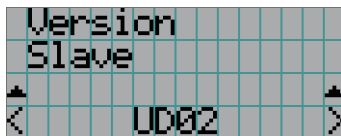


← Displays the vendor name.

← Displays the version information.

**Slave**

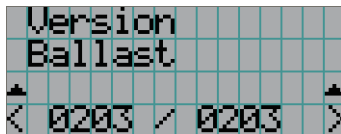
Displays the slave firmware version of the projector.



← Displays the version information.

**Ballast**

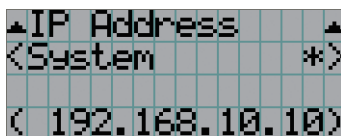
Displays the ballast firmware version of the projector. The version information is displayed in the format "ballast 1/ballast 2".



← Displays the version information.

**4-6-6. IP Address**

Displays the IP address set in the projector.

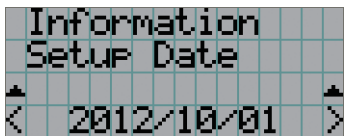


← Displays the IP address.

System	Displays the IP address set for the projector (System).
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4-6-7. Setup Date

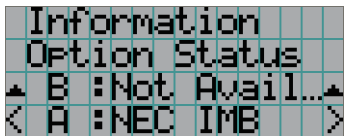
Displays the date when the projector was set up (starting date of the warranty period).



← Displays the date when the projector was set up (starting date of the warranty period).

4-6-8. Option Status

Displays the link status of the device mounted in slot A (media block, signal input board) on the projector. The device name is displayed in ( ) when the projector is in standby or when connection to the device cannot be confirmed.



← Slot B is not available in this projector.

← Displays the link status of the device in slot A.

B	Not Available: Slot B is not available in this projector.
A	Displays the link status of the device in slot A. <Vendor Name> IMB: Media block (NC-90MS01) <ul style="list-style-type: none"><li>• NC-80LB: Signal input board (NC-80LB01-B)</li><li>• NC-80DS: Signal input board (NC-80DS01-B)</li><li>• No Board: No device mounted</li></ul>

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# 5.

## Maintenance of Your Projector

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**NOTE** Please request your dealer to perform cleaning of the projector inside.

### 5-1. Cleaning the Cabinet

Before carrying out maintenance of your projector, be sure to always check that the projector is turned off and the power plug is unplugged from the electrical outlet.

- Wipe with a dry, soft cloth without nap.

When the cabinet is excessively dirty, wipe with cloth well wrung after being dampened with a neutral detergent diluted with water and then finish up with a dry cloth.

When you use a chemical dust cloth, follow the instructions in the manual attached to it.

- Do not use a solvent, such as thinner or benzene. The coating may deteriorate or peel off.
- When removing dust on the ventilation opening, suck it off using an adapter with a brush on a vacuum cleaner. Never allow the cleaner without an adapter to come into direct contact or use a nozzle adapter in cleaning.
- Clean the ventilation opening at regular intervals. Dust, if allowed to accumulate there, may cause heating inside, which leads to functional trouble. The interval, which can vary with the location of your projector, is about 100 hours.
- Do not damage the cabinet by scratching it or allowing hard objects to hit it. This can scratch the projector.
- Consult your dealer/distributor about cleaning the inside of the projector.

**NOTE** Do not allow insecticide or other volatile liquid to splash on the cabinet, lens or screen. Also, do not allow any rubber or plastic object to remain in contact with the cabinet for a long time. The coating may deteriorate or peel off.

### 5-2. Cleaning the Lens

Clean the lens the same way as with camera lens (using a commercially available camera blower or cleaning paper for glasses). Take care not to damage the lens when cleaning.

## 5-3. Replacing the Lamp and the Air Filter

### 5-3-1. Warnings About Replacing the Lamp

When the usage time of the lamp being used as the light source exceeds the lamp replacement time (approximate), the message "Lamp1 OverTime" or "Lamp2 OverTime" is displayed on the projector LCD screen. When this happens, the lamp has reached its replacement time and you should replace it with a new lamp.

- TIP**
- The lamp replacement time (approximate) is 3,000 hours.
  - You can check the current amount of lamp usage remaining (approximate) using the following items in the adjustment menus. (See page 48)
    - Amount of lamp usage remaining (approximate): "Information" → "Usage" → "Lamp Remaining"



#### CAUTION

DO NOT TOUCH THE LAMP immediately after it has been used. It will be extremely hot. Turn the projector off and then disconnect the power cable. Allow at least one hour for the lamp to cool before handling.

- Use the specified lamp for safety and performance.
- Do not mount the lamp that you first used mounted in lamp 1 in lamp 2, and do not mount the lamp that you first used mounted in lamp 2 in lamp 1. If you do, the lamp replacement time (approximate) will not be calculated properly.
- Please purchase the replacement lamp at your dealer/distributor. Specify NP-9LP01 as the model number for the replacement lamp when ordering.
- Replace the air filters at the same time as when you replace the lamp. Specify NP-9AF01 as the model number for the replacement filter when ordering.
- A replacement lamp and air filter kit is also provided. Specify NP-9LP01 as the model number for the replacement lamp and filter kit when ordering.
- Do not remove any screws other than as specified.
- The lamp has glass attached for protecting the lamp. Handle with care to avoid accidentally breaking it. Furthermore, do not touch the surface of the glass. This may lead to perform degradation in terms of brightness.
- If you continue using the lamp after the message has been displayed, the lamp may blow. When the lamp blows, it shatters creating a large sound, and fragments of the lamp become scattered around within the lamp house. If this happens, please contact your dealer/distributor for a replacement.
- If you replace the lamp while the unit is installed suspended from the ceiling, take care to ensure that no one can enter below the unit. If the lamp shatters, there is a risk of lamp fragments flying everywhere.

**NOTE** The lamp replacement time is not the guarantee time. The actual replacement time varies depending on the usage environment.

### 5-3-2. Warnings About Replacing the Air Filter

Air filters are attached over the air inlet of the projector to prevent dust. Replace air filters periodically to maintain the projector's performance.

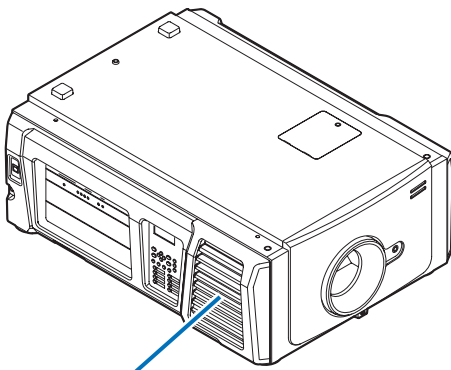
#### **WARNING:**

- When replacing air filters, turn off the projector and unplug the power cable.
- Dust in air filters will hinder ventilation of the projector, lead to a rise of the internal temperature and can cause a fire or malfunction.

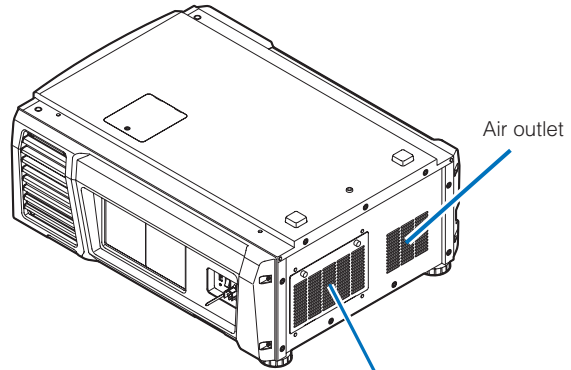
#### **CAUTION**

Before replacing the filters, turn off the projector, disconnected the power cable and then allow the cabinet to cool. Failure to do so can result in electric shock or burn injuries.

- Please purchase the replacement air filter at your dealer/distributor. Specify the NP-9AF01 (optional) when you order.
- A replacement lamp and air filter kit is also provided. Specify NP-9LP01 as the model number for the replacement lamp and filter kit when ordering.
- Always replace both of the air filters at the same time. If you do not replace both of the air filters, the air filter usage time will not be calculated correctly.



- Air inlet
- Air filter (side)



- Air inlet
- Air filter (rear)

Model number	Replacement cycle
NP-9AF01	Replace each time you replace the lamp.
NP-9LF01 (Replacement lamp and filter kit)	

### 5-3-3. Procedure for Replacing the Lamp and Air Filter

- **Step 1**

Replace the lamp (See page 54)

- **Step 2**

Replace the rear air filter (See page 59)

Replace the side air filter (See page 62)

- **Step 3**

Reset the lamp usage time and air filter usage time (See page 64)

### 5-3-4. Replacing the Lamp

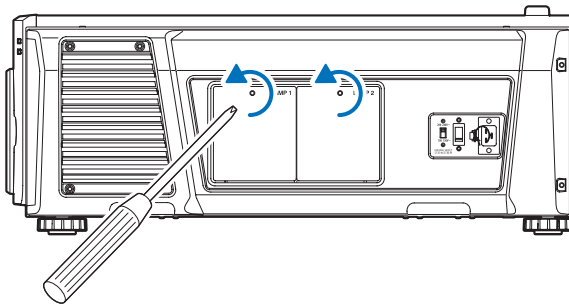
This section describes the procedure for replacing both of the lamps.

**Preparation:** Have a Phillips head screwdriver ready.

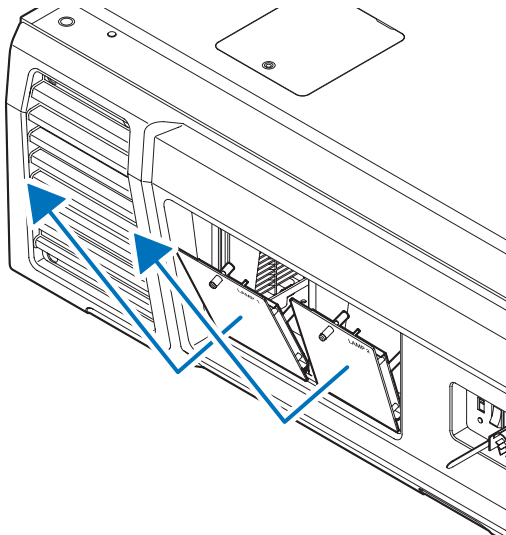
**1** Remove the lamp cover.

1. Loosen the screw securing the lamp cover until the Phillips screwdriver goes into a free-wheeling condition.

The screw is not removable.



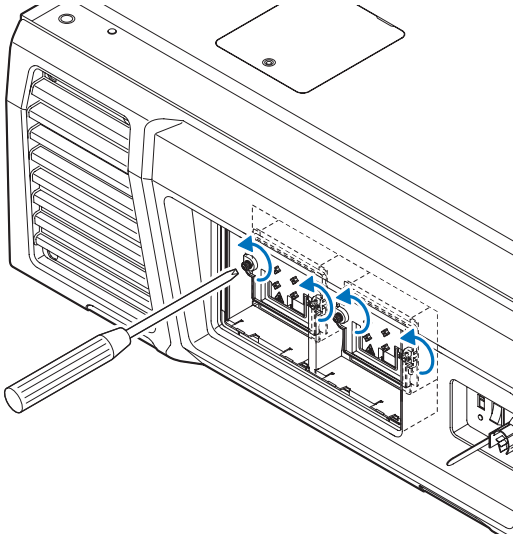
2. Grasp the standoff pillar of the screw securing the lamp cover and pull it up towards you to remove the lamp cover.



**2** Remove the lamp housing.

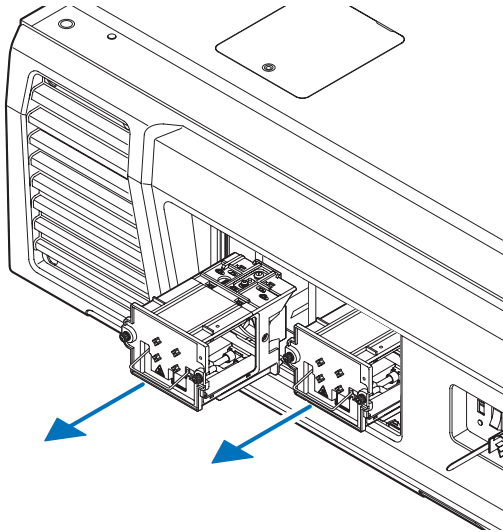
1. Loosen the two screws securing the lamp housing until the Phillips screwdriver goes into a freewheeling condition.

The two screws are not removable.



2. Grasp the handle and remove the lamp housing.

At this time, pull the lamp housing straight out.



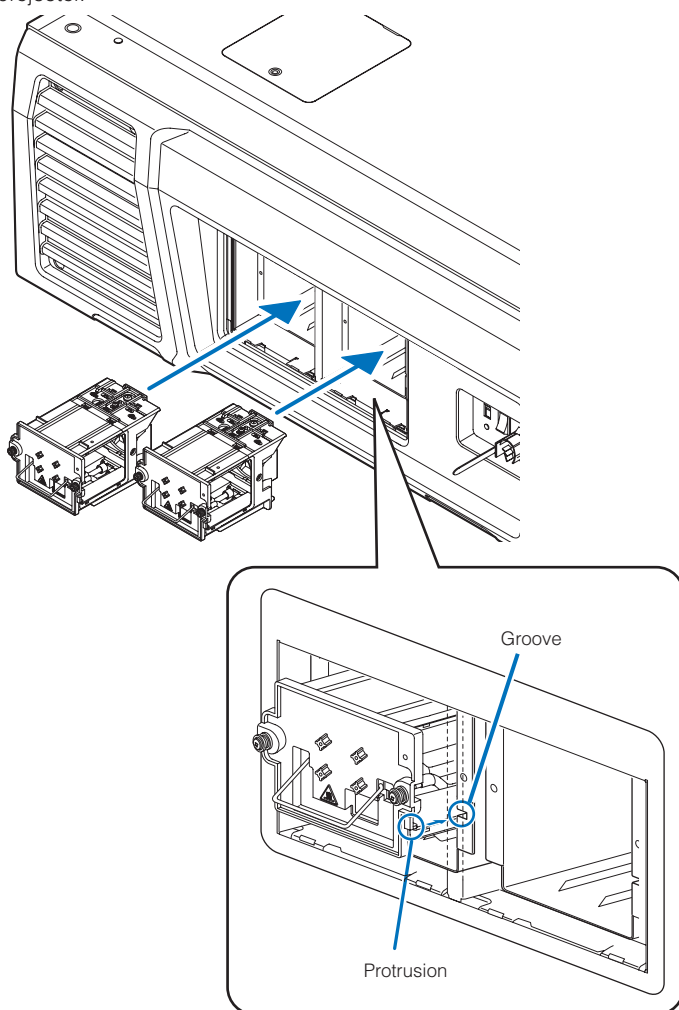
**⚠ CAUTION**

Make sure that lamp housing is cool enough to handle before removing it.

### **3** Install a new lamp housing.

#### **1.** Insert a new lamp housing until the lamp housing is plugged into the socket.

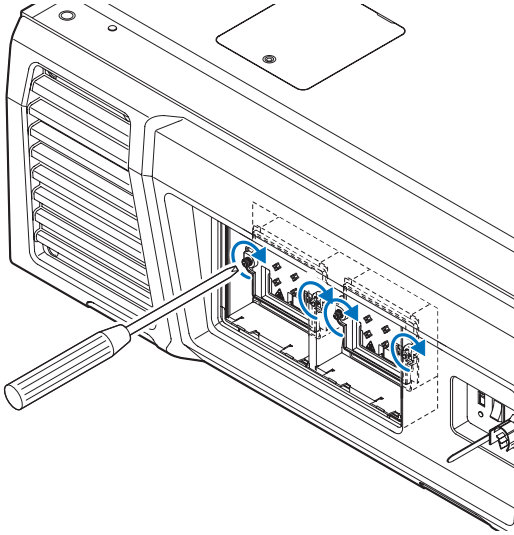
Finally, align the protrusion for aligning the position of the lamp housing with the groove in the receptacle side of the projector.





**2. Secure it in place with the two screws.**

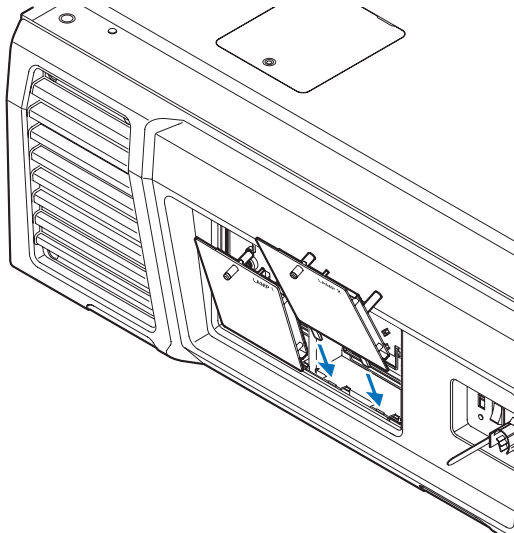
Be sure to tighten the screws.



**NOTE** Be sure to install both Lamp 1 and Lamp 2. The projector will not turn on unless both the lamps are installed.

**4 Reattach the lamp cover.**

1. Align the protrusions (2 locations) in the lamp cover with the receptacle holes in the projector and mount the lamp cover.

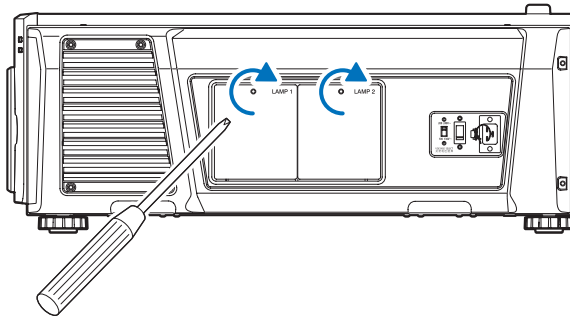


## 5. Maintenance of Your Projector

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### 2. Tighten the screw to secure the lamp cover.

Be sure to tighten the screw.



This completes replacing the lamp. Next, replace the air filters.

- Replace the rear air filter (See page 59)
- Replace the side air filter (See page 62)

**NOTE** Always replace both of the air filters at the same time. If you do not replace both of the air filters, the air filter usage time will not be calculated correctly.

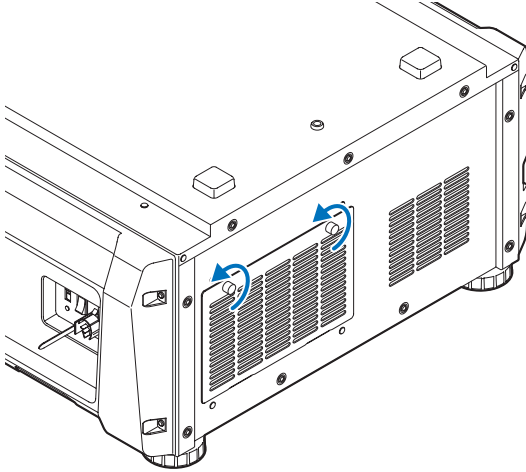
### 5-3-5. Replacing the Rear Air Filter

**Preparation:** Replace the lamp first. (See page 54)

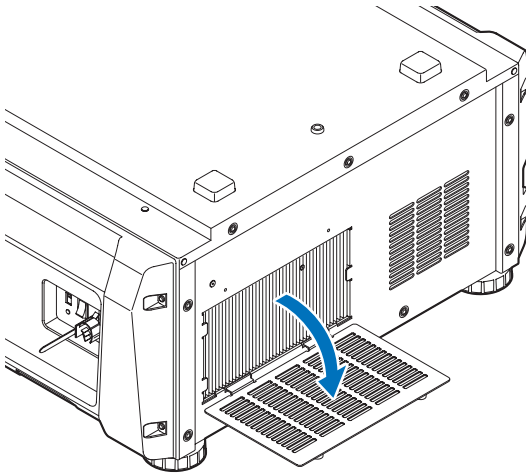
**1** Open the filter cover.

**1. Loosen each of the two knobs by turning them counterclockwise.**

The knobs are not removable. If the knob is too tight to turn, use a Phillips screwdriver.

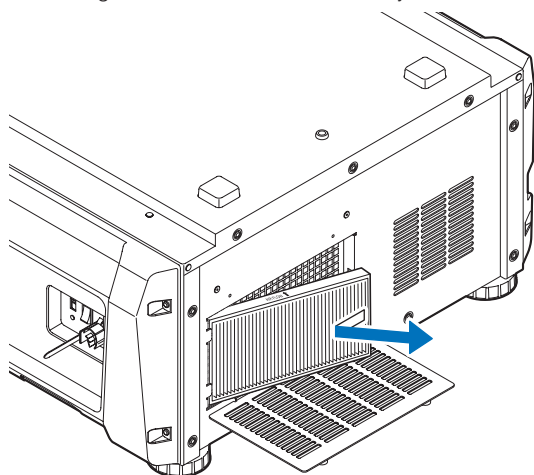


**2. Tilt the filter cover towards you to open it.**



### **2** Remove the air filter.

Pull the right side of the air filter towards you to remove it.

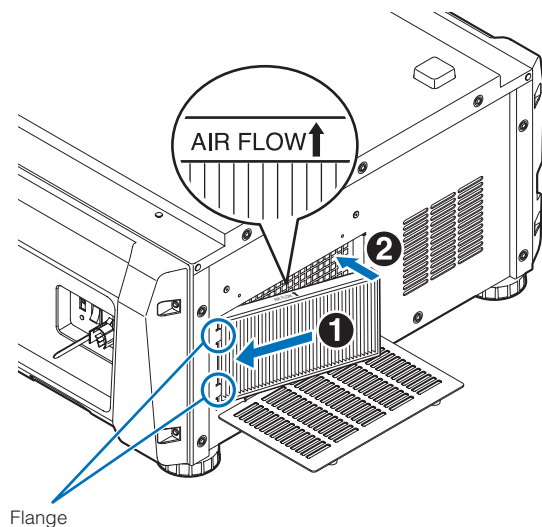


### **3** Mount the air filter to the projector.

Look for an arrow (↑AIR FLOW) indicating the installation direction on the side of the air filter. Point the arrow towards the projector.

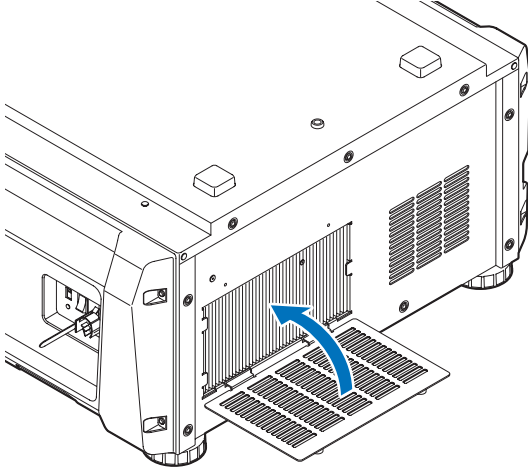
1. Align the air filter to the flange on the left side of the air inlet.

2. Push the right side of the air filter against the air inlet on the projector.

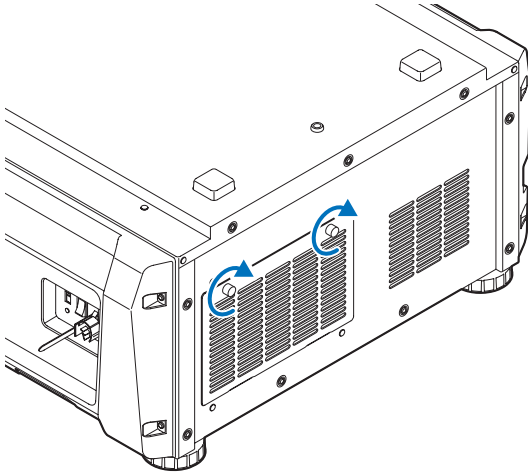


**4** Mount the filter cover to the projector.

1. Grasp the knob on the filter cover and mount it to the projector.



2. Tighten the two knobs clockwise to secure the filter cover.



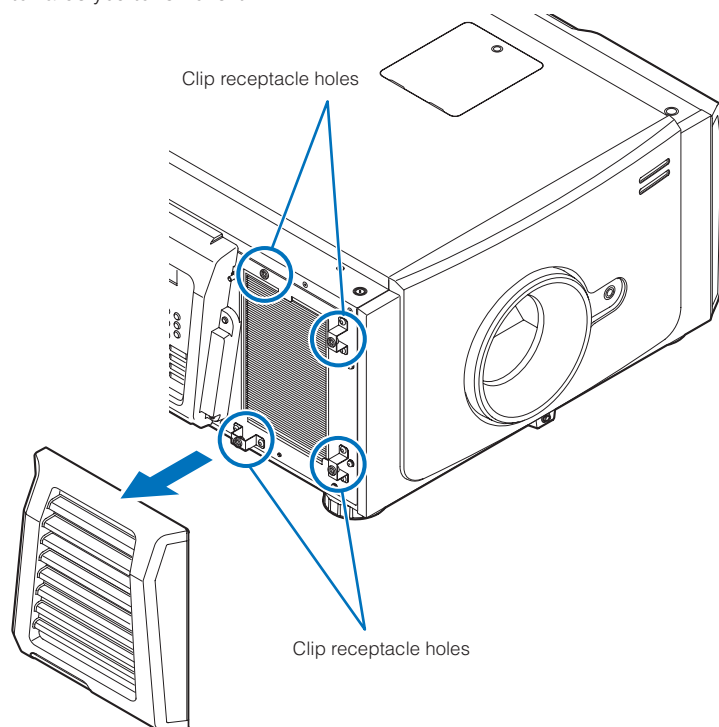
This completes replacing the rear air filter. Next, replace the side air filter.

### 5-3-6. Replacing the Side Air Filter

**Preparation:** Replace the lamp first. (See page 54)

#### **1** Remove the filter cover.

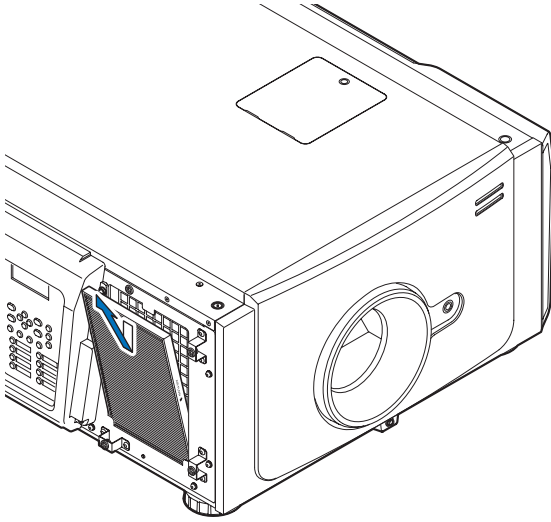
The filter cover is fastened by plastic clips (4 locations). Grasp the top and bottom edges of the cover and pull it towards you to remove it.



**NOTE** When removing the filter cover, remove it by applying force evenly. If you only apply force to one side, it may cause the clips to become damaged.

### 2 Remove the air filter.

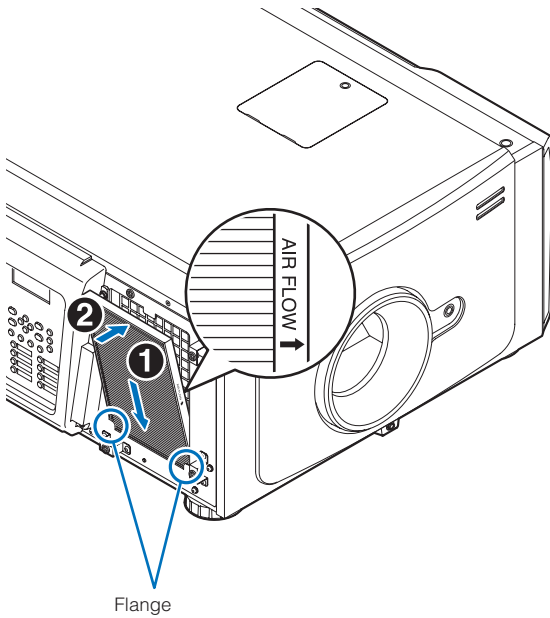
Pull the upper part of the air filter towards you and lift it up to remove it.



### 3 Mount the air filter to the projector.

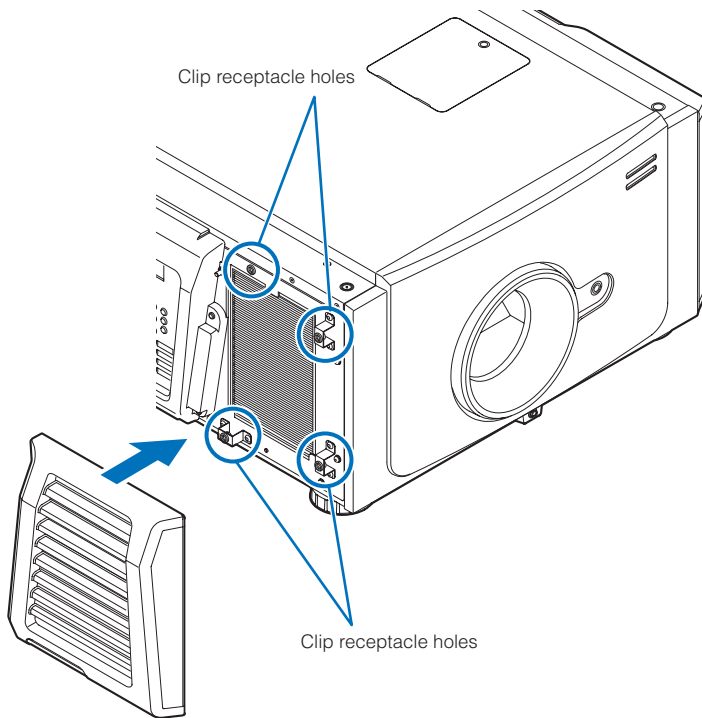
Look for an arrow (↑AIR FLOW) indicating the installation direction on the side of the air filter. Point the arrow towards the projector.

1. Align the air filter to the flange under the air inlet.
2. Push the top side of the air filter against the air inlet on the projector.



### **4** Mount the filter cover to the projector.

1. Align the positions of the plastic clips (4 locations) with the clip receptacle holes on the projector.
2. Push it in straight to fasten the filter cover.



This completes replacing the side air filter. If you have not yet finished replacing the rear air filter, replace the rear air filter next (See page 59). Once you have finished replacing both of the air filters, reset the lamp usage time and the air filter usage time.

### 5-3-7 Resetting the Lamp Usage Time and Air Filter Usage Time

- 1** Turn on the power to the projector.
- 2** Reset the usage time in “Configuration” → “Reset” in the adjustment menu.
  - “Lamp Usage”: Resets the lamp usage (See page 46)
  - “Filter Usage”: Resets the filter usage (See page 46)

This completes resetting the lamp usage time and air filter usage time.



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# 6.

## Appendix

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### 6-1. Troubleshooting

Before asking for repair, please check your connection, settings and operation once again. If the trouble cannot be corrected, please contact your dealer/distributor for instructions or repair.

#### 6-1-1. Problems and where to check

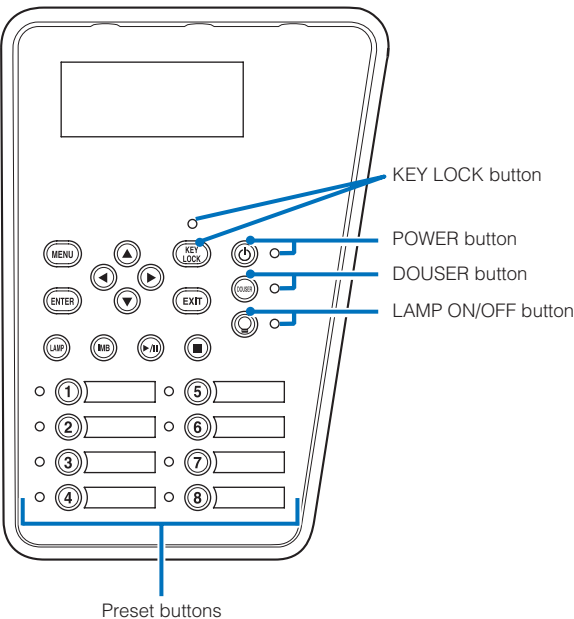
Problem	Check these items
The projector cannot be turned on.	Check to see if AC power is supplied to the projector.
	Make certain that the main power switch is ON.
	Check to see whether the panel key lock function is activated. If so, the main unit's control buttons are locked and do not work.
	Is the temperature inside the projector too high? When the inside temperature is too high, the protective function does not allow your projector to be turned on. Wait some time and then turn it on.
	Are you using the projector at high elevations with an altitude of approximately 5500 feet/1600 meters or higher? The cooling fan settings need to be configured when using the projector at high elevations. Please contact your dealer/distributor for instructions.
The image cannot be projected.	Check to see if the connected input has been selected.
	Check to see if a cable is properly connected to the input terminal.
	Check to see whether the douser is closed.
	Check to see if the settings are all adjusted properly.
The image is distorted.	Check to see if the protractor is properly set up.
The image is blurred.	Make certain that the lens is properly focused.
	Check to see if the screen and a projector are installed at correct angles.
	The projection distance may be larger than the focusing range.
	See if the lens and other parts have condensation on them. If the projector is turned on in a warm place after storage in a cold place, the lens and other optical components inside may develop condensation. In such a case, please wait several minutes until the condensation disappears.

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Problem	Check these items
Video image is disturbed.	Check whether the signal cable connected to the projector is disconnected.
The STATUS indicator blinks in red.	Your projector may have trouble. Please contact your dealer/distributor for instructions.
An error code is displayed.	Please contact your dealer/distributor for instructions.

6-2. Indicator display list

See the descriptions below when the buttons on the control panel or the STATUS indicator on the rear of the projector is lit or blinking. The projector also has a warning function that uses a buzzer.



6-2-1. Preset buttons

Indicator condition		Projector condition	Note
Off		No title is assigned to the button.	-
Steady light		A title is assigned to the button.	-
	Green	The title is being selected.	-
	White	The title is not selected.	-

6-2-2. KEY LOCK button

Indicator condition		Projector condition	Note
Off		The key lock is off.	-
Steady light	Orange	The key lock is on.	-

### 6-2-3. POWER button

Indicator condition		Projector condition	Note
Off		The projector power supply is off, or the projector is in standby.	-
Blinking light	Green (cycles of 1) (Note 1)	Preparing to turn power on/cooling fan rotating (State from turning the power off to entering standby mode).	Wait for a moment.
	Green (cycles of 2) (Note 2)	State where power cannot be turned off (Immediately after turning the lamp on or immediately after changing the lamp mode).	Wait for a moment. (for a maximum of about 90 seconds)
Steady light	Green	The projector is turned on.	-

(Note 1) Repeats 0.5 seconds on → 0.5 seconds off.

(Note 2) Repeats 0.5 seconds on → 1.5 seconds off.

### 6-2-4. DOUSER button

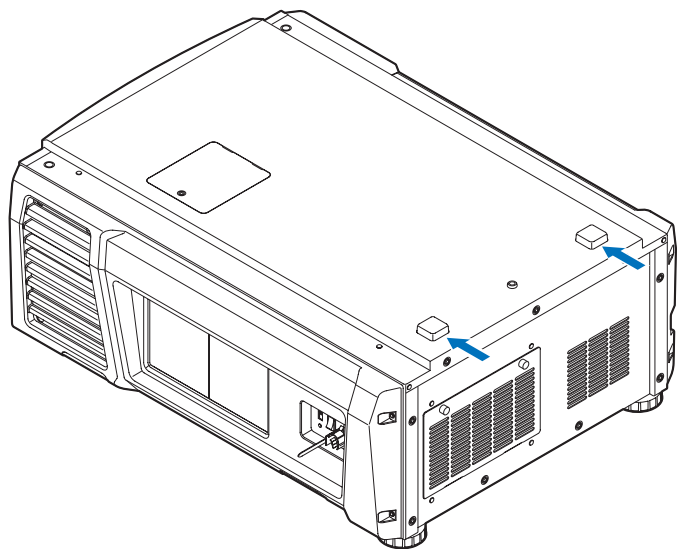
Indicator condition		Projector condition	Note
Steady light	Green	The douser is closed.	-
Off		The douser is opened.	-

### 6-2-5. LAMP ON/OFF button

Indicator condition		Projector condition	Note
Off		The lamp is off.	-
Steady light	Green	The lamp is on (Dual/Lamp 1/Lamp 2).	-
Blinking light	Green (cycles of 2) (Note 1)	State where the lamp cannot be turned on/off or the lamp mode cannot be changed (Immediately after turning the lamp on/off or immediately after changing the lamp mode).	Wait for a moment. (for a maximum of about 90 seconds)

(Note 1) Repeat 0.5 seconds on → 1.5 seconds off.

6-2-6. STATUS indicator



Indicator condition		Projector condition	Note
Off		Main power is off.	-
Blinking light	Green	The projector is getting ready to turn on. The douser is closed. The lamp is off.	Wait for a moment.
	Orange	The projector is cooling down.	Wait for a moment.
	Red (With buzzer)	Safety problem, error.	An error message is displayed in the LCD screen. Check the content of the error.
	Red (Without buzzer)	Error with possible image project under certain conditions.	
Steady light	Green	The projector is turned on.	-
	Orange	The projector is in standby.	-
	Red	Error at a level with not affect on projection.	An error message is displayed in the LCD screen. Check the content of the error.

## 6-3. Operation using an HTTP browser

### 6-3-1. Overview

The use of HTTP server functions will allow control of the projector from a web browser. Please be sure to use "Microsoft Internet Explorer 4.x" or a higher version for the web browser.

This device uses "JavaScript" and "Cookies" and the browser should be set to accept these functions. The setting method will vary depending on the version of the browser. Please refer to the help files and the other information provided in your software.

**NOTE** The display's or button's response can be slowed down or operation may not be accepted depending on the settings of your network.  
Should this happen, consult your network administrator.  
The projector may not respond if its buttons are repeatedly pressed in rapid intervals. Should this happen, wait a moment and repeat.  
Access is gained to the HTTP server functions by and specifying  
`http://<the projector's IP address>/index.html`  
in the entry column of the URL.

### 6-3-2. Preparation before use

Make network connections and set up the projector and confirm that it is complete before engaging in browser operations. Operations with a browser that uses a proxy server may not be possible depending on the type of proxy server and the setting method. Although the type of proxy server will be a factor, it is possible that items that have actually been set will not be displayed depending on the effectiveness of the cache, and the contents set from a browser not be reflected in operation. It is recommended that a proxy server not be used unless it is unavoidable.

### 6-3-3. Handling of the address for operation via a browser

Regarding the actual address that is entered for the address or entered to the URL column when operation of the projector is via a browser, the host name can be used as it is with the host name corresponding to the IP address of the projector has been registered in the domain name server by a network administrator, or the host name corresponding to the IP address of the projector has been set in the "HOSTS" file of the computer being used.

**(Example 1) When the host name of the projector has been set to "pj.nec.co.jp"**

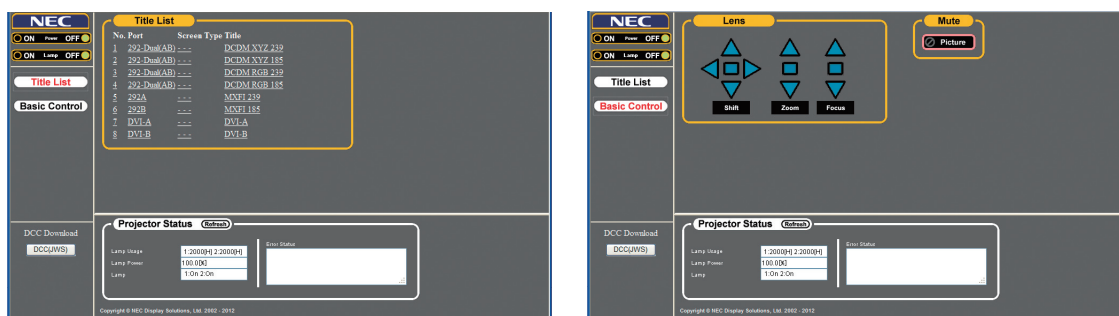
`http://pj.nec.co.jp/index.html` is specified for the address or the entry column of the URL to access HTTP server functions.

**(Example 2) When the IP address of the projector is "192.168.10.10"**

`http://192.168.10.10/index.html` is specified for the address or the entry column of the URL to access HTTP server functions.

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### 6-3-4. Structure of the HTTP server



Power	Controls the power to your projector.
	<ul style="list-style-type: none"> <li>On: Turns the power on.</li> <li>Off: Turns the power off.</li> </ul>
Lamp	Turn the lamp on/off.
	<ul style="list-style-type: none"> <li>On: Turns the lamp on.</li> <li>Off: Turns the lamp off.</li> </ul>
Title List	Displays titles set in the projector (such as input port, screen type, and title). Check, and the title will be changed.
Basic Control	Displays the basic control items.
Lens	Controls the lens operation.
Shift	<ul style="list-style-type: none"> <li>▲ : Shifts the projected screen upward.</li> <li>▼ : Shifts the projected screen downward.</li> <li>◀ : Shifts the projected screen leftward.</li> <li>▶ : Shifts the projected screen rightward.</li> <li>■ : Stops the shifting.</li> </ul> Shifting can also be stopped by clicking the same button one more time.
Zoom	<ul style="list-style-type: none"> <li>▲ : Zooms up the lens.</li> <li>▼ : Zooms down the lens.</li> <li>■ : Stops the zooming.</li> </ul> Zooming the can also be stopped by clicking the same button one more time.
Focus	<ul style="list-style-type: none"> <li>▲ : Focuses up the lens.</li> <li>▼ : Focuses down the lens.</li> <li>■ : Stops the focusing.</li> </ul> Focusing can also be stopped by clicking the same button one more time.
Mute	Picture
	Click and the douser closes and the projected picture disappears. Click once again and the picture will be projected again.
Projector Status	Displays the condition of the projector. <ul style="list-style-type: none"> <li>Lamp Usage: Displays the hours of lamp use.</li> <li>Lamp Power: Displays lamp output (%).</li> <li>Lamp Status: Displays the status of the lamp (On: Lights / Off: Off).</li> <li>Error Status: Displays the status of errors occurring within the projector.</li> <li>Refresh: Updates the display of the following conditions.</li> </ul>
DCC Download	You can download and use Digital Cinema Communicator for S2 (DCC) on your computer. Refer to page 71 for how to download DCC.

### 6-3-5. Downloading DCC from the projector for use

The execution file of DCC is integrated in the projector. This section describes the procedure for downloading the execution file of DCC from the projector to your computer for use.

The following requirements must be met for this function.

- Java Runtime Environment (JRE) is installed on your computer.
- The following Web browser is being used.  
When using Windows: Internet Explorer 7.X or later, Mozilla Firefox 2.X or later  
When using Linux: Mozilla Firefox 3.6 or later

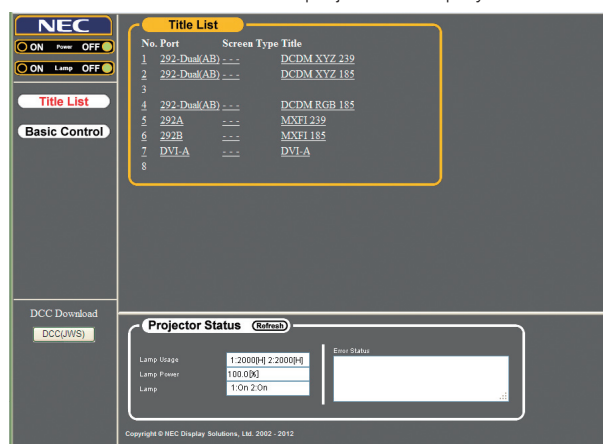
**1** Start the Web browser on your computer.

**2** Enter “http://(IP address of projector)” for the address of the Web browser, and press the Enter key.

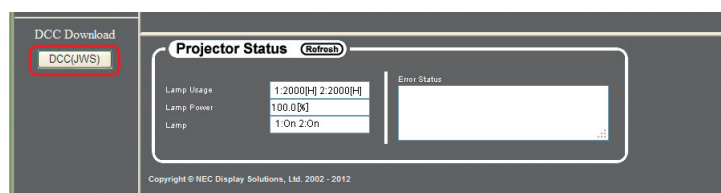
In the initial status, the IP address of the projector is set to “192.168.10.10”.

In this case, enter “http://192.168.10.10”.

The HTTP server screen of the projector is displayed.



**3** Click the [DCC(JWS)] button of DCC Download.



The splash screen of Java is displayed, and the security warning screen for the digital signature is displayed.

**NOTE** When using Firefox as your Web browser, a dialog confirming how to open the file is displayed.

- For Windows, select [Java(TM) Web Start Launcher].
- For Linux, select [JavaWS].

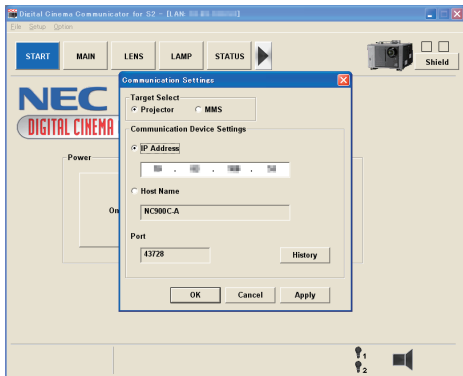
**4** On the security warning screen, confirm the following points and then click the run button.

- [DCC Starter JWS] is displayed for the name.
- [NEC Display Solutions, Ltd.] is displayed for the issuer.
- [(IP address of connected projector)] is displayed for the download source.

The DCC Starter starts and the downloading of DCC starts. Downloading definitely is performed when you click this the first time. From the second time, downloading is not performed when the version of DCC integrated in the projector matches the version of DCC already downloaded to your computer.

**TIP** If you select the check box, the security warning screen is not displayed from the next time.

**5** When downloading completes, DCC starts.



**TIP** The downloaded DCC execution file is saved in the following folder. (If the folder does not exist, a folder is created automatically.)

For Windows: "C:\DCC\ (IP address of connected projector)"

For Linux: "~/wine/drive\_c/DCC/(IP address of connected projector)"



# 6-4. Writing of the log file (Save Information)

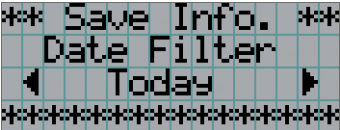
Log files saved on the main unit can be written to USB memory connected to the USB port of the main unit. To perform the writing of the log file, use the following procedure.

**1** Connect the USB memory to the USB port of the main unit.

Wait until the USB memory is recognized, and it enters the condition in which it can be used (5 or more seconds). For details, refer to the instruction guide of the USB memory.

**2** Simultaneously press the UP button and ENTER button.

The "Save Info." screen is displayed.



**TIP** If you press the EXIT button during operation, operation is stopped and the display returns to the normal screen.

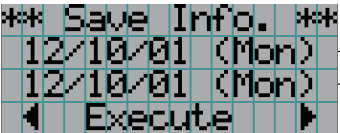
**3** Press the LEFT/RIGHT button, and select the log file writing period.

The items that can be selected are as follows.

Today	Writes today's log files.
7days	Writes 7 days' log files from today.
30days	Writes 30 days' log files from today.
Manual	Writes the specified period's log files.

**4** Press the ENTER button.

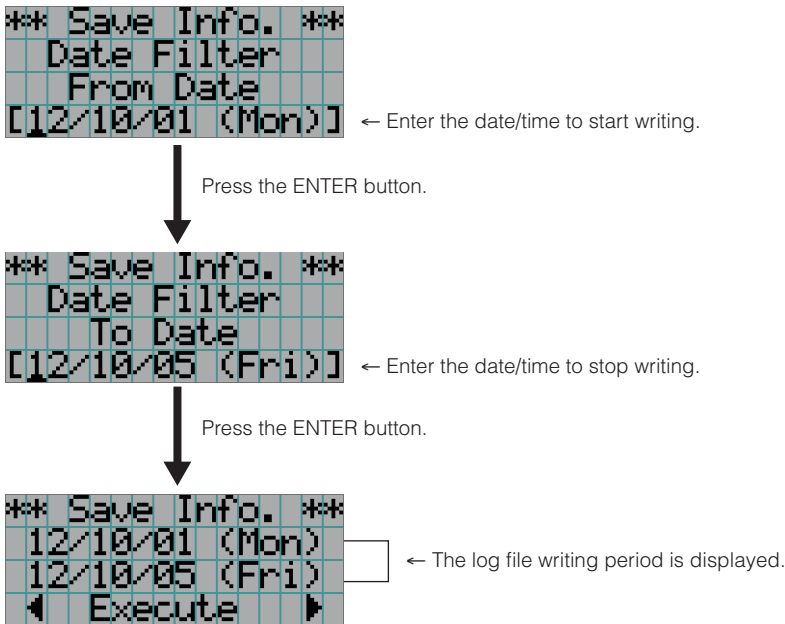
When "Today", "7days", or "30days" is selected, the log file writing period is displayed.



← The log file writing period is displayed.

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When "Manual" is selected, specify the log file writing period. For how to enter numerals, refer to "4-1-3. How to enter alphanumeric characters" (See page 41). If you press the ENTER button, the display advances to the following screen.



- 5** Confirm the log file writing period, press the LEFT/RIGHT button to select "Execute," and press the ENTER button.

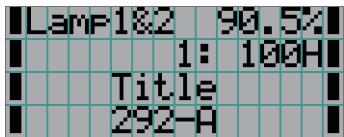
The log files of the specified period are written to the USB device. When writing completes, the following screen is displayed.



**TIP** If you select "Cancel" and press the ENTER button, the writing of log files is stopped, and the display returns to the normal screen.

- 6** Press the ENTER button.

The display returns to the normal screen.



- 7** Remove the USB from the USB port of the main unit.

### 6-4-1. Names of log files

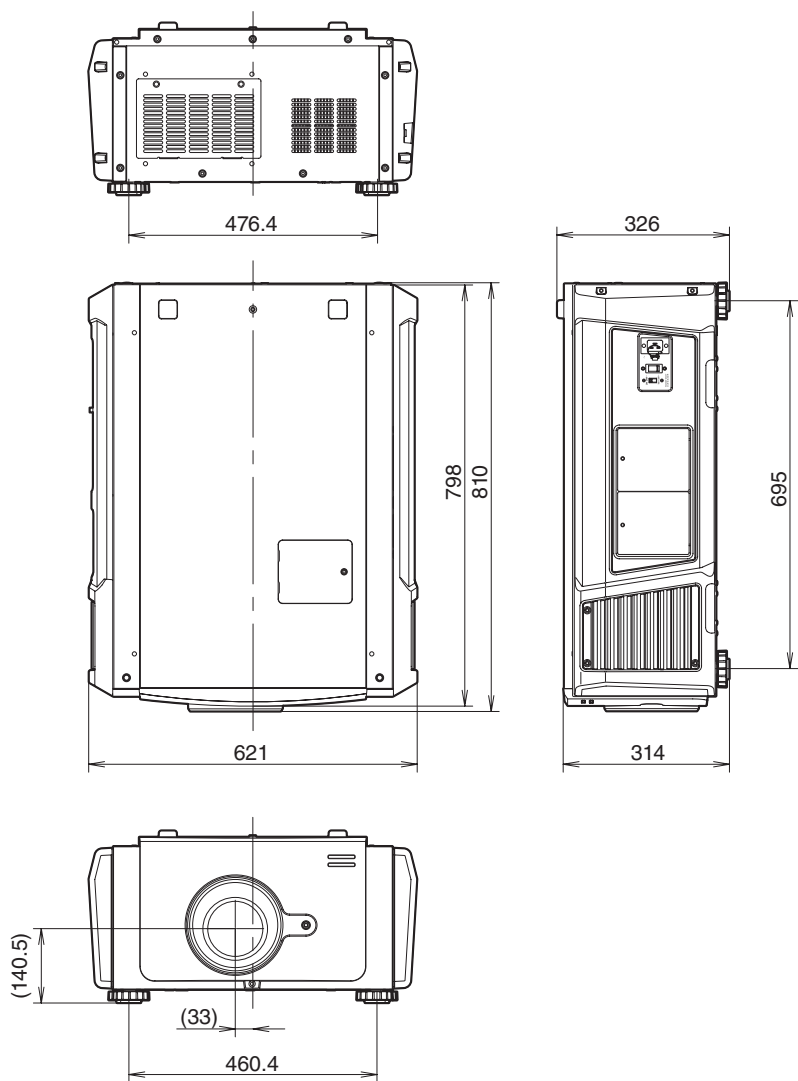
Written log files are saved with the following file names.

N?YYMMDD.txt

N?	This shows the model of projector. The numeral of the "?" portion differs depending on the model. N1: NC3200S Series N3: NC1200C Series N4: NC2000C Series N6: NC3240S Series N7: NC900C Series
YYMMDD	Shows the date/time when written. YY: Year (lower 2 digits) MM: Month (2 digits) DD: Date (2 digits)

For example, if NC900C-A log file is written on October 1, 2012, it is saved with the "N7121001.txt" file name.

# 6-5. Outline Drawing



Units: mm

## 6-6. Specifications

Model name	NC900C-A		
Projection method	3 chip DLP Cinema® method		
	0.69-inch DC2K chip		
Panel resolution	2048 x 1080		
Lamp type	350W AC lamp		
Screen sizes	7 m to 8.1 m @14ft-L / Screen Gain 1.3, Max. 9.5 m @14ft-L / Screen Gain 1.8 (Depends on setup conditions)		
Contrast ratio	1600:1 with DCI specified color representation		
Lens adjustment function	Motorized lens shift (vertical/horizontal), motorized zoom, motorized focus, douser		
Signal input ports	When shipped from factory: Empty (for mounting optional components) (Note 1)		
External Control	RS-232C (D-sub 9pin) x 1 GPIO port (D-sub 37 pin) x 1 Service terminal (stereo mini jack) x 1 3D CTL (D-sub 15 pin) x 1 USB (Type A) x 1 Interlock port x 1 Ethernet port (G-bit RJ-45) x 1		
Power supply voltage	AC 100 to 130 V, 50/60 Hz single phase AC 200 to 240 V, 50/60 Hz single phase		
Input current	10.3 to 7.9 A (100 to 130 V) 5.1 to 4.3 A (200 to 240 V)		
Power consumption	1023 W (100 to 130 V) (Note 2) 985 W (200 to 240 V) (Note 2)		
Cooling method	Cooling air system (includes dust filter)		
Noise level	Less than 52 dB		
Installation	Orientation: Desktop/front, Desktop/rear, Ceiling/front, Ceiling/rear		
Net weight	44 kg (Excluding lens)		
Dimensions	621 mm (W) x 798 mm (D) x 314 mm (H) (Does not include protruding portions, includes foot.)		
Environment	Operating temperature: 10 to 35°C Operating humidity: 10 to 85% (non-condensing) Storage temperature: -10 to 50°C Storage humidity: 10 to 85% (non-condensing) Operating altitude: 0 to 3000m/9800 feet (1600m/5500 feet to 3000m/9800 feet: Set "Fan Speed Mode" to "High Altitude")		
Regulations		<Safety>	<EMC>
	USA	UL60950-1 2nd Edition	FCC Part15 Class A
	Canada	CSA60950-1 2nd Edition	ICES-003 Class A
	Europe	EN60950-1 2nd Edition	EN55022 Class A, EN55024, EN61000-3-2/-3-3
	Russia	IEC60950-1 2nd Edition, GOST-R, Hygenic	EN55022 Class A, EN55024, EN61000-3-2/-3-3
	Oceania	IEC60950-1 2nd Edition	AS/NZS CISPR. 22 Class A
	Asia	IEC60950-1 2nd Edition	EN55022 Class A, EN55024, EN61000-3-2/-3-3
	Korea	K60950-1	K00022 Class A, K00024
	Saudi Arabia	SASO	EN55022 Class A, EN55024, EN61000-3-2/-3-3
	Japan	J60950-1	VCCI Class A, JIS C 61000-3-2, J55022 Class-A

(Note 1) The video input slots are empty when the device is shipped. The optional Signal Input Board is available as separate optional products.

(Note 2) The value is typical.

\* Note that these specifications and design can change without prior notice.

## 6-7. Power Cable

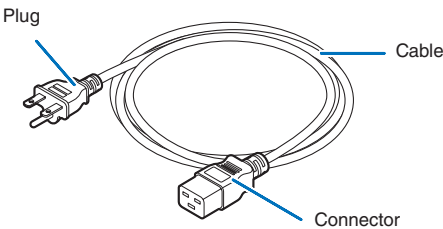
**NOTE** Ask your dealer for the power cable to select and purchase.

### Power Cable Electrical Specification

The projector is equipped with an IEC60320 C19 connector to connect an AC power supply cable. Ensure that the AC power cables that connect the connectors built into the projector to the AC power mains have the current capacities as shown below.

Power supply voltage	Projector input current	Power cable current capacity
AC 100–130V	10.3 to 7.9A	125V 15A or higher 250V 15A or higher
AC 200–240V	5.1 to 4.3A	250V 15A or higher

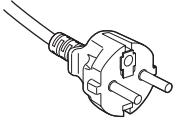

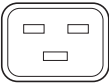
### Type of Power Cable



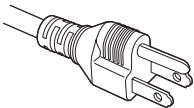

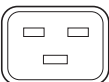
Use plugs, cables, and connectors that are suitable for the regulations of the country of installation, as shown in the following table.

**NOTE** For users in North America  
Use a power cable no longer than 4.5m/14.76 ft according to National Electrical Code.

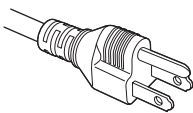

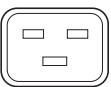
### Germany

Plug	Cable	Connector
CEE 7 	H05VV-F 3G1.5 	IEC 320 C19 

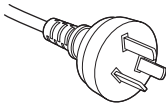

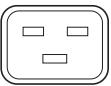
### USA

Plug	Cable	Connector
NEMA 5-15P 	SJT 3 x AWG 14 	IEC 320 C19 

Japan

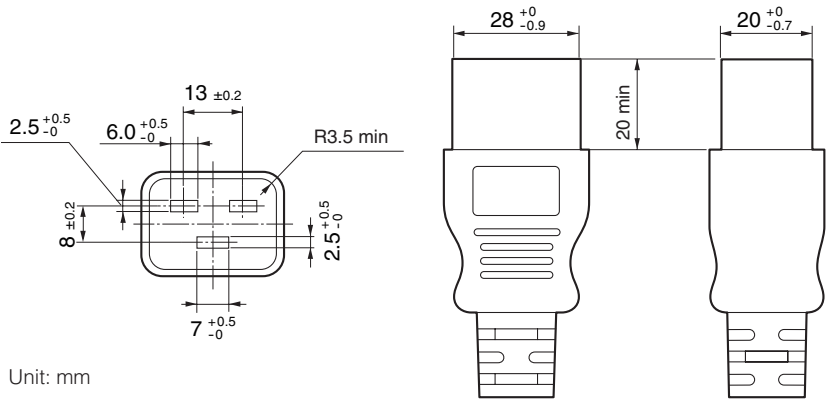
Plug	Cable	Connector
JIS C 8303 	VCTF 3 x 2.0mm 	IEC 320 C19 

China

Plug	Cable	Connector
GB2099 	RVV 300/500 	GB17465.1 

Connector

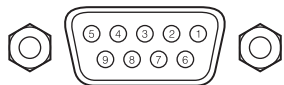
Dimensions of the connector of the power cable are shown below.



## 6-8. Pin Assignment and Functions of Terminal

### 6-8-1. PC CONTROL connector (RS-232) (D-Sub 9 pin)

This is an RS-232C interface for controlling the projector from a PC. The projector operates as a DCE (Data Communication Equipment), so use a straight cable when connecting to a PC.



Pin No.	RS-232C Signal Name	Functions as RS-232C	Projector Connector Operation
1	CD	Carrier detection	Not used (N.C.)
2	RXD	Reception data	Data transmission to an external device
3	TXD	Transmission data	Data reception from an external device
4	DTR	Data Terminal ready (Note)	Connection to 6 pins
5	GND	Signal GND	Signal GND
6	DSR	Data set ready (Note)	Connection to 4 pins
7	RTS	Transmission request	SYSTEM: Hi-Z (Not used) CINEMA: Hi-Z (Used)
8	CTS	Transmission available	SYSTEM: Fixed at -6.5 V (Not used) CINEMA: $\pm 10.5$ V (Used: Depends on communication status)
9	RI	Ring indicator	Not used (N.C.)

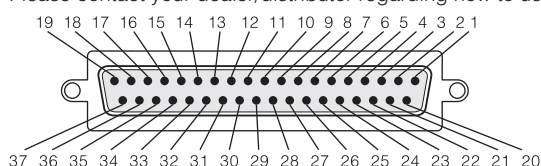
(Note) Do not use DTR and DSR signals when communicating.



## 6-8-2. External control connector (GP I/O) (D-Sub 37 pin)

It is possible to control the projector with an external device and to control the external device from the projector using an external control connector (GPIO: General Purpose I/O Ports). Each pin is electrically separated from the projector internal circuits by a photo-coupler. 8 port input and 8 port output are available.

Please contact your dealer/distributor regarding how to use and to operate them.



Pin view of female connector

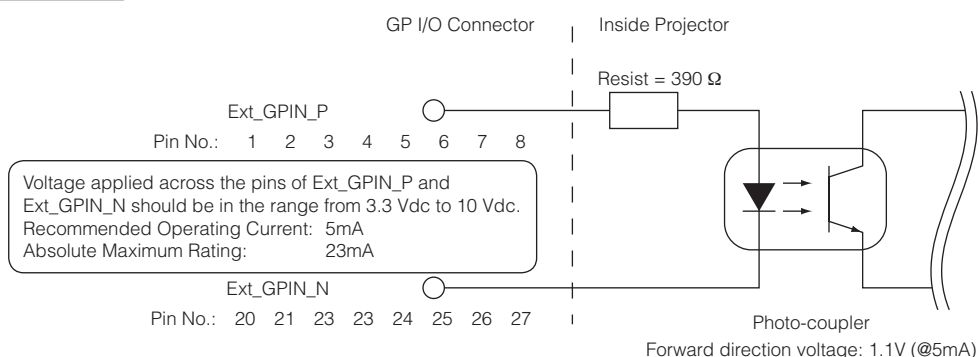
Pin No.	Signal Name	I/O	Pin No.	Signal Name	I/O
1	GPIN1+ (3D L/R Input Reference +)	IN	20	GPIN1- (3D L/R Input Reference -)	IN
2	GPIN2+ (3D L/R Display Reference +)	IN	21	GPIN2- (3D L/R Display Reference -)	IN
3	GPIN3+ (system reserved)	IN	22	GPIN3- (system reserved)	IN
4	GPIN4+ (system reserved)	IN	23	GPIN4- (system reserved)	IN
5	EXT_GPIN1+ (Control and Title Selection +)	IN	24	EXT_GPIN1- (Control and Title Selection -)	IN
6	EXT_GPIN2+ (Control and Title Selection +)	IN	25	EXT_GPIN2- (Control and Title Selection -)	IN
7	EXT_GPIN3+ (Control and Title Selection +)	IN	26	EXT_GPIN3- (Control and Title Selection -)	IN
8	EXT_GPIN4+ (Control and Title Selection +)	IN	27	EXT_GPIN4- (Control and Title Selection -)	IN
9	GPOUT1+ (External 3D L/R Output Reference +)	OUT	28	GPOUT1- (External 3D L/R Output Reference -)	OUT
10	GPOUT2+ (system reserved)	OUT	29	GPOUT2- (system reserved)	OUT
11	GPOUT3+ (system reserved)	OUT	30	GPOUT3- (system reserved)	OUT
12	GPOUT4+ (Internal 3D L/R Output Reference +)	OUT	31	GPOUT4- (Internal 3D L/R Output Reference -)	OUT
13	EXT_GPOUT1+ (Projector Ready/Busy +)	OUT	32	EXT_GPOUT1- (Projector Ready/Busy -)	OUT
14	EXT_GPOUT2+ (Projector Error Status +)	OUT	33	EXT_GPOUT2- (Projector Error Status -)	OUT
15	EXT_GPOUT3+ (IMB Play/End Status +)	OUT	34	EXT_GPOUT3- (IMB Play/End Status -)	OUT
16	EXT_GPOUT4+ (Projector Heartbeat +)	OUT	35	EXT_GPOUT4- (Projector Heartbeat -)	OUT
17	NC (not connected)	-	36	NC (not connected)	-
18	GND	PWR	37	GND	PWR
19	GND	PWR	-	-	-

EXT\_GPIN1 - EXT\_GPIN4: You can control the projector externally by combinations of input signals (high/low).  
(Projector power supply/turning the lamp on or off/image mute/title selection)

EXT\_GPOUT1 - EXT\_GPOUT4: Functions in the above table are default settings. You can change the assigned functions.

## 6. Appendix

### Input Connector



### • Using GPIO Control

Momentary “ON” pulse enables you to control projector. To enable “ON” pulse, hold it for at least 500 ms. Hold “OFF” for at least 500 ms before “ON”. (See page 83)

Here is function list to control projector by using GPIO port.

Pin No.	Photo-coupler ON/OFF				Function
1-20	ON/OFF				3D L/R timing signal input ON/OFF
2-21	ON/OFF				3D L/R display timing signal input ON/OFF
3-22	-				System reserved (used internally)
4-23	-				System reserved (used internally)
5-24 6-25 7-26 8-27	8-27	7-26	6-25	5-24	The following functions apply depending on the combination of input terminals.
	OFF	OFF	OFF	ON	Power ON
	OFF	OFF	ON	OFF	Power OFF
	OFF	OFF	ON	ON	Lamp ON
	OFF	ON	OFF	OFF	Lamp OFF
	OFF	ON	OFF	ON	Image douser ON
	OFF	ON	ON	OFF	Image douser OFF
	OFF	ON	ON	ON	System reserved (used internally)
	ON	OFF	OFF	OFF	Selects the title registered to the preset button 1
	ON	OFF	OFF	ON	Selects the title registered to the preset button 2
	ON	OFF	ON	OFF	Selects the title registered to the preset button 3
	ON	OFF	ON	ON	Selects the title registered to the preset button 4
	ON	ON	OFF	OFF	Selects the title registered to the preset button 5
	ON	ON	OFF	ON	Selects the title registered to the preset button 6
	ON	ON	ON	OFF	Selects the title registered to the preset button 7
	ON	ON	ON	ON	Selects the title registered to the preset button 8

Example for dousing image: Input ON to 5-24 and 7-26 while 6-25 and 8-27 are OFF.

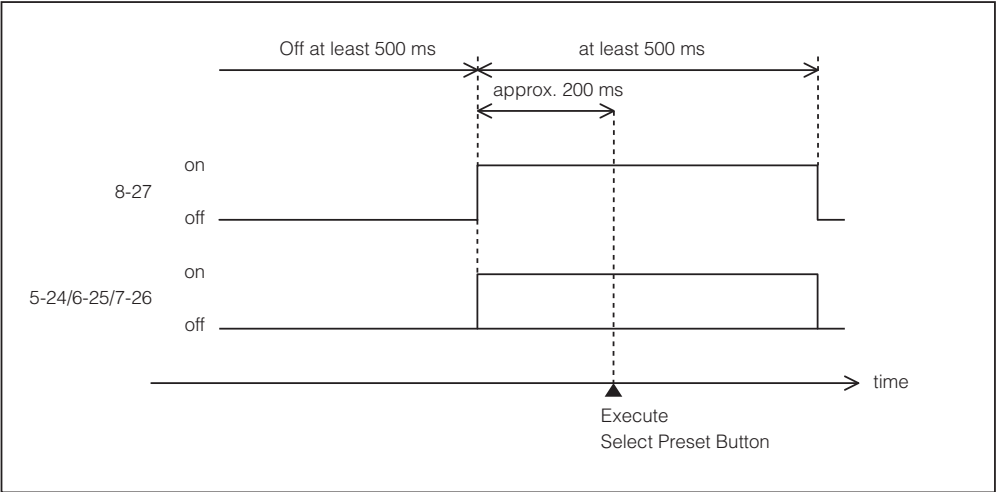
Example for selecting the preset button 2: Input ON to 5-24 and 8-27 while 6-25 and 7-26 are OFF.

### NOTE

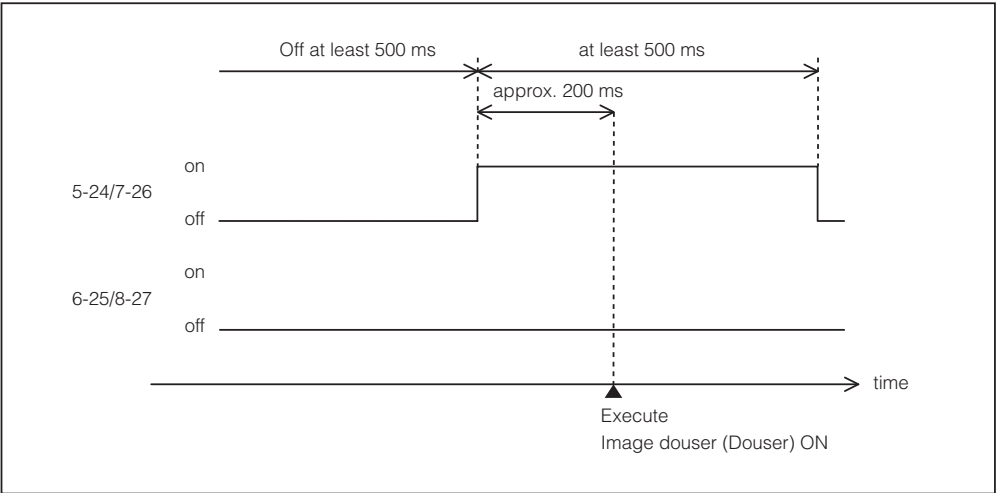
- The operation command coming from GPI/O port will be canceled when the projector is processing other tasks, such as lamp cooling and switching title.
- Set all other pins than those in use to “OFF”.
- The operation command is executed upon continuous input of the “ON” pulse for approximately 200 ms.

•Timing chart of GPIO control

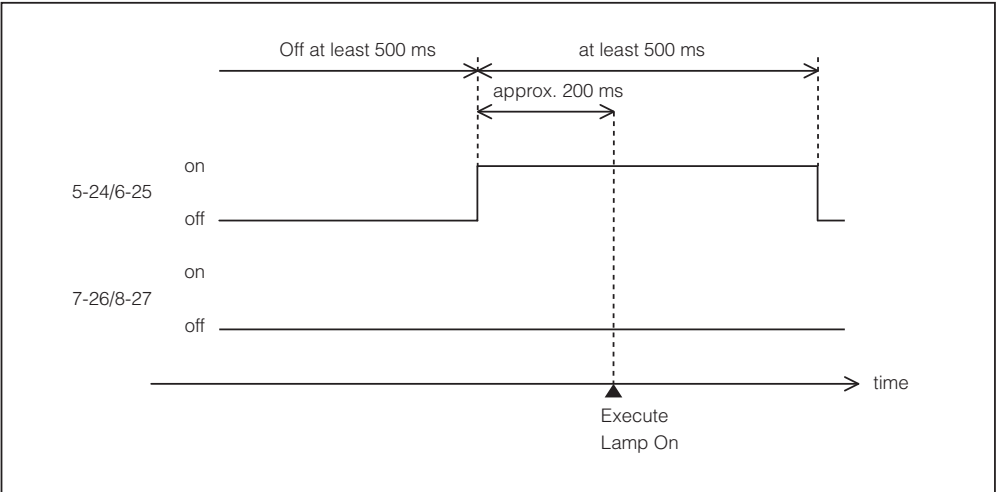
Example of Select Preset Button



Example for turning the image douser (Douser) on

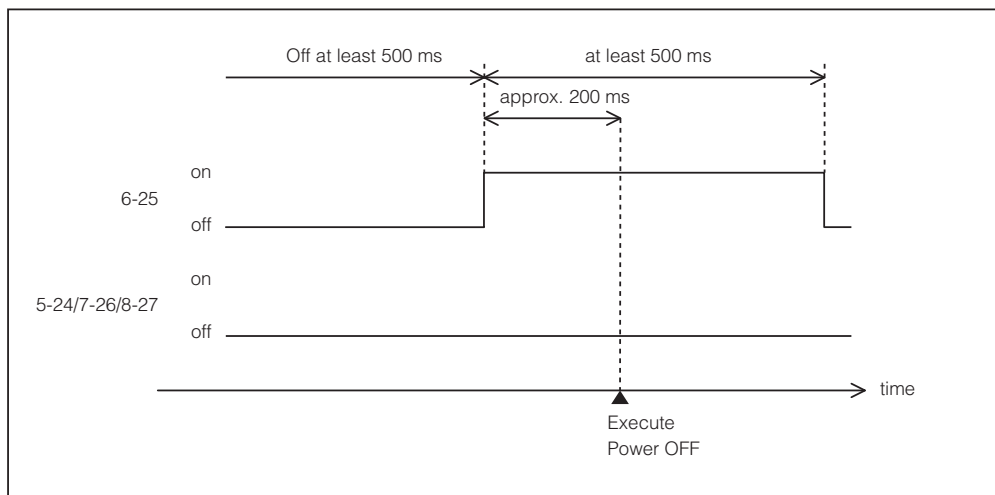


Example of Lamp On

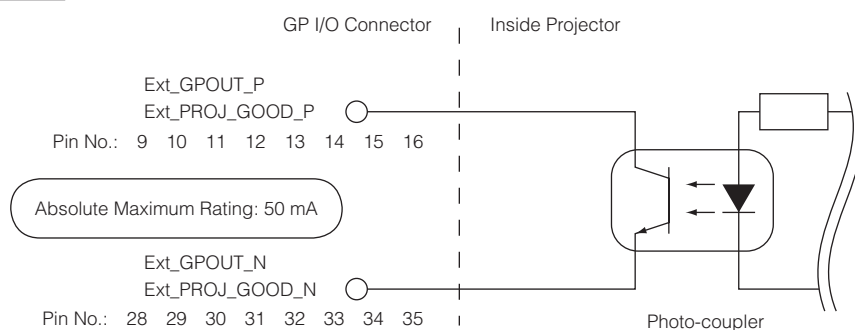


## 6. Appendix

Example for turning the power off



## Output Connector



### • Using GPIO Control

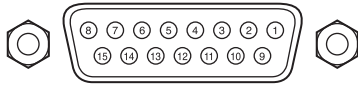
You can use GPIO control for the projector's health check and error check. Also, you can use the output as the trigger to control external devices.

The following functions are assigned to the pin number 13-32, 14-33, 15-34, and 16-35 (EXT\_GPOUT1 - EXT\_GPOUT4) as the default. You can change the assigned functions.

Pin No.	Photo-coupler ON/OFF	Function
9-28	ON/OFF	External 3D L/R timing signal output ON/OFF
10-29	–	System reserved (used internally)
11-30	–	System reserved (used internally)
12-31	ON/OFF	Internal 3D L/R timing signal output ON/OFF
13-32	ON/OFF	GPIO control status check ON: GPIO control (input) is unavailable. OFF: GPIO control (input) is available.
14-33	ON/OFF	Error check ON: Error OFF: No error
15-34	ON/OFF	IMB status check ON: The content is being played. OFF: The content is stopped/paused.
16-35	ON/OFF	Health check (heart beat) ON and OFF are alternately output when operations are normal.

### 6-8-3. 3D connector (D-sub 15 pin)

This is used to connect a 3D image system to the projector.



Pin view of a female connector

Pin No.	Signal Name	I/O	Function
1	+12V	PWR	Supplies power (+12V) to the 3D image system
2	GNDC	GND	Ground
3	GNDC	GND	Ground
4	RS232_RX	IN	Data transmission from the 3D image system (1200 Baud, 8 bits, No Parity)
5	RS232_TX	OUT	Data transmission to the 3D image system (1200 Baud, 8 bits, No Parity)
6	CONN_3D_MODE+	OUT	3D mode status (+) (Connects to the collector of the output transistor of the photo coupler inside the projector)
7	CONN_SYNC+	OUT	3D L/R switching timing signal (+) (Connects to the collector of the output transistor of the photo coupler inside the projector)
8	3D_INPUT_REFERENCE+	IN	3D L/R timing signal (+) (Connects to the anode of the input diode of the photo coupler inside the projector)
9	+12V	PWR	Supplies power (+12V) to the 3D image system
10	3D_INPUT_REFERENCE-	IN	3D L/R timing signal (-) (Connects to the cathode of the input diode of the photo coupler inside the projector)
11	3D_DISPLAY_REFERENCE+	IN	3D L/R display timing signal (+) (Connects to the anode of the input diode of the photo coupler inside the projector)
12	3D_DISPLAY_REFERENCE-	IN	3D L/R display timing signal (-) (Connects to the cathode of the input diode of the photo coupler inside the projector)
13	CONN_3D_MODE-	OUT	3D mode status (-) (Connects to the emitter of the output transistor of the photo coupler inside the projector)
14	CONN_SYNC-	OUT	3D L/R switching timing signal (-) (Connects to the emitter of the output transistor of the photo coupler inside the projector)
15	N/C	-	Unused

## 6-9. Related products list

Product name		Model name
Lens	Zoom lens 1.36 to 1.63	NP-9LS14Z
	Zoom lens 1.63 to 2.03	NP-9LS16Z
	Zoom lens 2.03 to 2.72	NP-9LS20Z
	Zoom lens 2.72 to 4.07	NP-9LS27Z
	Zoom lens 4.07 to 6.34	NP-9LS40Z
Lamp	Replacement Lamp	NP-9LP01
Air Filter	Replacement Filter	NP-9AF01
Lamp and Air Filter Kit	Replacement Lamp and Filter	NP-9LF01
Integrated Media Server	Integrated Media Server	NC-90MS01
Signal Input Board (supports CineLink™ 2) (Note 1)	Signal Input Board	NC-80LB01-B
Signal Input Board (does not support CineLink™ 2) (Note 1)	Signal Input Board	NC-80DS01-B

(Note 1) What is HDCP/HDCP technology?

HDCP is an acronym for High-bandwidth Digital Content Protection. High bandwidth Digital Content Protection (HDCP) is a system for preventing illegal copying of video data sent over a Digital Visual Interface (DVI).

If you are unable to view material via the DVI input, this does not necessarily mean the projector is not functioning properly. With the implementation of HDCP, there may be cases in which certain content is protected with HDCP and might not be displayed due to the decision/intention of the HDCP community (Digital Content Protection, LLC).





**DLP Cinema® Projector**

**NEC**

# **Installation Manual**

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DLP Cinema® Projector

**NC900C-A**

NEC Display Solutions, Ltd.

Model No. NP-NC900C-A
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# Introduction

---

DLP Cinema Projector Installation and Adjustment NEC Display Solutions, Ltd. Manual (This document) describes the procedures to install, adjust and maintain the projector (NC900C-A) and peripheral devices. For safe and correct installation, adjustment and use of the projector, carefully read this document before installation.

Refer to the operation manuals of the applicable products for basic operation and remarks of the projector. This document expects the readers who have basic knowledge about projector installation. After reading, please keep this document under care of the company which installed or adjusted the projector.

## The product name used in this manual

In this manual, the device name is written as listed below. If the function has difference by devices, the product name is written in the text.

- |                                      |                           |
|--------------------------------------|---------------------------|
| • NC900C-A                           | Projector                 |
| • NC-80LB01-B/NC-80DS01-B            | Signal input board or SIB |
| • NC-90MS01                          | Media block or IMB        |
| • Digital Cinema Communicator for S2 | DCC for S2                |

# Important Information

**Precautions:** Please read this manual carefully before using your **NC900C-A** and keep the manual handy for future reference.

The NC900C-A (projector unit) is called the “projector”, and the NC-90MS01 (integrated media server) is called the “media block” or “IMB” in this manual.

- DLP, DLP Cinema and their respective logos are trademarks or registered trademarks of Texas Instruments.
- CineLink is a trademark of Texas Instruments.
- Other product names and manufacturer names described in this manual are the registered trademarks or trademarks of their respective companies.
- The display screens and illustrations shown in this manual may differ slightly from the actual ones.
- GPL/LGPL Software Licenses

The product includes software licensed under GNU General Public License (GPL), GNU Lesser General Public License (LGPL), and others.

For more information on each software, see “readme.pdf” inside the “about GPL&LGPL” folder on the supplied CD-ROM.



## **WARNING:**

TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.



## **CAUTION:**

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT OPEN COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



This symbol warns the user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any part inside of this unit.



This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore, it should be read carefully in order to avoid any problems.

## **DOC compliance Notice**

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

## **Machine Noise Information Regulation - 3. GPSGV,**

The highest sound pressure level is less than 70 dB (A) in accordance with EN ISO 7779.



## **WARNING:**

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.



## **CAUTION:**

- In order to reduce any interference with radio and television reception use a signal cable with ferrite core attached. Use of signal cables without a ferrite core attached may cause interference with radio and television reception.
- This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the installation manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

## **Important Safeguards**

These safety instructions are to ensure the long life of your projector and to prevent fire and shock. Please read them carefully and heed all warnings.

## **Installation**

1. Consult your dealer for information about transporting and installing the projector. Do not attempt to transport and install the projector yourself.  
The projector must be installed by qualified technicians in order to ensure proper operation and reduce the risk of bodily injury.
2. Place the projector on a flat, level surface in a dry area away from dust and moisture. Tilting the front of the projector up or down from level could reduce lamp life. Do not put the projector on its side when the lamp is on. Doing so may cause damage to the projector.
3. Do not place the projector in direct sunlight, near heaters or heat radiating appliances.
4. Exposure to direct sunlight, smoke or steam could harm internal components.
5. Handle your projector carefully. Dropping or jarring your projector could damage internal components.
6. To carry the projector, a minimum of four persons are required.
7. Do not hold the lens part with your hand. Otherwise the projector may tumble or drop, causing personal injury.

8. Do not place heavy objects on top of the projector.
9. Turn off the projector, and disconnect the power cable before moving the projector.
10. The cooling fan settings need to be configured when using the projector in a location at an altitude of approximately 5500 feet/1600 meters or higher. Refer to "About High Altitude mode" (page 6) for details.
11. If you wish to have the projector installed on the ceiling;
  - Do not attempt to install the projector yourself.
  - The projector must be installed by qualified technicians in order to ensure proper operation and reduce the risk of bodily injury.
  - In addition, the ceiling must be strong enough to support the projector and the installation must be in accordance with any local building codes.
  - Please consult your dealer for more information.Refer to "2-2-1. Installing the Projector on the Ceiling" (page 30) for details on the attachment positions when installing on the ceiling.

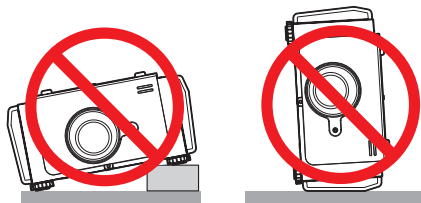
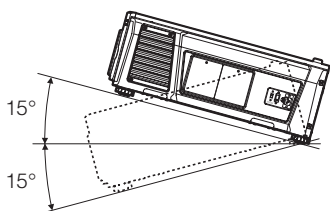


### WARNING:

1. Do not cover the lens with the supplied lens cap or equivalent while the projector is on. Doing so can lead to distorting or melting of the cap and burning your hands due to the heat emitted from the light output.
2. Do not place any objects, which are easily affected by heat, in front of the projector lens. Doing so could lead to the object melting from the heat that is emitted from the light output.



Do not tilt the projector forward or back at a greater angle than 15°. Doing so may result in malfunction. When mounting the projector on the ceiling, select an appropriate option for [Fan Tilt Setting].



## Power Supply

1. The projector is so designed that it operates with the power supply voltage described below.
  - AC100–130V 10.3 to 7.9 A 50/60Hz Single-phase
  - AC200–240V 5.1 to 4.3 A 50/60Hz Single-phaseEnsure that your power supply fits this requirement before attempting to use your projector.
2. The power cable is not included with the projector. Use a power cable that meets the standards and power supply voltage of the country where you are using the projector. Refer to "2-3. Selecting the Power Cable (English)" for details.
3. Handle the power cable carefully. A damaged or frayed power cable can cause electric shock or fire.
  - Do not bend or tug the power cable excessively.
  - Do not place the power cable under the projector, or any heavy object.
  - Do not cover the power cable with other soft materials such as rugs.
  - Do not heat the power cable.
4. Placing the power cable and the signal cable closely to each other can cause beat noise. If this happens, keep the two separated so that beat noise is not generated. Beat noise is corruption of the picture often seen as a rolling band moving through the image.
5. Do not touch the projector during a thunder storm. Doing so can cause electrical shock or fire.
6. When installed on the ceiling, install the breaker in a location that is easy to reach by hand.

**For UK only:** In UK, a BS approved power cable with moulded plug has a Black (five Amps) fuse installed for use with this equipment. If a power cable is not supplied with this equipment please contact your supplier.

## Fire and Shock Precautions

1. Ensure that there is sufficient ventilation and that vents are unobstructed to prevent potentially dangerous concentrations of ozone and the build-up of heat inside your projector. Allow at least 12 inches (30cm) of space between your projector and a wall. In particular, clear a space of 27.6 inches (70 cm) or more in front of the air outlet on the rear surface and 19.8 inches (50 cm) or more in front of the air outlet on the lamp side. (See page 15)
2. Prevent foreign objects such as paper clips and bits of paper from falling into your projector. Do not attempt to retrieve any objects that might fall into your projector. Do not insert any metal objects such as a wire or screwdriver into your projector. If something should fall into your projector, disconnect it immediately and have the object removed by a qualified service person.

3. Turn off the projector, unplug the power cable and have the projector serviced by a qualified service personnel under the following conditions:
  - When the power cable or plug is damaged or frayed.
  - If liquid has been spilled into the projector, or if it has been exposed to rain or water.
  - If the projector does not operate normally when you follow the instructions described in this user's manual.
  - If the projector has been dropped or the cabinet has been damaged.
  - If the projector exhibits a distinct change in performance, indicating a need for service.
4. Keep any items such as magnifying glass out of the light path of the projector. The light being projected from the lens is extensive, therefore any kind of abnormal objects that can redirect light coming out of the lens, can cause unpredictable outcome such as fire or injury to the eyes.
5. When using a LAN cable:  
For safety, do not connect to the connector for peripheral device wiring that might have excessive Voltage.
6. Do not look into the lens while the projector is on. Serious damage to your eyes could result.



7. Do not try to touch the air outlets on the projector during normal projector operation as it is hot.

### Cleaning

1. Turn off the projector and unplug the power cable before cleaning the cabinet or replacing the lamp.
2. Clean the cabinet periodically with a cloth. If heavily soiled, use a mild detergent. Never use strong detergents or solvents such as alcohol or thinner.
3. Use a blower or lens paper to clean the lens, and be careful not to scratch or mar the lens.
4. Do not touch the projector or the power plug with wet hand. Doing so can cause electrical shock or fire.



### CAUTION:

1. Do not unplug the power cable from the wall outlet or projector when the projector is powered on. Doing so can damage the projector.
  - While projecting images
  - While cooling after the projector has been turned off. (The POWER button LED blinks in green while the fan is rotating, and "cooling..." is displayed on the LCD screen. The cooling fan continues to work for 90 seconds.)
2. Do not turn of the AC power for 90 seconds after the lamp is turned on and while the POWER indicator is blinking green. Doing so could cause premature lamp failure.
3. Use of a wall outlet with a 20 A or more circuit breaker is recommended.

### Caution on Carrying the Projector/Handling the Optional Lens

When shipping the projector with the lens, remove the lens before shipping the projector. Always attach the dust cap to the lens whenever it is not mounted on the projector. The lens and the lens shift mechanism may encounter damage caused by improper handling during transportation.

### Backing up authentication data

- In order to backup the authentication data needed to receive cinema video signals, a secondary battery is used inside the projector. If you have not used the projector at all for 6 months or more, the battery will lose power and the authentication data will not be able to be backed up. Always put the projector into standby mode for at least 48 hours once every 6 months to recharge the battery.

### Handling the Battery

- Take care when handling the battery, as it could cause fire, injury, or damage to surrounding objects.
  - Do not short out, dismantle, or place batteries in a fire.
  - Do not use the battery other than as designated.
  - Ensure that you have the batteries' polarity (+/-) aligned correctly.
- Dispose of used batteries according to your local regulations.
- There is a battery mounted on the electronic circuit board within the main unit. When disposing of the main unit, do not dismantle the device or remove the internal circuit board, and contact the shop where you purchased the product or your local government agency.

### Peripheral Devices and Connecting Cables

Use shielded cables for the cables connecting the IMB with peripheral devices (GPI, GPO, AES cables). If you use a non-shielded cable, there is a risk that radio interference may occur.

#### WARNING TO CALIFORNIA RESIDENTS:

Handling the cables supplied with this product will expose you to lead, a chemical known to the State of California to cause birth defects or other reproductive harm. WASH HANDS AFTER HANDLING

#### Note for US Residents

The lamp in this product contains mercury. Please dispose according to Local, State or Federal Laws.

### Lamp Replacement

1. Use the specified lamp for safety and performance.
2. To replace the lamp, follow all instructions provided on the user's manual.
3. Due to the lamp being sealed in a pressurized environment, there is a small risk of explosion, if not operated correctly. There is minimal risk involved, if the unit is in proper working order, but if damaged or operated beyond the recommended hours, the risk of explosion increases. Please note that there is a warning system built in, that displays following message when you reach a preset operating time "Lamp1 OverTime" or "Lamp2 OverTime". When you see this message please replace the lamp 1 or lamp 2. If the lamp does explode, smoke will be discharged from the vents located on the back of the unit. Do not stand in front of the vents during the operation. This smoke is comprised of glass in particulate form and Mercury gas, and will not cause harm if kept out of your eyes. If your eyes have been exposed to this gas, please flush your eyes out with water immediately and seek immediate medical attention. Do not rub your eyes! This could cause serious injury.

#### A Lamp Characteristic

The projector has a high-pressure mercury lamp as a light source.

A lamp has a characteristic that its brightness gradually decreases with age. Also repeatedly turning the lamp on and off will increase the possibility of its lower brightness.



#### CAUTION:

- DO NOT TOUCH THE LAMP immediately after it has been used. It will be extremely hot. Turn the projector off and then disconnect the power cable. Allow at least one hour for the lamp to cool before handling.
- When removing the lamp from a ceiling-mounted projector, make sure that no one is under the projector. Glass fragments could fall if the lamp has been burned out.

### About High Altitude mode

- Set [Fan Speed Mode] to [High Altitude] when using the projector at altitudes approximately 5500 feet/1600 meters or higher.  
Using the projector at altitudes approximately 5500 feet/1600 meters or higher without setting to [High Altitude] can cause the projector to overheat and the projector could shut down. If this happens, wait a couple minutes and turn on the projector.
- Using the projector at altitudes less than approximately 5500 feet/1600 meters and setting to [High Altitude] can cause the lamp to overcool, causing the image to flicker. Switch [Fan Speed Mode] to [Auto].
- Using the projector at altitudes approximately 5500 feet/1600 meters or higher can shorten the life of internal parts such as the lamp.

### Disposing of your used product



EU-wide legislation as implemented in each Member State requires that used electrical and electronic products carrying the mark (left) must be disposed of separately from normal household waste.

This includes projectors and their electrical accessories or lamps. When you dispose of such products, please follow the guidance of your local authority and/or ask the shop where you purchased the product.

After collecting the used products, they are reused and recycled in a proper way. This effort will help us reduce the wastes as well as the negative impact such as mercury contained in a lamp to the human health and the environment at the minimum level.

The mark on the electrical and electronic products only applies to the current European Union Member States.

### **For questions relating to unclear points or repairs**

Contact your dealer or the following support branch for questions relating to unclear points, malfunctions and repairs of the product.

### **In Europe**

Company Name: NEC Display Solutions Europe GmbH  
Address: Landshuter Allee 12-14, D-80637 Muenchen, Germany  
Telephone: +49 89 99699 0  
Fax Line: +49 89 99699 500  
Email Address: [info@nec-displays.com](mailto:info@nec-displays.com)  
WEB Address: <http://www.nec-display-solutions.com>

### **In North America**

Company Name: NEC Display Solutions of America, Inc.  
Address: 500 Park Boulevard, Suite 1100 Itasca, Illinois 60143, U.S.A.  
Telephone: +1 800 836 0655  
Fax Line: +1 800 356 2415  
Email Address: [pjtechsupport@necdisplay.com](mailto:pjtechsupport@necdisplay.com)  
WEB Address: <http://www.necdisplay.com/>

### **In China**

Company Name: NEC Solutions (China) Co., Ltd.  
Address: Rm 1903, Shining Building, 35 Xueyuan Rd, Haidian District Beijing 100191, P.R.C.  
Telephone: +8610 59342706

### **In Hong Kong, Taiwan, Singapore, Malaysia and Indonesia**

Company Name: Strong Westrex, Inc.  
Address: Room 4108 China Resources Building, No. 26 Harbour Road, Wanchai, Hong Kong.  
Telephone: +852 2827 8289  
Fax Line: +852 2827 5993  
Email Address: [hkstrong@netvigator.com](mailto:hkstrong@netvigator.com)

### **In South Korea**

Company Name: Hyosung ITX Co., Ltd.  
Address: 1F, Ire Building, 2, Yangpyeong-dong 4-ga, Yeongdeungpo-gu, Seoul, Korea 150-967  
Telephone: +82-2-2102-8591  
Fax Line: +82-2-2102-8600  
Email Address: [moneybear@hyosung.com](mailto:moneybear@hyosung.com)  
WEB Address: <http://www.hyosungitx.com>

### **In Australia and New Zealand**

Company Name: NEC Australia Pty Ltd  
Address: 26 Rodborough Road Frenchs Forest NSW 2086  
Telephone: 131 632 (from anywhere in Australia)  
Email Address: [displays@nec.com.au](mailto:displays@nec.com.au)  
WEB Address: <http://www.nec.com.au>

# Wichtige Informationen

**Vorsichtsmaßnahmen:** Lesen Sie sich dieses Handbuch bitte sorgfältig durch, bevor Sie den **NC900C-A** benutzen, und bewahren Sie das Bedienungshandbuch in greifbarer Nähe als spätere Referenz auf.

In diesem Handbuch wird der NC900C-A (Projektoreinheit) „Projektor“ und das NC-90MS01 (integrierter Media-Server) „Media Block“ oder „IMB“ genannt.

- DLP, DLP Cinema und die entsprechenden Logos sind Warenzeichen oder registrierte Warenzeichen von Texas Instruments.
- CineLink ist ein Warenzeichen von Texas Instruments.
- Andere in diesem Handbuch genannte Produkt- und Herstellernamen sind eingetragene Warenzeichen oder Warenzeichen der entsprechenden Unternehmen.
- Die Bildschirmanzeigen und Abbildungen in diesem Handbuch können leicht von den tatsächlichen Anzeigen abweichen.
- GPL/LGPL Softwarelizenzen

Das Produkt beinhaltet Software, die unter GNU General Public License (GPL), GNU Lesser General Public License (LGPL) und anderen lizenziert ist.

Für weitere Informationen zu jeder Software lesen Sie bitte die „readme.pdf“ im Ordner „about GPL&LGPL“ auf der mitgelieferten CD-ROM.



## WARNUNG:

ZUR VERMEIDUNG VON FEUER UND ELEKTRISCHEN SCHLÄGEN DARF DAS GERÄT WEDER REGEN NOCH FEUCHTIGKEIT AUSGESETZT WERDEN.



## ACHTUNG:

ZUR VERMEIDUNG EINES ELEKTRISCHEN SCHLAGES ÖFFNEN SIE NICHT DAS GEHÄUSE. INNERHALB DES GEHÄUSES BEFINDEN SICH KEINE FÜR DIE BEDIE- NUNG DES GERÄTES ERFORDERLICHEN TEILE. LAS- SEN SIE DEN KUNDENDIENST NUR VON HIERFÜR QUALIFIZIERTEN PERSONEN DURCHFÜHREN.



Dieses symbol warnt den bediener, dass inner- halb des gerätes unisolierte teile vorhanden sind, die hochspannung führen und deren berührung einen elektrischen schlag verursa- chen kann.



Dieses symbol macht den bediener darauf auf- merksam, dass wichtige, den betrieb und die wartung des gerätes betreffende schriften bei- gefügt sind. um irgendwelche probleme zu ver- meiden, sollten diese beschreibungen sorgfältig gelesen werden.

## Maschinenlärminformations-Verordnung – 3. GPSGV,

Der höchste Schalldruckpegel beträgt 70 dB(A) oder weni- ger gemäß EN ISO 7779.



## WARNUNG:

Dieses Gerät ist ein Produkt der Klasse A. Der Betrieb dieses Gerätes in Wohngebieten kann erhebliche Störun- gen des Funkempfangs verursachen. In diesem Fall muss der Benutzer diese Störungen beseitigen.



## ACHTUNG:

- Verwenden Sie ein Signalkabel mit Ferritkern, um Stö- rungen beim Radio- und Fernsehempfang zu reduzie- ren. Die Verwendung eines Signalkabels ohne Ferrit- kern kann Störungen beim Radio- und Fernsehempfang verursachen.
- Durch Prüfung dieses Gerätes nach FCC, Part 15 wurde die Einhaltung der Grenzwerte für digitale „Class A“- Geräte bestätigt. Diese Grenzwerte gelten für einen wirksamen Schutz gegen Störungen in Gewerbegebieten.  
Dieses Gerät erzeugt und verwendet Funkfrequenz- energie und kann diese ausstrahlen und kann, wenn es nicht entsprechend dem Bedienungshandbuch aufge- stellt und betrieben wird, Störungen beim Radio- und Fernsehempfang verursachen. Die Verwendung die- ses Gerätes in Wohngebieten verursacht wahrschein- lich Störungen, die der Benutzer in eigener Verantwortung zu beseiti- gen hat.

## Wichtige Sicherheitshinweise

Diese Sicherheitshinweise sollen eine lange Lebensdauer Ihres Projektors sicherstellen und vor Feuer und elektrischen Schlägen schützen. Lesen Sie diese Hinweise sorgfältig durch und beachten Sie alle Warnungen.

## Installation

1. Wenn Sie Informationen zum Transport und zur Installa- tion des Projektors wünschen, wenden Sie sich an Ihren Händler. Versuchen Sie nicht, den Projektor selbst zu transportieren oder zu installieren.  
Zur Gewährleistung eines ordnungsgemäßen Betriebs des Projektors und zur Minimierung des Risikos von Ver- letzungen von Personen muss der Projektor von qualifi- zierten Technikern installiert werden.
2. Stellen Sie den Projektor auf eine flache, waagerechte Fläche in einer trockenen Umgebung; frei von Staub und Feuchtigkeit.
3. Stellen Sie den Projektor weder in direktes Sonnenlicht noch in die Nähe einer Heizung oder sonstiger Hitze abstrahlender Einrichtungen.



4. Wenn das Gerät direktem Sonnenlicht, Rauch oder Dampf ausgesetzt wird, können interne Komponenten beschädigt werden.
5. Behandeln Sie Ihren Projektor vorsichtig. Fallenlassen oder starkes Schütteln kann interne Komponenten beschädigen.
6. Zum Tragen des Projektors werden mindestens vier Personen benötigt.
7. Halten Sie den Projektor nicht mit der Hand am Linsenbereich fest. Anderenfalls kann der Projektor umkippen oder herunterfallen und Verletzungen verursachen.
8. Legen Sie keine schweren Gegenstände auf den Projektor.
9. Schalten Sie den Projektor aus, und ziehen Sie das Netzkabel ab, bevor Sie den Projektor umsetzen.
10. Die Einstellungen des Kühlgebläses müssen angepasst werden, wenn der Projektor in Höhenlagen von ca. 5500 Fuß / 1600 Meter oder höher verwendet wird. Einzelheiten dazu finden Sie unter „Über den Modus Große Höhe“ (Seite 12).
11. Wenn der Projektor an der Decke installiert werden soll:
  - Versuchen Sie nicht, den Projektor selbst zu installieren.
  - Der Projektor muss von qualifiziertem Servicepersonal installiert werden, um einen ordnungsgemäßen Betrieb sicherzustellen und die Verletzungsgefahr zu reduzieren.
  - Die Decke muss für das Gewicht des Projektors eine ausreichende Festigkeit aufweisen und die Installation muss entsprechend den örtlichen Bauvorschriften ausgeführt werden.
  - Weitere Informationen erhalten Sie von Ihrem Fachhändler.

Einzelheiten zu den Befestigungspositionen bei Deckenmontage finden Sie unter „2-2-1. Installing the Projector on the Ceiling“ (Seite 30).

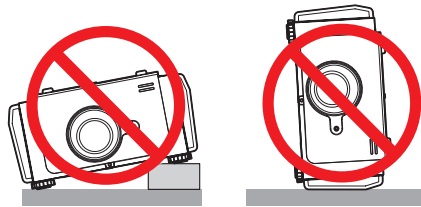
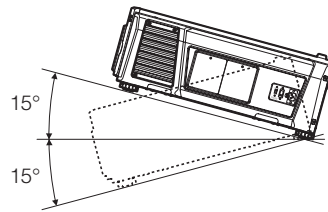


## **WARNUNG:**

1. Bedecken Sie die Linse nicht mit der mitgelieferten Linsenkappe o.ä. während der Projektor eingeschaltet ist. Dies kann eine Verformung oder ein Schmelzen der Kappe verursachen. Darüber hinaus würden Sie sich aufgrund der vom Lichtausgang abgestrahlten Hitze wahrscheinlich die Hände verbrennen.
2. Platzieren Sie keine hitzeempfindlichen Objekte vor der Projektorlinse. Dies könnte zum Schmelzen des Objekts durch die Hitze am Lichtausgang führen.



Kippen Sie den Projektor nicht mehr als 15° nach vorn oder hinten. Dies könnte zu Fehlfunktionen führen. Wählen Sie nach dem Anbringen des Projektors an der Decke eine geeignete Option für den [Fan Tile Setting].



## **Spannungsversorgung**

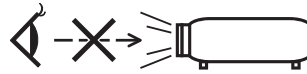
1. Der Projektor wurde so konzipiert, dass er mit der unten aufgeführten Netzspannung läuft.
  - 100–130 V Wechselstrom 10,3 bis 7,9 A 50/60 Hz Einphasenstrom
  - 200–240 V Wechselstrom 5,1 bis 4,3 A 50/60 Hz Einphasenstrom

Stellen Sie sicher, dass die vorhandene Spannungsversorgung diesen Vorgaben entspricht, bevor Sie versuchen, Ihren Projektor zu betreiben.
2. Es wird kein Netzkabel mit dem Projektor geliefert. Verwenden Sie ein Netzkabel, das die Normen und Netzspannung des Landes, in dem der Projektor verwendet wird, erfüllt. Siehe „2-4. Auswahl des Netzkabels (Deutsch)“ betreffend den Einzelheiten.
3. Behandeln Sie das Netzkabel vorsichtig. Ein beschädigtes oder durchgeschauertes Netzkabel kann elektrische Schläge oder einen Brand verursachen.
  - Biegen oder ziehen Sie das Netzkabel nicht übermäßig.
  - Legen Sie das Netzkabel nicht unter den Projektor oder unter einen anderen schweren Gegenstand.
  - Bedecken Sie das Netzkabel auch nicht mit weichen Materialien, z. B. mit Teppichen.
  - Erhitzen Sie das Netzkabel nicht.
4. Wenn Sie das Netzkabel und das Signalkabel in unmittelbarer Nähe zueinander platzieren, kann Überlagerungsrauschen auftreten. Vergrößern Sie in einem derartigen Fall den Abstand zwischen diesen beiden Kabeln.
5. Berühren Sie den Projektor auf keinen Fall während eines Gewitters. Wenn Sie dies nicht beachten, kann dies zu einem elektrischen Schlag oder einem Feuer führen.

6. Wenn der Projektor an der Decke montiert wird, installieren Sie den Leistungsschalter an einer Stelle, die von Hand leicht erreichbar ist.

### Vorsichtsmaßnahmen zur Vermeidung von Bränden und elektrischen Schlägen

1. Sorgen Sie für ausreichende Belüftung und stellen Sie außerdem sicher, dass die Lüftungsschlitze frei bleiben, damit sich innerhalb des Projektors kein Hitzestau bilden kann. Lassen Sie mindestens 30 cm Abstand zwischen Ihrem Projektor und der Wand. Halten Sie insbesondere einen Freiraum von mindestens 70 cm vor dem Luftauslass auf der Rückseite und von mindestens 50 cm vor dem Luftauslass auf der Lampenseite ein. (Seite 17)
2. Vermeiden Sie, dass Fremdgegenstände wie Büroklammern und Papierschnipsel in den Projektor fallen. Versuchen Sie nicht, in den Projektor gefallene Gegenstände selbst zu entfernen. Stecken Sie keine Metallgegenstände wie einen Draht oder Schraubendreher in Ihren Projektor. Wenn etwas in den Projektor gefallen ist, müssen Sie sofort den Netzstecker ziehen und den Gegenstand von qualifiziertem Servicepersonal entfernen lassen.
3. Schalten Sie den Projektor aus, ziehen Sie das Netzkabel ab und lassen Sie den ihn von einem qualifizierten Servicetechniker überprüfen, falls einer der folgenden Fälle zutrifft:
  - Wenn das Netzkabel oder der Netzstecker beschädigt oder ausgefranst ist.
  - Falls Flüssigkeit in den Projektor gelangt ist, oder wenn er Regen oder Wasser ausgesetzt war.
  - Falls der Projektor nicht normal arbeitet, obwohl Sie die in diesem Bedienungshandbuch beschriebenen Anleitungen befolgen.
  - Wenn der Projektor fallengelassen oder das Gehäuse beschädigt wurde.
  - Wenn der Projektor eine eindeutige Leistungsänderung aufweist, die einer Wartung bedarf.
4. Lichtkegel des Projektors fern. Da das von der Linse projizierte Licht umfassend ist, können alle abnormalen Gegenstände, die in der Lage sind, das aus der Linse austretende Licht umzulenken, unvorhersehbare Ereignisse wie z.B. einen Brand oder Augenverletzungen verursachen.
5. Wenn ein LAN-Kabel verwendet wird:  
Schließen Sie es aus Sicherheitsgründen nicht an den Anschluss der Peripheriegeräte-Verbindung an, das sie eine zu hohe Spannung führen könnte.
6. Schauen Sie nicht in die Linse, wenn der Projektor eingeschaltet ist. Dies könnte schwere Augenverletzungen zur Folge haben.



7. Berühren Sie während des normalen Projektorbetriebs nicht den Luftauslass am Projektor, da dieser heiß ist.



### WARNUNG:

#### Sehen Sie nicht direkt in den leuchtintensiven Lichtstrahl.

- Die in diesem Produkt befindliche Lampe ist eine intensive Licht- und Hitzequelle. Ultraviolette Licht ist ein Bestandteil des von der Lampe abgestrahlten Lichts. Die Aufstellung und Inbetriebnahme dieses Produkts darf ausschliesslich durch lizenzierte Fachkräfte oder geschulte Benutzer erfolgen, die ausreichend über die möglichen Gefahren unterrichtet sind, die von der in diesem Gerät entstehenden Ultraviolett-Strahlung ausgehen können.

### Reinigung

1. Schalten Sie den Projektor aus und trennen Sie das Netzkabel ab, bevor das Gehäuse gereinigt oder die Lampe ausgetauscht wird.
2. Reinigen Sie das Gehäuse regelmäßig mit einem Tuch. Bei starker Verschmutzung verwenden Sie ein mildes Reinigungsmittel. Reinigen Sie das Gerät niemals mit starken Reinigungs- oder Lösungsmitteln wie z.B. Alkohol oder Verdünnern.
3. Reinigen Sie die Linse mit einer Blaseinrichtung oder einem Linsentuch. Beachten Sie dabei, dass die Linsenoberfläche weder zerkratzt noch auf andere Weise beschädigt wird.
4. Berühren Sie den Projektor oder den Netzstecker nicht mit nassen Händen. Andernfalls kann es zu elektrischen Schlägen oder zu einem Brand kommen.



### ACHTUNG:

1. Ziehen Sie das Netzkabel nicht aus der Steckdose oder vom Projektor ab, während der Projektor mit Strom versorgt wird. Andernfalls kann der Projektor beschädigt werden.
  - Während der Projektion von Bildern
  - Während des Abkühlens, nach dem Projektor ausgeschaltet worden ist. (Die POWER-Anzeige blinkt grün, während das Gebläse in Betrieb ist, und auf der LCD-Anzeige wird „cooling...“ angezeigt. Das abkühlende Fan fährt fort, für 90 Sekunden zu arbeiten.)
2. Schalten Sie den Wechselstrom 90 Sekunden lang nicht aus, nachdem die Lampe eingeschaltet wurde und während die POWER-Anzeige grün blinkt. Andernfalls könnte die Lampe vorzeitig ausfallen.
3. Es wird empfohlen, eine Steckdose mit einem Schutzschalter von mindestens 20 A zu benutzen.

### Vorsicht beim Transportieren des Projektors/Umgang mit der optischen Linse

Wenn Sie den Projektor mit der Linse verschicken, entfernen Sie die Linse vor dem Versand. Bringen Sie immer die Staubschutzkappe an der Linse an, wenn diese nicht am Projektor angebracht ist. Die Linse und der Lens Shift Mechanismus können durch unsachgemäße Handhabung während des Transports beschädigt werden.

### Sicherung der Authentifizierungsdaten

- Eine Zweitbatterie ist im Projektor installiert, um die für den Empfang der Videosignale notwendigen Authentifizierungsdaten zu sichern. Falls der Projektor während den letzten 6 Monaten gar nicht mehr verwendet wurde, wird die Batterie leer sein, und die Authentifizierungsdaten können nicht gesichert werden. Lassen den Projektor alle 6 Monate mindesten 48 Stunden in Wartemodus um die Batterie wiederaufzuladen.

### Umgang mit der Batterie

- Seien Sie äusserst vorsichtig beim Hantieren der Batterie, um jedes Risiko von Brand, Verletzungen oder Beschädigungen anderer Objekte.
  - Die Batterien nicht kurzschliessen, demontieren oder ins Feuer werfen.
  - Die Batterien nicht anders als zum vorgesehenen Verwendungszweck benutzen.
  - Stellen Sie sicher, dass Sie die Batterie mit der richtigen Polung (+/-) eingelegt haben.
- Entsorgen Sie verbrauchte Batterien entsprechend den in Ihrem Land geltenden Bestimmungen.
- Auf der Leiterplatte der Haupteinheit ist eine Batterie montiert. Zerlegen Sie die Haupteinheit beim Entsorgen nicht, und entfernen Sie nicht die interne Leiterplatte. Wenden Sie sich stattdessen an den Händler, bei dem Sie das Gerät erworben haben, oder an die zuständige Behörde.

### Peripheriegeräte und Verbindungskabel

Verwenden Sie abgeschirmte Kabel für die Verbindungskabel zwischen dem IMB mit Peripheriegeräten (GPI-, GPO-, AES-Kabel). Wenn Sie ein nicht abgeschirmtes Kabel verwenden, besteht die Gefahr, dass Funkstörungen auftreten.

### Austausch der Lampe

1. Verwenden Sie für Sicherheit und Leistung die angegebene Lampe.
2. Um die Lampe auszuwechseln, folgen Sie allen Anweisungen in der Bedienungsanleitung.
3. Aufgrund der unter Druck luftdicht verschlossenen Lampe besteht bei falscher Handhabung eine geringe Explosionsgefahr. Wenn sich das Gerät in einwandfreiem Zustand befindet, ist dieses Risiko minimal; die Explosionsgefahr erhöht sich jedoch im Falle einer Beschädigung oder bei einer Benutzung über die empfohlenen Betriebsstunden hinaus. Beachten Sie bitte, dass im Gerät ein Warnsystem integriert ist, das bei Erreichen der voreingestellten Betriebsdauer die nachfolgende Meldung anzeigt: „Lamp1 Over Time“ oder „Lamp2 Over Time“. Wenn Sie diese Meldung sehen, wechseln Sie bitte die Lampe 1 oder Lampe 2 aus.

Im Falle einer Lampenexplosion tritt aus den Lüftungsschlitzen der Rückseite des Gerätes Rauch aus. Stehen Sie nicht vor den Entlüftungsöffnungen während des Betriebes. Dieser Rauch besteht aus einer ganz besonderen Form von Glas und aus Quecksilbers. Solange dieser Rauch nicht in die Augen gelangt, bestehen keinerlei gesundheitliche Risiken.

Wenn Ihre Augen dem Gas ausgesetzt worden sind, spülen Sie die Augen bitte sofort mit Wasser aus und konsultieren Sie einen Arzt. Reiben Sie die Augen nicht! Dies könnte ernsthafte Verletzungen zur Folge haben.

#### Eine Lampeneigenschaft:

Als Lichtquelle dient dem Projektor eine Hochdruck-Quecksilberlampe.

Zu den Eigenschaften der Lampe gehört es, dass ihre Helligkeit mit zunehmendem Alter teilweise abnimmt. Auch ein wiederholtes Ein- und Ausschalten der Lampe erhöht die Wahrscheinlichkeit einer geringeren Helligkeit.



#### ACHTUNG:

- BERÜHREN SIE DIE LAMPE direkt nach der Benutzung NICHT. Sie ist dann noch immer extrem heiß. Schalten Sie den Projektor aus und trennen Sie anschließend das Netzkabel ab. Lassen Sie die Lampe für mindestens eine Stunde abkühlen, bevor Sie sie handhaben.
- Stellen Sie beim Entnehmen der Lampe aus einem an der Decke montierten Projektor sicher, dass sich keine Personen unter dem Projektor aufhalten. Bei einer ausgebrannten Lampe könnten Glassplitter herausfallen.

### Über den Modus Große Höhe

- Stellen Sie den [Fan Speed Mode] auf [High Altitude], wenn Sie den Projektor in Höhenlagen bei ca. 5500 Fuß / 1600 Meter oder höher verwenden.  
Wenn Sie den Projektor in Höhenlagen bei ca. 5500 Fuß/1600 Meter ohne die Einstellung des Projektors auf [High Altitude] verwenden, kann dies dazu führen, dass sich der Projektor überhitzt und selbst ausschaltet.  
Warten Sie in diesem Fall einige Minuten und schalten Sie den Projektor wieder ein.
- Verwenden Sie den Projektor in Höhenlagen unterhalb von ca. 5500 Fuß/1600 Meter mit der Einstellung des Projektors auf [High Altitude], kann dies zu einer Unterkühlung der Lampe führen und dadurch das Bild flimmern.  
Schalten Sie den [Fan Speed Mode] auf [Auto].
- Die Verwendung des Projektors bei Höhenlagen von ca. 5500 Fuß/1600 Metern oder höher kann die Lebensdauer der inneren Komponenten, wie beispielsweise der Lampe, verkürzen.

### Entsorgung Ihres benutzten Gerätes



Die EU-weite Gesetzgebung, wie sie in jedem einzelnen Mitgliedstaat gilt, bestimmt, dass benutzte elektrische und elektronische Geräte mit dieser Markierung (links) getrennt vom normalen Haushaltsabfall entsorgt werden müssen.

Dies schließt Projektoren und deren elektrisches Zubehör oder ihre Lampen mit ein. Folgen Sie beim Entsorgen eines solchen Gerätes bitte den Anweisungen Ihrer örtliche Behörde und/oder konsultieren Sie den Händler, bei dem Sie das Gerät erworben haben.

Nach der Sammlung benutzter Geräte werden diese erneut verwendet und entsprechend den Umweltbestimmungen recycelt. Das trägt dazu bei, die Abfallmenge zu reduzieren sowie die negativen Auswirkungen beispielsweise des in der Lampe enthaltenen Quecksilbers auf die Gesundheit und die Umwelt möglichst gering zu halten.

Die Markierung auf elektrischen und elektronischen Geräten gilt nur für die gegenwärtigen Mitgliedstaaten der Europäischen Union.

### Bei Fragen, die sich aus unklaren Punkten oder Reparaturarbeiten ergeben

Bei Fragen, die sich aus unklaren Punkten, Fehlfunktionen oder Reparaturarbeiten am Produkt ergeben, wenden Sie sich an Ihren Händler oder an die folgende Niederlassung.

### In Europa

Firmenname: NEC Display Solutions Europe GmbH  
Adresse: Landshuter Allee 12-14, D-80637 München, Germany  
Telefon: +49 89 99699 0  
Fax-Nummer: +49 89 99699 500  
E-Mail-Adresse: [info@nec-displays.com](mailto:info@nec-displays.com)  
Web-Adresse: <http://www.nec-display-solutions.com>

### In Nordamerika

Firmenname: NEC Display Solutions of America, Inc.  
Adresse: 500 Park Boulevard, Suite 1100 Itasca, Illinois 60143, U.S.A.  
Telefon: +1 800 836 0655  
Fax-Nummer: +1 800 356 2415  
E-Mail-Adresse: [pjtechsupport@necdisplay.com](mailto:pjtechsupport@necdisplay.com)  
Web-Adresse: <http://www.necdisplay.com/>

### In China

Firmenname: NEC Solutions (China) Co., Ltd.  
Adresse: Rm 1903, Shining Building, 35 Xueyuan Rd, Haidian District Beijing 100191, P.R.C.  
Telefon: +8610 59342706

### In Hongkong, Taiwan, Singapur, Malaysia und Indonesien

Firmenname: Strong Westrex, Inc.  
Adresse: Room 4108 China Resources Building, No. 26 Harbour Road, Wanchai, Hong Kong.  
Telefon: +852 2827 8289  
Fax-Nummer: +852 2827 5993  
E-Mail-Adresse: [hkstrong@netvigator.com](mailto:hkstrong@netvigator.com)

### In Südkorea

Firmenname: Hyosung ITX Co., Ltd.  
Adresse: 1F, Ire Building, 2, Yangpyeong-dong 4-ga, Yeongdeungpo-gu, Seoul, Korea 150-967  
Telefon: +82-2-2102-8591  
Fax-Nummer: +82-2-2102-8600  
E-Mail-Adresse: [moneybear@hyosung.com](mailto:moneybear@hyosung.com)  
Web-Adresse: <http://www.hyosungitx.com>

### In Australien und Neuseeland

Firmenname: NEC Australia Pty Ltd  
Adresse: 26 Rodborough Road Frenchs Forest NSW 2086  
Telefon: 131 632 (von überall in Australien)  
E-Mail-Adresse: [displays@nec.com.au](mailto:displays@nec.com.au)  
Web-Adresse: <http://www.nec.com.au>

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# 1. Before Setting Up Your Projector

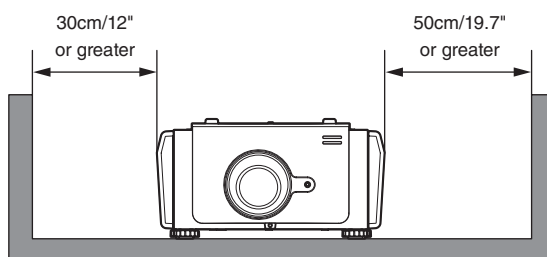
## 1-1. Clearance for Installing the Projector (English)

Allow ample clearance between the projector and its surroundings as shown below.

Avoid installing the projector in a place where air movement from the HVAC is directed at the projector.

Heated air from the HVAC can be taken in by the projector's intake vent. If this happens, the temperature inside the projector will rise too high causing the over-temperature protector to automatically turn off the projector's power.

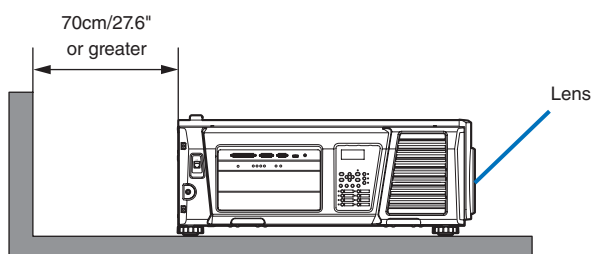
**Example 1** – If there are walls on both sides of the projector.



**NOTE** The drawing shows the proper clearance required for the front, back and top of the projector.

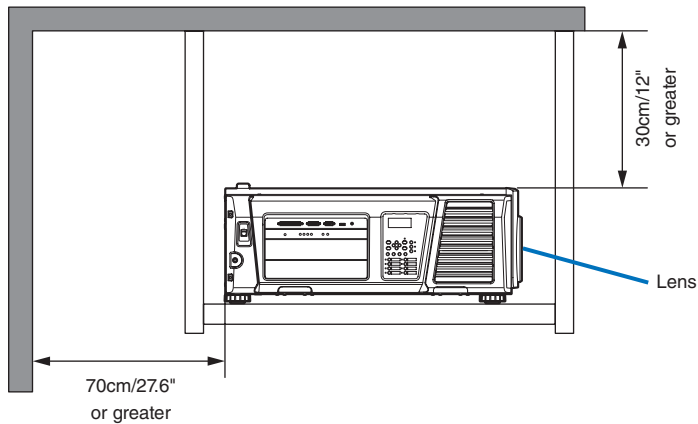
**Example 2** – If there is a wall behind the projector.

(1) For floor installation:



**NOTE** The drawing shows the proper clearance required for the back, sides and top of the projector.

(2) For ceiling mounting:



**NOTE**

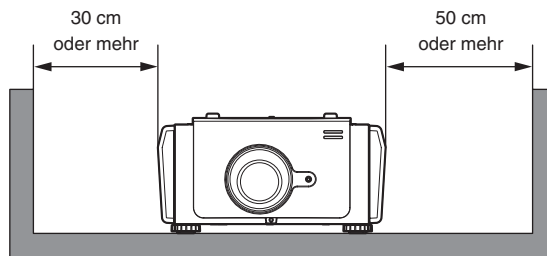
- The drawing shows the proper clearance required for the front, sides, back and bottom of the projector.
- If suspending the projector 30 cm/12 inches away from the ceiling, allow ample clearance for all four sides and the under the projector.



## 1-2. Freiraum bei der Projektorinstallation (Deutsch)

Achten Sie auf ausreichenden Freiraum zwischen dem Projektor und seiner Umgebung, wie unten gezeigt. Vermeiden Sie es, den Projektor an einer Stelle zu installieren, an der er den Luftströmungen von Klimaanlage ausgesetzt ist. Die aufgeheizte Luft aus einer Klimaanlage kann vom Lüftungseinlass des Projektors aufgenommen werden. Dadurch wird die Innentemperatur des Projektors zu stark erhöht, was dazu führt, dass der Überhitzungsschutz des Projektors diesen automatisch ausschaltet.

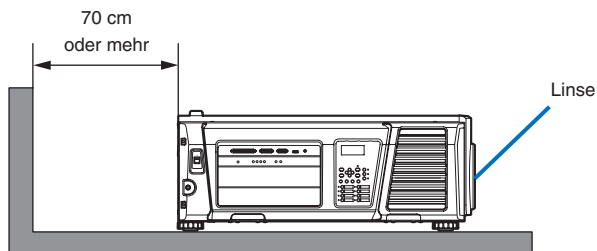
**Beispiel 1 - Wenn sich Wände auf beiden Seiten des Projektors befinden.**



**HINWEIS** Die Abbildung zeigt den ordnungsgemäßen Abstand für die Vorder-, Rück- und Oberseite des Projektors.

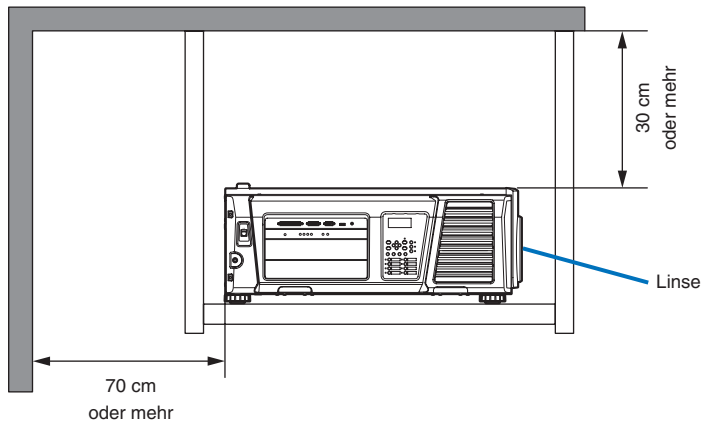
**Beispiel 2 - Wenn sich eine Wand hinter dem Projektor befindet.**

(1) Bei Installation auf einem flachen Untergrund:



**HINWEIS** Die Abbildung zeigt den ordnungsgemäßen Abstand für die linke, rechte, Rück- und Oberseite des Projektors.

(2) Bei der Deckenmontage:



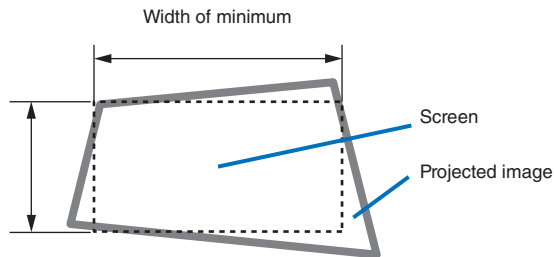
**HINWEIS**

- Die Abbildung zeigt den ordnungsgemäßen Abstand für die linke, rechte, Vorder-, Rück- und Unterseite des Projektors.
- Wenn Sie den Projektor 30 cm von der Decke entfernt installieren, achten Sie auf ausreichende Freiräume auf allen vier Seiten und unter dem Projektor.

## 1-3. Selecting the lens unit

This section provides the guideline information on how to select a screen size, projector mounting position, and type of lens units, which is appropriate for your presentation purposes. Select the lens unit for your projector according to the environment in which it is installed.

Note that all descriptions given in this manual assume that the angle of projection is zero degree. In case of projection from an upper position or from the right or left, it is necessary to calculate the width for the minimum projected image that is a little larger than the screen size.

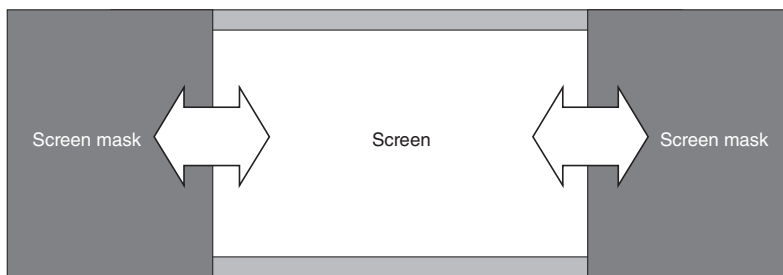


### 1-3-1. Screen Type

The following two types of screen masks can be used for the DLP Cinema Projector. Check the screen mask for your projector for its type before selecting lens units, because types of lens units to be used on the projector and its settings depend upon the type of screen mask you use.

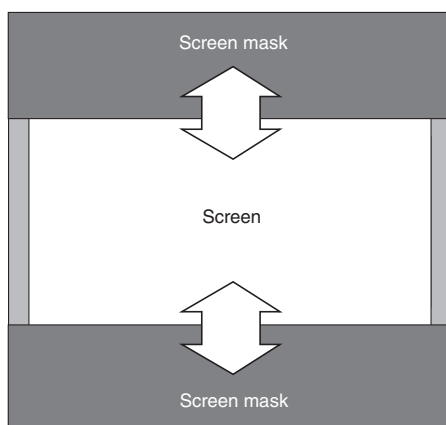
#### Horizontal moving screen mask

Screen masks move horizontally to adjust the screen.



### Vertical moving screen mask

Screen masks move vertically to adjust the screen.



### 1-3-2. Calculating the lens zoom magnification to use

The lens zoom magnification required when installing the projector is calculated using the following method.

- (1) Calculate the lens zoom magnification for SCOPE projection
- (2) Calculate the lens zoom magnification for VISTA (FLAT) and HDTV projection
- (3) Select the lens that satisfies the zoom magnification calculated in (1) and (2).

#### SCOPE projection:

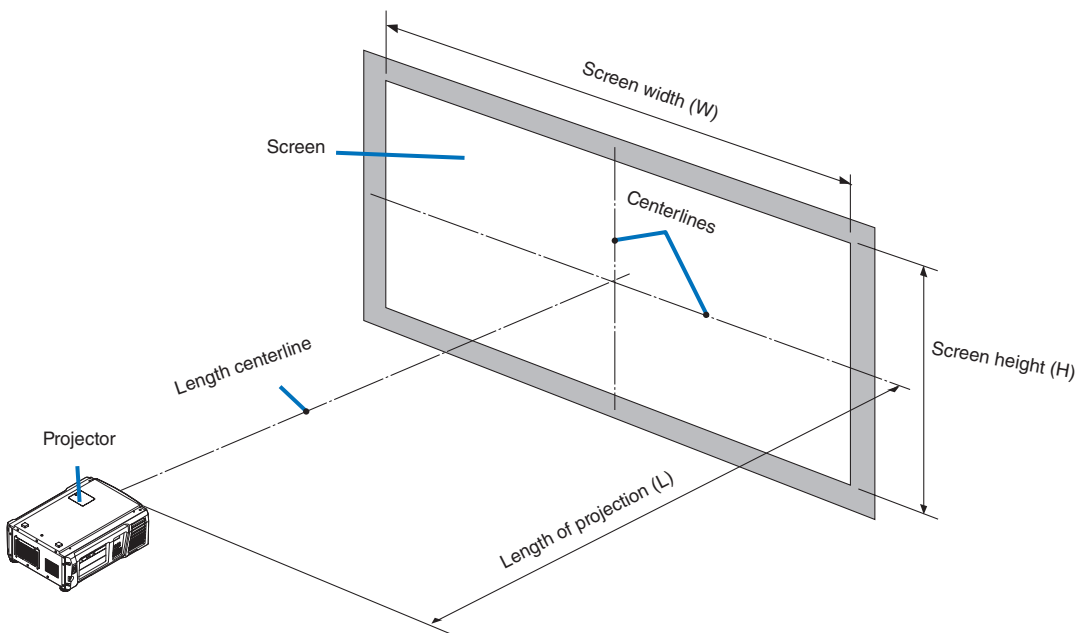
$$\text{Primary lens magnification} = \frac{\text{Length of projection (L)}}{\text{Screen width (W)}}$$

#### VISTA (FLAT)/HDTV projection:

$$\text{Primary lens magnification} = \frac{\text{Length of projection (L)}}{\text{Screen width (W)} \times (2048 \div \text{Number of pixels per horizontal line})}$$

Note: Number of pixels per horizontal line: 1998 for VISTA (FLAT); 1920 for HDTV

Select a lens that meets the magnification requirement for SCOPE, VISTA (FLAT), and HDTV screen types.



### Option lenses

The lens units that can be attached to this projector are shown in the following table.

MODEL	Magnifying
NP-9LS14Z	1.36–1.63
NP-9LS16Z	1.63–2.03
NP-9LS20Z	2.03–2.72
NP-9LS27Z	2.72–4.07
NP-9LS40Z	4.07–6.34

### Examples of selecting the lens unit

If the "projection distance (L) = 30 m, the screen width (W) = 15 m":

$$\text{SCOPE projection} = \frac{30\text{m}}{15\text{m}} = 2.0\text{x}$$

$$\text{VISTA (FLAT) projection} = \frac{30\text{m}}{15\text{m} \times (2048 \div 1998)} = 1.95\text{x}$$

$$\text{HDTV projection} = \frac{30\text{m}}{15\text{m} \times (2048 \div 1920)} = 1.88\text{x}$$

Therefore, "NP-9LS16Z", which satisfies the magnifications in all of the above projections, is selected as the primary lens.

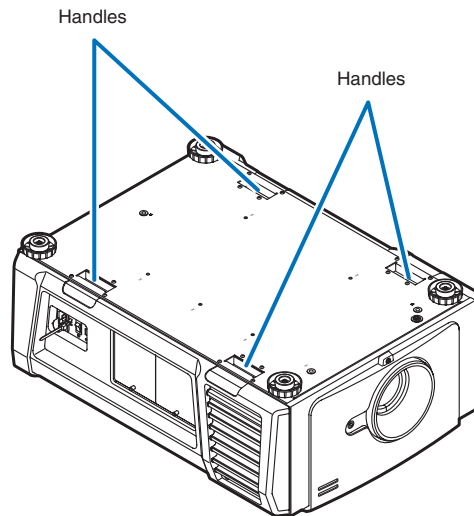
## 1-4. Carrying the projector

When moving the projector, it should be carried by holding the handles on the base of the unit by 4 or more people.



### **WARNING:**

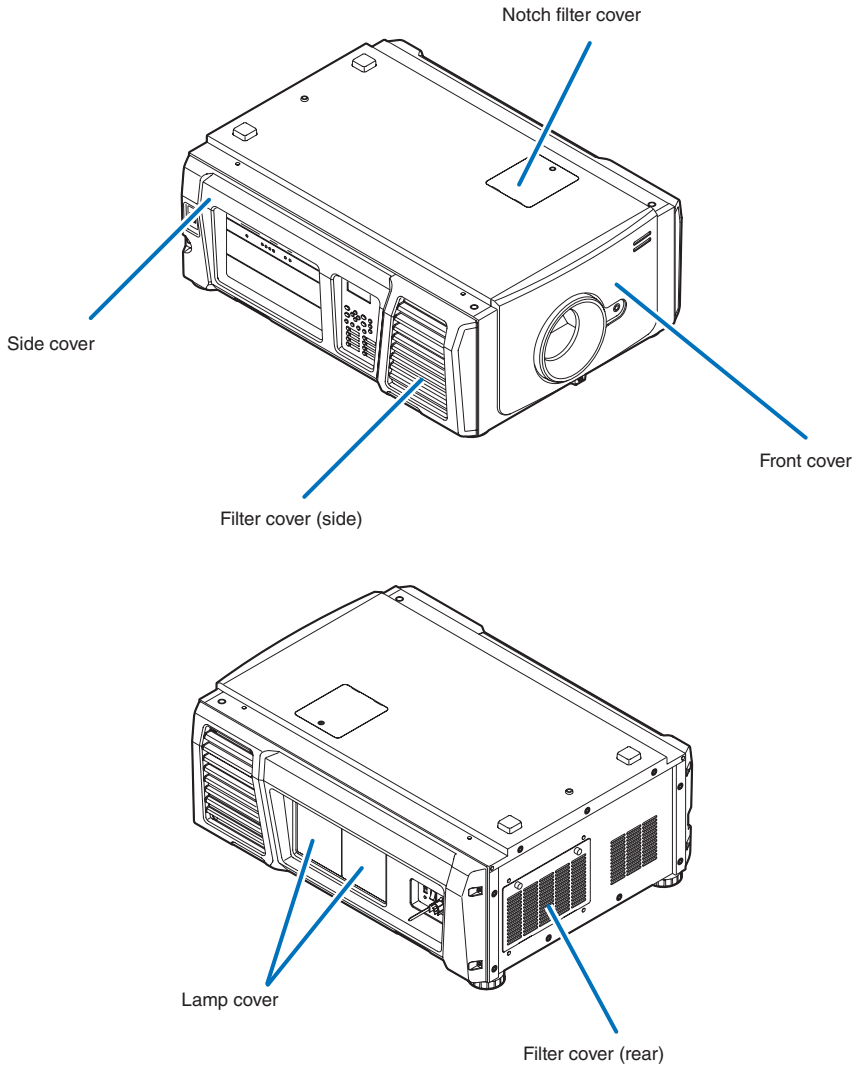
When moving the projector, first turn off the power and always disconnect the power plug from the electrical outlet, and check that all of the connecting cables between equipment and the lenses have been removed.



## 1-5. Removing the Projector Covers

This section provides guideline information on how to mount and remove covers on the projector.

### Name of the cover



#### NOTE

- "Side cover" and "Front cover" are equipped with key locks. Special keys (cover key) are required to mount or remove them.
- To remove the side cover, the filter cover (side) needs to be removed.
- If you remove the front cover or side cover, the following error message is displayed on the LCD screen of the main unit operating panel by the tamper detection circuit.  
"Tamper Fail", "Service Door Tamper"

Encrypted contents cannot be displayed while an error message is being displayed. Refer to "3-2. Recovering from Tamper Errors" (page 47) for the recovery procedure.

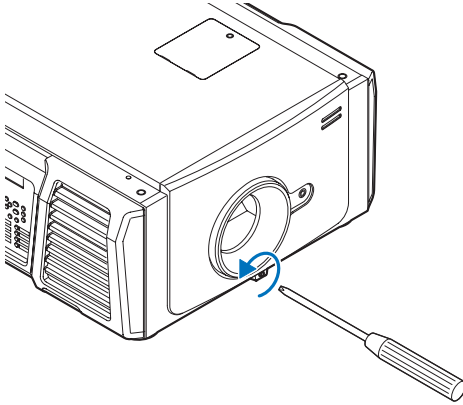


### 1-5-1. Removing and Mounting the Front Cover

**Preparation:** Phillips head screwdriver (No.2) and cover key (attached goods)

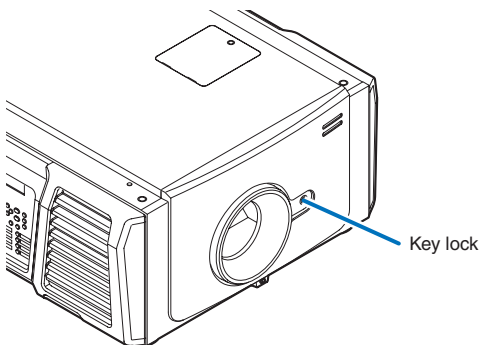
- 1** Loosen the screw securing the front cover until the Phillips screwdriver goes into a freewheeling conditions.

The screw is not removable.



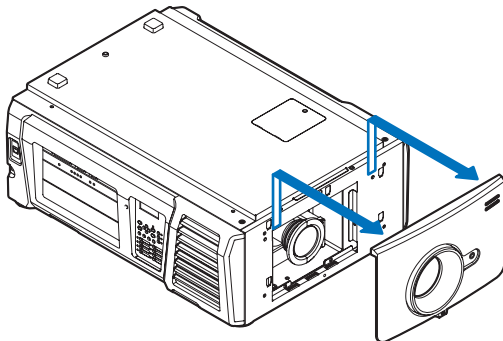
- 2** Unlock the front cover.

Unlock the cover using the cover key.



- 3** Remove the front cover.

Lift up the cover slightly and then pull it towards you to remove it.



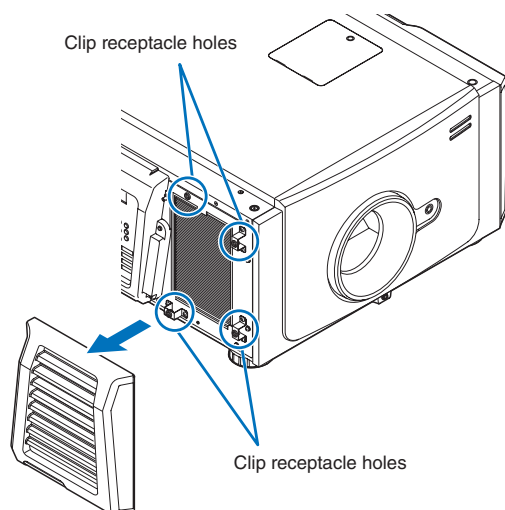
This completes removing the front cover. To mount the cover, perform the removal procedure in reverse. Make sure that you do not forget to tighten the screw or to lock the key lock.

### 1-5-2. Removing and Mounting the Side Cover

**Preparation:** Phillips head screwdriver (No.2) and cover key (attached goods)

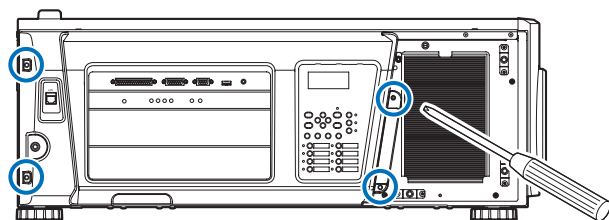
#### 1 Remove the filter cover (side).

The filter cover is held in place by plastic clips (4 locations). Grasp the top and bottom edges of the cover and pull it towards you to remove it.



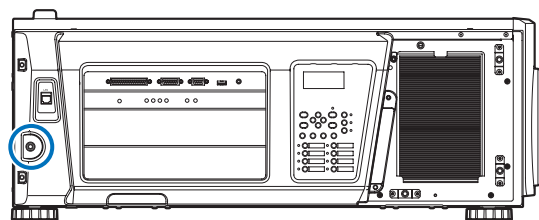
#### 2 Loosen the four fixing screws on the side cover.

Loosen four screws on the side cover until they are free to spin. The screws do not detach from the cover.



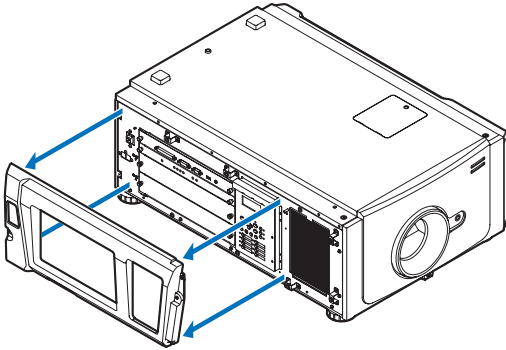
#### 3 Unlock the side cover.

Unlock the cover using the cover key.



**4 Remove the side cover.**

Pull the cover directly towards you to remove it.



This completes removing the side cover. To mount the side cover, perform the removal procedure in reverse. Make sure that you do not forget to tighten the screws or to lock the key lock.

### **1-5-3. Removing and Mounting the Lamp Cover**

Refer to the projector User's Manual for details on how to remove and attach the lamp cover.

### **1-5-4. Removing and Mounting the Filter Cover**

Refer to the projector User's Manual for details on how to remove and attach the filter cover.

### **1-5-5. Removing and Mounting the Notch Filter Cover**

Refer to "3-7. Replacing the Notch Filter" (page 56) for details on how to remove and attach the notch filter cover.

## 2. Setting Up Your Projector

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### 2-1. Setup Procedure

Set up the projector according to the procedure below. This chapter describes the installation of procedure until turning on of the power.

- **Step 1**  
Projector Installation (See page 30)
- **Step 2**  
Selecting the Power Cable (See page 31)  
Connecting the Power Cable (See Projector User's Manual)
- **Step 3**  
Mounting the Lens Unit (See page 39)
- **Step 4**  
Mounting the Lamp (See Projector User's Manual)
- **Step 5**  
Mounting the following optional parts as required.
  - Installing the Media Block (NC-90MS01) (See page 42)
  - Installing the Signal Input Board (NC-80LB01-B/NC-80DS01-B) (See page 42)

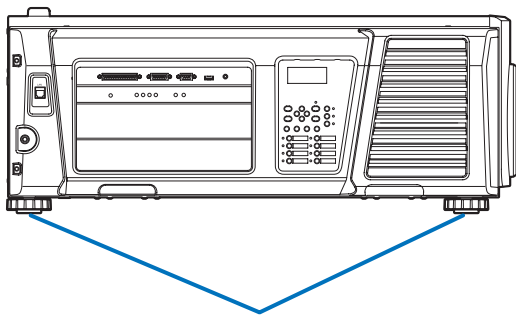
## 2-2. Projector Installation

Move the projector to the projection position and install it corresponding to the screen and projection conditions. To correct the inclination to the right or left of the projector, use the level adjusters at 4 positions. You can extend the level adjuster to 35 mm at the maximum (Rotate it counterclockwise for extension).



**CAUTION:**

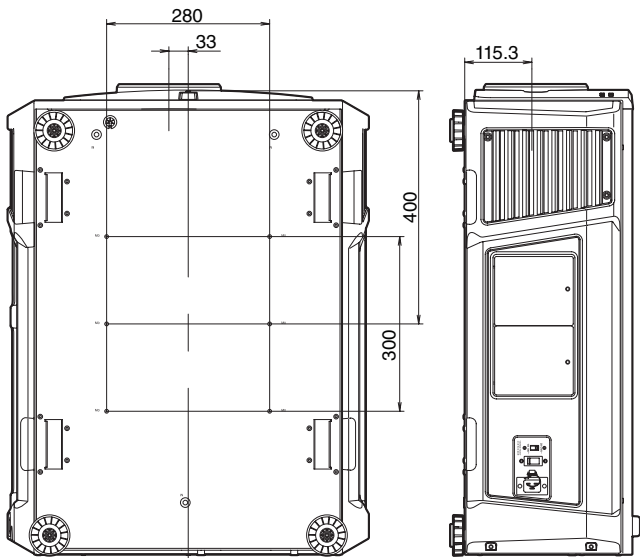
- Do not extend the adjuster by more than 35 mm. Rotating it forcefully may cause the adjuster to come off or be damaged.
- To adjust the level adjusters of the projector, extend the two level adjusters at the front and the back at the same time so that the weight is imposed to them equally. If you adjust only one adjuster, the weight is not imposed equally, which may result in level adjuster failure.



Level adjusters (in four positions)

### 2-2-1. Installing the Projector on the Ceiling

To install the projector on the ceiling, install it by referring to the following specifications.



## 2-3. Selecting the Power Cable (English)

The power cable is not included with the projector. Refer to “2-3-1. AC Power Work Specifications” (page 32) and provide the necessary power cable.

**WARNING:**

Carefully read the contents described in this section before connection and connect the cables according to the proper procedure. Inappropriate handling may cause fatal, serious or other bodily injuries due to fire or electric shock.

**CAUTION:**

- For details on connecting the power cable, refer to the projector User's Manual.
- Before connecting the power cables, check that the main power switch of the projector is turned off. Implement the connection with AC power shut off.
- Be sure to ground the equipment to ensure safety. Use a power cable that meets the standards and power supply voltage of the country where you are using the projector (page 33), and always connect the equipment to the ground. If the ground is not connected, it may cause electrical shocks.
- When connecting the power cable plugs to the AC IN and the electrical outlet, securely insert the plugs all the way in. If the connection between the power cable plug and the electrical outlet is loose, the plug area may generate heat, causing burns and accidents.
- Switch the power cable and power supply voltage of the projector to match the projector to the voltage of the electrical outlet you are connecting to. If selected incorrectly, it may cause damage or fires.

2-3-1. AC Power Work Specifications

**AC power supply equipment**

Do not use any voltage other than those shown below for the AC power supply connected to the projector.

100–130V AC, single phase, power, 50/60Hz
200–240V AC, single phase, power, 50/60Hz

**Breaker**

Connect the AC power supply from the power supply equipment of the building to the projector via a breaker. The breaker capacity will be as follows depending on the power supply voltage.

AC power supply voltage used	Breaker current capacity
100–240V	20 A



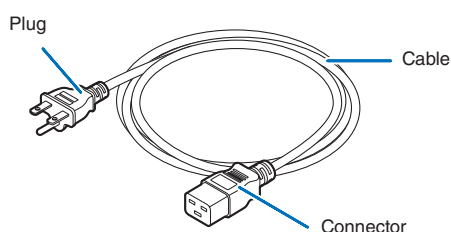
## AC power supply cable for the projector

The projector is equipped with an IEC60320 C19 connector to connect an AC power supply cable. Ensure that the AC power cables that connect the connectors built into the projector to the AC power mains have the current capacities as shown below.

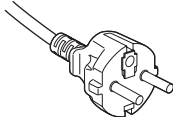

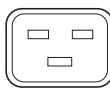
Power supply voltage	Projector input current	Power cable current capacity
AC 100–130V	10.3 to 7.9A	125V 15A or higher 250V 15A or higher
AC 200–240V	5.1 to 4.3A	250V 15A or higher

Furthermore, use plugs, cables, and connectors that are suitable for the regulations of the country of installation, as shown in the following table.

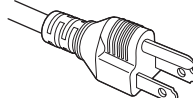

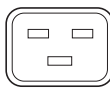
**NOTE** For users in North America  
Use a power cable no longer than 4.5m/14.76 ft according to National Electrical Code.



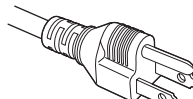

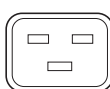
### Germany

Plug	Cable	Connector
CEE 7	H05VV-F 3G1.5	IEC 320 C19
		

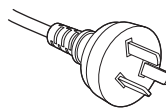

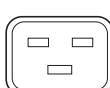
### USA

Plug	Cable	Connector
NEMA 5-15P	SJT 3 x AWG 14	IEC 320 C19
		

### Japan

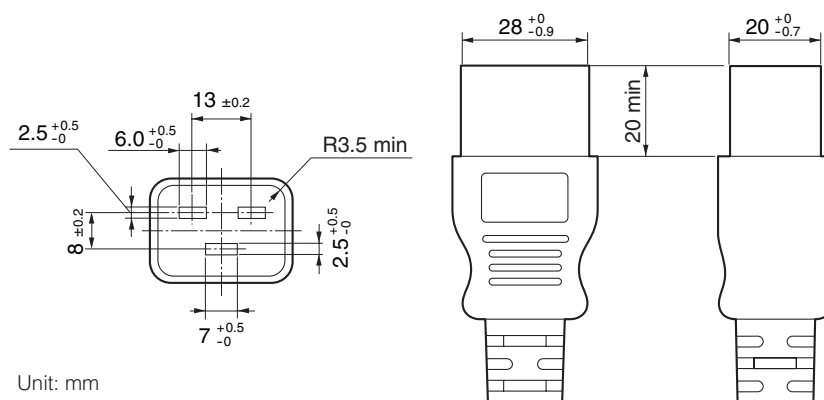
Plug	Cable	Connector
JIS C 8303	VCTF 3 x 2.0mm	IEC 320 C19
		

### China

Plug	Cable	Connector
GB2099	RVV 300/500	GB17465.1
		

### Connector

Dimensions of the connector of the power cable are shown below.



## 2-4. Auswahl des Netzkabels (Deutsch)

Es wird kein Netzkabel mit dem Projektor geliefert. Nehmen Sie auf „2-4-1. Netzstrom-Spezifikationen“ (Seite 36) Bezug, und beschaffen Sie das notwendige Netzkabel.

**WARNUNG:**

Lesen Sie diesen Abschnitt vor dem Herstellen der Verbindungen sorgfältig durch, und schließen Sie die Kabel anhand der ordnungsgemäßen Verfahren an. Falsche Handhabung kann zu schweren oder sogar tödlichen Verletzungen durch Brand oder einen elektrischen Schlag führen.

**ACHTUNG:**

- Für Einzelheiten zum Anschließen des Netzkabels siehe des Projektors Bedienungshandbuch.
- Bevor Sie das Netzkabel anschließen, prüfen Sie, ob die Hauptstromschalter des Projektors ausgeschaltet ist. Stellen Sie die Verbindungen bei ausgeschaltetem Netzstrom her.
- Erden Sie das Gerät, um die Sicherheit zu gewährleisten. Verwenden Sie ein Netzkabel, das die Normen und Netzspannung des Landes, in dem der Projektor verwendet wird, erfüllt (Seite 37), und schließen Sie das Gerät stets an Erde an. Wenn keine Erde angeschlossen wird, kann es zu elektrischen Schlägen kommen.
- Führen Sie die Netzkabelstecker beim Anschließen bis zum Anschlag in den Netzeingang und die Netzsteckdose ein. Sitzt der Netzstecker nicht fest in der Netzsteckdose, kann Wärme im Steckerbereich erzeugt werden, die zu Verbrennungen und Unfällen führen kann.
- Wechseln Sie das Netzkabel und die Versorgungsspannung des Projektors, um den Projektor an die Spannung der verwendeten Netzsteckdose anzupassen. Eine falsche Einstellung kann zu Beschädigung oder Bränden führen.

### 2-4-1. Netzstrom-Spezifikationen

#### Netzkabel

Verwenden Sie für die Netzspannungsversorgung, die an den Projektorkopf angeschlossen ist, nur die unten angegebene Spannung.

100–130 V AC, eiphasig, 50/60Hz
200–240 V AC, eiphasig, 50/60Hz

#### Ausschalter

Verbinden Sie das Netzkabel mit der Netzversorgung via einen Abschalter.

Die Ausschalterleistung hat abhängig von der Versorgungsspannung folgende Werte.

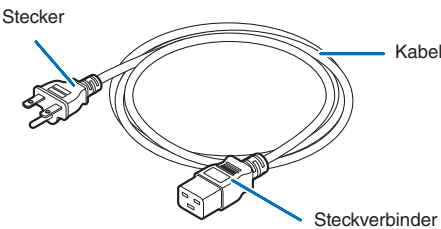
Verwendete Netzspannung	Ausschalterleistung
100–240 V	20 A

**Netzkabel für den Projektor**

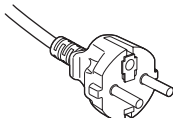

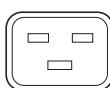
Der Projektor ist mit einem C19-Steckverbinder gemäß IEC60320 zum Anschließen des Netzkabels ausgestattet. Sorgen Sie dafür, dass die Netzkabel, die von den Steckverbindern am Projektor zum Netzanschluss führen, über die unten angegebenen Stromkapazitäten verfügen.

Netzspannung	Projektor-Eingangsstrom	Netzkabel-Stromkapazität
100–130 V Wechselstrom	10,3 bis 7,9 A	125 V 15 A oder höher 250 V 15 A oder höher
200–240 V Wechselstrom	5,1 bis 4,3 A	250 V 15 A oder höher

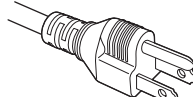

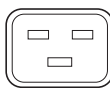
Verwenden Sie zudem Stecker, Kabel und Steckverbinder, die den Vorgaben des jeweiligen Landes entsprechen (siehe dazu folgende Tabelle).



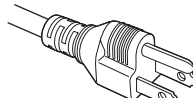

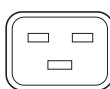
**Deutschland**

Stecker	Kabel	Steckverbinder
CEE 7 	H05VV-F 3G1.5 	IEC 320 C19 

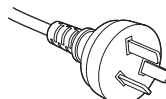

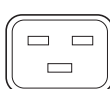
**USA**

Stecker	Kabel	Steckverbinder
NEMA 5-15P 	SJT 3 x AWG 14 	IEC 320 C19 

**Japan**

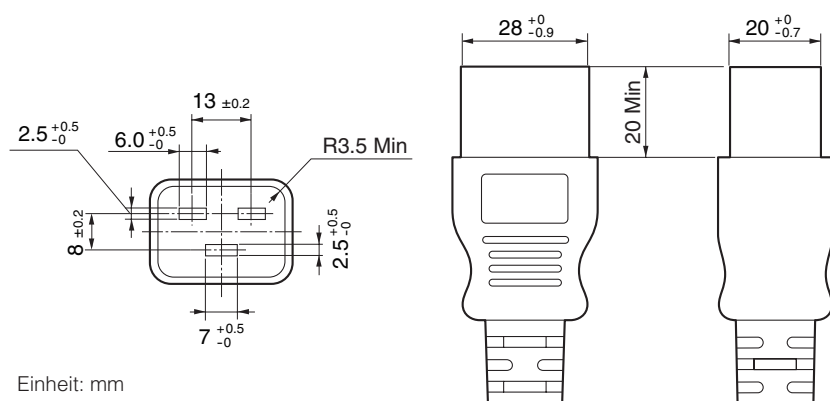
Stecker	Kabel	Steckverbinder
JIS C 8303 	VCTF 3 x 2.0mm 	IEC 320 C19 

**China**

Stecker	Kabel	Steckverbinder
GB2099 	RVV 300/500 	GB17465.1 

### Steckverbinder

Die Abmessungen des Netzkabels sind unten angegeben.



## 2-5. Mounting the Lens Unit

This device can use 5 types of lens units (sold separately).

MODEL	Magnifying
NP-9LS14Z	1.36–1.63
NP-9LS16Z	1.63–2.03
NP-9LS20Z	2.03–2.72
NP-9LS27Z	2.72–4.07
NP-9LS40Z	4.07–6.34

### NOTE

- The other NEC optional lenses are not available on this model.
- The projector and lenses are made of precision parts. Do not subject them to shock or excessive forces.
- Remove the lens unit when moving the projector. If not, the lens could be subject to shock while the projector is being moved, damaging the lens and the lens shift mechanism.
- Turn off the power and wait for the cooling fan to stop and turn off the main power switch before mounting or removing the lens.
- When dismounting the lens from the projector, return the lens position to the center position before turning off the power. Failure to do so may prevent the lens from being mounted or dismounted because of narrow space between the projector and the lens.
- Never touch the lens surface while the projector is operating.
- Be very careful not to let dirt, grease, etc., on the lens surface and not to scratch the lens surface.
- Perform these operations on a flat surface over a piece of cloth, etc., to prevent the lens from getting scratched.
- When leaving the lens off the projector for long periods of time, mount the dust cap on the projector to prevent dust or dirt from getting inside.

**Preparation:** Remove the front cover. (page 25)

### NOTE

If you remove the front cover, the following error message is displayed on the LCD screen of the main unit operating panel by the tamper detection circuit.

“Tamper Fail”, “Service Door Tamper”

Encrypted contents cannot be displayed while an error message is being displayed. Refer to “3-2. Recovering from Tamper Errors” (page 47) for the recovery procedure.

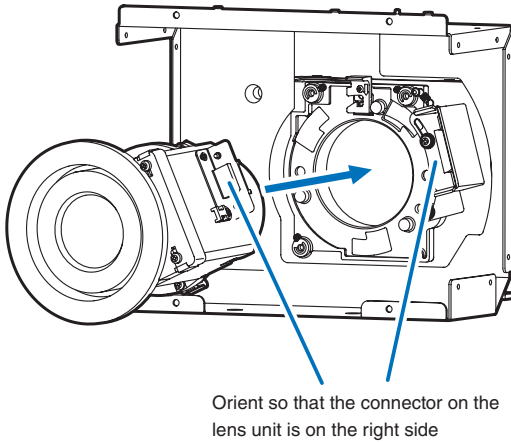
**1** Remove the dust cap from the projector.

**2** Remove the lens cap on the back of lens.

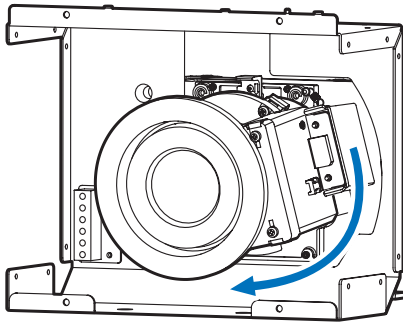
### NOTE

Mounting the lens with lens cap on its back to the projector can cause malfunction.

- 3** Orient so that the connector on the lens unit is on the right side, then insert the lens into the projector.



- 4** Turn the lens clockwise.  
Rotate until it clicks to lock the lens unit into the projector.



- 5** Mount the front cover to the projector.

This completes the installation of the lens.

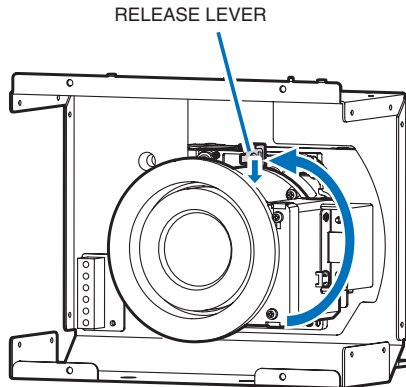


## 2-5-1. Removing the lens

- Preparation:**
- [1] Return to the center position. (page 73)
  - [2] Turn off the main power and unplug the power cable.
  - [3] Wait for the projector to cool sufficiently before removing the lens, before removing the front cover. (page 25)

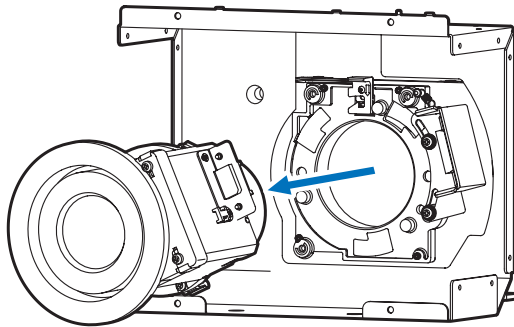
**1** Rotate the lens counterclockwise while holding down the **RELEASE LEVER**.

The lens unit can be removed from the projector.



**2** Slowly remove the lens from the projector by pulling it straight out.

After removing the lens, attach the lens cap to both the front and back of the lens for proper storage. If the projector is stored without the lens, attach the dust cover to the lens hood.



**3** Mount the front cover to the projector.

This completes the remove of the lens.

## 2-6. Mounting the Lamp

Refer to the projector User's Manual for details on how to remove and attach the lamp.

## 2-7. Mounting the Option Board

This section describes the procedure of mounting the media block and signal input board. The following option board can be mounted to the slot A of the projector.

Name		Slot A	Slot B(Note)
IMB	NC-90MS01	*	—
Signal Input Board	NC-80LB01-B	*	—
	NC-80DS01-B	*	—

(Note) Slot B is not available in this projector.

**Preparation:**

Phillips head screwdriver (No.2) and cover key (attached goods).

- **Step 1**  
Remove Side Cover from the Projector (See page 26)
- **Step 2**  
Mount the Option Board to the Projector (See this page)
- **Step 3**  
Mount the Cover to the Projector (See page 26)
- **Step 4**  
Restore the Tamper Error (See page 47)  
Setting up the Projector (See page 44)

**NOTE** If you remove the side cover, the following error message is displayed on the LCD screen of the main unit operating panel by the tamper detection circuit.

"Tamper Fail", "Service Door Tamper"

Also, if you remove the closing panel or device from slot, the following error message is displayed on the LCD screen of the main unit operating panel by the tamper detection circuit. Furthermore, since the marriage is cleared, re-marriage is necessary.

"Marriage Tamper Fail", "Physical Marriage Tamper", "Marriage Not Active"

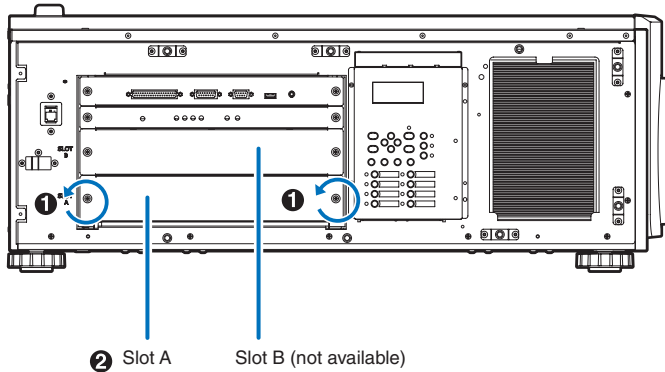
Encrypted contents cannot be displayed while an error message is being displayed. Refer to "3-2. Recovering from Tamper Errors" (page 47) for the recovery procedure.

### 1 Remove the side cover.

Side cover of the projector should be removed to mount the option board. For the procedure of removing the side cover, refer to "1-5-2. Removing and Mounting the Side Cover" (page 26).

### 2 Remove the blocking panel from slot A.

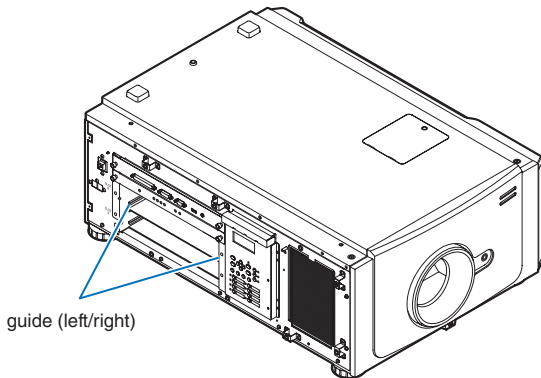
1. Loosen the knurled screws (2 places) of slot A until their rotations become idle (❶). Screws cannot be removed.
2. Remove the blocking panel (❷).



**NOTE** Carefully store the blocking panel and screws that you removed.

### 3 Mount the option board to the projector.

1. Insert the board by following the guide on either side of the slot.
2. Tighten up the knurled screws (2 places) until it fix.



### 4 Mount the side cover to the projector.

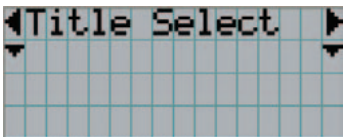
This completes the mounting of option board. Next, recover the tamper error. For the procedure of recovering, refer to "3-2. Recovering from Tamper Errors" (page 47). A setting to use option board is needed, after recovering from tamper error. For the procedure, refer to "2-7-1. Make the option board usable" (page 44).

### 2-7-1. Make the option board usable

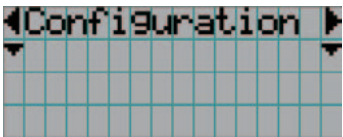
By registering the mounted option board to the slot, you can use option board by setting up the projector. This procedure is described for the example, when IMB (NC-90MS01) is mounted to slot A. For the operation of the projector, refer to projector's "Users Manual".

.....  
**TIP** DCC for S2 can be used to set up.  
For the procedure by using DCC for S2, refer to "Digital Cinema Communicator for S2 Installation Manual".  
.....

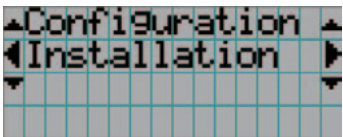
- 1** Set the projector in standby mode.
- 2** Enable the service personnel menu.  
These settings are for our service personnel and cannot normally (user mode) be used. You need to enter a passcode to enable the service personnel menu. Refer to the "4-1-1. When You Use the Service Personnel Menu" (page 63) for the procedure.
- 3** Press the MENU button on the control panel.  
"Title Select" is displayed in the menu. From this procedure on, control panel of the projector will be used.



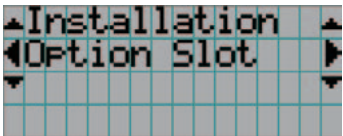
- 4** Press the LEFT/RIGHT button to display "Configuration" and press the DOWN button.



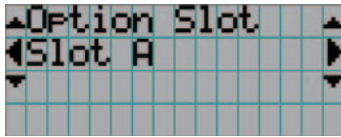
- 5** Press the LEFT/RIGHT button to display "Installation" and press the DOWN button.



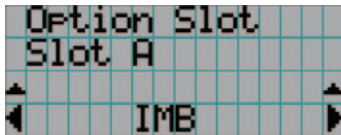
- 6** Press the LEFT/RIGHT button to display "Option Slot" and press the DOWN button.



- 7** Press the LEFT/RIGHT button to display “Slot A” and press the DOWN button.

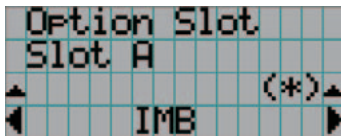


- 8** Press the LEFT/RIGHT button to display “IMB”



- 9** Press the ENTER button.

(\*) is displayed to the selected item.



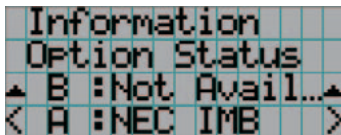
- 10** Press the EXIT button several times.

The projector exits the menu and goes back to the regular screen.

If you press the EXIT button and then select “Yes” and press the ENTER button on a regular screen, you will returned to user mode.

This completes the setting of the projector.

**TIP** Settings of slot A and slot B can be confirmed at projector's [Information] - [Option Status]



# 3. Projector Adjustment and Connecting

---

## 3-1. Flow of Adjustment and Connecting

Adjustment and Connecting of the projector accord to the procedure below.

- **Step1**  
Turning Your Projector On (See page 50)
- **Step2**  
Setting The Date and Time in the Projector (See page 51)
- **Step3**  
Setting the Projector Projection Method (See page 52)
- **Step4**  
Adjusting the Lens (See page 54)  
Display the test pattern to adjust the screen size, screen ratio and focus.
- **Step5**  
Replacing the notch filter (See page 56)
- **Step6**  
Connecting with the Image Input Port (See page 59)
- **Step7**  
Connecting the Various Control Terminal (See page 60)

This chapter explains the adjustment and connection of the projector with Steps 1 to 7.

Steps 1 to 7 complete the adjustment and connection of the projector. Next, carry out various settings such as color adjustment using DCC for S2. Refer to the “Digital Cinema Communicator for S2 Installation Manual” for the procedure.

## 3-2. Recovering from Tamper Errors

The tamper detection circuit is fitted in the projector.

If any of the following actions is performed, an error message will be displayed on the LCD screen of the main unit control panel by tamper detection circuit.

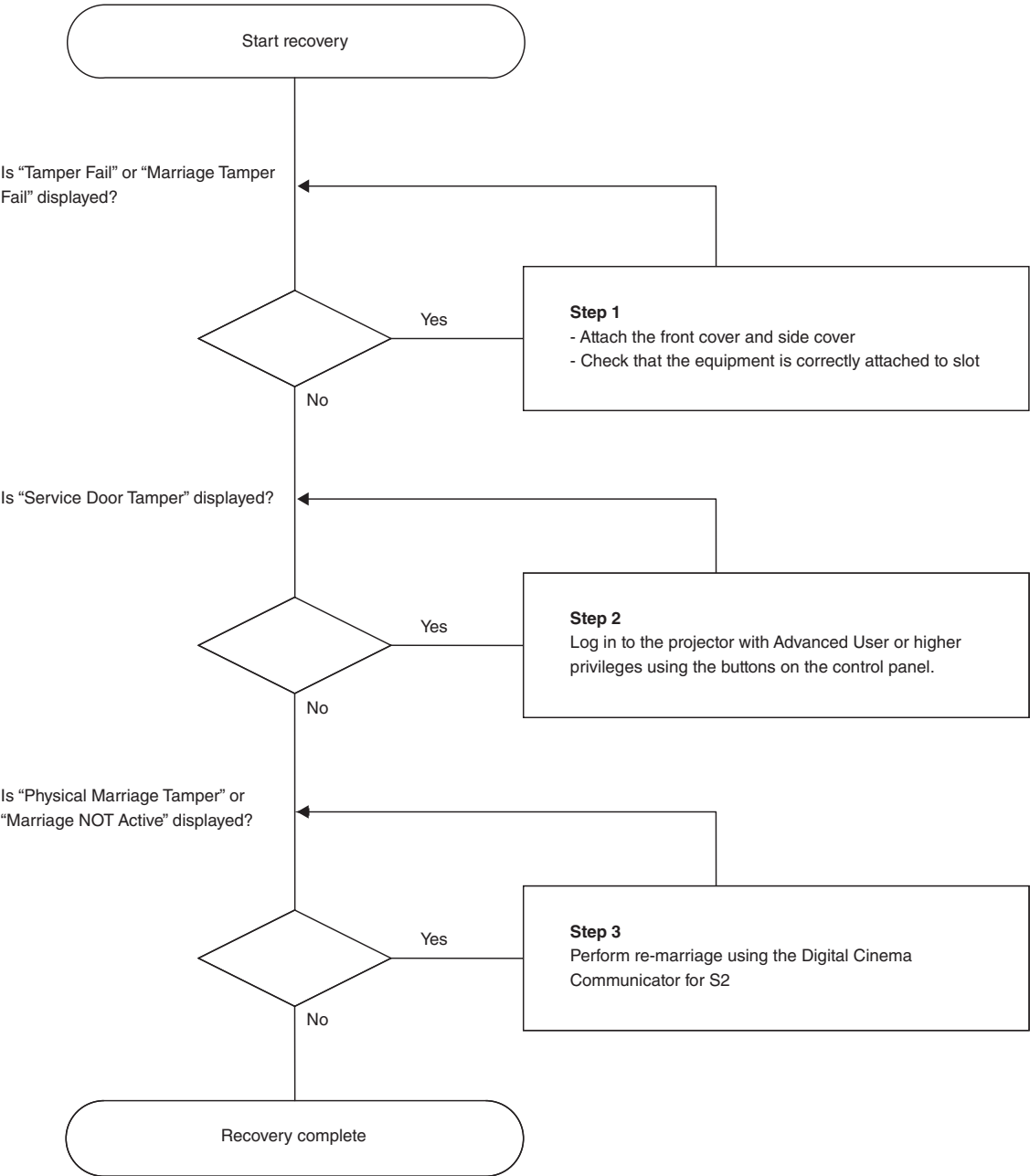
Action	Error code	Error message
Cover removed <ul style="list-style-type: none"><li>• Front cover</li><li>• Side cover</li></ul>	177	Tamper Fail
	486	Service Door Tamper
Slot device or blocking panel removed <ul style="list-style-type: none"><li>• Blocking panel</li><li>• Media block</li><li>• Signal input board</li></ul>	178	Marriage Tamper Fail
	482	Physical Marriage Tamper
	484	Marriage NOT Active

**TIP** Error codes can be checked when using the DCC for S2.

While the above error messages are being displayed, encrypted contents cannot be displayed. Refer to “3-2-1. Procedure for Recovering from Tamper Errors” (page 48) for details on how to recover from tamper errors.

3-2-1. Procedure for Recovering from Tamper Errors

If a tamper error is displayed when the projector power is turned on, recover by using the following procedure.





- Step 1

**“Attach the front cover and side cover”**

If you have removed a cover, then attach the cover. Furthermore, if the covers are attached, check that they are attached correctly.

When the covers are attached, “Tamper Fail” is cleared.

**“Check that the equipment is correctly attached to slot”**

If there are no devices mounted in slot, attach the blocking panel. Also, if a device is mounted in slot, check that it is securely pushed all the way into the slot.

When the device is mounted correctly in slot, “Marriage Tamper Fail” is cleared.

- Step 2

**“Log in to the projector with Advanced User or higher privileges using the buttons on the control panel”**

Refer to “4-1-1. When You Use the Service Personnel Menu” (page 63) for details on logging into the projector with Advanced User or higher privileges using the buttons on the control panel.

Once you login, “Service Door Tamper” is cleared.

- Step 3

**“Perform Re-Marriage using the Digital Cinema Communicator for S2”**

DCC for S2 is used to perform re-marriage. Refer to “Digital Cinema Communicator for S2 Installation Manual” for details.



### 3-3. Turning your Projector On

**NOTE**

- While your projector is on, be sure to have the lens cap removed from the lens. Otherwise, the lens cap may get deformed due to a heat buildup.
- In the following instances, the power to your projector cannot be turned on even if you press the POWER button.
  - When the inside temperature is abnormally high. The protective function prevents power from turning on. Wait some time (until the projector inside cools down) and then turn on the power.
  - When the STATUS indicator is blinking without the lamp lighting up after power-on. Your projector may be in trouble. Check the error display on the LCD screen and contact your dealer/distributor for instructions.
- Note that the image may sometimes flicker until the lamp has stabilized (5 to 10 minutes) after power-on. This is due to the characteristics of the lamp and is not trouble of your projector.

**Preparation:**



- Connect the power cable to the projector (See Projector User's Manual).
- Supply AC power to the projector.

- 1** Remove the lens cap.
- 2** Check that the VOLTAGE SELECT switch is set to match the voltage of the power supply you are using.



**CAUTION:**

You should select a power cable which is appropriate for the voltage of the electrical outlet you are connecting the projector to, and set the VOLTAGE SELECT switch properly. If the selection or setting is wrong, it may cause fires, or damage to the projector.

Voltage of power to use	Position of the VOLTAGE SELECT switch
AC100V outlet	<p>"100 130V~"</p> <p><b>200 240V~</b></p>  <p><b>100 130V~</b></p>
AC200V (single phase) outlet	<p>"200 240V~"</p> <p><b>200 240V~</b></p>  <p><b>100 130V~</b></p>

- 3** Turn on the main power switch on the side of the projector.

A buzzer will ring on the projector. The POWER button indicator will blink green and the STATUS indicator light orange (standby state).

KEY LOCK becomes automatically on if no control panel operation takes place in the standby state for 30 seconds by default. Buttons on the control panel do not function while KEY LOCK is on.

**4** If KEY LOCK is on, press the KEY LOCK button for one second or longer.

KEY LOCK becomes off. The KEY LOCK button indicator turns off and buttons on the control panel become operable.

**5** Press the POWER button on the control panel of your projector three seconds or longer.

Projector turns on.

The POWER button indicator lights up green after the completion of activation.

**6** Press the LAMP ON/OFF button on the control panel for five seconds or longer.

The lamp is turned on and the screen glows light about 15 seconds later. The LAMP ON/OFF button indicator brinks in cycles of 2 (and changes to steady green light 90 seconds later). The douser is closed until the screen glows light (the DOUSER button indicator lights green). When the douser is open, the DOUSER button indicator turns off.

### 3-4. Setting the Date and Time in the Projector

The internal clock in the projector operates on coordinated universal time (UTC). You can set the internal projector time to the time in your region by setting the time difference between the standard time in your region and UTC.

If you are using DCC for S2, you can easily set the date and time in the projector by reading the date and time settings of the computer where DCC is installed. Refer to “Digital Cinema Communicator for S2 Installation Manual” for details.

## 3-5. Setting the Projector Projection Method

The projection method can be changed in the projector menu. In the factory default settings, it is set to front (installed on a stand and projecting from the front of the screen).

**NOTE** When installed on the ceiling, always set "Fan Tilt Setting" (page 73) correctly.

**1** Press the MENU button for three seconds or longer.

The Passcode input screen appears on the LCD screen at the projector's control panel.  
Press the EXIT button to return to the original screen.

**2** Enter the passcode and press the ENTER button.

If you make a mistake during input, you can move the cursor by pressing the LEFT/RIGHT buttons and overwrite the passcode.

If the passcode is correct, you can use the service personnel menu.

**3** Press the LEFT/RIGHT button to display "Configuration" and press the DOWN button.

**4** Press the LEFT/RIGHT button to display "Installation" and press the DOWN button.

**5** Press the LEFT/RIGHT button to display "Orientation" and press the DOWN button.

**6** Check that "Image Orient" is properly selected and press the DOWN button.

If "Image Orient" is not properly selected, press the LEFT/RIGHT buttons to select it.

**7** Press the LEFT/RIGHT buttons to select the projection method.

When shipped from the factory, it is set to [Normal-F].

Normal-F	Front projection. With the projector installed on the pedestal, projection is executed from the front of the screen.
Normal-R	Rear projection. With the projector installed on the pedestal, projection is executed from the back of the screen.
UpsideDown-F	Ceiling front projection. With the projector installed on the ceiling, projection is executed from the front of the screen.
UpsideDown-R	Ceiling rear projection. With the projector installed on the ceiling, projection is executed from the back of the screen.

**8** Press the ENTER button.

An (\*) will be put on the selected projection method.

**9** Press the EXIT button.

Returns to the "Orientation" screen. Next, set the installation method.

**10** Press the LEFT/RIGHT button to display "Fan Tilt Setting" and press the DOWN button.

**11** Press the LEFT/RIGHT buttons to select the projection method.

When shipped from the factory, it is set to [Floor].

Floor	Select when the projector is installed on a desktop.
Ceiling	Select when the projector is installed on the ceiling.

**12** Press the ENTER button.

An (\*) will be put on the selected fan operating mode.

### **13** Press the EXIT button several times.

The projector exits the menu and goes back to the regular screen.

If you press the EXIT button and then select "Yes" and press the ENTER button on a regular screen, you are returned to user mode.

## 3-6. Adjusting the Lens

Display the test pattern and adjust the screen size, focus and screen position with the lens unit.

### 3-6-1. Display the Test Pattern

- 1** Press the MENU button.

"Title Select" is displayed on the LCD screen at the projector's control panel.

- 2** Press the DOWN button.

- 3** Press the LEFT/RIGHT buttons to select "TEST Pattern".

- 4** Press the DOWN button.

- 5** Press the LEFT/RIGHT buttons to select "Cross Hatch".

- 6** Press the ENTER button.

An (\*) will be put on the selected test pattern.

### 3-6-2. Adjusting the Screen Ratio

**Preparation:** Display the zoom/focus adjustment screen by using the following procedure.

- [1] Press the MENU button on the projector's control panel.  
"Title Select" appears on the projector's LC display.
- [2] Select "Configuration" menu using LEFT the LEFT/RIGHT button.
- [3] Press the DOWN button.
- [4] Select "Lens Control" using the LEFT/RIGHT button.
- [5] Press the DOWN button.
- [6] Press the ENTER button.  
"Focus Zoom" is displayed and you can adjust the focus/zoom.

**1** Press the LEFT/RIGHT buttons to roughly adjust the screen size so that the screen height and the image height are the same.

**2** Press the UP/DOWN buttons to roughly adjust the focus.

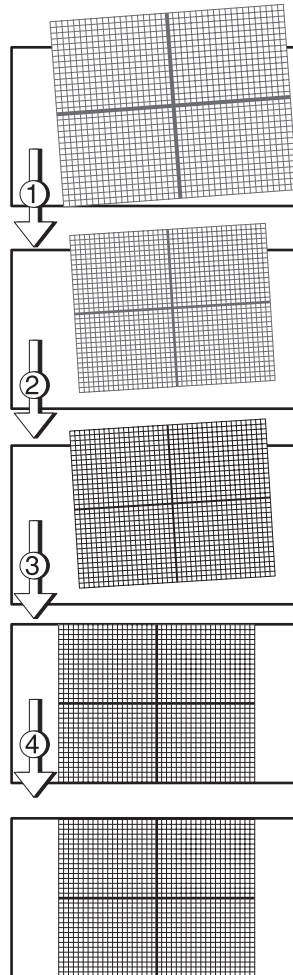
**3** Adjust the surface on which the projector is set up and the level adjuster of the projector to adjust the setup position, height, and tile (front-back and left right) of the projector so that the projected image is level at the screen center.

**4** Use the LEFT/RIGHT buttons again to adjust the screen size so that the projected image is kept 0.5 to 1 crosshatch cell portions higher than the top edge of the screen.

**5** Finally adjust the focus using the UP/DOWN buttons.

**6** Press the EXIT button several times.

The projector exits the menu and goes back to the regular screen.



## 3-7. Replacing the Notch Filter

This projector is equipped with a notch filter that has been optimized for projection in a movie theater. The image can be made brighter by removing the notch filter. Note that the projector does not comply with the Color Gamut in the DCI standards in that case.

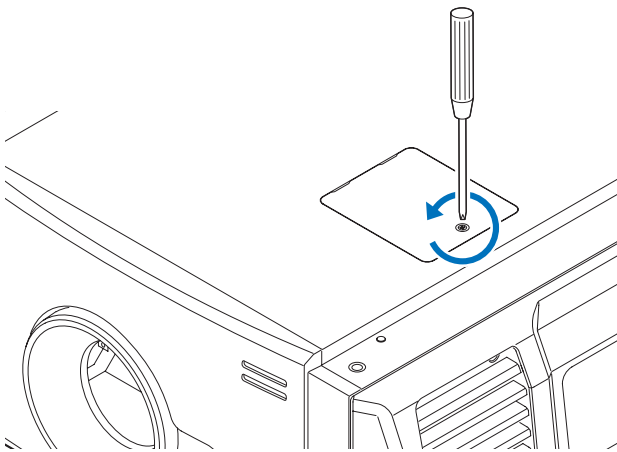
**NOTE** If you remove the notch filter, always attach the dummy bracket.

**Preparation:**

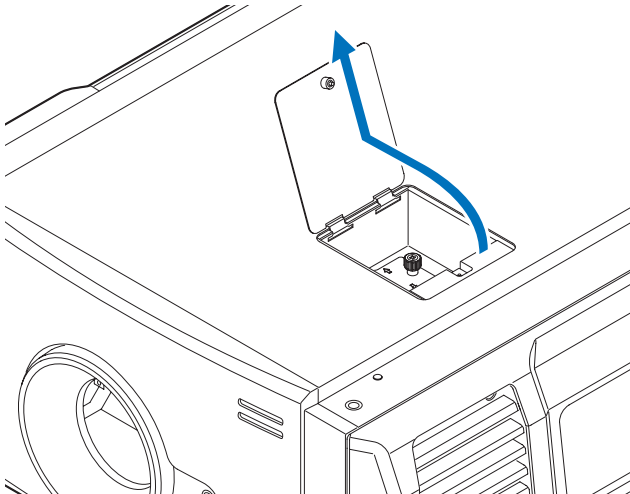
- Phillips head screwdriver (No.2).
- Turn off the projector and disconnect it from the electrical outlet.

**1** Remove the notch filter cover.

1. Loosen the screw. The screw cannot be removed.



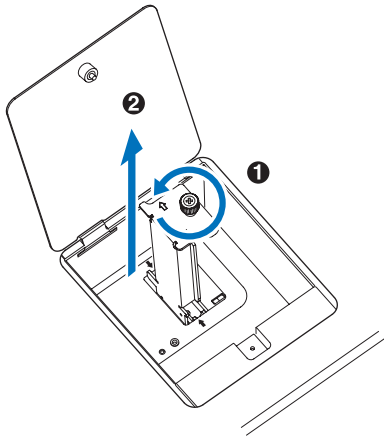
2. Open the notch filter cover, and then pull it up and remove it.





**2** Remove the notch filter.

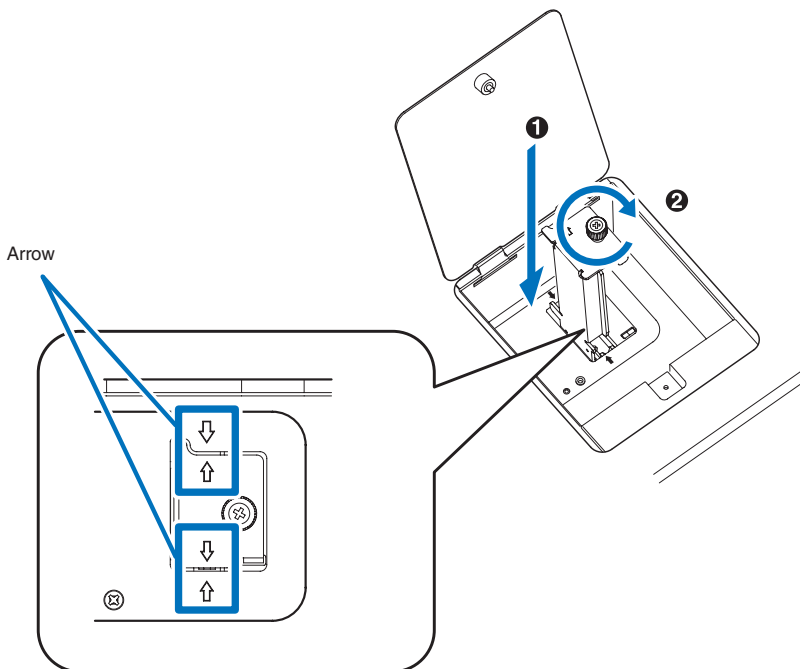
1. Loosen the screw on the notch filter until it is free to spin **(1)**. The screw does not detach from the notch filter.
2. Gently pull up the notch filter and remove it **(2)**.



**3** Take the dummy bracket from the accessory box.

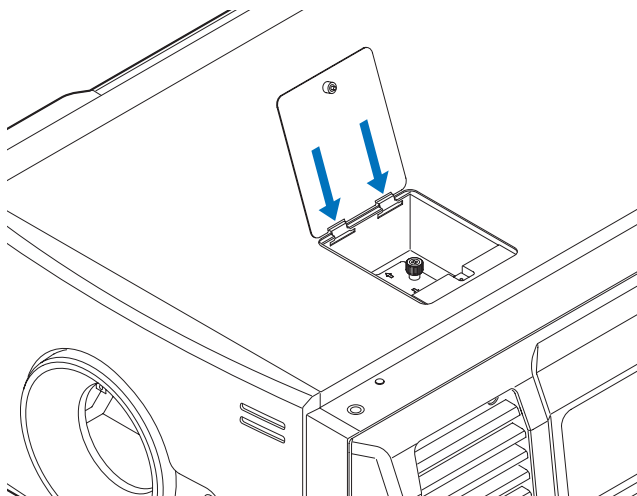
**4** Attach the dummy bracket.

1. Gently attach along the guides on the projector **(1)**.  
Check that the position of the arrow on the dummy bracket is aligned with the arrow on the projector.
2. Fasten the locking screws to affix the dummy bracket **(2)**.

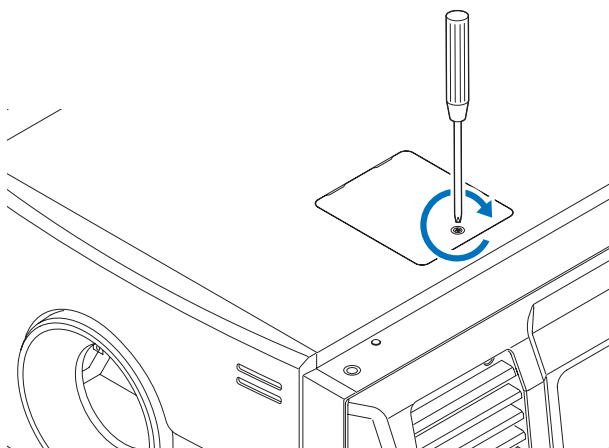


### **5** Mount the notch filter cover to the projector.

1. Attach with the protrusions in the notch filter cover aligned with the holes in the projector.



2. Tighten the screw on the notch filter cover clockwise to fasten.



This completes replacing the notch filter.

## 3-8. Connecting with the Image Input Port

By installing option board to projector, you can add input port. Input port which can add to option board is listed below. For the connection diagram of projector and peripheral equipment, refer to Installation manual of option board.

Option Board	Image Input Port
NC-90MS01 (Note 1)	HDMI input port x1 3G SDI input port x2
NC-80LB01-B/NC-80DS01-B (Note 2)	HD-SDI input port (BNC)x4 DVI-D input port (DVI-D 24pin)x2

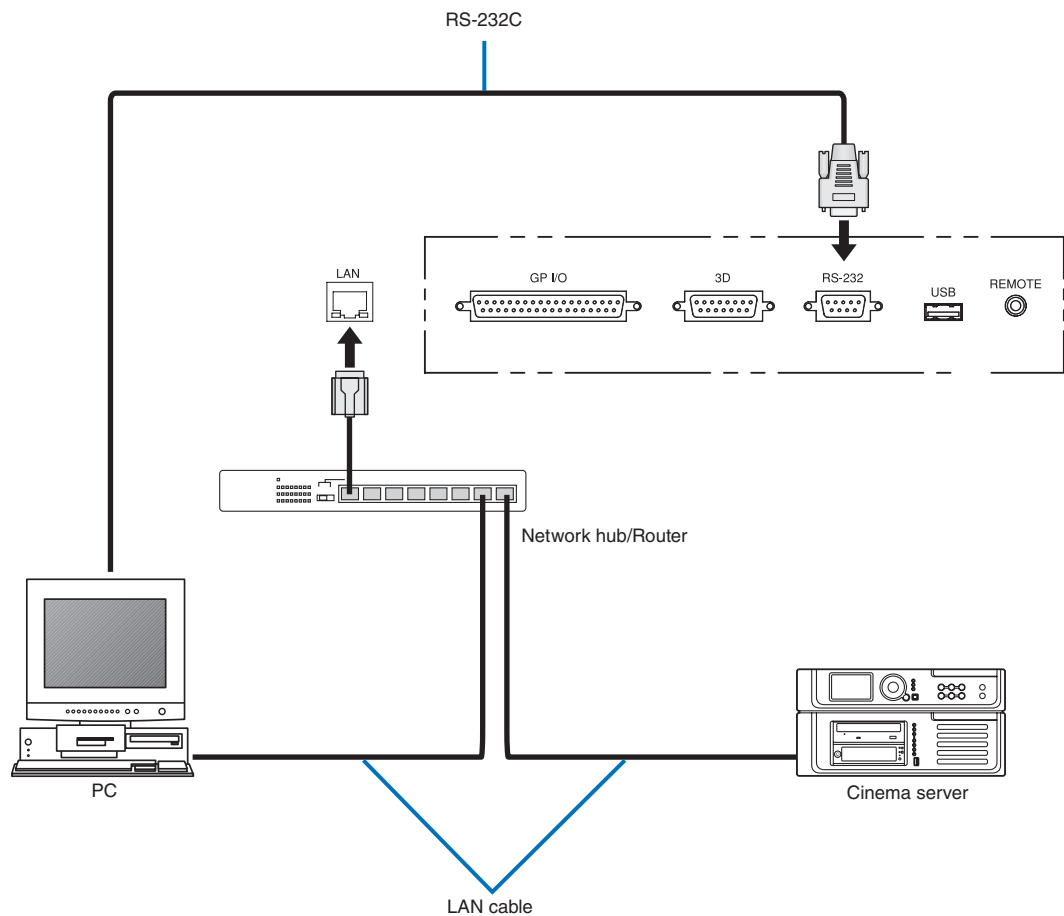
(Note 1) This is included as standard with the projector.

(Note 2) NC-80LB01-B supports CineLink 2, and NC-80DS01-B does not support CineLink 2. NC-80DS01-B cannot display the encrypted contents.

### 3-9. Connecting the Various Control Terminal

For control, your projector comes with such ports as the PC control terminal and the Ethernet port (RJ-45).

PC control terminal (RS-232)	Use this terminal when controlling the projector in serial connection from a PC.
Ethernet port (LAN)	Use this port when controlling the projector in LAN connection from a PC or a cinema server.



This completes the adjustment and connection of the projector. Next, set up the projector from the DCC for S2. Refer to the "Digital Cinema Communicator for S2 Installation Manual" for the procedure.

## 4. LCD Menu

This chapter describes the menus displayed in the LCD screen on the projector's control panel and their functions. For basic operations of menus, refer to the projector's operation manual.

### 4-1. List of Menu

Menus in parentheses are menus for our service personnel. Normally, these menus cannot be used. If you are logged in to the projector with Installation privileges, you cannot use [FactoryDefault] - [LAN] (page 66).

Main menu	Submenu		Description	Reference page
Title Select	"Title Memory Name"		Selects the title of the signal to be projected.	63
	TEST Pattern		Selects the test pattern to be projected.	63
Configuration	Lamp Setup	Adjust	Adjusts lamp brightness.	64
		Lamp Mode	Selects the lamp to use.	64
	Lens Control	Lens Position	Adjusts the position of the projected screen.	65
		Focus Zoom	Adjusts the size and focus of the projected screen.	65
	Reset	(FactoryDefault)	Returns the settings to their default values. Selects between preset buttons and titles only, LAN settings only and all settings.	66
		Lamp Usage	Initializes the usage time of the lamp.	67
		Filter Usage	Initializes the usage time of the air filter.	67
		(Fan Usage)	Initializes the usage time of the fan.	67
		(Douser Count)	Resets the number of times the douser has been used.	67
	(Setup)	Douser Setup	Sets the douser open/close state.	68
		Panel Key Lock	Locks the buttons on the projector's control panel so that they cannot be operated.	68
		Auto Key Lock	Enables or disables Auto Key Lock.	69
		3D Connector	Sets the signal input terminal for a 3D image system (3D terminal or GPI/O terminal).	69
		Unlit Mode	Sets the projector operation when the lamp does not turn on.	69
		Off Timer	Sets the time until the projector power is turned off automatically.	70
		Filter Message	Sets the time to display the message indicating the air filter replacement cycle.	70
		Silent Mode	Selects whether to use the status indicator, buzzer, indicators on the control panel and backlight.	70
	(Installation)	Option Slot	Configures the device installed in slot A (only when the projector is in standby mode).	72
		Orientation	Sets the projection method and cooling fan operating mode.	72
		Lens Center	Moves the lens shift position to the center.	73
		Baudrate	Sets the PC control connector (RS-232) data transmission speed (bps).	73
		Date/Time	Sets the date and time on the projector.	74
		New Router Setup	Sets the router with the default settings when the router built-in the projector has been replaced.	74
		Fan Speed Mode	Sets the cooling fan operating mode.	74
	(Memory)		The content of the selected lamp memory (lamp mode and lamp output power value) can be overwritten with the current settings.	75
	(Lens FW Update)		This will be used to update the lens firmware in the future.	75
(Title Setup)	Preset Button	Preset Button 1-16	Sets the title to be assigned to the preset buttons (<1> to <8> buttons).	76

Main menu	Submenu		Description	Reference page
Information	Lamp	Output	Displays the lamp output setting.	77
		Voltage	Displays the lamp voltage value.	77
	Preset Button	Preset Button 1–16	Displays the titles which are assigned to the preset buttons (<1> to <8> buttons).	78
	Usage		Displays information related to projector usage.	78
	Error Code		Displays the currently occurring error.	78
	Version	System	Displays the model name and various version information about the projector.	79
		SIB	Displays the model and version of the signal input board (SIB).	79
		IMB	Displays the vendor name and version information about the media block (IMB).	79
		Slave	Displays the slave firmware version of the projector.	79
		Ballast	Displays the ballast firmware version of the projector.	80
	IP Address	System	Displays the IP address of the projector.	80
	Setup Date		Displays the date when the projector was set up (starting date of the warranty period).	80
	Option Status		Displays the link status of the device mounted in slot A and projector.	80

### 4-1-1. When You Use the Service Personnel Menu

To use the menu for service personnel, you need to input the passcode. This section describes how to display the passcode entry screen and how to enter the passcode. Refer to the Projector Manual for details on how to enter text.

**1 Press the MENU button for three seconds or longer.**

The passcode input screen will be displayed on the LCD screen at the projector's control panel.  
Press the EXIT button to return to the original screen.

**2 Enter the passcode and press the ENTER button.**

If you make a mistake during input, you can move the cursor by pressing the LEFT/RIGHT buttons and overwrite the passcode.

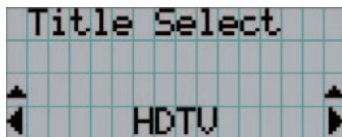
If the passcode is correct, you can use the menu for service personnel.

## 4-2. Title Select

### 4-2-1. Title select (Title Memory)

Select the title of the signal to be projected.

You can register up to 100 titles. You can also assign registered titles to the preset buttons <1> to <8> on the projector's control panel and call them up directly using those buttons. (See page 78)

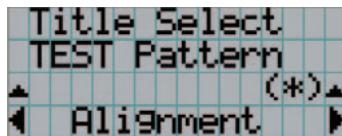


← Displays the currently selected item with asterisk (\*).

← Selects the title to be projected.

### 4-2-2. Test Pattern

Selects the test pattern to be projected.



← Displays the currently selected item with asterisk (\*).

← Selects the test pattern to be projected.

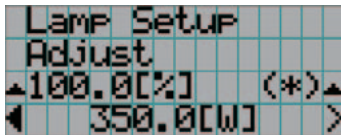
OFF, Alignment, Cross Hatch, Convergence, Red, Green, Blue, White, Black, White 50% [IRE], H-Ramp, Logo
---

## 4-3. Configuration

### 4-3-1. Lamp Setup

#### Adjust

Adjust the lamp output (brightness).

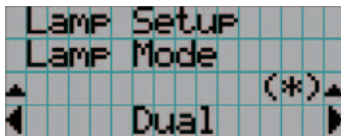


← Displays the current output power value (%) when the lamp rated output is 100%.  
← Displays the current power value (W).

**NOTE** You cannot set the lamp output to below 75.2%.

#### Lamp Mode

Selects the lamp to use. When “Dual” is selected, lamp 1 and lamp 2 turn on/off at the same time. When “Lamp 1” or “Lamp 2” is selected, the other lamp is not used.



← Displays the currently selected item with asterisk (\*).  
← Displays the setting.

Dual	Uses lamp 1 and lamp 2 at the same time.
Lamp 1	Uses only lamp 1 (lamp 2 is not used).
Lamp 2	Uses only lamp 2 (lamp 1 is not used).

#### TIP

- If you change the lamp mode while the lamp is on, the changed settings are applied immediately.
- If you change the lamp mode while the lamp is off, the changed settings are applied the next time the lamp is turned on.
- The LCD screen displays “Lamp Lit Change” if any of the following events occurs when the lamp mode is set to “Dual”.
  - One of the lamps has failed to turn on when you turn the lamps on
  - One of the lamps has extinguished while the lamps are onTo once again light a lamp which has failed to turn on or extinguished, press both the LAMP ON/OFF button and the MENU button three seconds or longer. However, the lamp cannot be turned on again while the LAMP ON/OFF button indicator is blinking.

#### NOTE

When the lamp mode is changed, the LAMP ON/OFF button indicator blinks green. You cannot change the lamp mode while the LAMP ON/OFF button indicator is blinking. Wait until the LAMP ON/OFF button indicator changes from blinking to steady on.



### 4-3-2. Lens Control

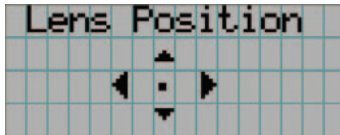
Adjust the position, size, and focus of the projected screen.

Press the ENTER button to switch the display between “Lens Position” and “Focus Zoom” adjustments. Press the EXIT button to return to a menu one level above.

#### Lens Position

Adjusts the position of the projected screen.

The projected screen moves in the selected direction as you press the UP/DOWN/LEFT/RIGHT button.

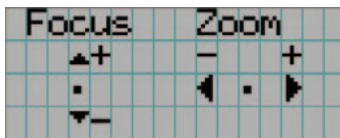


#### Focus Zoom

Adjusts the size (Zoom) and focus (Focus) of the projected screen.

Press the UP/DOWN button to adjust the focus.

Press the LEFT/RIGHT button to adjust the size of the projected screen.



4-3-3. Reset

Used when initializing settings and usage times. Some of the items are in the service personnel menu. Refer to “4-1-1. When You Use the Service Personnel Menu” (page 63) for details on how to use these.

Item	Service Personnel	User
FactoryDefalut	○	—
Lamp Usage	○	○
Filter Usage	○	○
Fan Usage	○	—
Douser Count	○	—

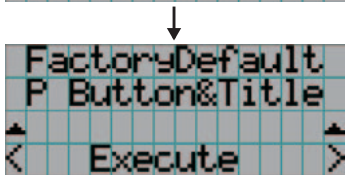
FactoryDefault

Returns the projector main unit settings to the factory default state. You can choose from the following three types of methods.

- Registered preset buttons and title settings
- Network settings
- All adjustment and setting values



← Select the item to be reset.



← Press the ENTER button to execute resetting.

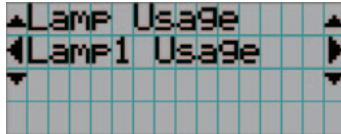
P Button & Title	Resets the allocation of preset buttons and all registered titles.
LAN	Resets the network settings.
All	Resets all adjustment and setting values.

**NOTE** If you are logged in to the projector with Installation privileges, you cannot reset the network settings (LAN).

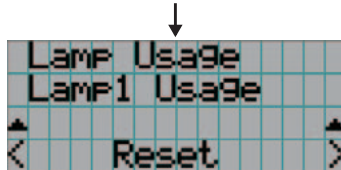
### Lamp Usage

Resets the lamp usage time. When both lamp 1 and lamp 2 are replaced at the same time, reset the usage times of both lamp 1 and lamp 2.

- [1] Press the LEFT/RIGHT button to select the lamp to reset the usage time of, and then press the ENTER button.
- [2] Press the ENTER button in the "Lamp1 Usage" or "Lamp2 Usage" screen, the confirmation screen will appear.
- [3] Select "Yes" in the confirmation screen, and then press the ENTER button to reset the lamp usage time.



← Selects the lamp to reset the usage time of.



← Press the ENTER button to display the confirmation screen.

Lamp1 Usage	Resets the usage time of lamp 1.
Lamp2 Usage	Resets the usage time of lamp 2.

### Filter Usage

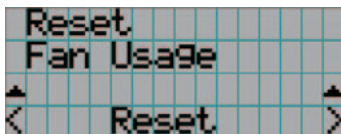
Resets the air filter usage time. Press the ENTER button, then select "Yes" in the displayed confirmation screen, and then press the ENTER button to reset the air filter usage time.



← Press the ENTER button to display the confirmation screen.

### Fan Usage

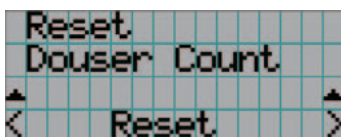
Resets the fan usage time. Press the ENTER button, then select "Yes" in the displayed confirmation screen, and then press the ENTER button to reset the fan usage time.



← Press the ENTER button to display the confirmation screen.

### Douser Count

Resets the number of times the douser has been used. Press the ENTER button, then select "Yes" in the displayed confirmation screen, and then press the ENTER button to reset the number of times the douser has been used.



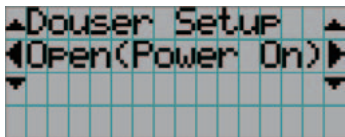
← Press the ENTER button to display the confirmation screen.

4-3-4. Setup

This menu is for service personnel. For the procedure to use it, refer to “4-1-1. When You Use the Service Personnel Menu” (page 63).

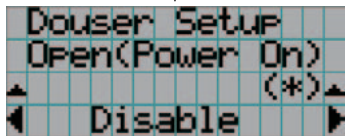
Douser Setup

Sets the douser open/close state. Request your dealer/distributor to perform the setting.



← Selects the item.

↓

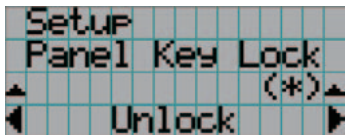


← Displays the currently selected item with asterisk (\*).  
← Displays the setting.

Open(Power On)	When set to Enable, the douser opens after the projector starts up.
Lamp On	When set to Enable, the douser opens when the lamp is turned on.
Title Select	When set to Enable, the douser opens when a title is selected.

Panel Key Lock

The control buttons on your projector are locked to be inoperative.



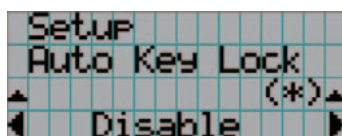
← Displays the currently selected item with asterisk (\*).  
← Displays the setting.

Lock	Enable a lock on the control buttons on your projector.
Unlock	Disable the lock on the control buttons.

**NOTE** When the buttons on the projector’s control panel are locked, press the EXIT button on the projector for about 10 sec. to unlock them (The key lock setting on the projector becomes Unlock).

### Auto Key Lock

Enables or disables Auto Key Lock.



← Displays the currently selected item with asterisk (\*).

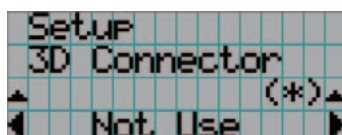
← Displays the setting.

Enable	Enables the auto key lock function. This applies the key lock automatically if you do not perform any operations from the main unit control panel for 30 seconds after entering the standby state. If you do not perform any operations for 30 seconds after releasing the key lock, the key lock is applied again.
Disable	Disables the auto key lock function. Although the key lock becomes active after entering the standby state, once you release the key lock it is not automatically applied.

### 3D Connector

Selects the port for 3D video systems used as the control signal input/output for the 3D video system.

If you select "Not Use", the GP I/O port is used as the control signal input/output for the 3D video system. If you select "Use", the 3D port is used as the signal input for the 3D video system.



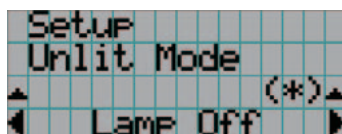
← Displays the currently selected item with asterisk (\*).

← Displays the setting.

Not Use	Does not use the 3D port as the control signal input/output for the 3D video system (uses the GP I/O port).
Use	Uses the 3D port as the control signal input/output for the 3D video system.

### Unlit Mode

When lamp is unlit, sets whether to shut down the projector or transit to lamp-off state. The default setting is set to "Lamp Off". For this menu, the new setting is applied immediately when the setting is changed.



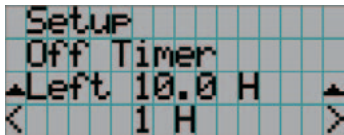
← Displays the currently selected item with asterisk (\*).

← Displays the setting.

Lamp Off	In case the lamp did not turn on for some reason, the projector will transit to lamp-off state (the power remains turned on).
Cooling	In case the lamp did not turn on for some reason, the projector shuts down (powers off). (Before shutting down, the fan operates for 90 seconds (cool off time).)

Off Timer

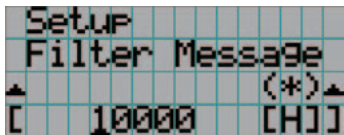
Automatically turns off the projector power once the configured time has elapsed. The time until the power is turned off can be set in steps of 1 hour (up to a maximum of 24 hours). The timer starts from when the setting is applied by pressing the ENTER button. While the timer is running, the remaining time is displayed in the format “Left \*\*. \* H”. Set to “No Preset” to stop the timer.



- ← Displays the remaining time until the power is turned off.
- ← Sets the time until the power is turned off. (No Preset: Timer off)

Filter Message

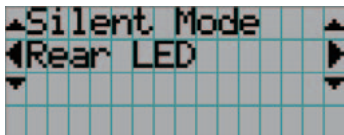
Sets the time until the air filter replacement cycle (units: hours). Once the usage time of the air filter exceeds the configured time, the message (“Filter Time Over”) is displayed on the LCD screen. The default setting is set to “0 (-----) [H]”. In this setting, “Filter Time Over” is not displayed.



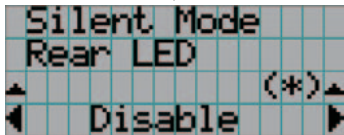
- ← The current setting value is displayed with an asterisk (\*).
- ← Sets the time until the replacement cycle (units: hours).

Silent Mode

Sets whether the status indicators, buzzer, indicators on the projector's control panel, illumination, and LCD screen backlight are enabled or disabled.



- ← Selects the item.



- ← Displays the currently selected item with asterisk (\*).
- ← Displays the setting.

RearLED	Sets whether to use or not use the status indicators. Enable: Use Disable: Not use (the status indicators do not light up)
Buzzer	Sets whether to use or not use the buzzer. Enable: Use Disable: Not use (the buzzer does not sound)
Control Button	Sets whether to use or not use the indicators on the projector's control panel. Enable: Use Disable: Not use (the LED next to the buttons do not light up)
LCD Backlight	Sets whether to use or not use the illumination and LCD screen backlight on the projector's control panel. Enable: Use Disable: Not use (turns off the illumination and LCD screen backlight on the projector's control panel)

**TIP**

When LCD Backlight is set to Disable, you can change the setting to Enable by long-pressing (3 seconds or more) the EXIT button and UP button.

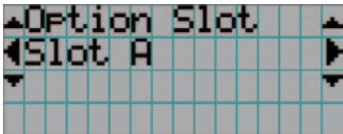
4-3-5. Installation

This menu is the service personnel menu. For the using service personnel menu, refer to “4-1-1. When You Use the Service Personnel Menu” (page 63).

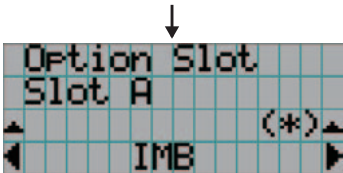
Option Slot

Configures the devices mounted in slot A. This menu is active in standby mode only.

Slot B is not available in this projector (displays as “Not Available”).



← Select the slot.



← Displays the currently selected item with asterisk (\*).

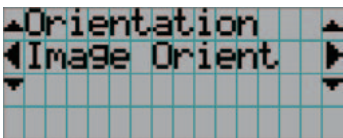
← Displays the setting.

IMB	Media block (NC-90MS01)
NC-80LB	Signal input board (NC-80LB01-B)
NC-80DS	Signal input board (NC-80DS01-B)
No Board	No device mounted

Orientation

Set the projection method (Image Orient) to match the installation conditions of the projector and screen. Furthermore, set the cooling fan operation (Fan Tilt Setting) to match the installation conditions of the projector.

**NOTE** When you change the installation method, always check that “Fan Tilt Setting” is set correctly (the factory default settings are Image Orient: Normal-F and Fan Tilt Setting: Floor). If “Fan Tilt Setting” is not set correctly, the lamp may heat up causing it to shatter or become damaged.

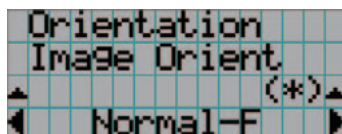


← Select the item and press the ENTER button to display the menu.

Image Orient	Set the projection method.
Fan Tilt Setting	Set the cooling method to match the projection method.



(If you selected Image Orient)



← Displays the currently selected item with asterisk (\*).

← Displays the setting.

Normal-F	Front projection. With the projector installed on the pedestal, projection is executed from the front of the screen.
Normal-R	Rear projection. With the projector installed on the pedestal, projection is executed from the back of the screen.
UpsideDown-F	Ceiling front projection. With the projector installed on the ceiling, projection is executed from the front of the screen.
UpsideDown-R	Ceiling rear projection. With the projector installed on the ceiling, projection is executed from the back of the screen.

(If you selected Fan Tilt Setting)



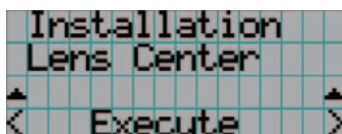
← Displays the currently selected item with asterisk (\*).

← Displays the setting.

Floor	Select when the projector is installed on a desktop.
Ceiling	Select when the projector is installed on the ceiling.

## Lens Center

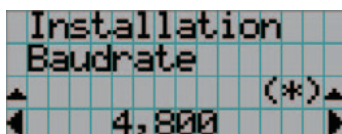
To move the lens shift to the center position. The center position may slightly shift depending upon mounting conditions of the lens.



← Press the ENTER button to execute moving.

## Baudrate

To select the transmission speed (bps) for your projector (SYSTEM) and a PC when they are connected by a commercially available RS-232C straight cable. Select one from 4800, 9600, 19200 and 38400. Select the transfer speed corresponding to the speed of the connected devices.



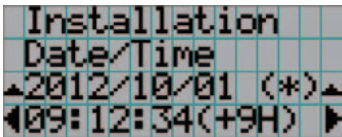
← Displays the currently selected item with asterisk (\*).

← Displays the setting.

Date/Time

Use this to set the date and time on the projector.

The internal clock in the projector uses coordinated universal time (UTC). This sets the time difference between the standard time in your region and UTC.

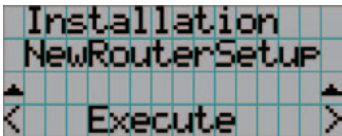


← Displays the currently setting with asterisk (\*).  
← Sets the time difference between the standard time in your region and UTC.

**TIP** If you are using DCC for S2, you can set the date and time from your computer. Refer to “Digital Cinema Communicator for S2 Installation Manual” for details.

NewRouterSetup

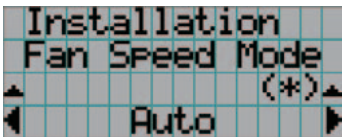
Sets the router with the default settings when the router built-in the projector had been replaced.



← Press the ENTER button to execute the setup.

Fan Speed Mode

It adjusts the rotation speed of the internal cooling fan.



← Displays the currently selected item with asterisk (\*).  
← Displays the setting.

Auto	The fan rotates at the optimal speed according to the temperature sensor inside the projector.
High Speed	The fan always rotates at high speed.
High Altitude	Select when using the projector in locations with low air pressure, such as at high elevations of altitude approximately 5500 feet (1600 m) or higher. The fan always rotates at high speed.

**NOTE**

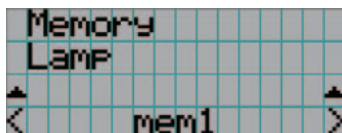
- It is recommended that you select “High Speed” if you use the projector non-stop for consecutive days.
- Set “Fan Speed Mode” to “High Altitude” when using the projector at altitudes approximately 5500 feet/1600 meters or higher.
- Using the projector at altitudes approximately 5500 feet/1600 meters or higher without setting to “High Altitude” can cause the projector to overheat and the protector could shut down. If this happens, wait a couple minutes and turn on the projector.
- Using the projector at altitudes less than approximately 5500 feet/1600 meters and setting to “High Altitude” can cause the lamp to overcool, causing the image to flicker. Switch “Fan Speed Mode” to “Auto”.
- Using the projector at altitudes approximately 5500 feet/1600 meters or higher can shorten the life of internal parts such as the lamp.

### 4-3-6. Memory

This menu is the service personnel menu. For the using service personnel menu, refer to “4-1-1. When You Use the Service Personnel Menu” (page 63).

The content of the selected lamp memory (lamp mode and lamp output power value) can be overwritten with the current settings. Press the LEFT/RIGHT buttons to select the lamp memory, then press the “ENTER” button to display the confirmation screen. Select “Yes” in the confirmation screen, and then press the ENTER button. The selected lamp memory (lamp mode and lamp output power value) is overwritten with the current settings.

**NOTE** Lamp memory cannot be newly registered. Use DCC for S2 to register the lamp memory in advance. Refer to “Digital Cinema Communicator for S2 Installation Manual” for details on registering the lamp memory.

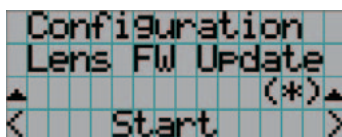


← Select the lamp memory and press the ENTER button to display the confirmation screen.

### 4-3-7. Lens FW Update

This menu is the service personnel menu. For the using service personnel menu, refer to “4-1-1. When You Use the Service Personnel Menu” (page 63).

This will be used to update the lens firmware in the future.



## 4-4. Title Setup

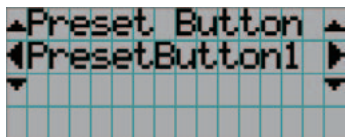
This menu is the service personnel menu. For the using service personnel menu, refer to “4-1-1. When You Use the Service Personnel Menu” (page 63).

### 4-4-1. Preset Button

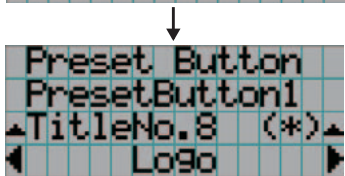
Use this button to set the titles to be assigned to the preset buttons (<1> to <8> buttons).

You cannot assign the same title to several preset buttons. If you want to assign any title to another number, cancel the assignment once and then set it to any button again.

The “Preset Button 1 to Preset Button 8” settings correspond to buttons <1> to <8> on the control panel. To select the titles allocated to “Preset Button 9 to Preset Button 16”, press the <1> to <8> button while holding down the <Up> button on the control panel.



← Select the preset button number (1 to 16).



← Display the selected number of the title.

← Select the titles to be assigned to the preset buttons.  
Select the titles from those registered in advance.  
To clear assignment to preset buttons, select “---”.

## 4-5. Information

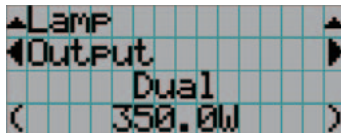
Displays the hours of lamp use, the version information and error codes.

### 4-5-1. Lamp

Displays information relating to the lamp.

#### Output

Displays the lamp mode and lamp output power value (W).



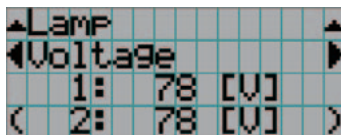
← Selects the item to display.

← Displays the lamp mode.

← Displays the current power value (W).

#### Voltage

Displays the voltage value (V) of the currently used lamp.



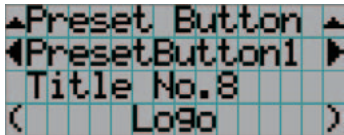
← Selects the item to display.

← Displays the voltage value (V) of lamp 1.

← Displays the voltage value (V) of lamp 2.

4-5-2. Preset Button

Displays the titles assigned to the preset buttons (<1> to <8> buttons) on the projector's control panel.



← Selects the preset button number whose contents you want to display.

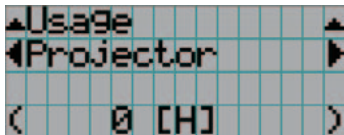
← Displays the assigned title numbers.

← Displays the registered names of the assigned titles.

**TIP** To select a title allocated to one of "Preset Button9" to "Preset Button16", press the preset button while holding down the UP button. For example, to select the title allocated to "Preset Button9", press the <1> button while holding down the UP button.

4-5-3. Usage

Displays information related to the projector usage, such as the usage time of the projector, lamps, air filters, and fan, and information about the lamp replacement cycle.



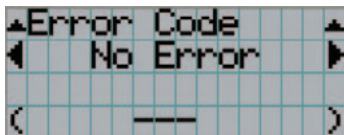
← Selects the item to display.

← Displays information about the selected item.

Projector	Displays the usage time of the projector.
Lamp	Displays the usage time of the lamp.
Lamp Remaining	Displays the amount of usage time remaining (approximate) from the current usage time with the unused state as 100% and 0% when the lamp needs replacement.
Lamp Strike	Displays the number of times the lamp has been turned on.
Filter	Displays the usage time of the air filter.
Fan	Displays the usage time of the fan.
Douser Count	Displays the number of times the douser has been used.

4-5-4. Error Code

Displays the error code when an error occurs. See the "Error Code List" in the Appendix for details on error codes. When multiple errors occur, you can display them by pressing the LEFT/RIGHT buttons.



← Displays the code of the error currently occurring.

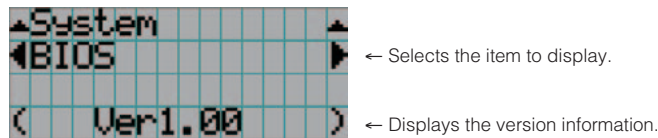
← Displays the name of the error currently occurring.

### 4-5-5. Version

Displays the version information about the projector, optional boards and IMB.

#### System

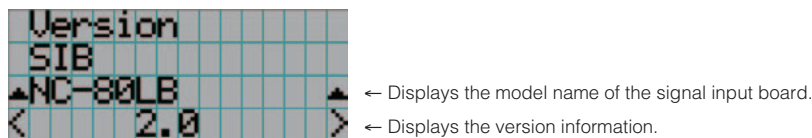
Displays the version information of the projector.



BIOS	Displays the BIOS version of the projector.
Firmware	Displays the firmware version of the projector.
Data	Displays the data version of the projector.
Lens	Displays the firmware version of the lens mount on the projector.
Serial No.	Displays the serial number of the projector.
Model	Displays the model name of the projector.

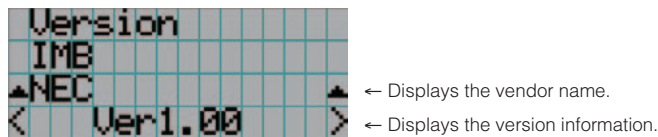
#### SIB

Displays the model name and version information about the signal input board (SIB). When the projector is in standby mode, the version information displays "---". Displays "Not Use" when the signal input board is not attached to the projector.



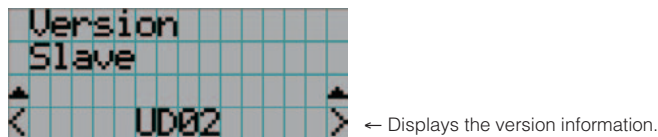
#### IMB

Displays the vendor name and version information about the media block (IMB). When the projector is in standby mode, the vendor name is blank and the version information displays "---". Displays "Not Use" when IMB is not mounted to the projector.



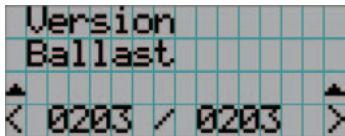
#### Slave

Displays the slave firmware version of the projector.



Ballast

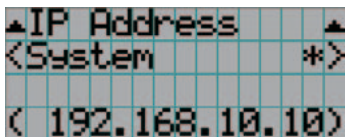
Displays the ballast firmware version of the projector. The version information is displayed in the format "ballast 1/ballast 2".



← Displays the version information.

4-5-6. IP Address

Displays the IP address set in the projector.

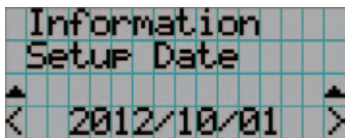


← Displays the IP address.

System	Displays the IP address set for the projector (System).
--------	---

4-5-7. Setup Date

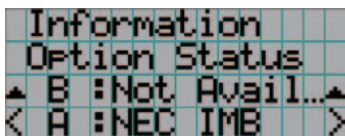
Displays the date when the projector was setup (starting date of the warranty period).  
The setup date is configured by using DCC for S2. Refer to "Digital Cinema Communicator for S2 Installation Manual" for details.



← Displays the date when the projector was set up (starting date of the warranty period).

4-5-8. Option Status

Displays the link status of the device mounted in slot A (media block, signal input board) on the projector. The device name is displayed in ( ) when the projector is in standby or when connection to the device cannot be confirmed.



← Slot B is not available in this projector.

← Displays the link status of the device in slot A.

B	Not Available: Slot B is not available in this projector
A	<div>Displays the link status of the device in slot A.</div> <ul style="list-style-type: none"><li>• &lt;Vendor Name&gt; IMB: Media block (NC-90MS01)</li><li>• NC-80LB: Signal input board (NC-80LB01-B)</li><li>• NC-80DS: Signal input board (NC-80DS01-B)</li><li>• No Board: No device mounted</li></ul>



## 5. Appendix

### 5-1. List of Registered Titles (when shipped from the factory)

Preset Button	Title Number	TITLE NAME	INPUT	FILES										Anamor- phic Lens
				PCF			TOGD			3D File	SCREEN	MCGD		
				FILE NAME	SOURCE Input Size (HxV)	Aspect Ratio	SAME FILE NAME	Tolerance Box	White Clip					
	001	DCDM_XYZ_239	SDI-A,B	DCDM_XYZ_239	2048x858	0	DC28_DCI_XYZE_314_351	Not Use	Use	Disable	DC2K SCOPE	M10I	OFF	
	002	DCDM_XYZ_185	SDI-A,B	DCDM_XYZ_185	1998x1080	0	DC28_DCI_XYZE_314_351	Not Use	Use	Disable	DC2K FLAT	M10I	OFF	
	003	DCDM_RGB_239	SDI-A,B	DCDM_RGB_239	2048x858	0	DC28_DCI_Xenon	Not Use	Not Use	Disable	DC2K SCOPE	M10I	OFF	
	004	DCDM_RGB_185	SDI-A,B	DCDM_RGB_185	1998x1080	0	DC28_DCI_Xenon	Not Use	Not Use	Disable	DC2K FLAT	M10I	OFF	
	005	MXFI_239	SDI-A	MXFI_239	1920x804	0	DC28_DCI_Xenon	Not Use	Not Use	Disable	DC2K SCOPE	M10I	OFF	
	006	MXFI_185	SDI-B	MXFI_185	1920x1038	0	DC28_DCI_Xenon	Not Use	Not Use	Disable	DC2K FLAT	M10I	OFF	
	007	HDTV	SDI-B	HDTV_1920x1080	1920x1080	0	Nothing	Not Use	Not Use	Disable	DC2K HDTV	M10I	OFF	
	008	DVI-A	DVI-A	DVI_2048x1080	0x0	0	P7v2 theatre	Use	Not Use	Disable	DC2K DVI	M10I	OFF	
	009	DVI-B	DVI-B	DVI_2048x1080	0x0	0	P7v2 theatre	Use	Not Use	Disable	DC2K DVI	M10I	OFF	
	010	DVI-TWIN	DVI-A,B	DVI_2048x1080	0x0	0	P7v2 theatre	Use	Not Use	Disable	DC2K DVI	M10I	OFF	
1	011	IMB 2K 239	IMB	DCDM_XYZ_239	2048x858	0	DC28_DCI_XYZE_314_351	Not Use	Use	Disable	DC2K SCOPE	M10I	OFF	
2	012	IMB 2K 185	IMB	DCDM_XYZ_185	1998x1080	0	DC28_DCI_XYZE_314_351	Not Use	Use	Disable	DC2K FLAT	M10I	OFF	
3	013	IMB Auto	IMB	DCDM_XYZ_Auto	0x0	0	DC28_DCI_XYZE_314_351	Not Use	Use	Disable	2048x1080 No Crop	M10I	OFF	

## 5-2. Error Code List

Please inquire your dealer/distributor about action to be taken for each error code.

Error Code	Error message	Description
4	GPSU(12V) Fail	Power supply is abnormal.
5	Lamp Unlit	Lamp doesn't light up.
12	E2PROM R Fail	E2PROM data read error is detected.
15	E2PROM W Fail	E2PROM data write error is detected.
120	DLP Ack Fail	ICP failed operation. It could be caused by configuration files lost, disk space issue, or DISKCHIP corruption issue.
121	Lens Fail	Lens unit control error
140	DLP CommR Fail	No communication with the ICP board. (Communication I/F is RS-232C)
141	DLP CommE Fail	No communication with the ICP board and DCC. (Communication I/F is Ethernet)
151	Fan1 Stop	Fan1 has stopped.
152	Fan2 Stop	Fan2 has stopped.
153	Fan3 Stop	Fan3 has stopped.
154	Fan4 Stop	Fan4 has stopped.
155	Fan5 Stop	Fan5 has stopped.
156	Fan6 Stop	Fan6 has stopped.
157	Fan7 Stop	Fan7 has stopped.
158	Fan8 Stop	Fan8 has stopped.
159	Fan9 Stop	Fan9 has stopped.
164	ICP Fan Stop	ICP Fan has stopped.
165	GPI MACRO(n) Selection Invalid	Selection of preset button (n) through GPI is invalid because metadata is enabled.
166	GPI Control Invalid	Projector control through GPI is invalid because projector is busy.
177	Tamper Fail	Service door tamper switch of projector is open.
178	Marriage Tamper Fail	Marriage tamper switch of projector is open.
180	CPU Fail(Mem)	System Test Failed during lamp on. (Memory)
201	Error Log Write Fail	Failed to write error log.
215	Filter Time Over	The time to exchange filters. The time to exchange filters.
220	AC On Fan Exchange Time	The time to exchange fans.
230	Router Fail	Failed to control router.
232	MAC Write Fail	Failed to setup MAC address of CPU board.
235	Router Self Check Fail	Router health-check error.
240	SIB Comm Fail	Failed to communicate with SIB.
241	SIB Error	SIB internal error.
242	SIB FPGA Reboot	Executed to re-boot SIB FPGA for recovery.
245	Fan10 Stop	Fan10 has stopped.
246	Fan11 Stop	Fan11 has stopped.
247	Fan12 Stop	Fan12 has stopped.
248	Fan13 Stop	Fan13 has stopped.
249	Fan14 Stop	Fan14 has stopped.
251	Fan1 Stop Precaution	Fan1 Stop Precaution.
252	Fan2 Stop Precaution	Fan2 Stop Precaution.
253	Fan3 Stop Precaution	Fan3 Stop Precaution.
254	Fan4 Stop Precaution	Fan4 Stop Precaution.
255	Fan5 Stop Precaution	Fan5 Stop Precaution.
256	Fan6 Stop Precaution	Fan6 Stop Precaution.
257	Fan7 Stop Precaution	Fan7 Stop Precaution.

Error Code	Error message	Description
258	Fan8 Stop Precaution	Fan8 Stop Precaution.
259	Fan9 Stop Precaution	Fan9 Stop Precaution.
263	ICP Fan Stop Precaution	ICP Fan Stop Precaution.
264	Fan10 Stop Precaution	Fan10 Stop Precaution.
265	Fan11 Stop Precaution	Fan11 Stop Precaution.
266	Fan12 Stop Precaution	Fan12 Stop Precaution.
267	Fan13 Stop Precaution	Fan13 Stop Precaution.
268	Fan14 Stop Precaution	Fan14 Stop Precaution.
270	SD Tamper Terminate	Terminated service door tamper event latched by Enigma board. * This message would be shown on Log, not on LCD.
271	IMB:SD Tamper Terminate	Terminated service door tamper event latched by IMB. * This message would be shown on Log, not on LCD.
301	System Error	ICP system status error
302	Self Test Error	ICP system status error To recover the issue, update ICP to higher than Prod3.0 or equal. If that can not remove the issue, remove and reseal the ICP board.
303	Install Release Package Error	ICP system status error It could be caused by disk space issue or DISKCHIP corruption issue.
304	Load Release Package Error	ICP system status error It could be caused by disk space issue or DISKCHIP corruption issue.
305	Key Error	ICP system status error
306	Certificate Error	ICP system status error
317	ICP Normal Configuration Error	ICP system status error
318	ICP Boot Configuration Error	ICP system status error
319	FMT Normal Configuration Error	ICP system status error
320	FMT Boot Configuration Error	ICP system status error
321	FMT Satellite Configuration Error	ICP system status error
322	1.20V Supply out of range	ICP system status error
323	1.80V Supply out of range	ICP system status error
324	2.50V Supply out of range	ICP system status error
325	3.30V Regulator out of range	ICP system status error
326	ICP FPGA Temperature out of range	ICP system status error
327	FMT FPGA Temperature out of range	ICP system status error
328	ICP Flash Update Error	ICP system status error
329	FMT Sequence Data File Mismatch	ICP system status error
330	FMT DMD Data File Mismatch	ICP system status error
331	FMT Flash Checksum Error - Sequence Data	ICP system status error
332	FMT Flash Checksum Error - DMD Data	ICP system status error
333	Satellite Hardware Mismatch	ICP system status error
334	FMT Flash Update Error	ICP system status error
335	Red Satellite Reports Reset	ICP system status error
336	Red Satellite Serial Link Error	ICP system status error
337	Red Satellite Firmware Configuration Error	ICP system status error
338	Red DAD1000 Bias Under Voltage Error	ICP system status error
339	Red DAD1000 Reset Under Voltage Error	ICP system status error
340	Red DAD1000 Offset Under Voltage Error	ICP system status error
341	Red DAD1000 Thermal Shutdown Error	ICP system status error
342	Green Satellite Reports Reset	ICP system status error
343	Green Satellite Serial Link Error	ICP system status error
344	Green Satellite Firmware Configuration Error	ICP system status error
345	Green DAD1000 Bias Under Voltage Error	ICP system status error

Error Code	Error message	Description
346	Green DAD1000 Reset Under Voltage Error	ICP system status error
347	Green DAD1000 Offset Under Voltage Error	ICP system status error
348	Green DAD1000 Thermal Shutdown Error	ICP system status error
349	Blue Satellite Reports Reset	ICP system status error
350	Blue Satellite Serial Link Error	ICP system status error
351	Blue Satellite Firmware Configuration Error	ICP system status error
352	Blue DAD1000 Bias Under Voltage Error	ICP system status error
353	Blue DAD1000 Reset Under Voltage Error	ICP system status error
354	Blue DAD1000 Offset Under Voltage Error	ICP system status error
355	Blue DAD1000 Thermal Shutdown Error	ICP system status error
356	RTC Error	Indicates that ICP RTC is set to a date before January 1, 2009, and is likely invalid. If the year value is less than 2009, then the time is considered to be "invalid".
370	ICP Frame Memory Test Result Fail	ICP self test error due to "Frame memory error"
372	ICP Data Path Signature Test Result Fail	ICP self test error due to "Data Path Signature Test Result Fail"
400	Enigma Comm Fail	No communication with the Enigma board.
410	System Error	Enigma Status error
411	Self Test Error	Enigma Status error
412	Install Release Package Error	Enigma Status error
413	Load Release Package Error	Enigma Status error
414	TI Login List Package Error	Enigma Status error
415	Security Officer Login List Package Error	Enigma Status error
419	Certificate or Key Error	Enigma Status error
420	ICP Communications Status	Enigma fails to do logical marriage to ICP when Enigma powers up. Because of no communications with ICP during logical marriage.
426	User Loader Integrity Error	Enigma is in FIPS error state. (Integrity check error)
427	Main Application Integrity Error	Enigma is in FIPS error state. (Integrity check error)
428	RNG Hardware Integrity Error	Enigma is in FIPS error state. (Integrity check error)
429	DRNG Algorithm Integrity Error	Enigma is in FIPS error state. (Integrity check error)
430	RSA Algorithm Integrity Error	Enigma is in FIPS error state. (Integrity check error)
431	AES Algorithm Integrity Error	Enigma is in FIPS error state. (Integrity check error)
432	HMAC Algorithm Integrity Error	Enigma is in FIPS error state. (Integrity check error)
433	SHA Algorithm Integrity Error	Enigma is in FIPS error state. (Integrity check error)
434	TLS Integrity Error	Enigma is in FIPS error state. (Integrity check error)
435	FPGA Configuration Integrity Error	Enigma is in FIPS error state. (Integrity check error)
436	FPGA CineLink 2 Decryption Integrity Error	Enigma is in FIPS error state. (Integrity check error)
437	RTC Error	Indicates that Enigma RTC is set to a date before January 1, 2009, and is likely invalid. If the year value is less than 2009, then the time is considered to be "invalid"
442	FPGA Configuration Error	Enigma Status error
443	FPGA Temperature out of range	Enigma Status error
446	RNG Hardware Duplicate Output Error	Enigma is in FIPS error state. (Integrity check error)
447	DRNG Algorithm Duplicate Output Error	Enigma is in FIPS error state. (Integrity check error)
450	1.20V Supply out of range	Enigma Status error
451	1.80V Supply out of range	Enigma Status error
452	2.50V Supply out of range	Enigma Status error
453	3.30V Regulator out of range	Enigma Status error
458	SelfTest User Loader Integrity Error	Enigma is in FIPS error state. (Self test result)
459	SelfTest Main Application Integrity Error	Enigma is in FIPS error state. (Self test result)
460	SelfTest RNG Hardware Integrity Error	Enigma is in FIPS error state. (Self test result)
461	SelfTest DRNG Algorithm Integrity Error	Enigma is in FIPS error state. (Self test result)
462	SelfTest RSA Algorithm Integrity Error	Enigma is in FIPS error state. (Self test result)
463	SelfTest AES Algorithm Integrity Error	Enigma is in FIPS error state. (Self test result)

Error Code	Error message	Description
464	SelfTest HMAC Algorithm Integrity Error	Enigma is in FIPS error state. (Self test result)
465	SelfTest SHA Algorithm Integrity Error	Enigma is in FIPS error state. (Self test result)
466	SelfTest TLS Integrity Error	Enigma is in FIPS error state. (Self test result)
467	SelfTest FPGA Configuration Integrity Error	Enigma is in FIPS error state. (Self test result)
468	SelfTest FPGA CineLink. 2 Decryption Integrity Error	Enigma is in FIPS error state. (Self test result)
474	Security Tamper	Security tamper condition exists in Enigma.
475	Top Side Security Enclosure Open	Security tamper condition exists in Enigma.
476	Bottom Side Security Enclosure Open	Security tamper condition exists in Enigma.
477	Security Battery Event	Battery tamper condition exists in Enigma.
478	Software Commanded Zeroization	Destroyed Enigma key by software command.
481	Security Enclosure Not Armed	Enigma security not armed.
482	Physical Marriage Tamper	Latched physical marriage tamper condition on Enigma board.
483	Logical Marriage Tamper	Logical marriage tamper condition exists in Enigma.
484	Marriage NOT Active	Marriage between ICP and Enigma has NOT been established (active).
486	Service Door Tamper	Latched service door tamper condition on Enigma board.
487	Security Log Error	Security log is full and no more log entries can be created in Enigma. It is the server's responsibility to avoid the issue.
488	Security Battery Low Warning	Close to "(477) Security Battery Event".
489	Security Log Warning	Security log is almost full in Enigma. Close to "(487) Security Log Error".
500	IMB Comm Fail	No communication with the IMB.
510	IMB:System Error	IMB Status error
511	IMB:Self Test Error	IMB Status error
519	IMB:Certificate or Key Error	IMB Status error
520	IMB:ICP Communications Status	IMB fails to do logical marriage to ICP when IMB powers up. Because of no communications with ICP during logical marriage.
537	IMB:RTC Error	IMB RTC is "invalid".
543	IMB:FPGA Temperature out of range	IMB Status error
550	IMB:Supply voltage out of range	IMB Status error
574	IMB:Security Tamper	Security tamper condition exists in IMB.
577	IMB:Security Battery Event	Battery tamper condition exists in IMB.
581	IMB:Security Enclosure Not Armed	IMB security not armed.
582	IMB:Physical Marriage Tamper	Latched physical marriage tamper condition on IMB.
583	IMB:Logical Marriage Tamper	Logical marriage tamper condition exists in IMB.
584	IMB:Marriage NOT Active	Marriage between ICP and IMB has NOT been established (active).
586	IMB:Service Door Tamper	Latched service door tamper condition on IMB
588	IMB:Security Battery Low Warning	Close to "(577) IMB: Security Battery Event".
700	Slave Comm Fail	Failed to communicate with slave MCU.
701	Slave Status Fail	Slave MCU is in unexpected status.
702	Lamp Lit Change	Lamp lit status becomes with unexpected state. (It could appear while dual lamp mode.)
703	Slave Comm Ack Fail	Slave fails to execute the command.
710	Lamp1 OverTime	Lamp1 cumulative time is over.
711	Lamp2 OverTime	Lamp2 cumulative time is over.
740	SensorFail Inlet	Failed to read inlet sensor.
741	SensorFail DMD	Failed to read DMD sensor.
750	OverTemp.DMD Precaution	Set inside temperature (DMD) is close to over temperature.
751	OverTemp.Inlet Precaution	Set inside temperature (Inlet) is close to over temperature.
752	Down Lamp Power Activated	Down lamp power to decrease set inside temperature.

Error Code	Error message	Description
753	OverTemp.Ballast1 Precaution	Set inside temperature (Ballast1) is close to over temperature.
754	OverTemp.Ballast2 Precaution	Set inside temperature (Ballast2) is close to over temperature.
760	OverTemp.DMD	Set inside temperature (DMD) is abnormal.
761	OverTemp.Inlet	Set inside temperature (Inlet) is abnormal.
762	OverTemp.Lamp	Set inside temperature (Lamp) is abnormal.
764	OverTemp.Ballast1	Set inside temperature (Ballast1) is abnormal.
765	OverTemp.Ballast2	Set inside temperature (Ballast2) is abnormal.
781	Interlock Open	Interlock is open.
782	SystemI2cFail	Failed to control sensors connecting to GPIO chip. (Slave board internal abnormality)
783	EepromFail	Slave MCU failed to read back all of data from EEPROM on slave MCU board due to unexpected data or something. (Slave board internal abnormality)
785	SoftwareI2cFail	I2C/UART conversion chip control failed on slave board. (Slave board internal abnormality)
786	PreCooling	Failed to precool.
787	Lamp Door1 Open	Lamp1 door (cover) is open.
788	Lamp Door2 Open	Lamp2 door (cover) is open.
789	Ballast1UartError	Communication error between slave MCU and ballast1.
790	Ballast2UartError	Communication error between slave MCU and ballast2.
791	FanInitError	Failed to initialize fans.
792	ExGpioFail	Failed to control the signal connecting to Ballast. (Slave board internal abnormality)
793	Notch Filter Open	Notch Filter Cover is open.
800	Fan15 Stop	Fan15 has stopped.
801	Fan16 Stop	Fan16 has stopped.
810	Fan15 Stop Precaution	Fan15 Stop Precaution
811	Fan16 Stop Precaution	Fan16 Stop Precaution

## 5-3. Battery Replacement Method for ICP Board (English)

The coin battery (Panasonic BR2330) mounted on the ICP board provides electrical power for maintaining tamper detection, time, and date information while the power to the projector is off. If the battery voltage drops, the tamper detection circuit is activated and the security key is erased. Once the security key has been erased, the projector requires repair at the factory.



### **WARNING:**

- Before replacing the battery, thoroughly read the content of this section, and perform the work by following the procedure correctly. If you make a mistake while fitting the new battery, there is a risk of explosion and damaging the projector.
- When replacing the battery, use the same model of battery.
- Dispose of the used battery by following the directions of your local government agency.

### **NOTE**

- Always adhere to the instructions given in this section.
- Make sure that the AC power supply is turned off while removing the ICP board from the projector.
- Although data is maintained while the battery is being replaced for approximately 3 hours by the sub-battery built into the ICP board (when the sub-battery is fully charged), please replace the battery quickly. To ensure that the sub-battery is fully charged, turn the projector power supply on for 30 minutes or more before replacing the battery.
- If you remove the side cover, the following error message is displayed on the LCD screen of the main unit operating panel by the tamper detection circuit of the signal input board.  
"Tamper Fail", "Service Door Tamper"

Also, if you remove the closing panel or device from slot, the following error message is displayed on the LCD screen of the main unit operating panel by the tamper detection circuit. Furthermore, since the marriage is cleared, re-marriage is necessary.

"Marriage Tamper Fail", "Physical Marriage Tamper", "Marriage Not Active"

Encrypted contents cannot be displayed while an error message is being displayed. Refer to "3-2. Recovering from Tamper Errors" (page 47) for the recovery procedure.

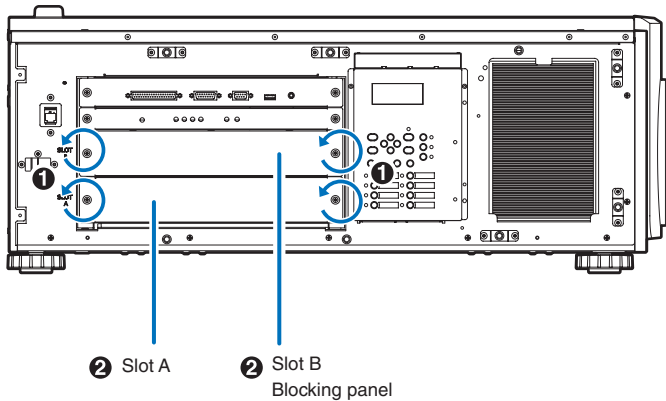
### Preparation:

- Phillips-head screwdriver (No. 2)
- Remove any cables connecting to external video equipment.
- Remove the side cover (see page 26)

### **1** Remove the option board mounted in slot A and the slot B blocking panel.

Remove the board and blocking panel in the order slot A then slot B.

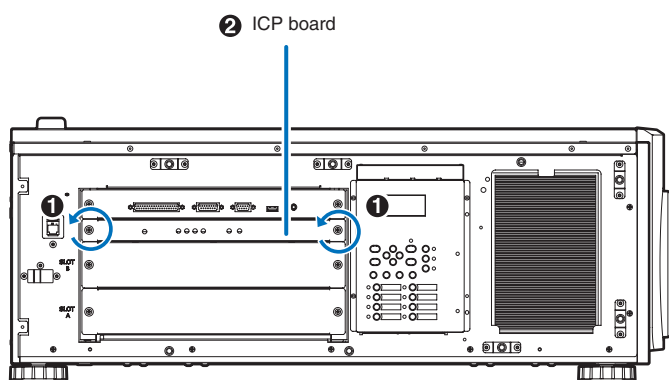
1. Unscrew the knurled screws (2 locations) on the front of the slot A/B until the screws turn freely (❶). These screws cannot be removed.
2. Pull the board or blocking panel directly out (❷).



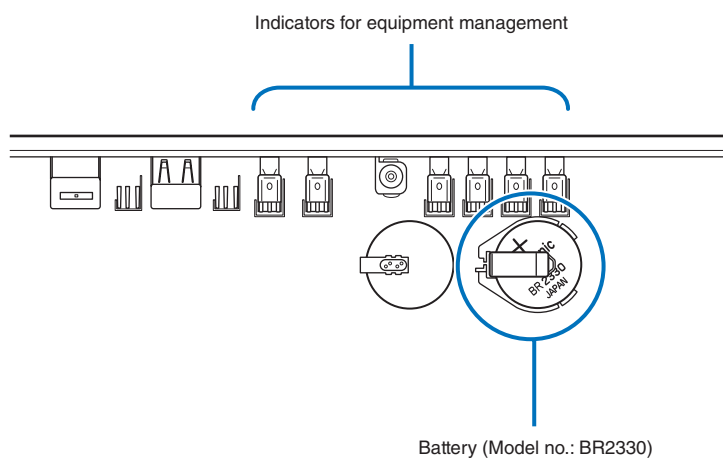


**2 Remove the ICP board.**

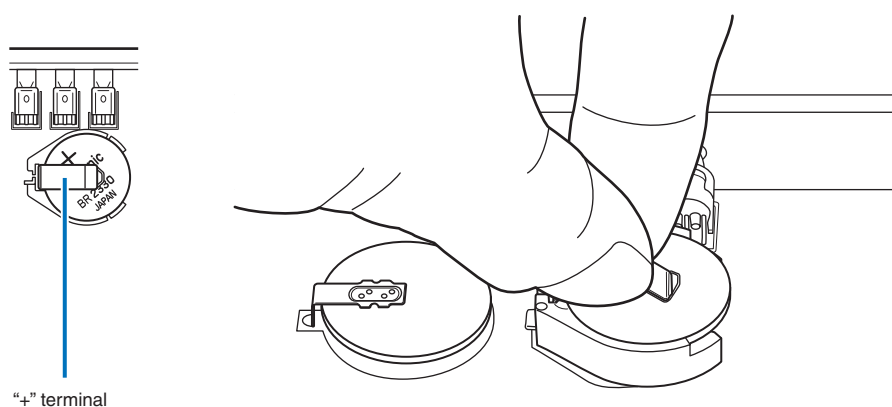
1. Unscrew the knurled screws (2 locations) on the front of the ICP board until the screws turn freely (❶). These screws cannot be removed.
2. Pull the ICP board directly out (❷).

**3 Remove the battery.**

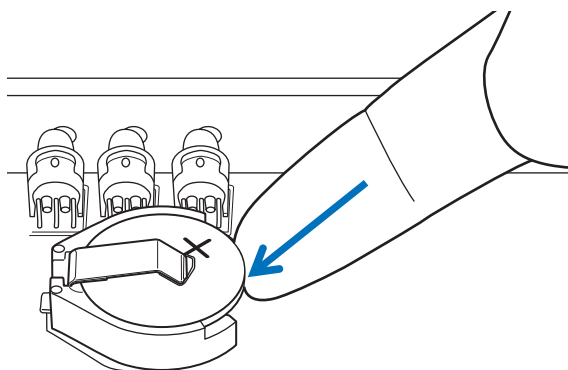
To remove the battery, use a non-conductive tool that does not have a sharp tip, or use your fingers.



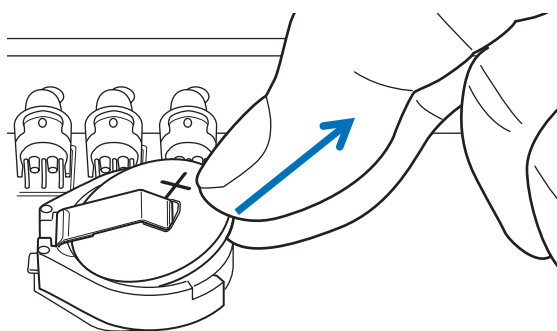
1. Gently lift up the positive (+) terminal that is retaining the battery so that you can remove the battery.



2. Insert a non-conductive tool or your finger into the negative side of the socket.



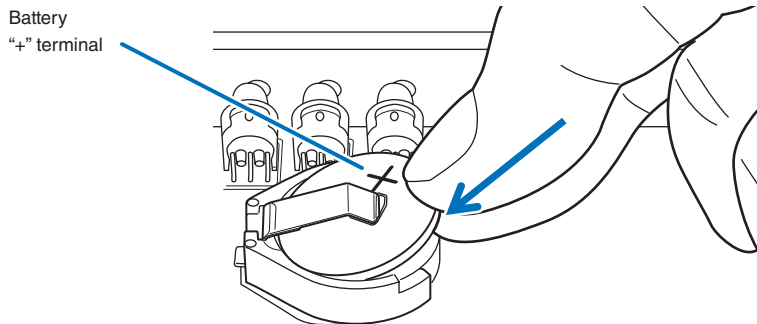
3. Remove the battery by lifting it out.



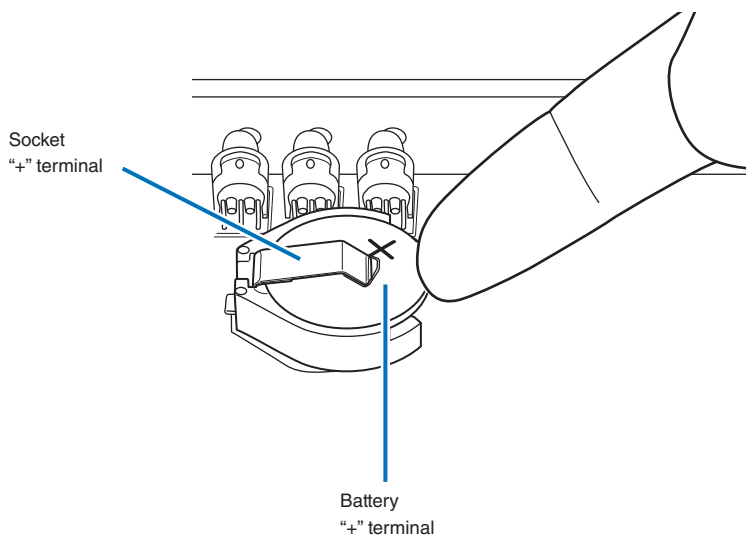
**NOTE** If you are using a tool to remove the battery, ensure that you have securely inserted the tool between the battery and the socket before removing the battery. Furthermore, take care to ensure that the tool you use to remove the battery does not touch the ICP board. There is a risk of damaging the ICP board.

**4** Fit the new battery.

1. Check the model number of the new battery.  
Model number: BR2330 (Panasonic)
2. Insert the battery into the socket ensuring that the positive (+) side of the battery is upwards.



3. Ensure that the positive (+) terminal of the socket is pressing down on the positive (+) surface of the battery.

**5** Mount the ICP board into the projector.

1. Insert the ICP board in directly following the guides.
2. Tighten and fasten the knurled screws (2 locations) on the front of the ICP board.

**6** Attach the option board that had been mounted in slot A and the slot B blocking panel.

Attach by performing the removal procedure in reverse.

Mount the board and blocking panel in the order slot A then slot B.

- 7** Attach the side cover.
- 8** Reattach the cables that you removed.
- 9** Turn the projector's power on.
- 10** Reconfigure the marriage.

Refer to "3-2. Recovering from Tamper Errors" (page 47) for details.

**NOTE** If you do not set the marriage, you will not be able to project encrypted content.

## 5-4. Batterieaustauschverfahren für ICP-Karte (Deutsch)

Die Knopfatterie (Panasonic BR2330) auf der ICP-Karte liefert den fürs Erkennen von Daten, Zeit und Datum bei abgeschaltetem Projektor notwendigen Strom. Wenn die Batteriespannung zurückgeht, wird der Datenerkennungskreis aktiviert, und der Sicherheitscode wird gelöscht. Wenn der Sicherheitscode gelöscht worden ist, muss der Projektor in der Fabrik wiederhergestellt werden.



### **WARNUNG:**

- Lesen Sie aufmerksam den Inhalt dieses Kapitels bevor Sie die Batterie ersetzen und gehen Sie vor wie nachstehend beschrieben. Es besteht die Gefahr einer Explosion, wenn Sie beim Einsetzen der neuen Batterie einen Fehler machen, mit dem Risiko schwerwiegender Beschädigungen des Projektors.
- Ersetzen Sie die Batterie ausschliesslich durch ein Modell des gleichen Typs.
- Entfernen Sie die gebrauchte Batterie gemäss den geltenden Vorschriften Ihres Aufenthaltsortes.

### **HINWEIS**

- Gehen Sie immer nach den Anweisungen in diesem Kapitel vor.
- Stellen Sie sicher, dass die Netzspannung ausgeschaltet ist, wenn sie die ICP-Karte aus dem Projektor nehmen.
- Auch wenn die Daten mittels in der ICP-Karte eingebauten Zweitbatterie ca. 3 Stunden lang erhalten bleiben, wenn die Batterie ersetzt wird (bei völlig aufgeladener Zweitbatterie), sollten Sie die Batterie möglichst bald ersetzen. Um sicherzustellen, dass die Zweitbatterie wirklich völlig aufgeladen ist, sollten Sie den Projektor mindestens 30 Minuten lang einschalten, bevor Sie die Batterie ersetzen.
- Falls Sie die Seitenabdeckung, entfernen wird die folgende Fehlermeldung vom Datenerkennungskreis auf dem LCD-Schirm der Betriebskonsole angezeigt.  
„Tamper Fail“, „Service Door Tamper“

Wenn Sie die Abdeckung oder das Gerät bei Steckplatz A entfernen, wird die folgende Fehlermeldung vom Datenerkennungskreis auf dem LCD-Schirm der Betriebskonsole angezeigt. Ausserdem muss eine neue Verbindung hergestellt werden, da die alte Verbindung gelöscht wurde,  
„Marriage Tamper Fail“, „Physical Marriage Tamper“, „Marriage Not Active“

Die Videoeingabe im HD-SDI Port der Signaleingabekarte kann nicht angezeigt werden, solange eine Fehlermeldung angezeigt wird. Siehe „3-2. Recovering from Tamper Errors“ (Seite 47) betreffend der Wiederherstellung.

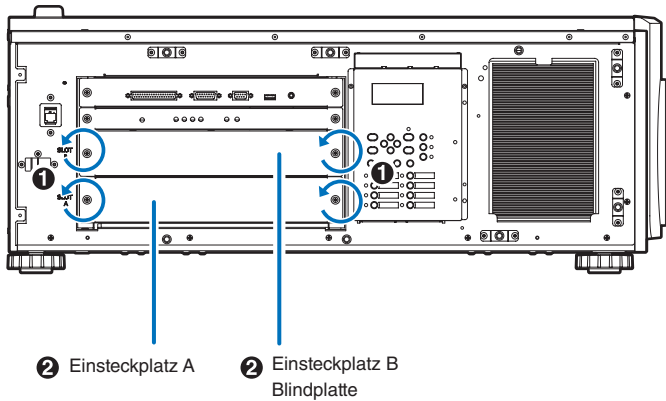
### Vorbereitung:

- Kreuzschlitzschraubenzieher (Nr. 2)
- Verbindungskabel zu externen Videogeräten entfernen.
- Die Seitenabdeckung entfernen (siehe Seite 26)

### 1 Die Zusatzkarte aus Einsteckplatz A und die Blindplatte aus Einsteckplatz B entfernen.

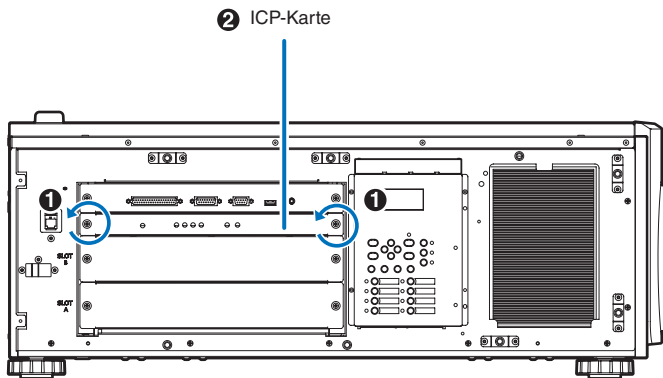
Zuerst die Karte aus Einsteckplatz A, und dann die Blindplatte aus Einsteckplatz B entfernen.

1. Lösen Sie die Rändelschrauben (an 2 Stellen) an der Vorderseiten des Einsteckplatzes A/B bis sie keinen Halt mehr haben (1). Diese Rändelschrauben dürfen nicht entfernt werden.
2. Ziehen Sie die Karte in gerader Richtung heraus (2).



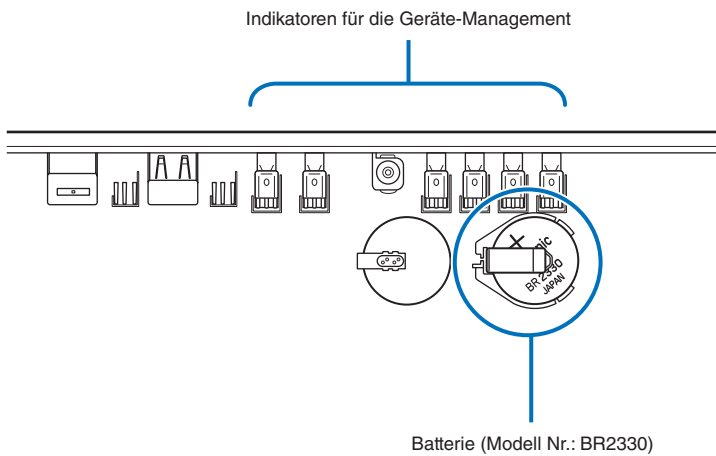
## 2 Die ICP-Karte entfernen.

1. Lösen Sie die Rändelschrauben (an 2 Stellen) an der Vorderseiten der ICP-Karte bis sie keinen Halt mehr haben (❶). Diese Schrauben dürfen nicht entfernt werden.
2. Ziehen Sie die Karte in gerader Richtung heraus (❷).

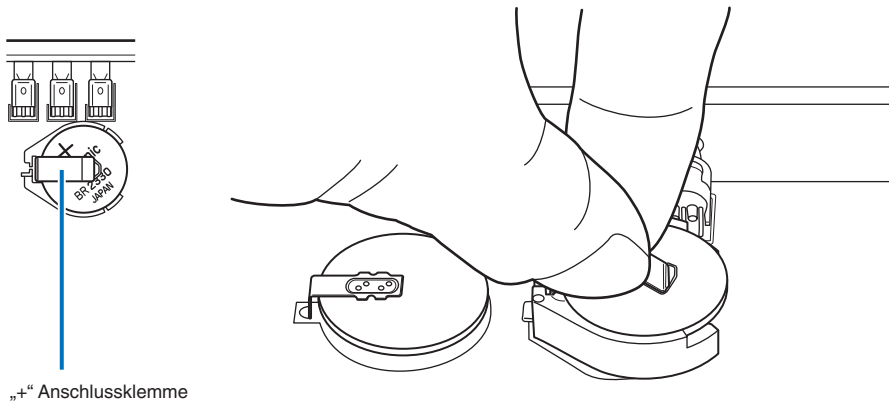


## 3 Entfernen Sie die Batterie.

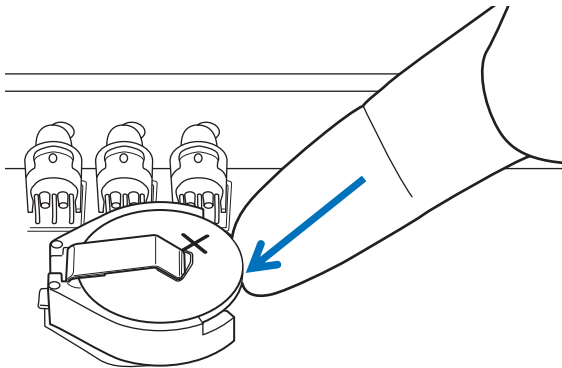
Verwenden Sie ein nicht leitendes Werkzeug ohne scharfe Spitze oder Ihre Finger, um die Batterie zu entfernen.



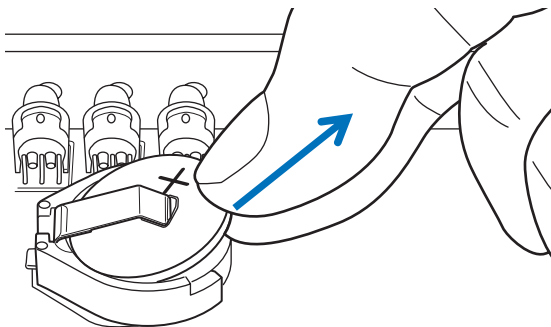
1. Die positive (+) Anschlussklemme, welche die Batterie andrückt, sachte anheben, so dass die Batterie herausgenommen werden kann.



2. Stecken Sie ein nicht leitendes Werkzeug oder Ihren Finger in die negative Seite der Fassung.



3. Heben Sie die Batterie hoch um sie zu entfernen.



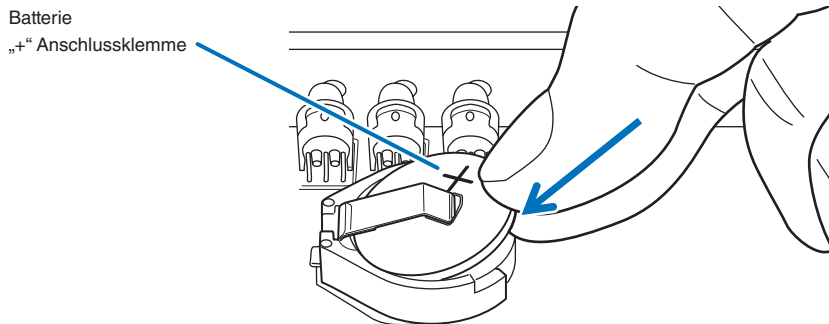
## HINWEIS

Falls Sie die Batterie mit Hilfe eines Werkzeugs entfernen, sollten Sie sicher stellen, dass das Werkzeug richtig zwischen Batterie und Fassung eingefügt ist bevor Sie die Batterie entfernen. Ausserdem sollten Sie darauf achten, dass das Werkzeug dass Sie verwenden die ICP-Karte nicht berührt. Die ICP-Karte könnte dadurch beschädigt werden.

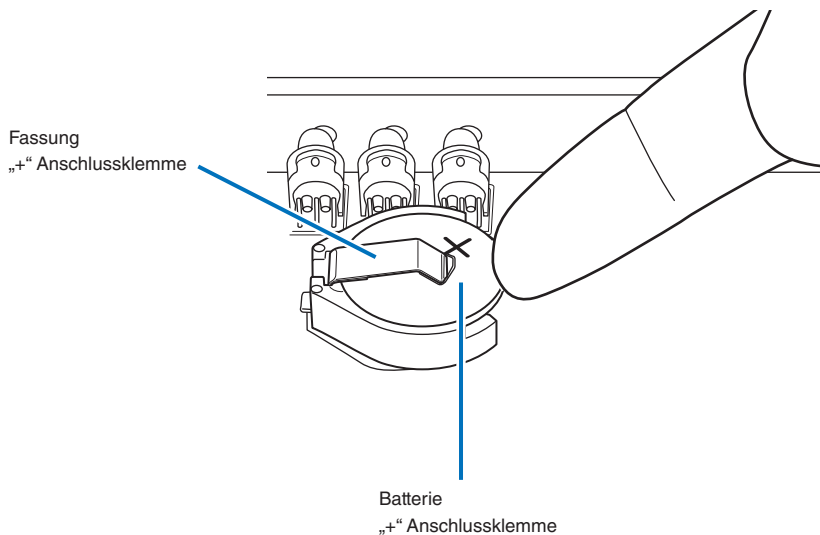


**4** Die neue Batterie einsetzen.

1. Kontrollieren Sie die Modellnummer der neuen Batterie, Modellnummer BR2330 (Panasonic).
2. Stecken Sie die Batterie in die Fassung, so dass die positive (+) Seite der Batterie nach oben weist.



3. Stellen Sie sicher dass die positive (+) Anschlussklemme der Fassung auf die positive (+) Fläche der Batterie drückt.

**5** Stecken Sie die ICP-Karte in den Projektor.

1. Die ICP-Karte entlang den Führungen direkt einschieben.
2. Die Rändelschrauben (2 Stellen) an der Vorderseite der ICP-Karte anziehen und sichern.

**6** Die Zusatzkarte in Einsteckplatz A und die Blindplatte in Einsteckplatz B einsetzen.

Zum Anbringen, das Ausbaurverfahren umgekehrt anwenden.

Montieren Sie zuerst die Karte in den Einsteckplatz A und dann in den Einsteckplatz B.

- 7** Bringen Sie die Seitenabdeckung an.
- 8** Verbinden Sie die beiden Kabel, die Sie entfernt haben.
- 9** Schalten Sie den Projektor ein.
- 10** Konfigurieren Sie die Verbindung wieder aufs Neue.

Siehe „3-2. Recovering from Tamper Errors“ (Seite 47) betreffend den Einzelheiten.

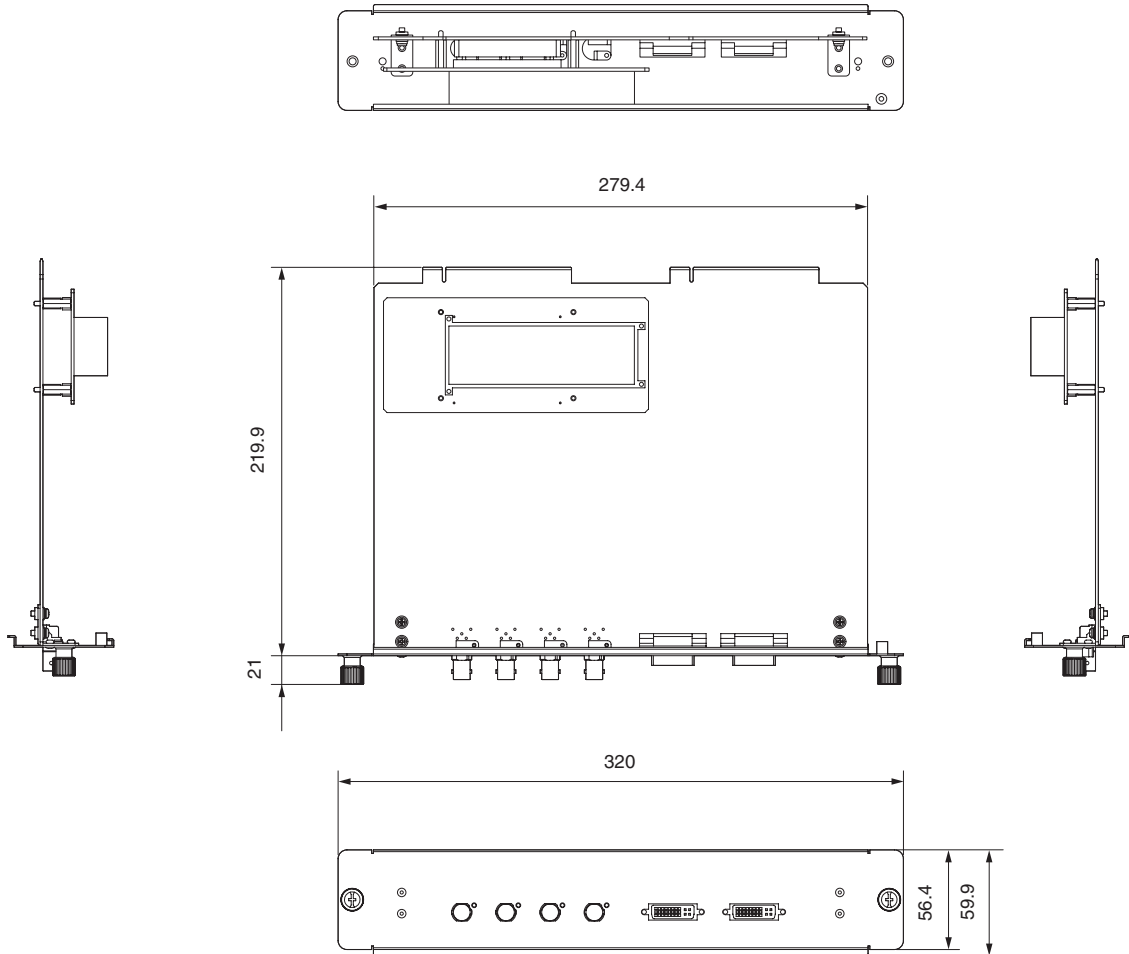
**HINWEIS**

Wenn die Verbindung nicht neu konfiguriert wird, kann die codierte Eingabe in der HD-SDI Buchse nicht verwendet werden.

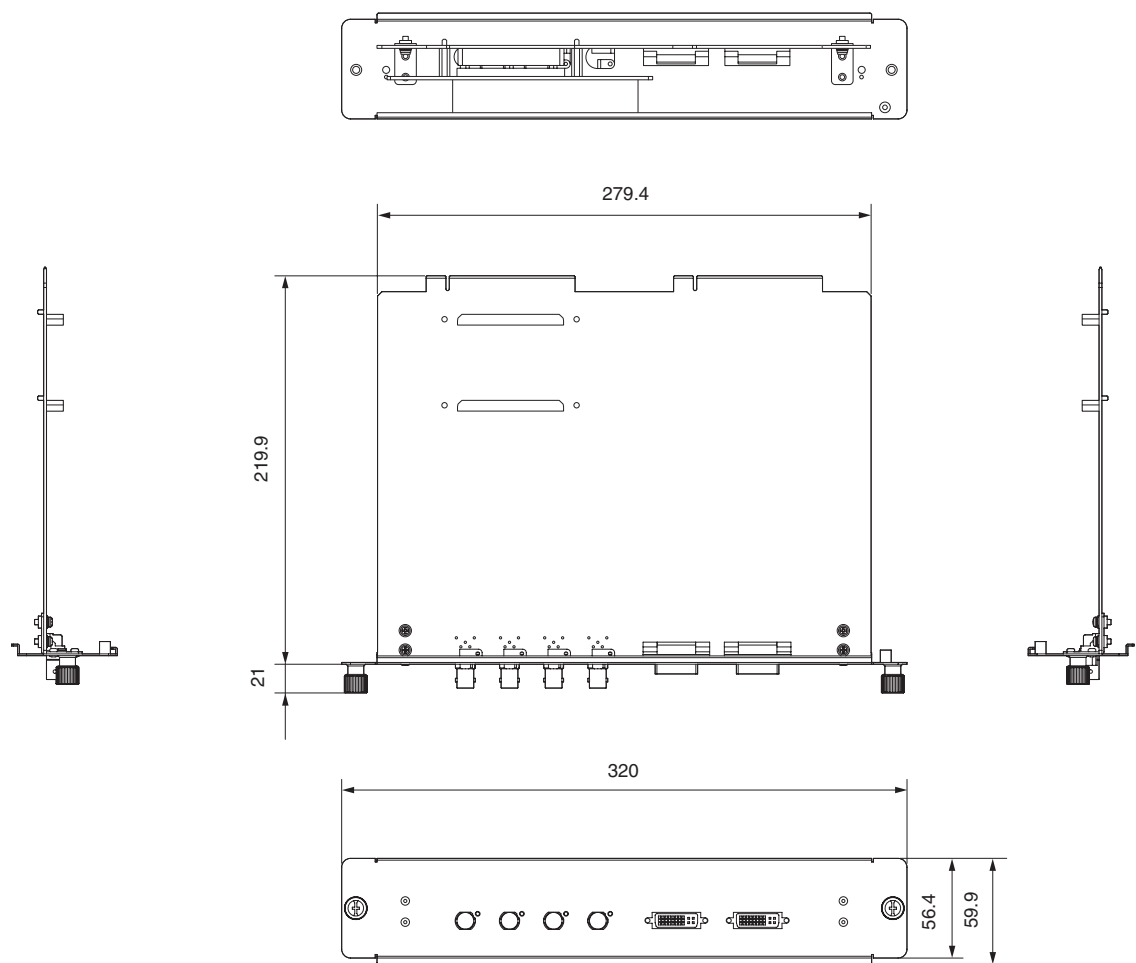
## 5-5. Outline Drawing

Refer to the IMB instruction manual for diagrams of the external appearance of the IMB (NC-90MS01).

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5-5-2. Signal Input Board (NC-80DS01-B)



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(MEMO)





# **Digital Cinema Communicator for S2**

---

## **Installation Manual**

# Introduction

---

The Digital Cinema Communicator for S2 Configuration Manual (this document) describes how to use the basic functions of the Digital Cinema Communicator for S2, and the settings that can be configured. ("Digital Cinema Communicator for S2" is abbreviated as "DCC" or "DCC for S2" in the remainder of this document.)

Refer to the Projector Manual for details on the basic operation of the projector and multi media switcher. This document is intended for people who know the basic operation of the projector and multi media switcher. After reading, this document should be kept under the care of the company which installed or adjusted the projector.

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- The screenshots shown in this document may differ slightly from the real screens.

## NOTES

- (1) The contents of this manual may not be reprinted in part or whole without permission.
- (2) The contents of this manual are subject to change without notice.
- (3) Great care has been taken in the preparation of this manual; however, should you notice any questionable points, errors or omissions, please contact us.
- (4) Notwithstanding article (3), NEC will not be responsible for any claims on loss of profit of other matters deemed to result from using the software.

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# 1. Overview of Software

This chapter provides the overview of the Digital Cinema Communicator for S2 and initialization.

## 1-1. Overview of DCC

DCC is software for controlling and managing NC series projectors and the multi media switchers (MMS) that are built into the projectors via the network. The main unit can be configured and managed from a computer by connecting to the projector or MMS via the network from a computer where DCC is installed.

**TIP** DCC supports "English", "Chinese (Simplified)", "Russian", "Spanish", "Portuguese" and "Japanese" for display. (as of October 2012)

### 1-1-1. Supported devices

The devices supported by DCC (Digital Cinema Communicator for S2) are as follows.

(As of October 2012)

NC series projector	NC900 series NC1200 series NC2000 series NC3200 series NC3240 series
Multimedia Switcher (MMS)	MM3000B

**TIP**

- Models other than those listed above are not supported.
- Use "Digital Cinema Communicator" if the device you are using is one of the following models.
  - NC series projectors: NC800, NC1500, NC1600, or NC2500 series
  - Multimedia Switcher: MM2000, or MM2000B

### 1-1-2. Operating environment of DCC

This software can be used with the personal computer that fills the following environments.

Supported OS	Windows 7 <sup>(Note)</sup> , Windows Vista, Windows XP, Windows 2003 Server, Windows 2000 Professional
Supported hardware	IBM PC/AT compatible personal computers
CPU	Pentium 300 MHz or higher required
Memory	128 MB or more
Network environment	TCP/IP-compatible LAN environment required

(Note): Operation has been confirmed in Windows 7 Starter (32-bit)

## 1-2. DCC installation/version upgrading

This section describes the installation procedure of DCC. Use the same procedure as for installation for version upgrading (installation by overwriting).

### Preparatory operation:

- Boot up your PC's Windows.
- If you have already started Windows, quit all running application programs.  
If you do not quit all running programs before installing the DCC Software, you risk having unsuccessful installation.

**NOTE**

- You must have "Administrators" privileges to install and uninstall the PC Control Software in Windows 2000, and "Computer Administrators" privileges to do the same in Windows XP.
- On Windows 7 or Windows Vista, if the "User Account Control" window is displayed, click "Allow".

**1** Save the EXE file of the DCC that was released formally in the local drive of the personal computer.

**2** Double-click the EXE file that was saved.

The installer starts.

**3** Install the DCC (version upgrading) according to the instruction of the installer.

DCC has now been installed (the version has been upgraded).

### 1-2-1. DCC uninstalling

Uninstall the Software from the menu shown below.

- For Windows 7 or Windows Vista  
[Start] → [Control Panel] → [Programs] → [Programs and Features]
- For Windows XP  
[Start] → [Control Panel] → [Add or Delete Program]
- For Windows 2000  
[Start] → [Control Panel] → [Add or Delete Applications]

## 1-3. Activation and termination of DCC

### 1-3-1. Activate the DCC

When DCC starts, the Communication Settings screen is displayed. Connect to the device selected in the Communication Settings screen. Refer to “1-4. Setting a connection destination” (page 11) for details on the Communication Settings screen.

**TIP** When the DCC or DCC for S2 is initially activated first, the “Language Select” screen appears. In this case, select the display language. DCC runs using the selected language the next time it is started. Refer to “3-9-2.SETUPScreen(Installation)” (page 137) for details on the Communication Settings screen.  
If a Chinese font or Japanese font is not installed on your PC, then displaying Chinese or Japanese is not supported and the [中文] button or [日本語] button is not displayed.



- 1 From the “Start” menu of Windows, click “All the programs” → “Projector User Supportware” → “Digital Cinema Communicator for S2” in that order.

The Communication Settings screen is displayed.  
For the details of the Communication Settings screen, see “1-4. Setting a connection destination” (page 11).

- 2 Select a connection destination device (projector or MMS) from the Target select field.

**NOTE** The NC900 series does not support MMS. If you are using the NC900 series projector, do not select MMS in the Target Select field.

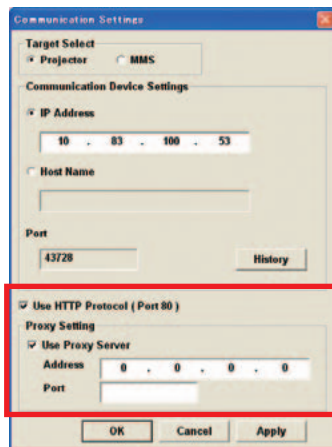
- 3 Select an IP address or a host name.
- 4 After setting the necessary items, click the “OK” button.





## HTTP Connection

If you start the DCC using the “/HTTP” option, you can connect to the projector via the HTTP protocol (port 80). This makes it possible to connect to the projector even if the projector is on a different network from the computer where the DCC is running. Furthermore, connections via a proxy server are also supported.



Use HTTP Protocol (Port 80)	Select this check box to connect to the projector via an HTTP proxy (port 80).
Proxy Setting	Configures the proxy server settings.
Use Proxy Server	Select this check box to connect to the projector via an HTTP proxy.
Address	Sets the IP address of the proxy server.
Port	Sets the port number of the proxy server.

### 1 Open the [Run...] window.

#### On Windows 7/Windows Vista

[Start] menu → [All Programs] → [Accessories] → [Run...]

#### On Windows XP/2000

[Start] menu → [Run...]

### 2 Click the [Browse] button in the [Run] window, and select the DCC executable file (DCCs2.exe).

The DCC executable file (DCCs2.exe) is normally stored in the following folder.

“C:\Program Files\Projector User Supportware\Digital Cinema Communicator for S2”

### 3 In the text box in the [Run] window, enter a space followed by “/HTTP” at the end.

Example: △ represents a space.

“C:\Program Files\Projector User Supportware\Digital Cinema Communicator for S2\DCCs2.exe”△/HTTP

**[NOTE]** If the path to where the DCC executable file is stored contains a space, check that the path is enclosed in double quotation marks (“”).

### 4 Click the [OK] button to run the DCC.

## 1-3-2. Exiting the DCC

- 1** Click “File”.  
The [File] menu will appear.
- 2** Click “Exit”.  
The DCC will close.



## 1-4. Setting a connection destination

When the DCC is activated, the Communication Settings screen is displayed. This screen is used to set the IP address or host name of the connection destination device. The connection destination devices that have been connected to are saved in a history, and the connection destination can be selected from this history. This screen can be displayed also by selecting "Communication Settings" from the Setup menu of the tool bar.

**TIP** Refer to "HTTP Connection" (page 9) for details on connecting via the HTTP protocol.

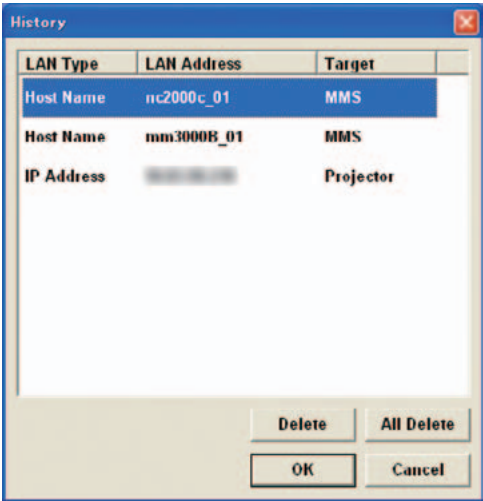


Target Select	Select a device of the connection destination. Select Projector or MMS.
Communication Device Settings	Enter the network setting of the connection destination device. Select the IP address or the host name and enter the necessary items.
IP Address	Enter the IP address. <ul style="list-style-type: none"> <li>• Connect to Projector: Enter the IP address of the projector. Value set at factory shipment: 192.168.10.10</li> <li>• Connect to MM3000B: Enter the IP address of the built-in MMS. Value set at factory shipment: 192.168.10.10</li> </ul>
Host Name	Enter a host name of the device of the connection destination. Value set at factory shipment: NC-Series
Port	Normally, no change is necessary. Value set at factory shipment: 43728
History button	Displays the History screen that shows the connection destinations that have been connected in the past. (See page 12)

**NOTE** The NC900 series does not support MMS. If you are using the NC900 series projector, do not select MMS in the Target Select field.

History screen

When the “History” button is pressed on the Communication Settings screen, the History screen is displayed. This screen displays the history of connection destinations. A connection destination can be selected from the history.

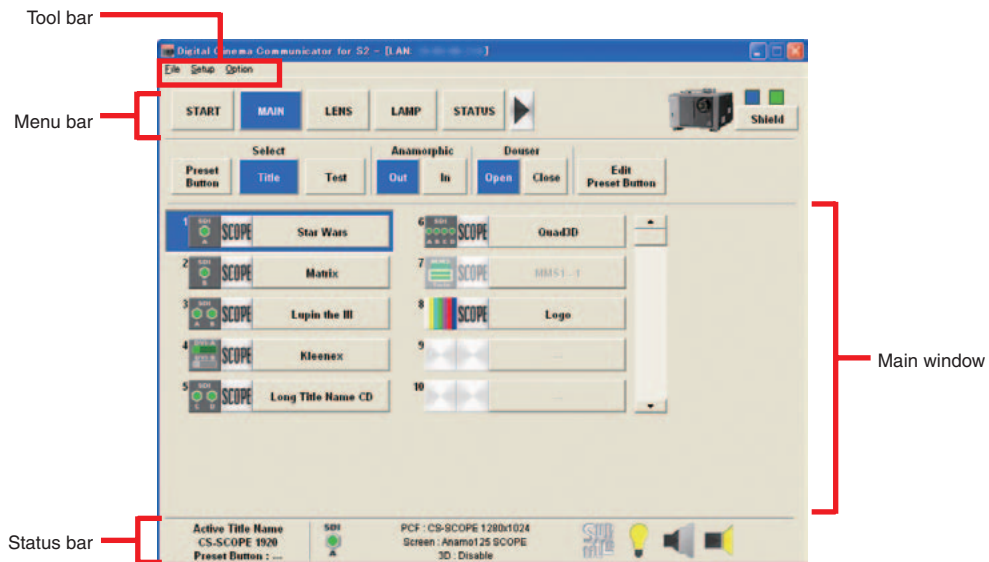


“Delete” button	Deletes the history selected in the list.
“All Delete” button	Deletes the entire history.
“OK” button	Enter the connection destination of the selected history in the setting screen.
“Cancel” button	Returns to the Communication Settings without performing any processing.

## 1-5. Description of the Sections in the screen

The menu screen of this software consists of four sections below.

The selected (active) button is displayed in blue.



### 1-5-1. Tool bar

Menu	Submenu	Description
File	Exit	Terminates DCC.
	Save Execute Log	This is only displayed while in Service mode. The communication packets between the DCC and the target projector (or the target multi media switcher) can be captured and saved in a text format file.
Setup	Communication Setting	Displays the Communication Settings screen. (See page 11)
Option	Always on Top	Select whether the DCC screen is always displayed as the first screen. At activation, "Not display first" is selected. Not checked: The DCC screen is not displayed in the foreground. Checked: The DCC screen is always displayed in the foreground.
	Disp Local Time	Sets the date and time for when logs are displayed using DCC. Not checked: Uses universal coordinated time (UTC). Checked: Uses the local time set in the projector main unit. (See page 139)
	Display Two Line <sup>(Note)</sup>	Selects how the menu bar is displayed. Not checked: Displays menu buttons across one line. Checked: Displays menu buttons across two lines.

(Note): This is not displayed if the DCC version is less than 4 or if the connection is to MMS.

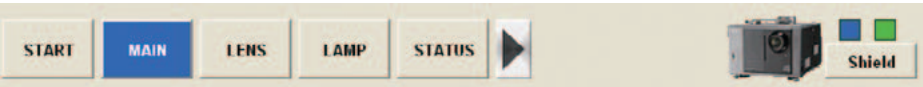
1-5-2. Menu bar

Menu buttons are displayed here. The menu selected here is displayed in the main window below. If the “▶” button is displayed on the right side of a menu button, the menu pages can be switched by pressing the “▶” button.

The buttons that are displayed in the menu bar differ depending on the connection destination (projector or multimedia switcher). Refer to “3-1. Project Operation Menu List” (page 67) for details on the projector menu. Refer to “4-2. MMS Operation Menu List” (page 177) for details on the multi media switcher menu.

If the DCC version is 4 or higher and the connection is to a projector, then the menu buttons can be displayed across two lines by selecting the [Option] - [Display Two Line] check box from the toolbar. If the connection is to MMS, [Display Two Line] is not displayed in the toolbar

For the one line display



For the two line display



“Shield” button

The DCC controls are disabled to prevent inadvertent operation (The “Shield” button is displayed in red). Press the “Shield” button again to return to the original state.



Indicator Icon (Left)

Shows the poling mode (ON/OFF). When the poling mode is ON, the projector’s status information is automatically updated every three seconds.

The poling mode is enabled in the START screen, MAIN screen and LAMP screen.

Lights (Blue)	When the poling mode is ON
Off	When the poling mode is OFF

Indicator Icon (Right)

This shows the status of the projector.

Lights (Green)	The projector is operating normally.
Lights (Red)	An error or warning occurs on the projector main unit.

### 1-5-3. Main window

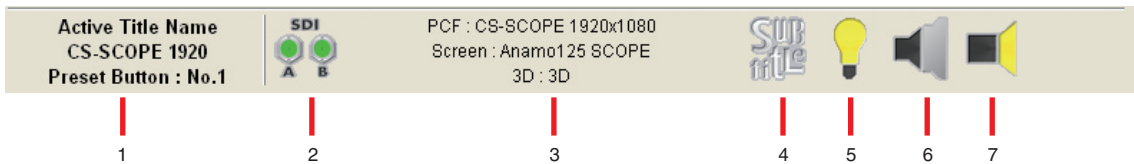
The menu selected from the menu bar is displayed here.

### 1-5-4. Status bar

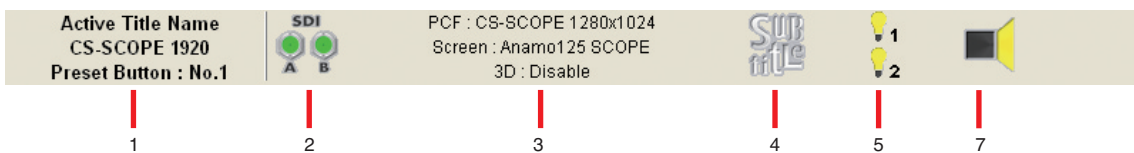
The status of the controller is displayed with icons.



#### For projector

NC3240/NC3200/NC2000/NC1200 Series



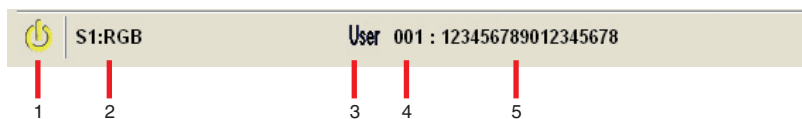
NC900 Series



1. Title Display	<p>Displays the selected title name and preset button number.</p> <div> <div> <b>Active Title Name</b>  <b>CS-SCOPE 1920</b>  <b>Preset Button : No.1</b> </div> <div> <div>Displays title name</div> <div>Displays preset button number</div> </div> </div>
2. Signal Input icon	<p>Shows the input signal terminal selected. Refer to the "3-3. MAIN Screen" (page 72) for details.</p>
3. PCF/SCREEN/3D File Display	<p>Displays the selected PCF filename, SCREEN filename, and 3D filename.</p>
4. Subtitle icon	<p>Show the status of the subtitle.</p>
5. Lamp icon	<p>(NC3240S/NC3200/NC2000/NC1200 Series) Shows the status of the lamp (ON/OFF).</p> <div>  (yellow): Lamp ON   (black): Lamp OFF </div>

	<p>(NC900 Series)</p> <p>Shows the lamp status(ON/OFF) and the lamp usage status (lamp mode) at same time. when the lamp mode is Lamp1/Lamp2, gray icon is displayed for the lamp that is not being used.</p> <p>Example: Lamp mode: Lamp1</p> <div>  <p>Lamp1: In use (Lamp ON) Lamp2: Not used</p> </div> <div>  <p>Lamp1: In use (Lamp OFF) Lamp2: Not used</p> </div>
6. Anamorphic Lens/Wide Converter Lens icon	<p>(For only NC3240/NC3200/NC2000/NC1200 Series)</p> <p>Shows the anamorphic lens/wide converter lens (IN/OUT).</p> <div>  <p>(red): Using the anamorphic lens/wide converter lens (IN).</p> </div> <div>  <p>(gray): Not using the anamorphic lens/wide converter lens (OUT).</p> </div>
7. Douser icon	<p>Displays the status of the douser (open/closed).</p> <div>  <p>(yellow): Douser is open.</p> </div> <div>  <p>(gray): Douser is closed.</p> </div>

## For multimedia switcher



1. Power icon	Displays the power status of the multimedia switcher (MM3000B).
2. Input signal terminal that is being selected	Shows the input signal terminal selected. S1/S2: Slot number RGB/DVI/SDI/VIDEO: Input signal port (interface board)
3. Signal type icon (Def./User)	Def.: Indicates that the image is projected using the signal adjustment values of the default signal list. User: Indicates that the image is projected using the signal list that has been set and registered by the user.
4. Signal number that is being projected	Displays the number of the signal being projected.
5. Signal name that is being projected	Displays the name of the signal being projected.



## 1-6. Basic operations

This section describes basic projector operations using DCC.

### 1-6-1. Turning on the Projector

#### Preparation:

- Check that there is AC power being supplied to the lamp power unit (only on the NC3240/NC3200 series) and the projector head.
- Check that the VOLTAGE SELECT switch is set to match the voltage of the power supply you are using (NC900 series only).

**1** Turn on the main power switch of the lamp power unit (NC3240/NC3200 series only).

**2** Turn on the main power switch of the projector.

**3** Activate the DCC.

The Communication Settings screen is displayed.

**4** Connect to the projector.

First, select a connection destination device (projector) from the Target Select field. Next, set the IP address or host name of the projector, and then press the “OK” button. Refer to “1-4. Setting a connection destination” (page 11) for details on the Communication Settings screen.

**5** Press the “ON” button in the POWER field of the START screen.

If you press the POWER “ON” button with the Lamp set to “Off”, the lamp is kept turned off when the projector is turned on.

To turn on the lamp, press the Lamp [On] button.

**6** Press the “Yes” button in the confirmation dialog.

The projector is turned on and starts the starting process. The progress bar is displayed during the starting process.

Upon completion of the starting process, the screen below is displayed (“ON” button in the POWER field becomes active).



### 1-6-2. Turning off the Projector

- 1** Display the START screen.  
When the START screen is not displayed, press the “START” button from the menu bar.
- 2** Press the “OFF” button in the POWER field of the START screen.
- 3** Press “Yes” button in the confirmation dialog.  
The progress bar is displayed and the ending process is executed.
- 4** When the projector head has entered the standby state, turn the main power switch on the projector to off.

### 1-6-3. Changing the menu mode

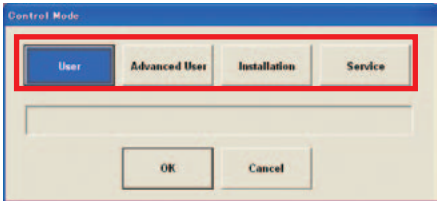
There are five menu modes available. The menu items that can be used differ depending on the mode.  
When you press “MODE” on the START screen, you can switch the menu mode. Dedicated passcodes need to be entered in order to switch to any mode other than user mode.

Mode	Description	Projector	MMS
User mode	Menu for usual operation. To display the basic menu items only.	○	○
Advanced User mode	(NC3240S/NC3200/NC2000/NC1200 Series) Menu for replacement of the lamp. The lamp settings menu can be used in addition to the menus that can be used in User mode. (NC900 Series) The available menus are the same as in User mode.	○	—
Installation mode	Menu for installation.	○	○
Service mode	Menu for the service personnel.	○	○
Pospro mode	Menu for the post productions. A menu item equivalent to the Service mode can be used and detail setup of a target color file (TCGD) is enabled.	○	—

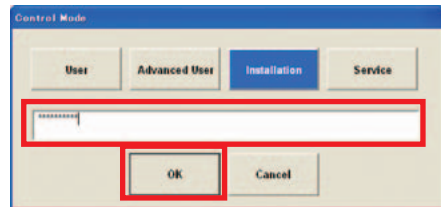
- 1** Press the “MODE” button from the START menu screen.  
The “Control Mode” screen appears.



- 2** Press the button of the mode to change.



- 3 Input the passcode and press “OK” button.



**TIP** When the mode is changed from the User mode, the “MODE” button and the “Shield” button are displayed as shown below.

- In Advanced User mode:  
“MODE (A)”, “Shield (A)”



- In Installation mode:  
“MODE (I)”, “Shield (I)”



- In Service mode:  
“MODE (S)”, “Shield (S)”



- In Pospro mode:  
“MODE (P)”, “Shield (P)”



## 2. Setting Up Your Projector

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This chapter describes how to initialize the projector using the DCC.

**TIP** See "3. Menu Functions [For Projector Operation]" (page 66) for information about the various functions.

### 2-1. Following Setup

**Preparation:** Switch to Installation mode (or Service mode). (See page 18)

- **Step 1**  
Configuring the device installed in the slot (See page 21)
- **Step 2**  
Adjusting Colors (See page 24)
- **Step 3**  
Creating "MCGD" Data (See page 25)
- **Step 4**  
Adjusting the color tone of the test pattern (See page 28)
- **Step 5**  
Adjusting the Lens and the Brightness of the Lamp (See page 29)
- **Step 6**  
Creating New Titles (See page 34)

## 2-2. Configuring the device installed in the slot

Select the devices (option board or multimedia switcher) installed in slot A and slot B of the projector. If the installed device and the settings configured with DCC differ, the installed device cannot be used.

Refer to the installation manual of each device for details on how to install the option board or multimedia switcher.

**NOTE** Slot B is not available in the NC900 series.

### Preparation:

- Install the option board or multimedia switcher in the projector.
- Set the projector in the standby state.

### 1 Press the “SETUP” button on the menu bar.

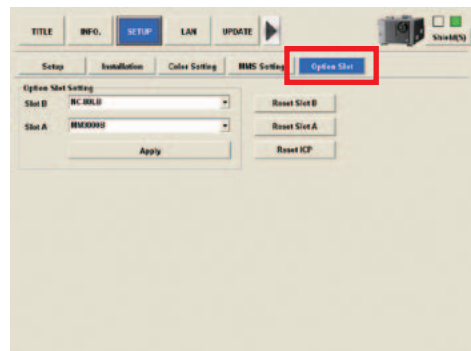
The “SETUP” screen appears.

If the “SETUP” button is not visible, press the “▶” button on the menu bar and then scroll the menu bar.



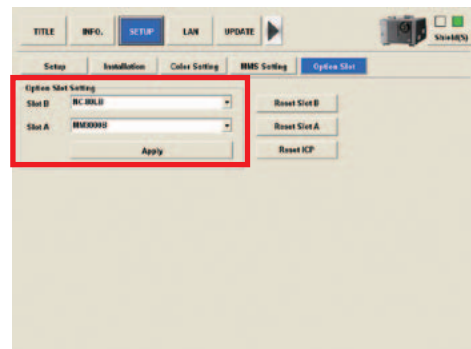
### 2 Press the “Option Slot” button.

The “Option Slot” page appears.



### 3 Configure the devices installed in slot A and slot B of the projector with Option Slot Setting, and press the “Apply” button.

The devices that can be selected are as follows. If no devices are installed, select “No Board”. “Not Available” is displayed and the settings cannot be changed for slots that are not available.



## For NC3240/NC3200/NC2000/NC1200 Series

Slot B	NC-80LB
	NC-80DS
	IMB
	No Board
Slot A	NC-80LB
	NC-80DS
	IMB
	MM3000B
	No Board

To use MM3000B in the NC3240, NC3200, NC2000, and NC1200 series, proceed to the following steps depending on the version of DCC.

### Version 3.3.1.0 and later

→ Step 5

### Prior to version 3.3.1.0

→ Step 4

- 4 To use MMS in the NC3240, NC3200, NC2000, and NC1200 series, press the “MMS Setting” button.

MMS can be used by pressing the “Built-in” button in MMS Select.

## For NC900 Series

Slot B	Not Available
Slot A	NC-80LB
	NC-80DS
	IMB
	No Board

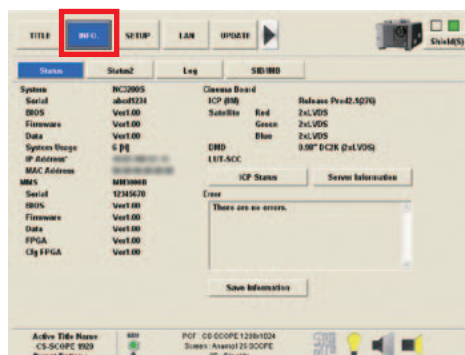


- 5 Turn on the power of the projector.

- 6 Press the “INFO.” Button on the menu bar.

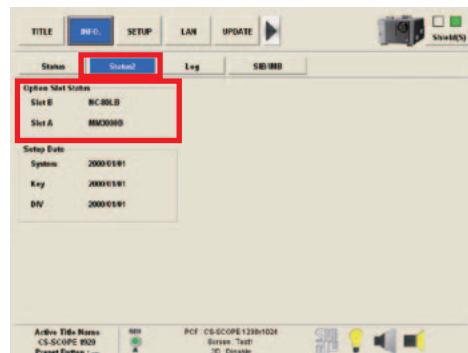
The “INFO.” screen appears.

If the “INFO.” Button is not visible, press the “▶” button on the menu bar and then scroll the menu bar.



**7** Press the “Status2” button.

The current connection status of the devices installed in slot A and slot B is displayed in “Option Slot Status”. If the projector is in standby state or the connection of the devices cannot be confirmed, ( ) is attached to the device name.



## 2-3. Adjusting Colors

This corrects the chromaticity of the colors of the image projected on the screen by means of a color meter and performs the setting of target colors (TCGD) during test pattern projections. You can also project an image in target colors (TCGD file) with red, green, blue and white colors selected.

This projector measures the value of each native color (color before corrections) and saves it in a file (MCGD) to allow the user to faithfully reproduce the specified color (i.e., target color or TCGD).

.....  
**TIP** The value of MCGD will change with the projection environment; therefore, when the setup location or illumination conditions change, the value should be measured again.  
.....

**Initial Preparation**

- Use a colorimeter to make preparations so that the value of the screen center can be measured. Display the “Cross Hatch” test pattern to adjust the screen center.
- Set the brightness of the room to projection conditions (i.e., turn off all illumination).
- Use of a PR-650 manufactured by PHOTO RESEARCH is recommended in measurement of the chromaticity level.
- If the projector you are using is the NC3240, NC3200, NC2000, or NC1200 series, adjust the alignment of the valve prior to measuring the MCGD. Wait at least 15 minutes for the projector to warm up and the brightness becomes constant before adjusting alignments.
- If the projector you are using is the NC900 series, turn on the lamp at least 15 minutes before performing the color adjustment in order to stabilize the brightness.



## 2-3-1. Creating “MCGD” Data

- 1 Press the “SETUP” button on the menu bar.

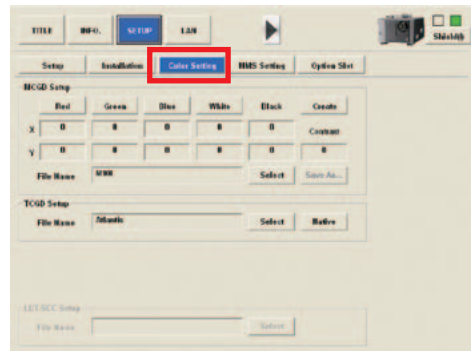
The “SETUP” screen appears.

If the “SETUP” button is not visible, press the “▶” button on the menu bar and then scroll the menu bar.



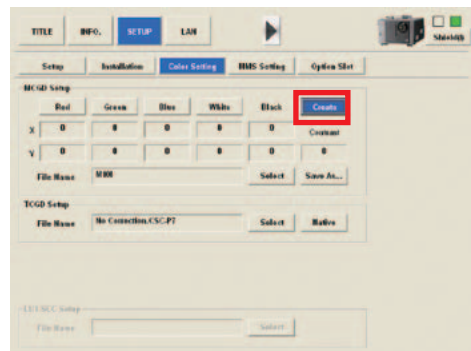
- 2 Press the “Color Setting” button.

The “Color Setting” page appears.



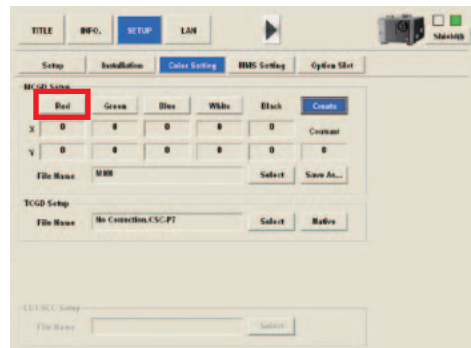
- 3 Press the “Create” button in the “MCGD Setup”.

The “Red”, “Green”, “Blue”, and “White” buttons within MCGD Setup will become valid.



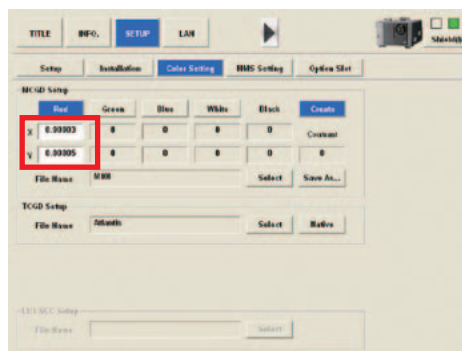
- 4 Press “Red” button.

There will be projection to the screen in the native color (red) of the projector.



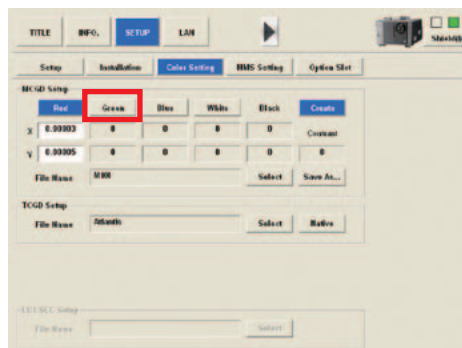
## 5 Measure the chromaticity

“x, y” of the screen center, then enter the measured value into the “x” section and the “y” section located under “Red”.

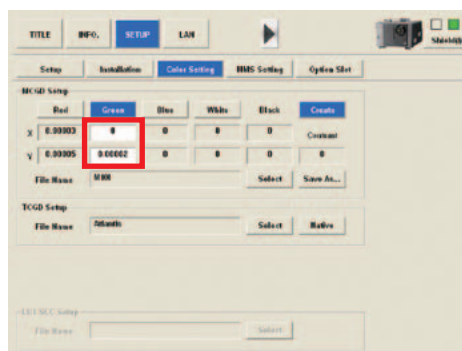


## 6 Press “Green” button.

There will be projection to the screen in the native color (Green) of the projector.

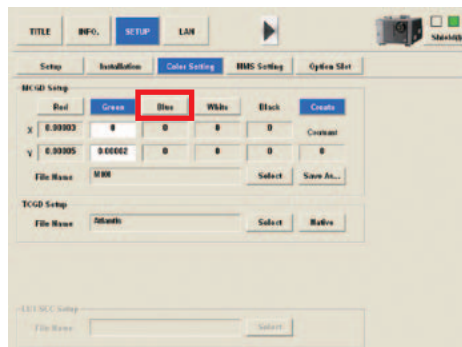


## 7 Measure the chromaticity “x, y” of the screen center, then enter the measured value into the “x” section and the “y” section located under “Green”.



## 8 Press “Blue” button.

There will be projection to the screen in the native color (Blue) of the projector.



- 9** Measure the chromaticity “x, y” of the screen center, then enter the measured value into the “x” section and the “y” section located under “Blue”:

The screenshot shows the 'Color Setting' menu with tabs for Setup, Installation, Color Setting, HBS Setting, and Option Set. Under 'Color Setting', there are buttons for Red, Green, Blue, White, and Black. The 'Blue' button is highlighted with a red box. Below these buttons, there are input fields for 'x' and 'y' values. For 'Blue', the 'x' value is 0.00002 and the 'y' value is 0.00002. There are also 'File Name' and 'Save As...' buttons.

- 10** Press “White” button.

There will be projection to the screen in the native color (White) of the projector.

The screenshot shows the 'Color Setting' menu with tabs for Setup, Installation, Color Setting, HBS Setting, and Option Set. Under 'Color Setting', there are buttons for Red, Green, Blue, White, and Black. The 'White' button is highlighted with a red box. Below these buttons, there are input fields for 'x' and 'y' values. For 'White', the 'x' value is 0.00002 and the 'y' value is 0.00002. There are also 'File Name' and 'Save As...' buttons.

- 11** Measure the chromaticity “x, y” of the screen center, then enter the measured value into the “x” section and the “y” section located under “White”:

The screenshot shows the 'Color Setting' menu with tabs for Setup, Installation, Color Setting, HBS Setting, and Option Set. Under 'Color Setting', there are buttons for Red, Green, Blue, White, and Black. The 'White' button is highlighted with a red box. Below these buttons, there are input fields for 'x' and 'y' values. For 'White', the 'x' value is 0.00002 and the 'y' value is 0.00002. There are also 'File Name' and 'Save As...' buttons.

- 12** Press the “Save As...” button.

Press the “Save As...” button to display the file name entry screen. To overwrite an existing file, check that the file you are editing is selected before pressing the “Save” button.

To register a new file, enter the name of file and then press the “Save” button.

The screenshot shows the 'Color Setting' menu with tabs for Setup, Installation, Color Setting, HBS Setting, and Option Set. Under 'Color Setting', there are buttons for Red, Green, Blue, White, and Black. The 'Save As...' button is highlighted with a red box. Below these buttons, there are input fields for 'x' and 'y' values. For 'White', the 'x' value is 0.00002 and the 'y' value is 0.00002. There are also 'File Name' and 'Save As...' buttons.

.....

**TIP** The titles registered in the projector use the MCGD file “M10I” by default (the MCGD file can be changed). You can apply the adjusted setting values to all of the registered titles and newly created titles that use “M10I” by saving over “M10I”. It is therefore recommended that you save the basic settings in “M10I” and save settings adjusted for each title in separate files.

.....

**2-3-2. Projecting Red, Green, Blue, and White Colors**

By pressing the “Red”, “Green”, “Blue”, and “White” buttons in the “MCGD Setup”, you can project an image in colors, respectively.

To select a target color (TCGD file), press the “SELECT” button in the “TCGD Setup”.

You can also select a native color of the projector with the “Native” button.

## 2-4. Adjusting the Lens Setup and Lamp Brightness

This adjusts the lens settings (projection screen position (lens shift), zoom, and focus) and the brightness of the lamp.

### NC3240/NC3200/NC2000/NC1200 series

You can register adjusted lens settings (lens memory function) or adjusted brightness of the lamp (lamp memory function). The registered setting values can be allocated to each title and can be readjusted after allocation. For information on the lens and lamp memory functions, refer to the following items.

- Lens memory function: "Lens Memory Screen" (Page 80)
- Lamp memory function: "Lamp Memory Screen" (Page 84)

**NOTE** If you are using the NC900 series, since the lens memory function is not available, the setting items are not displayed.

### NC900 series

The lamp mode setting and lamp brightness can be registered in advance (lamp memory function). The registered setting values can be assigned to each of the titles, and can be readjusted after assigning. Refer to "Lamp Memory Screen" (page 86) for details on the lamp memory function.

### 2-4-1. Adjusting the Lens

The projector zoom, focus and projected screen (lens shift) are adjusted with the "LENS" screen.

**NOTE** When the projector main unit is used in the NC2000/NC1200 Series, the following functions cannot be used.

- Copy of the Lens Memory function ([Copy] button on the Lens Memory screen)
- Paste of the Lens Memory function ([Paste] button on the Lens Memory screen)
- With Focus of the Lens Memory function (With Focus check box of the Lens Memory Setup field of the Lens Memory screen)



(Screen when connected to the NC2000 series)

Adjusting the Projection Screen Position (Shift)

"▲" button	To move the projection position upward.
"▼" button	To move the projection position downward.
"◀" button	To move the projection position to the left.
"▶" button	To move the projection position to the right.
"STOP" button	To stop the lens shifting.

- TIP
- Press the "▲", "▼", "◀" or "▶" buttons again during moving to stop the moving.
  - If you press the "Fine-adjust Mode" button, you can execute fine adjustment. If fine adjustment is enabled, the button is in the pressed state. If you press the "Fine-adjust Mode" button again, the status returns to the normal adjustment method.

Finely Adjusting the Projection Screen Size (Zoom)

"▲" button	To zoom in.
"▼" button	To zoom out.
"STOP" button	To stop zooming in or out.

- TIP
- Press the "▲" and "▼" button again during zooming in or out to stop the zoom-in or zoom-out operation.
  - If you press the "Fine-adjust Mode" button, you can execute fine adjustment. If fine adjustment is enabled, the button is in the pressed state. If you press the "Fine-adjust Mode" button again, the status returns to the normal adjustment method.

Adjusting the Focus of the Projection Screen (Focus)

"▲" button	To set the focus distance longer.
"▼" button	To set the focus distance shorter.
"STOP" button	To stop focus moving

- TIP
- Press the "▲" and "▼" button again during a moving focus to stop the focus moving.
  - If you press the "Fine-adjust Mode" button, you can execute fine adjustment. If fine adjustment is enabled, the button is in the pressed state. If you press the "Fine-adjust Mode" button again, the status returns to the normal adjustment method.

## 2-4-2. Adjusting the Brightness of the Lamp

The brightness of the lamp is adjusted using the LAMP screen.

In the case of movies, adjust the brightness of your DLP Cinema Projector to approximately 12 or 14 (ftl).

- NC3240/NC3200/NC2000/NC1200 series

The configured brightness can be maintained automatically by setting FeedBack to Enable.

- NC900 series

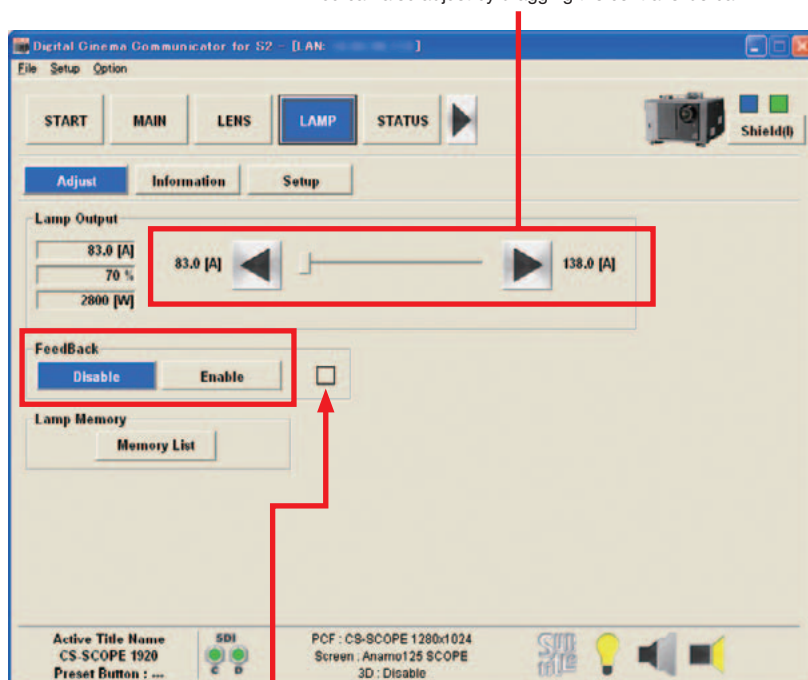
In addition to the function for adjusting the brightness, the lamp to use can also be changed.

### NOTE

- The set value will be invalidated after replacement of the lamp, therefore, you must set lamp brightness once again.
- If the lamp is off or the douser is closed, "Disabled by . . . (Lamp Off/Douser Close/Lamp Off, Douser Close)" is displayed. When this happens, the lamp output cannot be adjusted.

### NC3240/NC3200/NC2000/NC1200 Series

Press the "◀" and "▶" buttons to adjust the output value.  
You can also adjust by dragging the central slide bar.



Displays the operational status of the Feedback function.

Blue: The Feedback function is enabled

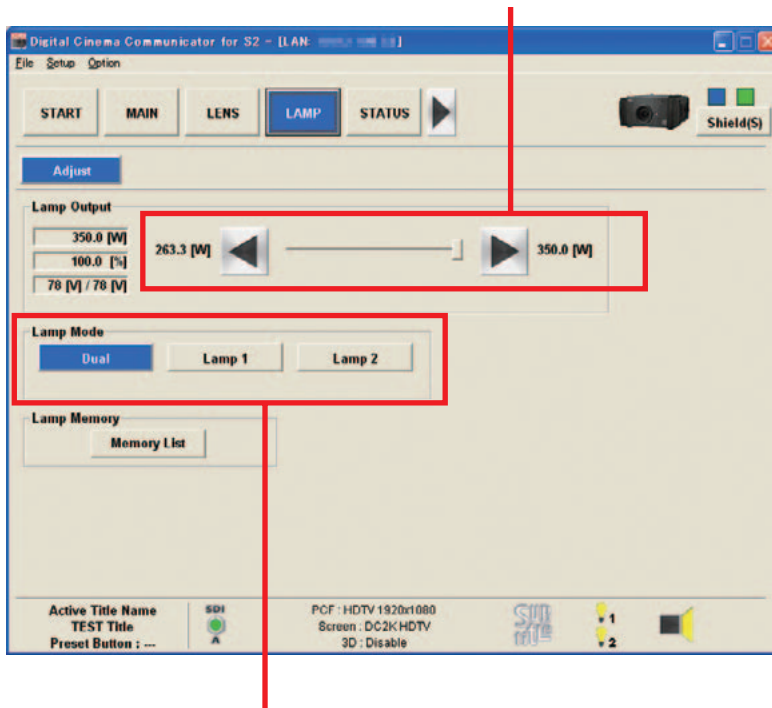
Gray: The Feedback function is disabled

### NOTE

If you set 100% of the lamp output, automatic brightness adjustment (FeedBack mode) will be disabled.

### NC900 Series

Press the “◀” and “▶” buttons to adjust the output value.  
You can also adjust by dragging the central slide bar.



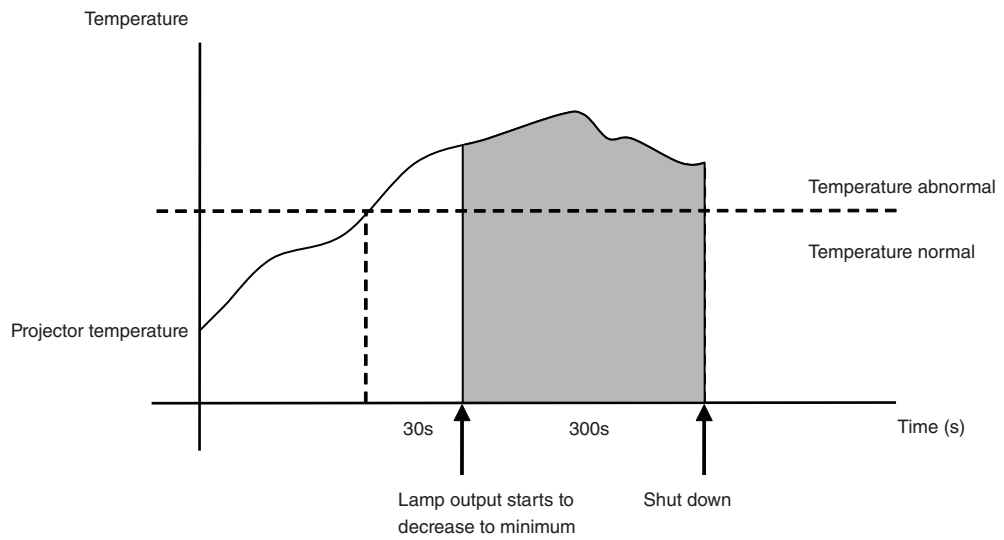
You can change the lamp to use.

Dual: Turns lamp 1 and lamp 2 on and off at the same time  
Lamp1/Lamp2: Turns only either lamp 1 or lamp 2 on and off

The NC900 series operates as follows if an abnormal temperature is detected in the projector.

1. 30 seconds after an abnormal temperature is detected, the lamp output starts to decrease to the minimum. During the period until the temperature returns to normal, “Disabled by Over Temp.” is displayed and the adjustment of the lamp output and the changes of the lamp mode cannot be performed. Furthermore, if the brightness is set to minimum, the projector shuts down.
2. If the abnormal temperature state continues for a period of 300 seconds after the lamp output starts to decrease, the projector shuts down.





## 2-5. Registering Titles

### 2-5-1. Information on Default Titles

The data listed on the next page have been cataloged in your projector before shipping from our factory. (As of October 2012)  
When projecting an image source covered by these data, you do not need to change the settings of your projector. When projecting an image source other than those mentioned above (data listed below), follow the procedures given in Section, "2-5-3. Creating New Titles" (page 40) Title Creation and Editing" and subsequent sections.

List of Default Titles (NC3200/NC2000/NC1200 series)

Preset Button	Title Number	TITLE NAME	INPUT	FILES										Anamorphic Lens
				PCF				3D File	SCREEN	MCGD				
				SOURCE		TCGD								
				FILE NAME	Input Size (HxV)	Aspect Ratio	SAME FILE NAME				Tolerance Box	White Clip		
1	001	DCDM XYZ 239	SDI-A,B	DCDM_XYZ_239	2048x858	0	DC28_DCL_XYZE_314_351	Not Use	Use	Disable	DC2K SCOPE	M10I	OFF	
2	002	DCDM XYZ 185	SDI-A,B	DCDM_XYZ_185	1998x1080	0	DC28_DCL_XYZE_314_351	Not Use	Use	Disable	DC2K FLAT	M10I	OFF	
3	003	DCDM RGB 239	SDI-A,B	DCDM_RGB_239	2048x858	0	DC28_DCL_Xenon	Not Use	Not Use	Disable	DC2K SCOPE	M10I	OFF	
4	004	DCDM RGB 185	SDI-A,B	DCDM_RGB_185	1998x1080	0	DC28_DCL_Xenon	Not Use	Not Use	Disable	DC2K FLAT	M10I	OFF	
5	005	MXFI 239	SDI-A	MXFI_239	1920x804	0	DC28_DCL_Xenon	Not Use	Not Use	Disable	DC2K SCOPE	M10I	OFF	
6	006	MXFI 185	SDI-B	MXFI_185	1920x1038	0	DC28_DCL_Xenon	Not Use	Not Use	Disable	DC2K FLAT	M10I	OFF	
7	007	HDTV	SDI-B	HDTV_1920x1080	1920x1080	0	Nothing	Not Use	Not Use	Disable	DC2K HDTV	M10I	OFF	
8	008	DVI-A	DVI-A	DVI_2048x1080	0x0	0	P7v2 theatre	Use	Not Use	Disable	DC2K DVI	M10I	OFF	
	009	DVI-B	DVI-B		0x0	0	P7v2 theatre	Use	Not Use	Disable	DC2K DVI	M10I	OFF	
	010	DVI-TWIN	DVI-A,B	DVI_2048x1080	0x0	0	P7v2 theatre	Use	Not Use	Disable	DC2K DVI	M10I	OFF	

List of Registered Titles (NC3240 series)

Preset Button	Title Number	TITLE NAME	INPUT	FILES										Anamorphic Lens
				PCF			TCGD			3D File	SCREEN	MCGD		
				SOURCE		Aspect Ratio	SAME FILE NAME	Tolerance Box	White Clip					
				FILE NAME	Input Size (HxV)									
1	001	DCDM XYZ 239	SDI-A,B	DCDM_XYZ_239	2048x858	0	DC28_DCI_XYZE_314_351	Not Use	Use	Disable	DC4K SCOPE	M10I	OFF	
2	002	DCDM XYZ 185	SDI-A,B	DCDM_XYZ_185	1998x1080	0	DC28_DCI_XYZE_314_351	Not Use	Use	Disable	DC4K FLAT	M10I	OFF	
3	003	DCDM RGB 239	SDI-A,B	DCDM_RGB_239	2048x858	0	DC28_DCI_Xenon	Not Use	Not Use	Disable	DC4K SCOPE	M10I	OFF	
4	004	DCDM RGB 185	SDI-A,B	DCDM_RGB_185	1998x1080	0	DC28_DCI_Xenon	Not Use	Not Use	Disable	DC4K FLAT	M10I	OFF	
5	005	MXFI 239	SDI-A	MXFI_239	1920x804	0	DC28_DCI_Xenon	Not Use	Not Use	Disable	DC4K SCOPE	M10I	OFF	
6	006	MXFI 185	SDI-B	MXFI_185	1920x1038	0	DC28_DCI_Xenon	Not Use	Not Use	Disable	DC4K FLAT	M10I	OFF	
7	008	DVI-A	SDI-B	HDTV 1920x1080	1920x1080	0	Nothing	Not Use	Not Use	Disable	DC4K HDTV	M10I	OFF	
8	009	DVI-B	DVI-A	DVI 2048x1080	0x0	0	P7v2 theatre	Use	Not Use	Disable	DC4K DVI	M10I	OFF	
	010	DVI-TWIN	DVI-B	DVI 2048x1080	0x0	0	P7v2 theatre	Use	Not Use	Disable	DC4K DVI	M10I	OFF	
	011	DCDM IMB 2K 239	IMB	DCDM_XYZ_239	2048x858	0	DC28_DCI_XYZE_314_351	Not Use	Use	Disable	DC4K SCOPE	M10I	OFF	
	012	DCDM IMB 2K 185	IMB	DCDM_XYZ_185	1998x1080	0	DC28_DCI_XYZE_314_351	Not Use	Use	Disable	DC4K FLAT	M10I	OFF	
	013	DCDM IMB 4K 239	IMB	DC4K_XYZ_239	4096x1716	0	DC28_DCI_XYZE_314_351	Not Use	Use	Disable	DC4K SCOPE	M10I	OFF	
	014	DCDM IMB 4K 185	IMB	DC4K_XYZ_185	3996x2160	0	DC28_DCI_XYZE_314_351	Not Use	Use	Disable	DC4K FLAT	M10I	OFF	

List of Registered Titles (NC900 series)

Preset Button	Title Number	TITLE NAME	INPUT	FILES										Anamorphic Lens		
				PCF				TCGD				3D File	SCREEN		MCGD	
				FILE NAME		SOURCE		SAME FILE NAME		Tolerance Box						White Clip
				Input Size (HxV)	Aspect Ratio											
	001	DCDM_XYZ_239	SDI-A,B	DCDM_XYZ_239	2048x858	0		DC28_DCI_XYZE_314_351	Not Use	Use	Disable	DC2K SCOPE	M10I	OFF		
	002	DCDM_XYZ_185	SDI-A,B	DCDM_XYZ_185	1998x1080	0		DC28_DCI_XYZE_314_351	Not Use	Use	Disable	DC2K FLAT	M10I	OFF		
	003	DCDM_RGB_239	SDI-A,B	DCDM_RGB_239	2048x858	0		DC28_DCI_Xenon	Not Use	Not Use	Disable	DC2K SCOPE	M10I	OFF		
	004	DCDM_RGB_185	SDI-A,B	DCDM_RGB_185	1998x1080	0		DC28_DCI_Xenon	Not Use	Not Use	Disable	DC2K FLAT	M10I	OFF		
	005	MXFI_239	SDI-A	MXFI_239	1920x804	0		DC28_DCI_Xenon	Not Use	Not Use	Disable	DC2K SCOPE	M10I	OFF		
	006	MXFI_185	SDI-B	MXFI_185	1920x1038	0		DC28_DCI_Xenon	Not Use	Not Use	Disable	DC2K FLAT	M10I	OFF		
	007	HDTV	SDI-B	HDTV_1920x1080	1920x1080	0		Nothing	Not Use	Not Use	Disable	DC2K HDTV	M10I	OFF		
	008	DVI-A	DVI-A	DVI_2048x1080	0x0	0		P7v2 theatre	Use	Not Use	Disable	DC2K DVI	M10I	OFF		
	009	DVI-B	DVI-B	DVI_2048x1080	0x0	0		P7v2 theatre	Use	Not Use	Disable	DC2K DVI	M10I	OFF		
	010	DVI-TWIN	DVI-A,B	DVI_2048x1080	0x0	0		P7v2 theatre	Use	Not Use	Disable	DC2K DVI	M10I	OFF		
1	011	IMB_2K_239	IMB	DCDM_XYZ_239	2048x858	0		DC28_DCI_XYZE_314_351	Not Use	Use	Disable	DC2K SCOPE	M10I	OFF		
2	012	IMB_2K_185	IMB	DCDM_XYZ_185	1998x1080	0		DC28_DCI_XYZE_314_351	Not Use	Use	Disable	DC2K FLAT	M10I	OFF		
3	013	IMB Auto	IMB	DCDM_XYZ_Auto	0x0	0		DC28_DCI_XYZE_314_351	Not Use	Use	Disable	2048x1080 No Crop	M10I	OFF		

### List of Default PCF files

This is common to the NC3240, NC3200, NC2000, NC1200, and NC900 series.

PCF FILE NAME	SOURCE		LUT-DG [gamma]	CSC	TCGD	Tolerance Box
	Input Size(HxV)	Aspect Ratio				
DC4K_DCDM_RGB_185	3996x2160	0	—	—	—	Not Use
DC4K_DCDM_RGB_239	4096x1714	0	—	—	—	Not Use
DC4K_DCDM_XYZ_185	3996x2160	0	—	—	—	Not Use
DC4K_DCDM_XYZ_239	4096x1714	0	—	—	—	Not Use
DC4K_VirtualWhite_XYZ_185	3996x2160	0	—	Unity RGB	VirtualWhite	Not Use
DC4K_VirtualWhite_XYZ_239	4096x1714	0	—	Unity RGB	VirtualWhite	Not Use
DCDM_RGB_185	1998x1080	0	—	—	—	Not Use
DCDM_RGB_239	2048x858	0	—	—	—	Not Use
DCDM_XYZ_185	1998x1080	0	—	—	—	Not Use
DCDM_XYZ_239	2048x858	0	—	—	—	Not Use
VirtualWhite_XYZ_185	1998x1080	0	Gamma2.6	Unity RGB	VirtualWhite	Not Use
VirtualWhite_XYZ_239	2048x858	0	Gamma2.6	Unity RGB	VirtualWhite	Not Use
185_YCxCz_1920	1920x1038	0	Gamma2.6	YCxCz Inverse ICT	DC28_DCI_ XYZE_314_351	Not Use
185_YCxCz_2048	1998x1080	0	Gamma2.6	YCxCz Inverse ICT	DC28_DCI_ XYZE_314_351	Not Use
239_YCxCz_1920	1920x804	0	Gamma2.6	YCxCz Inverse ICT	DC28_DCI_ XYZE_314_351	Not Use
239_YCxCz_2048	2048x858	0	Gamma2.6	YCxCz Inverse ICT	DC28_DCI_ XYZE_314_351	Not Use
DC4K_XYZ_185 <sup>(Note)</sup>	3996x2160	0	—	—	—	Not Use
DC4K_XYZ_239 <sup>(Note)</sup>	4096x1716	0	—	—	—	Not Use
DCDM_RGB_Auto	0x0	0	Gamma2.6	Unity RGB	DC28_DCI_Xenon	Not Use
DCDM_XYZ_Auto	0x0	0	Gamma2.6	Unity RGB	DC28_DCI_ XYZE_314_351	Not Use
Default	0x0	0	Gamma2.6	YCbCr 240M	P7v2 theatre	Use
DVI 2048x1080	0x0	0	Gamma2.6	Unity RGB	P7v2 theatre	Use
HDTV 1920x1080	1920x1080	0	Gamma2.2	YCbCr 709	P7v2 theatre	Not Use
MMS 2048x1080	2048x1080	0	Gamma2.2	Unity RGB	Rec 709	Not Use
MXFI_185	1920x1038	0	—	—	—	Not Use
MXFI_239	1920x804	0	—	—	—	Not Use
SDI DUAL	0x0	0	Gamma2.6	RGB 10-bit 64-940	P7v2 theatre	Use
XYZ_3D_1920x804	1920x804	0	Gamma2.6	YCxCz Inverse ICT	DC28_DCI_ XYZE_314_351	Not Use

(Note): This file is installed on NC3240 series only.

### List of Default SCREENS

This is common to the NC3240, NC3200, NC2000, NC1200, and NC900 series.

SCREEN FILE NAME	Anamorphic factor	Screen Presentation
1280x1024 No Crop	1	1280x1024
1400x1050 No Crop	1	1400x1050
Anamo125 SCOPE	1.25	2048x1080
DC2K DVI	1	2048x1080
DC2K FLAT AREA	1	1998x1080
DC2K FLAT	1	2048x1080
DC2K HDTV AREA	1	1920x1080
DC2K HDTV	1	2048x1080
DC2K SCOPE	1	2048x1080
DC2K SXGA AREA	1	1280x1024
DC4K DV <sup>(Note)</sup>	1	4096x2160
DC4K FLAT <sup>(Note)</sup>	1	4096x2160
DC4K HDTV <sup>(Note)</sup>	1	4096x2160
DC4K SCOPE <sup>(Note)</sup>	1	4096x2160
2048x1080 No Crop	1	2048x1080
4096x2160 No Crop	1	4096x2160

(Note): This file is installed on NC3240 series only.

### List of Default SOURCES

This is common to the NC3240, NC3200, NC2000, NC1200, and NC900 series.

SOURCE FILE NAME	SOURCE	
	Input Size (HxV)	Aspect Ratio
1280x1024 1778	1280x1024	1.778
1080x1024 185	1280x1024	1.85
1280x1024 235	1280x1024	2.35
1280x1024 239	1280x1024	2.39
1280x1024 Square Pixels	1280x1024	0
1800x1080 1667	1800x1080	0
1920x1038 185	1920x1038	0
1920x1080 1778	1920x1080	1.778
1920x803 239	1920x803	0
1920x817 235	1920x817	0
2048x1024 Square Pixels	2048x1024	0
2048x857 239	2048x857	0
2048x871 235	2048x871	0
4096x1714 239 <sup>(Note)</sup>	4096x1714	0
4096x1742 235 <sup>(Note)</sup>	4096x1742	0
4096x2048 Square Pixels <sup>(Note)</sup>	4096x2048	0
4096x2160 Square Pixels <sup>(Note)</sup>	4096x2160	0
Auto Square Pixels	0x0	0
2048x1080 Square Pixels	2048x1080	0
4096x2160 Square Pixels	4096x2160	0

(Note): This file is installed on NC3240 series only.

### List of Default 3Ds

This is common to the NC3240, NC3200, NC2000, NC1200, and NC900 series.

3D FILE NAME	Frame Rate Ratio	3D Control							
	N:N	L/R Input Reference	Input Frame Dominance	L/R Display Reference	L/R Output Reference Polarity	Dark Time Adjustment		Output Reference Delay	
						Setting	Actual	Time	Phase
Disable	1:1	3D Disabled	Left (L1R1 L2R2)	Use GPI (polarity=true)	True	0	0	0	0
Enable	6:2	Use Line Interleave (1st line=Left 2nd Line=Right)	Left (L1R1 L2R2)	Not used	Inverted	0	350	0	0
Enable Dolby	6:2	Use Line Interleave (1st line=Left 2nd line=Right)	Right (R1L1 R2L2)	Not used	True	780	780	0	0
Enable masterimage	6:2	Use Line Interleave (1st line=Left 2nd line=Right)	Right (R1L1 R2L2)	Not used	True	1157	1157	0	0
Enable RealD	6:2	Use Line Interleave (1st line=Left 2nd line=Right)	Right (R1L1 R2L2)	Not used	True	430	430	-120	0

## 2-5-2. Overview of Titles

A total of 100 titles (001–100) can be set for the projector. You can preset the followings for each title.

- Select Signal (selection of input signal and signal type)
- Image Scaler
- PCF files
- MCGD files
- SCREEN files
- 3D files
- Lamp memory

In the NC3240, NC3200, NC2000, and NC1200 series, the following items can also be configured.

- Lens memory
- Setup of anamorphic lens motorized turret

You can select registered titles directly from the control panel of the projector main unit by allocating the titles to preset buttons. (See page 76)

## 2-5-3. Creating New Titles

This section describes how to create a new title that is associated with a video signal input.

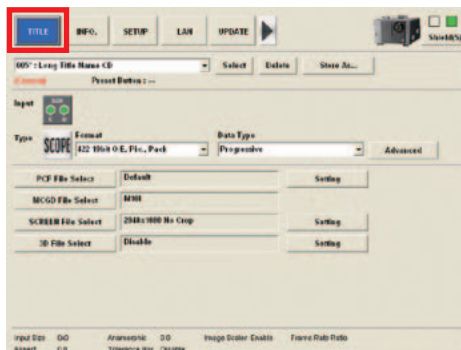
For the steps for registering a title for a test pattern, see “2-5-6. Registering a Test Pattern for a Title” (page 48). For the steps for editing a registered title, see “2-5-4. Editing a registered Title” (page 45).

**Preparation:** Switch to Installation mode (or Service mode). (See page 18)

### 1 Press the “TITLE” button on the menu bar.

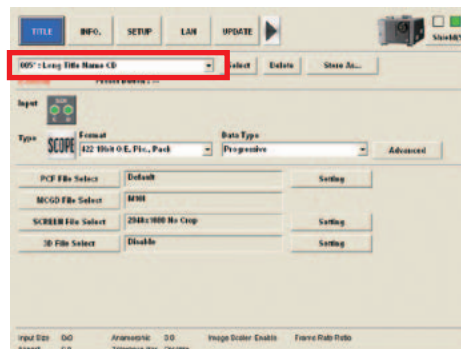
The “TITLE” screen will appear.

If the “TITLE” button is not visible, press the “▶” button on the menu bar and then scroll the menu bar.



### 2 Select “Create New Title” from the pull-down menu.

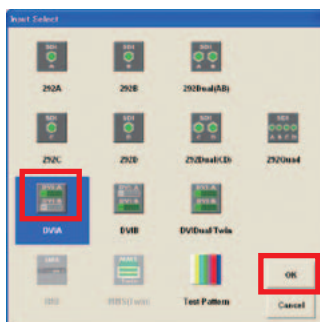
The “Input Select” screen appears.



### 3 Select the desired input signal and then press the “OK” button.

The selected icon is displayed as a blue cursor. Press the “OK” button to return to the “TITLE” screen.

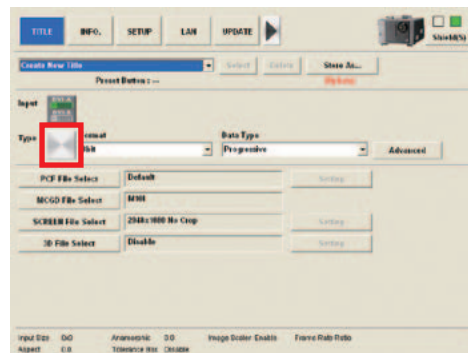
The “Type Select” screen appears.





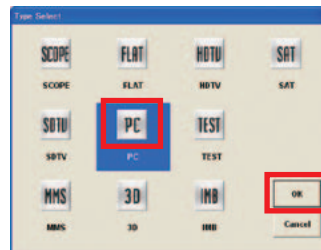
**4** Press the “Type” icon.

The “Type Select” screen appears.



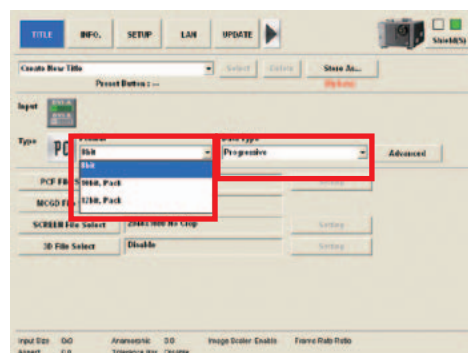
**5** Select the type of input signal and then press the “OK” button.

The selected icon is displayed as a blue cursor. Press the “OK” button to return to the “TITLE” screen.



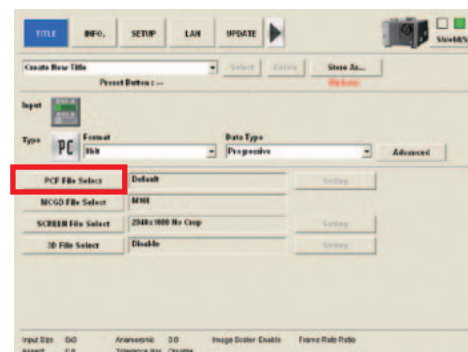
**6** Select the Format, Data Type.

From the pull-down list, select the format of the input signal and the data type.

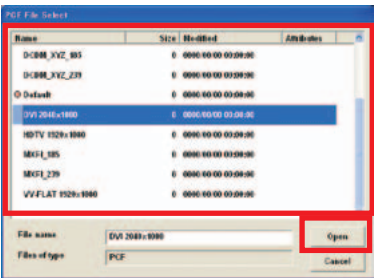


**7** Press the “PCF File Select” button.

The “PCF File Select” screen appears.

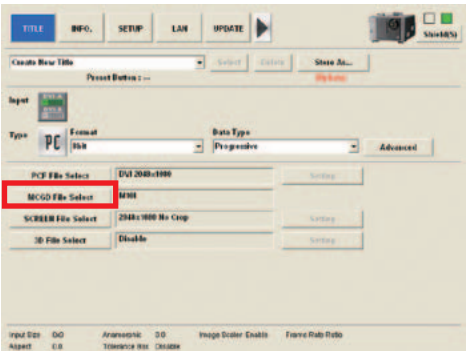


- 8** Select a PCF file that is associated with the signal and press the “Open” button.  
Press the “Open” button to return to the “TITLE” screen.

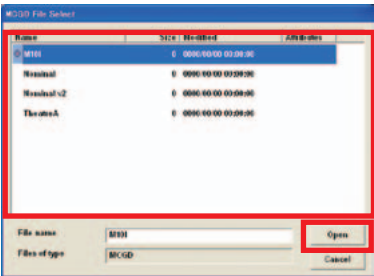


**TIP** If the file does not exist in the list, select a PCF file as a placeholder and save the title. Once you have saved the title you can create a new PCF file. Alternatively, you can change the settings in the PCF file that you selected as a placeholder. Refer to “2-6. Creating a PCF File” (page 50) for details on creating and editing PCF files.

- 9** Press the “MCGD File Select” button.  
The “MCGD File Select” screen appears.



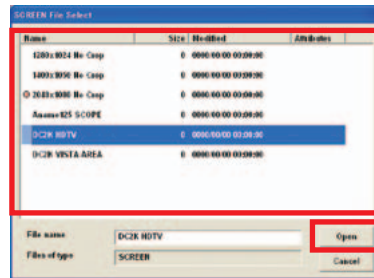
- 10** Select an MCGD file that is associated with the signal and press the “Open” button.  
Press the “Open” button to return to the “TITLE” screen.



- 11** Press the “SCREEN File Select” button.  
The “SCREEN File Select” screen appears.

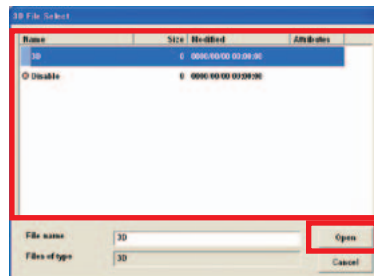
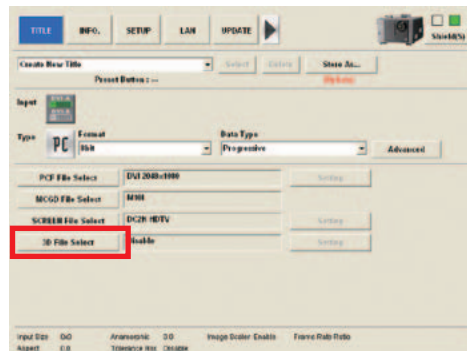


- Press the “Open” button to return to the “TITLE” screen.



If the file does not exist in the list, select a SCREEN file as a placeholder and save the title. Once you have saved the title you can create a new SCREEN file. Alternatively, you can change the settings in the SCREEN file that you selected as a placeholder. Refer to “2-7. Creating a SCREEN File” (page 57) for details on creating and editing SCREEN files.

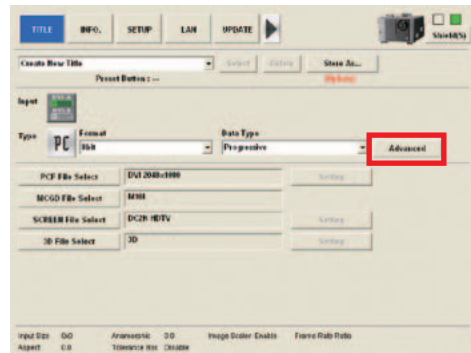
- The “3D File Select” screen appears.



If the file does not exist in the list, select a 3D file as a placeholder and save the title. Once you have saved the title you can create a new 3D file. Alternatively, you can change the settings in the 3D file that you selected as a placeholder. Refer to “2-8. Creating a 3D File” (page 62) for details on creating and editing 3D files.

## 15 Press the “Advanced” button.

The “Title Advanced” screen appears.

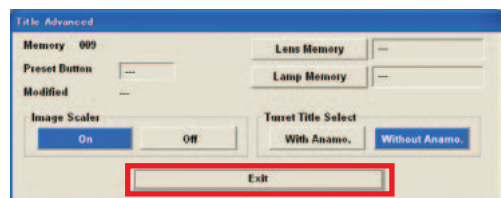


## 16 Configure the advanced settings depending on the input signal and press the “Exit” button.

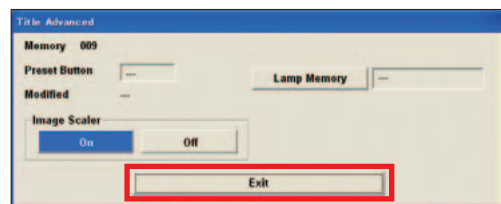
For details of the settings, see “3-7-1. Title Advanced Screen” (page 101).

Press the “Exit” button to return to the “TITLE” screen.

### NC3240S/NC3200/NC2000/NC1200 series

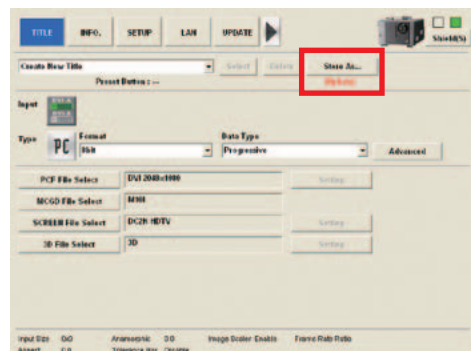


### NC900 series



## 17 Press the “Store As ...” button.

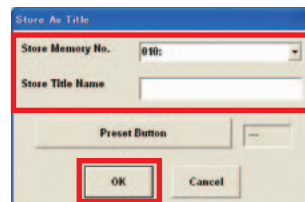
The “Store As Title” screen appears.



## 18 Select the title number, enter the title name, and press the “OK” button.

If you select a title number that has been registered (its title name is displayed), it is saved.

To allocate a title to the preset button, press the “Preset Button” button. Select the preset button to allocate and press the “OK” button.



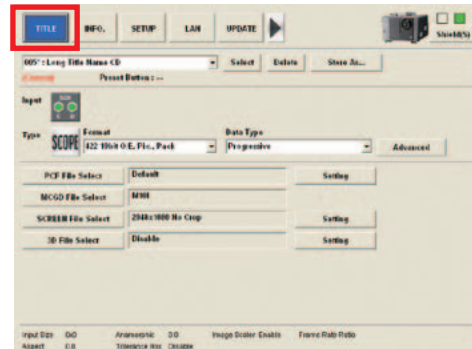
## 2-5-4. Editing a registered Title

**Preparation:** Switch to Installation mode (or Service mode). (See page 18)

### 1 Press the “TITLE” button on the menu bar.

The “TITLE” screen will appear.

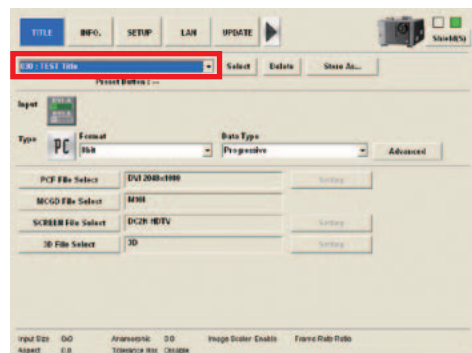
If the “TITLE” button is not visible, press the “▶” button on the menu bar and then scroll the menu bar.



### 2 From the pull-down menu, select a desired title.

Press the pull-down menu, select a title from the list that appears.

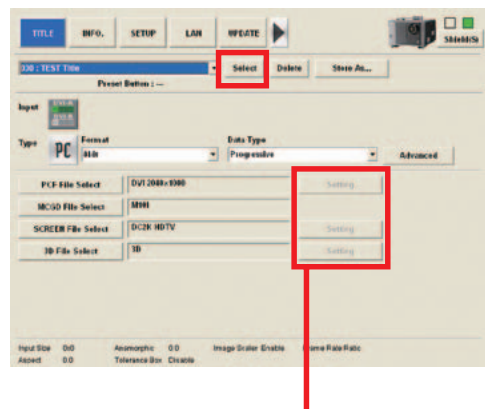
When you select a memory number to which a preset button has been assigned, its key number appears in the “Preset Button :” column.



### 3 Press the “Select” button.

The title being edited you selected in Step 2 is selected for output.

When the title being edited is selected and the “Select” button is pressed, it becomes possible to newly create and edit PCF files, SCREEN files, and 3D files (this makes it possible to use the “Setting” button).



When the title being edited is selected and the “Select” button is pressed, the selected title is selected for output, it becomes possible to newly create and edit PCF files, SCREEN files, and 3D files.

### 4 Edit the settings.

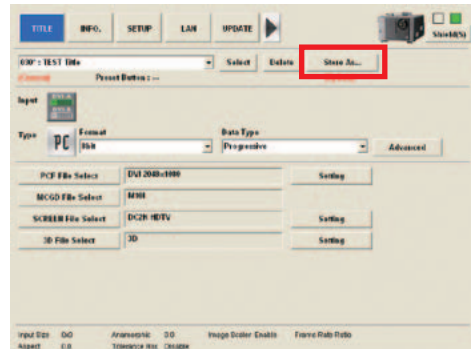
Edit the settings as described in “2-5-3. Creating New Titles” (page 40).

If you are newly creating or editing the settings files (PCF files, SCREEN files, and 3D files), refer to the following items.

- “2-6. Creating a PCF File” (page 50)
- “2-7. Creating a SCREEN File” (page 57)
- “2-8. Creating a 3D File” (page 62)

### 5 Press the “Store As ...” button.

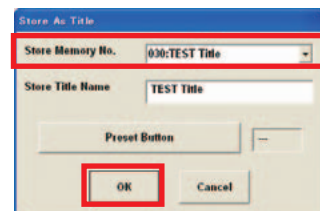
The “Store As Title” screen appears.



### 6 If you are overwriting a title number that has been edited, check that the Memory No. of the title being edited is displayed and then press the “OK” button.

To register an edited title as a new title, select a number for which no title has been selected (no title name is displayed) and press the “OK” button.

To allocate a title to the preset button, press the “Preset Button” button. Select the preset button to allocate and press the “OK” button.



## 2-5-5. Deleting a Title

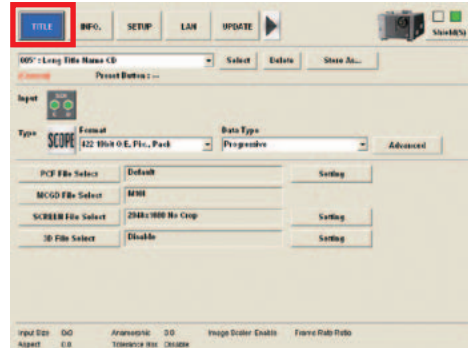
**NOTE** The title currently selected for output cannot be deleted.

**Preparation:** Switch to Installation mode (or Service mode). (See page 18)

**1** Press the “TITLE” button on the menu bar.

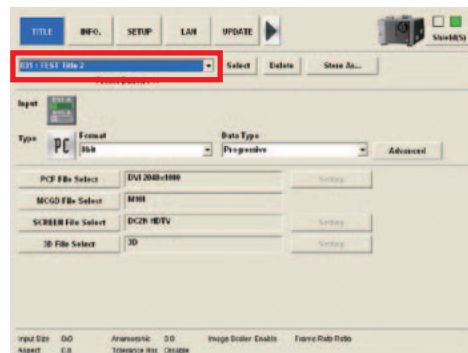
The “TITLE” screen will appear.

If the “TITLE” button is not visible, press the “▶” button on the menu bar and then scroll the menu bar.



**2** From the pull-down menu, select a desired title.

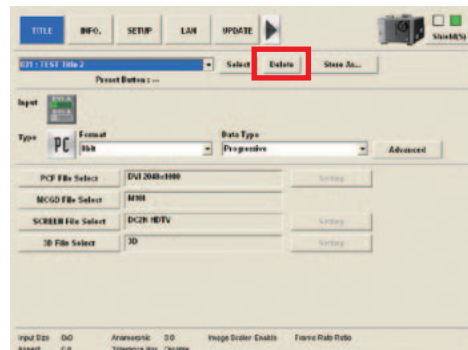
Press the pull-down menu, select a title from the list that appears.



**3** Press the “Delete” button.

When a confirmation message appears, press the “Yes” button.

Press the [Yes] button to delete the title.



## 2-5-6. Registering a Test Pattern for a Title

**Preparation:** Switch to Installation mode (or Service mode). (See page 18)

**1** Press the “TITLE” button on the menu bar.

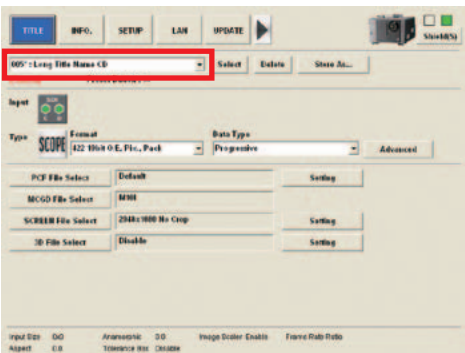
The “TITLE” screen will appear.

If the “TITLE” button is not visible, press the “▶” button on the menu bar and then scroll the menu bar.



**2** Select “Create New Title” from the pull-down menu.

The “Input Select” screen appears.

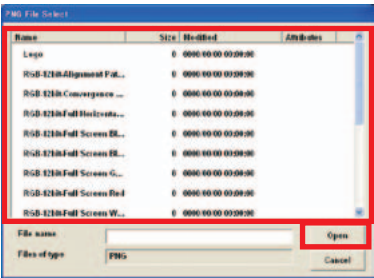


**3** Select the “Test Pattern” icon and press the “OK” button.

The selected icon is displayed as a blue cursor. Press the “OK” button to display the “PNG File Select” screen.



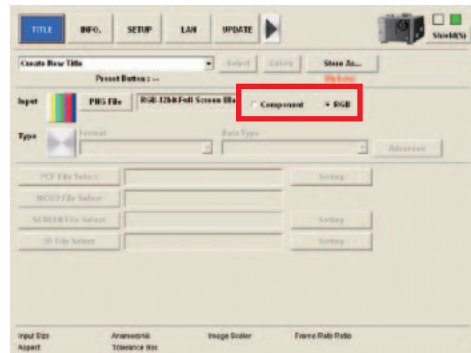
**4** Select the test pattern (PNG File) you want to register and press the “Open” button.





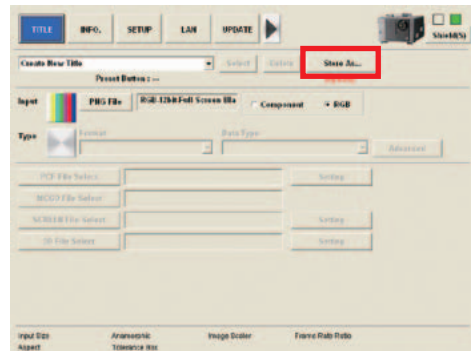
**5** Select the type of the test pattern signal.

Select either “Component” or “RGB”.



**6** Press the “Store As ...” button.

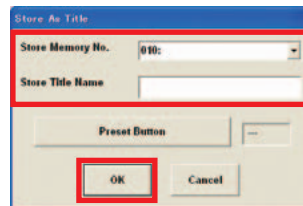
The “Store As Title” screen appears.



**7** Select the title number, enter the title name, and press the “OK” button.

If you select a title number that has been registered (its title name is displayed), it is saved.

To allocate a title to the preset button, press the “Preset Button” button. Select the preset button to allocate and press the “OK” button.



# 2-6. Creating a PCF File

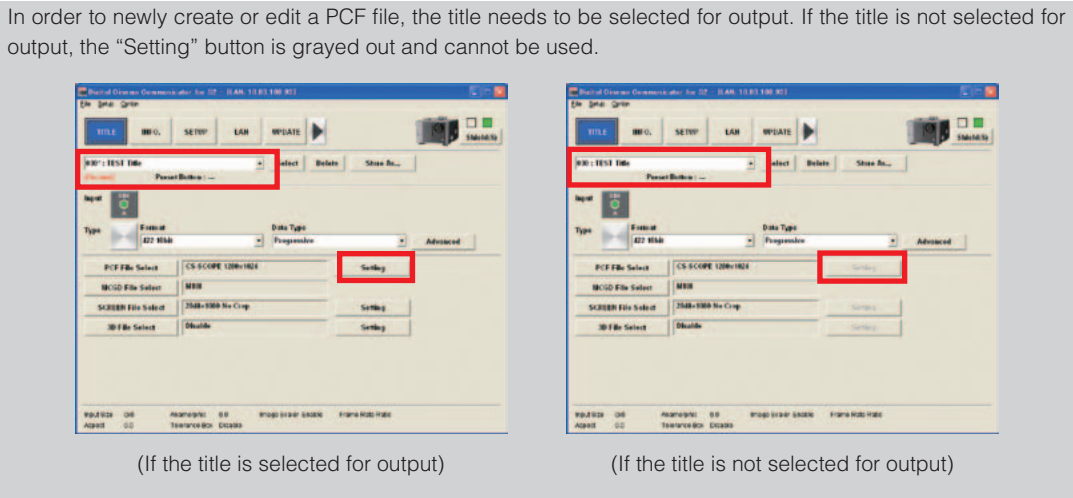
## 2-6-1. Overview of PCF File

The PCF file (Projector Configuration File) includes the items mentioned below, which are the setting information of the projector.

- Input signal information (Resolution, aspect ratio, etc.)
- Color Space information
- Gamma information
- Target color information (TCGD)

Newly creating and editing PCF files is performed by using the “Setting” button in the PCF file column of the TITLE screen (PCF Setting screen). Newly created or edited PCF files are saved in the projector main unit and can be used with other titles. For information on assigning a PCF file to a title, see “2-5-3. Creating New Titles” (page 40).

**NOTE** In order to newly create or edit a PCF file, the title needs to be selected for output. If the title is not selected for output, the “Setting” button is grayed out and cannot be used.



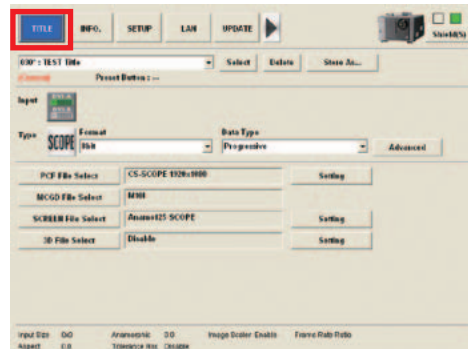
## 2-6-2. Creating a New PCF File

**Preparation:** Switch to Installation mode (or Service mode). (See page 18)

### 1 Press the “TITLE” button on the menu bar.

The “TITLE” screen will appear.

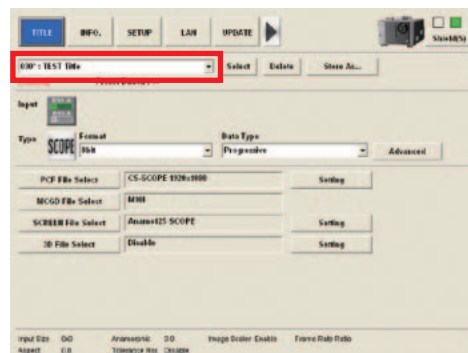
If the “TITLE” button is not visible, press the “▶” button on the menu bar and then scroll the menu bar.



### 2 From the pull-down menu, select a current title.

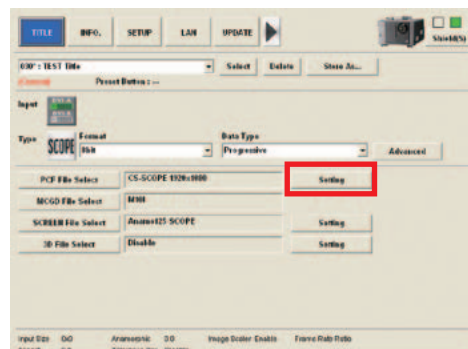
To create a PCF file, the current title (the currently selected signal) needs to be selected. The title with the pull-down menu number marked with “\*” is the current title.

If a current title does not exist, select a title and press the “Select” button.



### 3 Press the “Setting” button in the “PCF File Select”

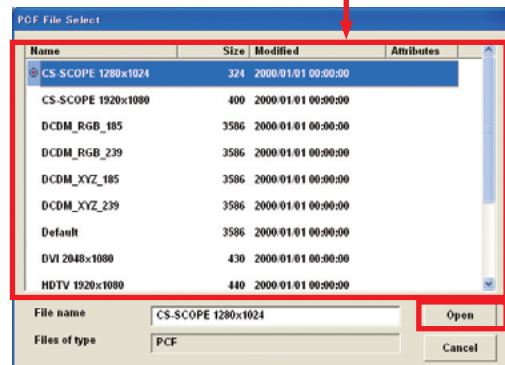
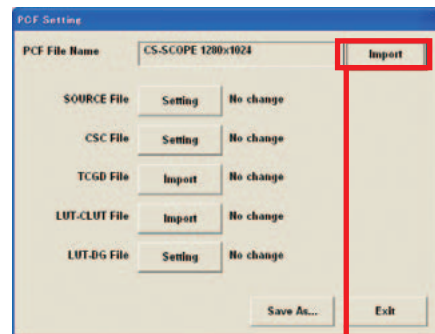
The “PCF Setting” Screen appears.



- 4** To create a new file based on an existing PCF file, press the “Import” button.

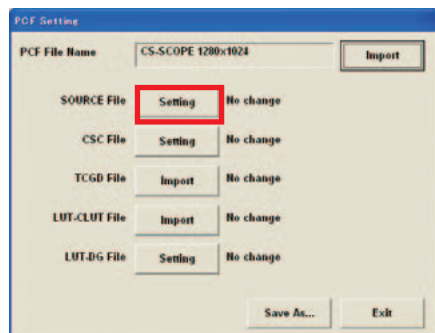
The PCF File Select screen is displayed.

Select a PCF file and press the “Open” button.



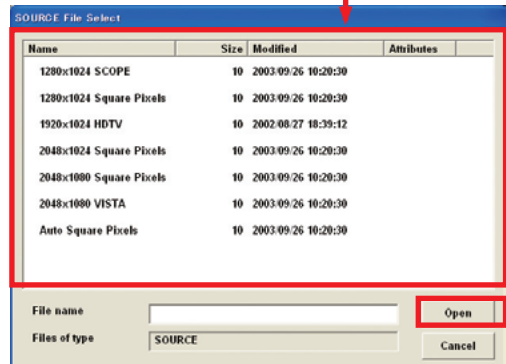
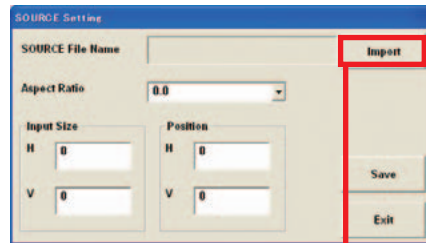
- 5** Press the “Setting” button in the SOURCE File.

The “SOURCE Setting” screen appears.



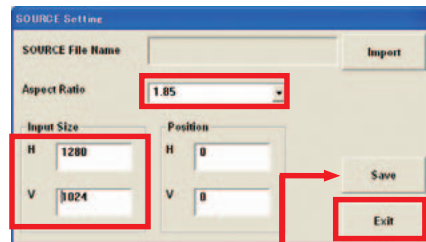
- 6** To create a new file based on an existing SOURCE file, press the “Import” button.

The SOURCE File Select screen is displayed.  
Select a SOURCE file and press the “Open” button.



- 7** Enter the Aspect Ratio and Input Size, then press “EXIT” button.

The “SOURCE Setting” screen reappears  
For SOURCE Setting Screen, See “SOURCE Setting Screen” (page. 104).



Saves the configured settings as a SOURCE file.

- TIP** To save the changed settings as a SOURCE file, press the “Save” button. Enter the file name in the SOURCE File Save screen and press the “Save” button.  
To overwrite an existing SOURCE file, select the file to overwrite and press the “Save” button.

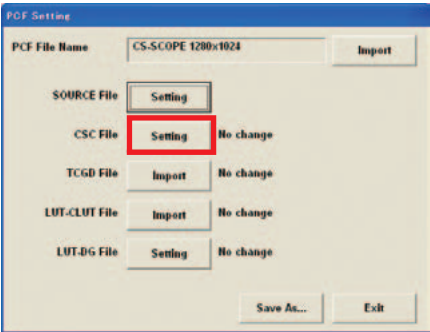
Example of setting SOURCE File

Conditions:

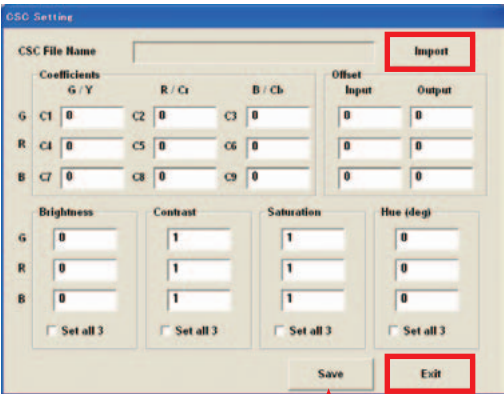
- Screen sizes: Project the screen size in Vista (Aspect ratio is 1:1.85)
- Input signal format: HD-SDI 1920x1080@24psF

Squeeze signals	(Signals that have been compressed at the control side 1920 to 1280 in the horizontal direction and 1080 to 1024 in the vertical direction) Aspect Ratio: 1.85 Input Size: 1280x1024
For signals other than squeeze signals	Aspect Ratio: 1.85 Input Size: 1920x1080

- 8 Press the “Setting” button in the “CSC File”  
“CSC Setting” screen will appears.



- 9 Press the “Import” button and select a CSC file that corresponds to the input signal.  
Since the required CSC file is already stored in the projector, you do not need to enter numerical values. When you have selected the CSC file, press the “Exit” button to return to the “PCF Setting” screen.



Saves the configured settings as a CSC file.

**TIP** To save the changed settings as a CSC file, press the “Save” button. Enter the file name in the CSC File Save screen and press the “Save” button.  
To overwrite an existing CSC file, select the file to overwrite and press the “Save” button.

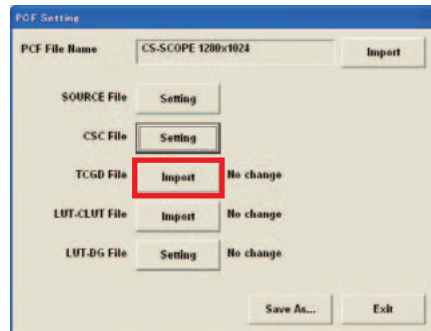
**Example of selecting a CSC file:**

For DVI connector	<ul style="list-style-type: none"> <li>• RGB input: "Unity RGB.CSC" (same as "Mk7 Unity RGB.CSC")</li> </ul>
For HD-SDI connector	<ul style="list-style-type: none"> <li>• Component input: 10-bit 64-940.CSC</li> <li>• "YCbCr 240M.CSC" (same as "Mk7 YCbCr 240M.CSC")</li> <li>• "YCbCr 709.CSC" (same as "Mk7 YCbCr 709.CSC")</li> <li>• DUAL LINK RGB input:</li> <li>• "RGB 10-bit 64-940.CSC"</li> </ul>

**10** Press the "Import" button in "TCGD File" to select the TCGD file.

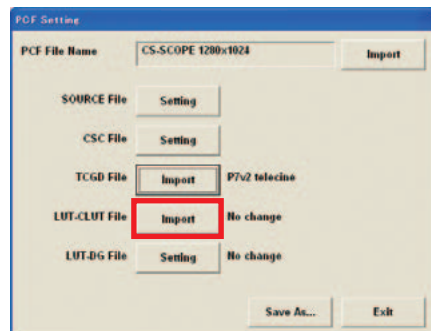
In the theater, "P7v2 Theater" is normally used. Note that "P7v2 telecine" should be used for post production and content creation.

When you have selected the TCGD file, press the "Open" button to return to the "PCF File Setup" screen.



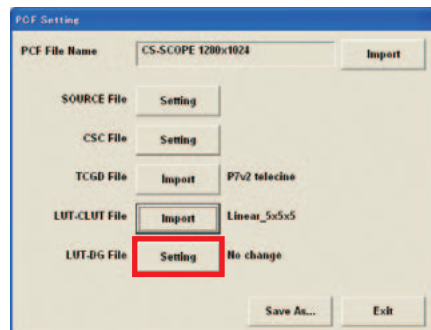
**11** Press the "Import" button in "LUT-CLUT File" to select the LUT-CLUT file.

(Usually, you do not need to select it.) When you have selected the LUT-CLUT file, press the "Open" button to return to the "PCF File Setup" screen.



**12** Press the "Setting" button in "LUT-DG File".

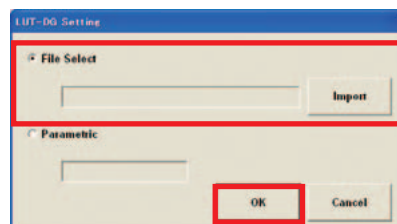
The "LUT-DG File Setup" screen appears.



**13** Set the LUT-DG file and then press the "OK" button.

Normally, select File Select and set the file shown following table.

When you have set the file, press the "OK" button to return to the "PCF File Setup" screen.

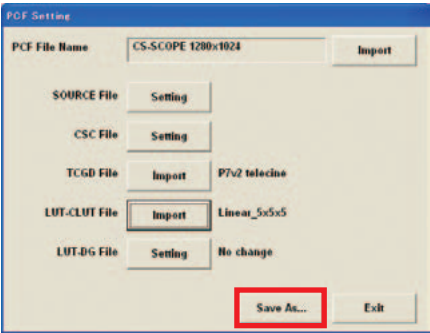


Example of setting LUT-DG File

Movies	"Gamma 2.6.LUT-DG" (equivalent to "Mk7 PL2.6.LUT-DG")
PC and Other Input	"Graphics_Enhanced.LUT-DG"
When using Parametric	Select "Parametric" to enter the degamma value.

14 Press the "Save As..." button.

Save the settings. Press the "Save As..." button to display the "PCF File Save" screen appears.  
To overwrite an existing file, check that the file being edited is selected before pressing the "Save" button.  
To register a new file, enter the name of file and then press the "Save" button.





## 2-7. Creating a SCREEN File

### 2-7-1. Overview of SCREEN files

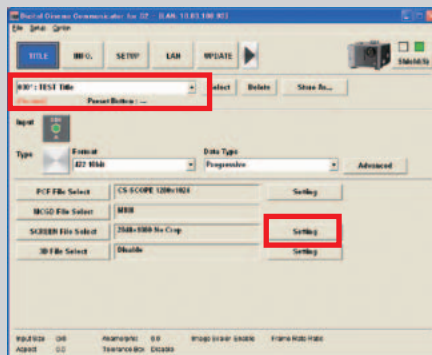
SCREEN files includes the items mentioned below, which are the setting information of the projector.

- Display area information
- Anamorphic Lens information
- Crop information

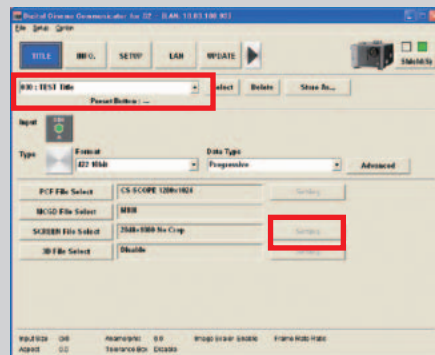
Newly creating and editing SCREEN files is performed by using the “Setting” button in the SCREEN file column of the TITLE screen (SCREEN Setting screen). Newly created or edited SCREEN files are saved in the projector main unit and can be used with other titles.

For information on assigning a SCREEN file to a title, see “2-5-3. Creating New Titles” (page 40).

**NOTE** In order to newly create or edit a SCREEN file, the title needs to be selected for output. If the title is not selected for output, the “Setting” button is grayed out and cannot be used.



(If the title is selected for output)



(If the title is not selected for output)

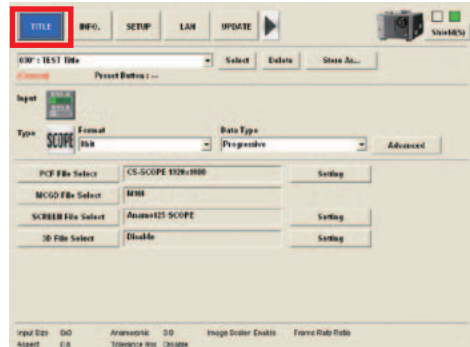
## 2-7-2. Creating a New SCREEN File

**Preparation:** Switch to Installation mode (or Service mode). (See page 18)

### 1 Press the “TITLE” button on the menu bar.

The “TITLE” screen will appear.

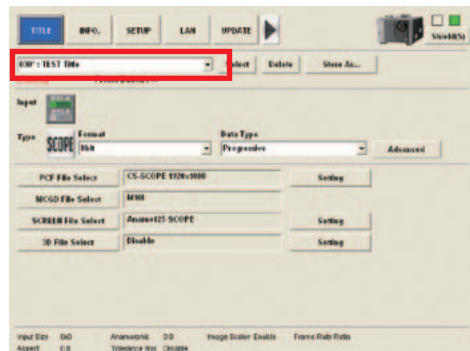
If the “TITLE” button is not visible, press the “▶” button on the menu bar and then scroll the menu bar.



### 2 From the pull-down menu, select a current title.

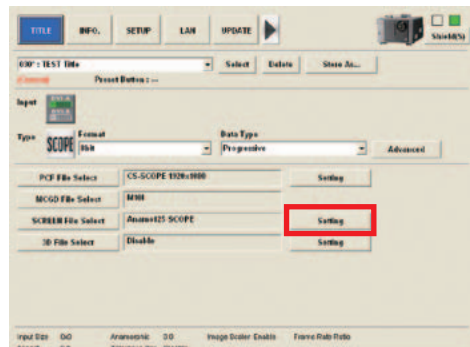
To create a SCREEN file, the current title (the currently selected signal) needs to be selected. The title with the pull-down menu number marked with “\*” is the current title.

If a current title does not exist, select a title and press the “Select” button.



### 3 Press the “Setting” button on the right-hand side of “SCREEN File Select”.

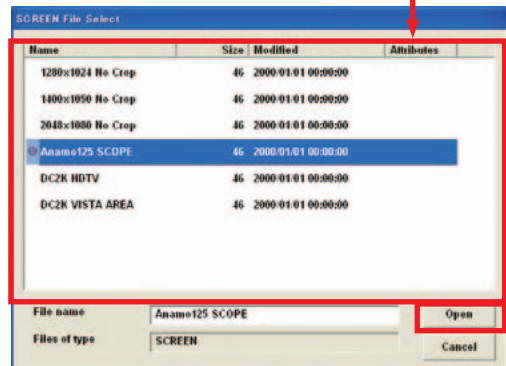
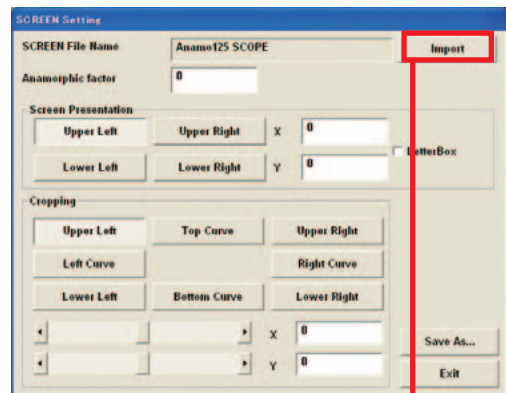
The “SCREEN Setting” screen appears.



- 4** To create a new file based on an existing SCREEN file, press the “Import” button.

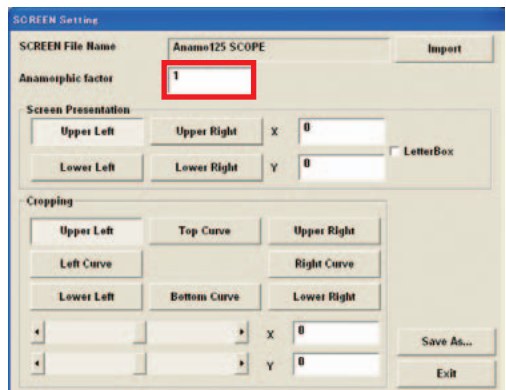
The SCREEN File Select screen is displayed.

Select a SCREEN file and press the “Open” button.



- 5** Input the magnification of Anamorphic Lens in the “Anamorphic factor”

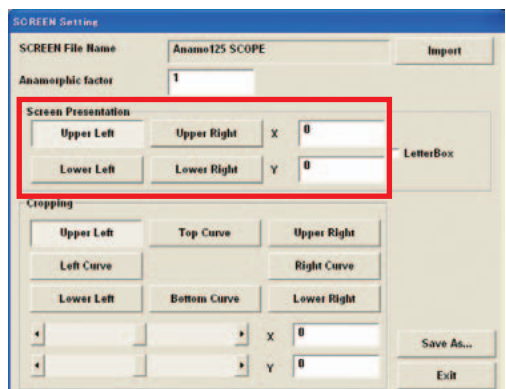
When the anamorphic lens is not used, “1” is input.



- 6** Enter information on the pixel you use in “Screen Presentation”

Normally leave it at the default. Enter X and Y values of the display area.

- X :0 to 2047
- Y :0 to 1079

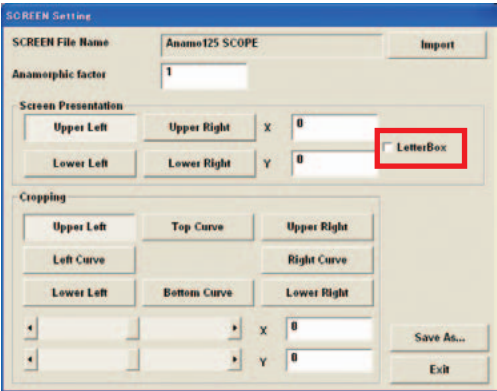


Example of setting SCREEN file

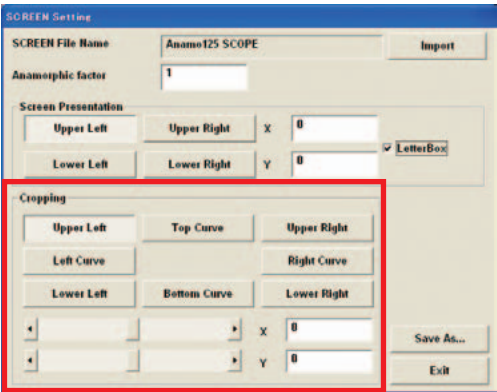
This sets the horizontal display area to be used when the primary lens zooming feature does not meet the required projection in a fixed wide-screen format.

VISTA Screen	Import the DC2K VISTA AREA.SCREEN file.
HDTV Screen	Import the DC2K HDTV AREA.SCREEN file.

- 7** Select the “LetterBox” checkbox.  
Usually this checkbox should be selected.



- 8** “Cropping” is used when the projected image is too large to be displayed in the screen.



## Items in “Cropping”

Select the item you want to adjust the amount of cropping (x- and y-coordinate) or the amount of curvature.  
You can make adjustments using the scroll bar or entering numerical values.

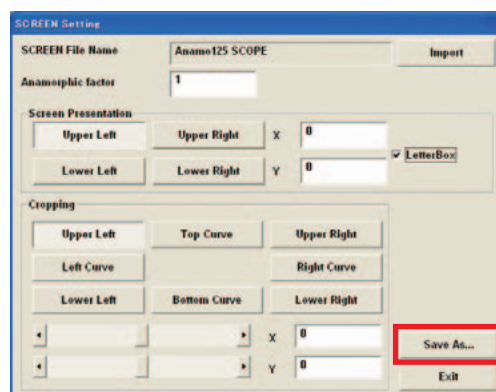
Upper Left	Sets the amount of cropping at the upper left of the screen. (This becomes the reference point of the XY coordinates.)
Left Curve	Sets the amount of curvature of the left vertical line of the screen. Enter the value of the relative value from the x coordinates of Upper Left and Lower Left. Setting this value to a negative value permits the correction of the distortion of the anamorphic lens.
Lower Left	Sets the amount of cropping at the lower left of the screen
Top Curve	Sets the amount of curvature of the top horizontal line of the screen. Enter the value of the relative value from the y coordinates of Upper Left and Upper Right. Setting this value to a negative value permits the correction of the distortion of the anamorphic lens.
Bottom Curve	Sets the amount of curvature of the bottom horizontal line of the screen. Enter the value of the relative value from the y coordinates of Lower Left and Lower Right. Setting this value to a positive value permits the correction of the distortion of the anamorphic lens.
Upper Right	Sets the amount of cropping at the upper right of the screen.
Right Curve	Sets the amount of curvature of the right vertical line of the screen. Enter the value of the relative value from the x coordinates of Upper Right and Lower Right. Setting this value to a positive value permits the correction of the distortion of the anamorphic lens.
Lower Right	Sets the amount of cropping at the lower right of the screen.

## 9 Press the “Save As...” button.

Save the settings. Press the “Save As...” button to display the “SCREEN File Select” screen appears. To overwrite an existing file, check that the file being edited is selected before pressing the “Save” button.

To register a new file, enter the name of file and then press the “Save” button.

Upon completion of adjustments, press the “Exit” button to return to the “TITLE” screen.



## 2-8. Creating a 3D File

### 2-8-1. Overview of 3D files

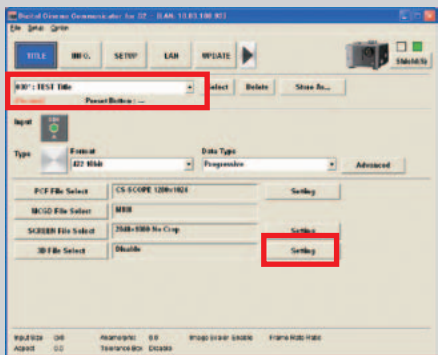
3D files includes the items mentioned below, which are the setting information of the projector.

- Frame rate ratio
- Advanced settings used for 3D control

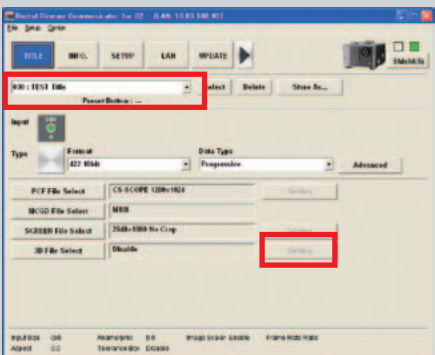
Newly creating and editing 3D files is performed by using the “Setting” button in the 3D file column of the TITLE screen (3D Controls screen). Newly created or edited 3D files are saved in the projector main unit and can be used with other titles.

For information on assigning a 3D file to a title, see “2-5-3. Creating New Titles” (page 40).

**NOTE** In order to newly create or edit a 3D file, the title needs to be selected for output. If the title is not selected for output, the “Setting” button is grayed out and cannot be used.



(If the title is selected for output)



(If the title is not selected for output)

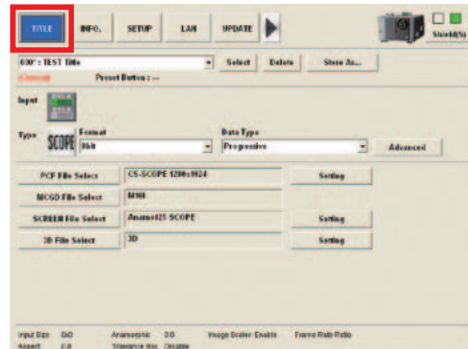
## 2-8-2. Creating a New 3D File

**Preparation:** Switch to Installation mode (or Service mode). (See page 18)

### 1 Press the “TITLE” button on the menu bar.

The “TITLE” screen will appear.

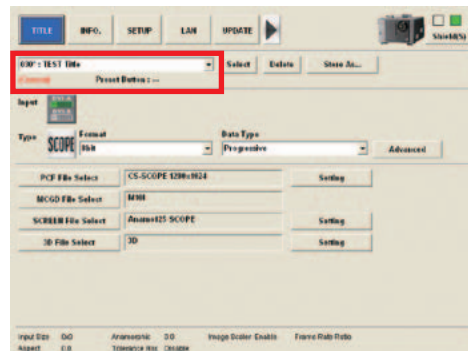
If the “TITLE” button is not visible, press the “▶” button on the menu bar and then scroll the menu bar.



### 2 From the pull-down menu, select a current title.

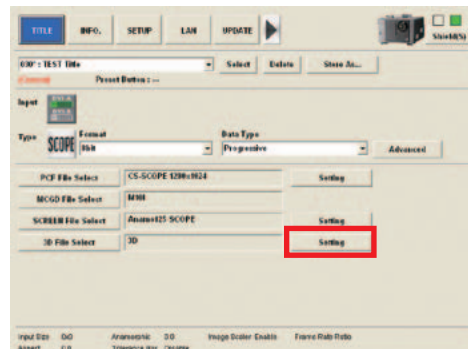
To create a 3D file, the current title (the currently selected signal) needs to be selected. The title with the pull-down menu number marked with “\*” is the current title.

If a current title does not exist, select a title and press the “Select” button.



### 3 Press the “Setting” button on the right-hand side of “3D File Select.”

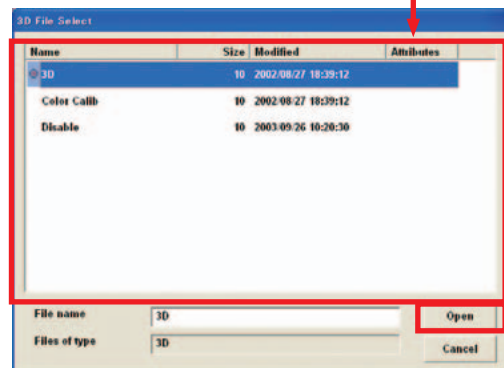
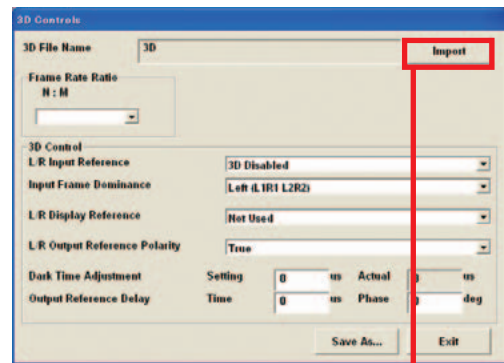
The “3D Setting” screen appears.



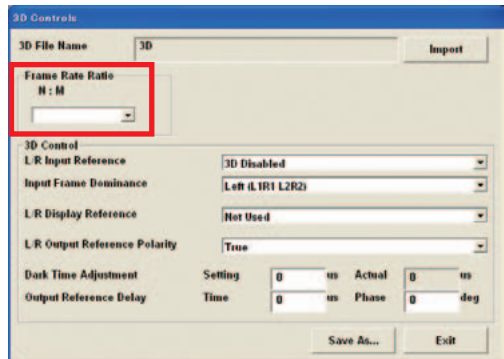
- 4** To create a new file based on an existing 3D file, press the “Import” button.

The 3D File Select screen is displayed.

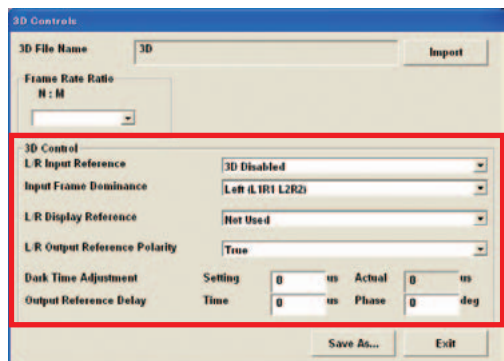
Select a 3D file and press the “Open” button.



- 5** Select the frame rate ratio in the “Frame Rate Ratio” field.



- 6** Configure the detailed settings in the “3D Control” field.





**7** Press the “Save As...” button.

Save the settings. Press the “Save As...” button to display the “3D File Save” screen appears. To overwrite an existing file, check that the file being edited is selected before pressing the “Save” button.

To register a new file, enter the name of file and then press the “Save” button.

Upon completion of adjustments, press the “Exit” button to return to the “TITLE” screen.

The screenshot shows the '3D Controls' dialog box. At the top, there is a '3D File Name' field containing '3D' and an 'Import' button. Below this is a 'Frame Rate Ratio' section with an 'N : M' field. The main section is titled '3D Control' and contains several dropdown menus: 'L/R Input Reference' (set to '3D Disabled'), 'Input Frame Dominance' (set to 'Left (LIR1 L2R2)'), 'L/R Display Reference' (set to 'Not Used'), and 'L/R Output Reference Polarity' (set to 'True'). At the bottom, there are two rows of controls: 'Dark Time Adjustment' with 'Setting' (0 us) and 'Actual' (0 us) fields, and 'Output Reference Delay' with 'Time' (0 us) and 'Phase' (0 deg) fields. A red rectangle highlights the 'Save As...' button at the bottom right, next to an 'Exit' button.

### 3. Menu Functions [For Projector Operation]

This chapter describes the functions of the projector operation menus. See “4. Menu Functions [For MMS Operation]” (page 176) for the menus for multimedia switcher (MMS) operation.

For information on the basic operations of the DCC, See “1-6. Basic operations” (page 17).



This is a screen example of the NC2000 Series.

## 3-1. Project Operation Menu List

Menus in parentheses are menus for our service personnel. Normally, these menus cannot be used.

### 3-1-1. NC3240/NC3200/NC2000/NC1200 Series

Main menu	Submenu	Description	Ref. page
START		This screen is displayed when the controller is started. It displays the model name of the connected projector main unit and the DCC version.	71
	POWER On/Off	To turn on and off the projector.	
	Lamp	To turn on and off the lamp. Use this when you do not want to turn on the light though the power is turned on.	
	MODE	To change the menu mode.	
MAIN		Select the input signal from this screen.	72
	Preset Button	To display the titles assigned to the preset buttons <sup>(Note)</sup> .	
	Title	To display the title list registered in the projector.	
	Test	To display the test pattern list.	
	Anamorphic Out/In	To control the anamorphic lens.	
	Douser Open/Close	To control the Douser function.	
	(Edit Preset Button)	To set the titles to be assigned to the preset buttons <sup>(Note)</sup> .	
LENS		Control the lens from this screen.	78
	Fine-adjust Mode	Set to operate only while pressing the Lens Shift, Zoom, or Focus buttons.	
	Shift	To shift the lens.	
	Zoom	To zoom in and zoom out.	
	Focus	To adjust focus.	
	Lens Memory	Edit titles and display for the lamp.	
	(Lens Mount Initialize)	To reset the lens control system in an emergency. You should not normally use this.	
	Lens Memory Store Status	Used when checking whether or not the current lens settings values can be saved.	
LAMP		Control the lamp from this screen.	82
	Adjust	To adjust the lamp brightness.	83
	Lamp Output	To adjust the lamp output.	
	FeedBack	To set the lamp brightness constant mode that uses a brightness sensor.	
	Lamp Memory	To save the current lamp settings, and call the saved settings.	
	Information	To display the lamp information and usage time of each of the cooling fans.	88
	(Setup)	Configures detailed lamp settings.	89
STATUS		Projector setting status is displayed in this screen.	96
(TITLE)		Set titles and display the list in this screen. This is used by the service personnel.	98

## Menu Functions [For Projector Operation]

Main menu	Submenu	Description	Ref. page
INFO		Screen for display of various information about the projector.	107
	Status	To check the device status and various information. You can also save the logs that have accumulated in the projector main unit. The information that can be checked is as follows. <ul style="list-style-type: none"> <li>• Version information and error information for the projector main unit, ICP board, and multi media switcher (MMS)</li> <li>• ICP board status</li> <li>• Control information from the cinema server (Timeline, Subtitle, and Metadata control information)</li> </ul>	107
	Status2	To check the states of slot A and slot B in the projector main unit and the installation complete date of the projector main unit (warranty start date).	111
	Log	To check the state of the projector main unit and the various logs.	113
	SIB/IMB	To check the status and version information of the signal input board itself, the security circuit (Enigma) on the signal input board, and the image media block (IMB).	126
(SETUP)		Screen for initial setting upon installation. This is used by the service personnel.	129
	Setup	Screen for configuring various settings of the projector main unit.	129
	Installation	Screen for configuring settings upon installation.	137
	(Color Setting)	Set a target color file (TCGD). This is a post production menu.	143
	(TCGD Setup)		
	MMS Setting	Configures whether or not the MMS is used.	144
	Option Slot	Screen for configuring the settings of slot A and slot B.	145
(LAN)		Screen for LAN setting. This is used by the service personnel.	147
	IP Address	Screen for configuring the IP address.	148
	Mail	Screen for configuring the email notification function settings.	149
	SNMP	Screen for configuring SNMP settings.	150
	DCC Starter	Screen for setting the IP address for connecting from the computer to the projector using DCC Starter.	154
(UPDATE)		This screen is used to update various firmware and system data, backup and restore projector settings files, view log files, etc. This is used by the service personnel.	155
[▶] button		Buttons that switch pages for the main menu bar. This is not displayed if [Option] - [Display Two Line] is selected in the menu bar. <ul style="list-style-type: none"> <li>• Menu items for page 1: START, MAIN, LENS, LAMP, and STATUS</li> <li>• Menu items for page 2: TITLE, INFO., SETUP, LAN and UPDATE</li> </ul>	—
[Shield] button		This button enables and disables the DCC button operations.	—

(Note): The configured preset buttons correspond to the preset buttons on the projector main unit. Refer to "3-3. MAIN Screen" (page 72) for details.

## 3-1-2. NC900 Series

Main menu	Submenu	Description	Ref. page
START		This screen is displayed when the controller is started. It displays the model name of the connected projector main unit and the DCC version.	71
	POWER On/Off	To turn on and off the projector.	
	Lamp	To turn on and off the lamp. Use this when you do not want to turn on the light though the power is turned on. When the lamp is turned on from the lamp off state, the lamp selected in the lamp mode is turned on (page 85).	
	MODE	To change the menu mode.	
MAIN		Select the input signal from this screen.	72
	Preset Button	To display the titles assigned to the preset buttons <sup>(Note)</sup> .	
	Title	To display the title list registered in the projector.	
	Test	To display the test pattern list.	
	Douser Open/Close	To control the Douser function.	
	(Edit Preset Button)	To set the titles to be assigned to the preset buttons <sup>(Note)</sup> .	
LENS		Control the lens from this screen.	81
	Fine-adjust Mode	Set to operate only while pressing the Lens Shift, Zoom, or Focus buttons.	
	Shift	To shift the lens.	
	Zoom	To zoom in and zoom out.	
	Focus	To adjust focus.	
	(Lens Mount Initialize)	To reset the lens control system in an emergency. You should not normally use this.	
LAMP		Control the lamp from this screen.	82
	Adjust	To adjust the lamp brightness.	85
	Lamp Output	To adjust the lamp output.	
	Lamp Mode	Selects the lamp to use.	
	Lamp Memory	To save the current lamp mode and lamp output power values, and call the saved settings.	
STATUS		Projector setting status is displayed in this screen.	97
(TITLE)		Set titles and display the list in this screen. This is used by the service personnel.	98
INFO		Screen for display of various information about the projector.	107
	Status	To check the device status and various information. You can also save the logs that have accumulated in the projector main unit. The information that can be checked is as follows. <ul style="list-style-type: none"><li>• Projector main unit, ICP board, and slave version information and error information</li><li>• ICP board status</li><li>• Control information from the cinema server (Timeline, Subtitle, and Metadata control information)</li></ul>	107
	Status2	To check the states of slot A and slot B in the projector main unit and the installation complete date of the projector main unit (warranty start date). You can also check the lamp information, the air filter and cooling fan usage times, the number of times the douser has been opened and closed, and other information.	111
	Log	To check the state of the projector main unit and the various logs.	113
	SIB/IMB	To check the status and version information of the signal input board itself, the security circuit (Enigma) on the signal input board, and the image media block (IMB).	126

## Menu Functions [For Projector Operation]

Main menu	Submenu	Description	Ref. page
SETUP		Screen for initial setting upon installation. Functions other than resetting the usage times are for use by service personnel.	129
	(Setup)	Screen for configuring various settings of the projector main unit.	129
	(Installation)	Screen for configuring settings upon installation.	137
	(Color Setting)	Set a target color file (TCGD). This is a post production menu.	143
	(TCGD Setup)		
	(Option Slot)	Screen for configuring the settings of slot A and slot B. Slot B is not available in the NC900 series.	145
	Reset	This screen is for initializing settings. The functions that can be used vary depending on the mode.	146
(LAN)		Screen for LAN setting. This is used by the service personnel.	147
	IP Address	Screen for configuring the IP address.	148
	Mail	Screen for configuring the email notification function settings.	149
	SNMP	Screen for configuring SNMP settings.	150
	DCC Starter	Screen for setting the IP address for connecting from the computer to the projector using DCC Starter.	154
(UPDATE)		This screen is used to update various firmware and system data, backup and restore projector settings files, view log files, etc. This is used by the service personnel.	155
[▶] button		Buttons that switch pages for the main menu bar. This is not displayed when [Option]-[Display Two Line] from Menu bar is selected. Menu items for page 1: START, MAIN, LENS, LAMP, and STATUS Menu items for page 2: TITLE, INFO., SETUP, LAN and UPDATE	—
[Shield] button		This button enables and disables the DCC button operations.	—

(Note): The configured preset buttons correspond to the preset buttons on the projector main unit. Refer to "3-3. MAIN Screen" (page 72) for details.

## 3-2. START Screen

When the DCC is activated or when you press the “START” button from the menu bar, the START screen is displayed. From the START screen, you can turn on and off (standby status) the projector, turn on and off the lamp and change the menu mode.

The following screen is an example of the screen for the NC2000 series.



System	Shows the model name of the projector.
Version	Displays the version of the software.
LAN	Displays the IP address of the target projector.
Power “On” button	Turns on and off (standby status) the power.
Power “Off” button	
Lamp	Turns on and off the lamp. Use this when you do not want to turn on the light though the power is turned on. If this button is set to “Off” in the standby mode, you can turn on the power without tuning on the lamp.
“Disable Lamp On while cooling” check box	(NC3240/NC3200/NC2000/NC1200 series) Enables or disables turning on/off of the lamp immediately after switching between On and Off for the lamp. <ul style="list-style-type: none"> <li>• With check mark: You cannot switch between On and Off of the lamp for about 5 minutes after On/Off switching.</li> <li>• Without check mark: You can turn on or off the lamp immediately after On/Off switching.</li> </ul> Usually, use the system with a check mark in this check box.
“On” button	Turn on the lamp. For the NC900 series, the lamp selected in the lamp mode turns on (page 85).
“Off” button	Turn off the lamp.
“MODE” button	This button changes the menu mode.

## 3-3. MAIN Screen

Press the “MAIN” button from the menu bar to display the MAIN screen.

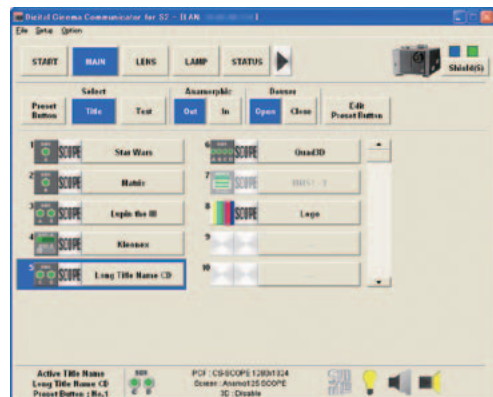
The MAIN screen is used to select the signal to input to the projector, control the anamorphic lens/wide converter lens, and control the douser. The input signal selection can be switched between the following three types by pressing the button in the Select field.

- Preset Button: Displays a list of the preset buttons registered in the projector main unit.
  - Selects the title (input signal) registered in the preset button
  - Sets the preset button
- Title: Displays a list of the titles registered in the projector main unit.
  - Selects the title to project
  - Sets the preset button
- Test: Displays a list of test patterns.
  - Selects the test pattern to project
  - Sets the test pattern

The following screen is an example of the screen for the NC2000 series.



MAIN screen (Preset Button)



MAIN screen (Title)



MAIN screen (Test)



Select	Select the input signal.
“Preset Button” button <sup>(Note1)</sup>	These buttons have the same function as macro keys provided on the control panel of the projector. Press the title buttons to select the titles (input signals) assigned to the preset buttons. <ul style="list-style-type: none"> <li>• Title displayed in blue: Title is selected.</li> <li>• Title displayed grayed out: The title cannot be selected.</li> </ul>
“Title” button	To display the title list registered in the projector. From this screen, you can select the title (input signal).
“Test” button	To display the test pattern list from this screen, you can select the test pattern.
R/G/B Display Status <sup>(Note2)</sup>	Sets the colors displayed while the test pattern is displayed. To not display any of R/G/B, clear the check box of the color to not display and click the [Apply] button. To restore the original state, select the check box and click the [Apply] button. By default, all of the R/G/B check boxes are selected.
“Edit” button <sup>(Note2)</sup>	To go to the test pattern edit mode to change the registration of the test pattern.
“Advanced” button <sup>(Note2)</sup>	Displays a detailed setting screen (TestPattern Advanced) for the currently selected test pattern. This button can only be used while a test pattern is selected.
Anamorphic “Out” button Anamorphic “In” button	(NC3240/NC3200/NC2000/NC1200 series) These buttons control the anamorphic lens/wide converter lens. <ul style="list-style-type: none"> <li>• “Out” button: To disable anamorphic lens/wide converter lens.</li> <li>• “In” button: To enable anamorphic lens/wide converter lens.</li> </ul>
Douser “Open” button Douser “Close” button	The following buttons control the douser. <ul style="list-style-type: none"> <li>• “Open” button: Cancels the douser function and let the projection light go.</li> <li>• “Close” button: Causes the douser to shut off the projection light.</li> </ul>
“Edit Preset Button” button <sup>(Note1)</sup>	This button is used to edit the preset buttons. (See page 76) This cannot be used while the MAIN screen (Test) is being displayed.














(Note 1): The registered settings correspond to preset buttons 1 to 8 on the projector main unit. To select a title registered in No. 9 to 16 using the preset buttons on the projector main unit, press preset buttons 1 to 8 while holding down the <UP> button on the projector main unit.

Example: To select the title registered in No. 9, press preset button 1 while holding down the <UP> button on the projector main unit.

(Note 2): This menu is only available in the Installation or Service mode.












## Input icon

Shows the input signal terminal.

	Input for SDI-A terminals		Input for SDI-B terminals		Dual input for SDI-A and SDI-B terminals
	Input for SDI-C terminals		Input for SDI-D terminals		Dual input for SDI-C and SDI-D terminals
—	—	—	—		Quad input through the SDI-A, SDI-B, SDI-C, and SDI-D ports (currently not supported)
	Input for DVI-A terminals		Input for DVI-B terminals		Dual/Twin input for DVI-A and DVI-B terminals
	Input for the image media block (IMB) terminal		Multi media switcher (MMS) input (TWIN input) (Not appear in the NC900 series)		Built-in test pattern

## Type icon

Indicates a signal type.

	SCOPE		FLAT		HDTV
	SDTV		PC		TEST signal
	Signal of Multi-media switcher (MMS) (Not appear in the NC900 series)		3D		Signal of Image media block (IMB)
	Satellite broadcast signal		If none is selected:		

**TestPattern Advanced Screen**

This screen can be displayed only when a test pattern is selected in Installation mode or Service mode.

Press the "Advanced" button with the test pattern selected in the MAIN screen (Test) to display the TestPattern Advanced screen. Detailed settings of the test patterns are configured on this screen.

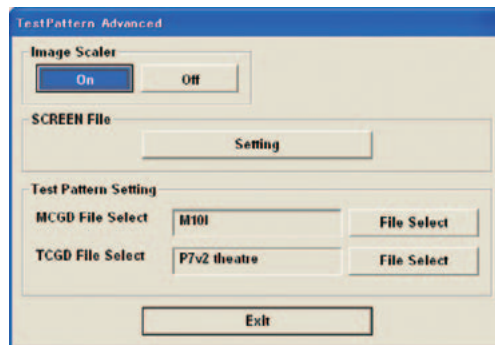


Image Scaler "On"/"Off" button	Turns on and off the image scaler of the selected test pattern.
SCREEN File "Setting" button	Sets the SCREEN file of the selected test pattern.
Test Pattern Setting	Set the MCGD file and the TCGD file of the selected test pattern.
"Exit" button	Closes the Test Pattern Advanced screen and returns to the MAIN screen.

### 3-3-1. Configuring the Preset Buttons

The preset buttons can only be configured in Installation mode or Service mode. When the “Edit Preset Button” button is pressed while in User mode or Advanced User mode, the mode needs to be switched by entering the passcode for Installation mode or Service mode.

The preset buttons can be configured by pressing the “Edit preset Button” button on the MAIN screen (Preset Button) or MAIN screen (Title).

#### For MAIN screen (Preset Button)

**Preparation:** Selects the title set in the preset button.

- 1** Press the “Edit Preset Button” button in the MAIN screen (Preset Button).

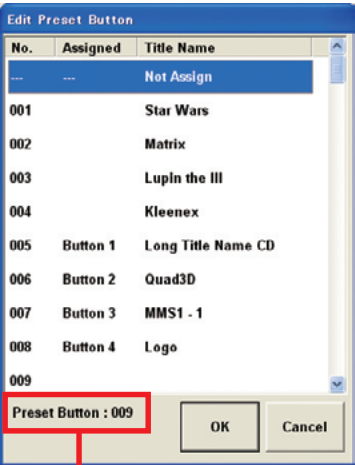
The preset buttons change into a configurable state.

- 2** Press the preset button to allocate to the title.

The Edit Preset Button screen is displayed. To cancel the configuration, press the “Cancel” button.

- 3** Select the title and press the “OK” button.

The selected title is allocated to the preset button.



Selected preset button

- 4** Press the “Edit Preset Button” button.

This confirms the preset button configuration.

**For MAIN screen (Title)**

**Preparation:** Selects the title set in the preset button.

- 1** Press the “Edit Preset Button” button in MAIN screen (Title).

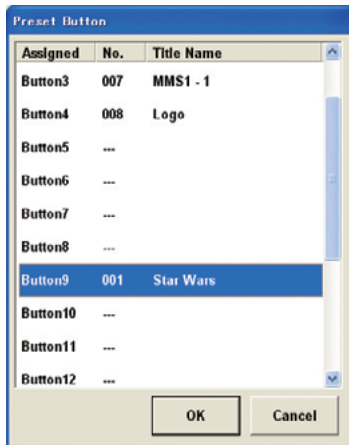
The preset buttons change into a configurable state.

- 2** Press the title allocated to the preset button.

The Preset Button screen is displayed. To cancel the configuration, press the “Cancel” button.

- 3** Select the preset button and press the “OK” button.

The selected title is allocated to the preset button.



- 4** Press the “Edit Preset Button” button.

This confirms the preset button configuration.

- 5** Press the “Preset Button” button in the Select field.

This checks the preset button configuration.

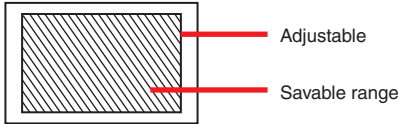
## 3-4. LENS Screen

Press the “LENS” button from the menu bar to display the LENS screen.

From the LENS screen, you can perform lens controls such as lens shifting, zoom adjustment, and focus adjustment.

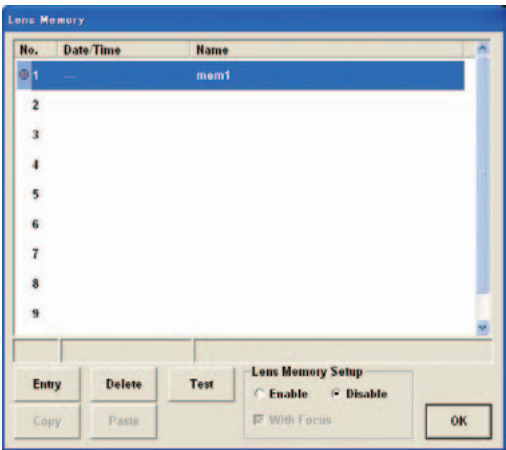
### 3-4-1. LENS screen (NC3240/NC3200/NC2000/NC1200 series)



"Fine-adjust Mode" button	Press the "Fine-adjust Mode" button for fine adjustment.
Lens Firmware Version	Displays the firmware version of the lens mount. When the projector is in standby mode, "---" is displayed.
Shift	<p>Move the projection screen vertically and horizontally.</p> <p>"▲" button: To move the projection position upward.</p> <p>"▼" button: To move the projection position downward.</p> <p>"◀" button: To move the projection position to the left.</p> <p>"▶" button: To move the projection position to the right.</p> <p>"STOP" button: To stop the lens shifting.</p> <p>Press the "▲" "▼" "◀" or "▶" buttons again during moving to stop the moving. If you press the "Fine-adjust Mode" button, the picture moves while you are pressing the "▲", "▼", "◀", "▶" buttons.</p>
Zoom	<p>Zoom in and zoom out the projection screen.</p> <p>"▲" button: To zoom in.</p> <p>"▼" button: To zoom out.</p> <p>"STOP" button: To stop zooming in or out.</p> <p>Press the "▲" or "▼" button again during zooming in or out to stop the zoom-in or zoom-out operation. If you press the "Fine-adjust Mode" button, the picture zooms in or zooms out while you are pressing the "▲", "▼" buttons.</p>
Focus	<p>Adjust the focus of the projection screen.</p> <p>"▲" button: To set the focus distance longer.</p> <p>"▼" button: To set the focus distance shorter.</p> <p>"STOP" button: To stop focus moving.</p> <p>Press the "▲" and "▼" button again during a moving focus to stop the focus moving. If you press the "Fine-adjust Mode" button, the focus is adjusted while you are pressing the "▲", "▼" buttons.</p>
Lens Memory	The values after adjustment through the LENS screen (Adjustment values for lens shift, zoom, and focus) can be saved to the memory in the projector. (See page 80)
Lens Mount Initialize	Resets the lens control system in an emergency. You should not normally use this.
Lens Memory Store Status	<p>Allows you to check whether or not the adjusted value on the LENS screen is in a savable state or not.</p> <p>Click the [Refresh] button to display the confirmation result for the horizontal direction (Shift-H) and vertical direction (Shift-V) of the current setting value.</p> <ul style="list-style-type: none"> <li>Available: The adjustment value can be saved.</li> <li>Out of Range: The adjustment value cannot be saved.</li> </ul> <div>  </div>

Lens Memory Screen

Press the “Memory List” on the LENS window to display the Lens Memory window.  
The values after adjustment through the LENS screen (Adjustment values for lens shift, zoom, and focus) can be saved to the memory in the projector.



“Entry” button	Saves the current adjustment value to the memory.
“Delete” button	Deletes the memory selected in the list from the Lens Memory.
“Test” button	Tests the adjustment value of the memory selected in the list.
“Copy” button	Copies the memory selected in the list.
“Paste” button	Saves the copied memory and overwrites the memory selected in the list.
Lens Memory Setup	Enables/disables the memory selected in the list. <ul style="list-style-type: none"><li>• Enable: Enables memory call-up.</li><li>• Disable: Disables memory call-up.</li><li>• With Focus: Apply a check mark here to turn it on to also call up focus adjustment values (Only when the setting is “Enable”).</li></ul>
“OK” button	Closes the Lens Memory window and returns to the LENS window.

NOTE

When the projector main unit is used in the NC2000/1200 Series, the following functions cannot be used.

- Copy of the Lens Memory function ([Copy] button on the Lens Memory screen)
- Paste of the Lens Memory function ([Paste] button on the Lens Memory screen)
- With Focus of the Lens Memory function (With Focus check box of the Lens Memory Setup field of the Lens Memory screen)



## 3-4-2. LENS screen (NC900 series)



"Fine-adjust Mode" button	Press the "Fine-adjust Mode" button for fine adjustment.
Lens Firmware Version	Displays the firmware version of the lens mount. When the projector is in standby mode, "---" is displayed.
Shift	<p>Move the projection screen vertically and horizontally.</p> <p>"▲" button: To move the projection position upward.</p> <p>"▼" button: To move the projection position downward.</p> <p>"◀" button: To move the projection position to the left.</p> <p>"▶" button: To move the projection position to the right.</p> <p>"STOP" button: To stop the lens shifting.</p> <p>Press the "▲" "▼" "◀" or "▶" buttons again during moving to stop the moving. If you press the "Fine-adjust Mode" button, the picture moves while you are pressing the "▲", "▼", "◀", "▶" buttons.</p>
Zoom	<p>Zoom in and zoom out the projection screen.</p> <p>"▲" button: To zoom in.</p> <p>"▼" button: To zoom out.</p> <p>"STOP" button: To stop zooming in or out.</p> <p>Press the "▲" or "▼" button again during zooming in or out to stop the zoom-in or zoom-out operation. If you press the "Fine-adjust Mode" button, the picture zooms in or zooms out while you are pressing the "▲", "▼" buttons.</p>
Focus	<p>Adjust the focus of the projection screen.</p> <p>"▲" button: To set the focus distance longer.</p> <p>"▼" button: To set the focus distance shorter.</p> <p>"STOP" button: To stop focus moving.</p> <p>Press the "▲" and "▼" button again during a moving focus to stop the focus moving. If you press the "Fine-adjust Mode" button, the focus is adjusted while you are pressing the "▲", "▼" buttons.</p>
Lens Mount Initialize	Resets the lens control system in an emergency. You should not normally use this.

## 3-5. LAMP Screen

Press the “LAMP” button from the menu bar to go to the LAMP screen.  
From the LAMP screen, you can adjust the lamp output and display the lamp information.

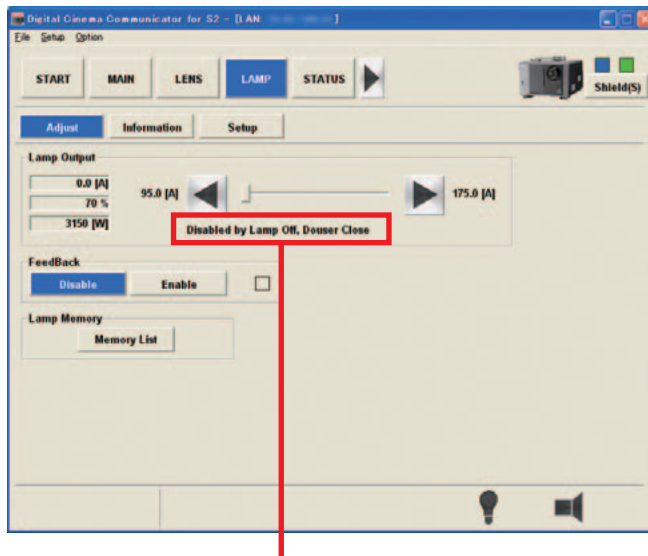
- NC3240/NC3200/NC2000/NC1200 series
  - Adjust: To adjust the lamp brightness. (See page 83)
  - Information: To display the lamp information. (See page 88)
  - Setup: To configure detailed lamp settings. (See page 89)
- NC900 series
  - Adjust: This screen is for adjusting the lamp output and selecting the lamp to use. (See page 85)

- TIP** For the NC900 series, refer to the following sections for details on the lamp information and related settings.
- INFO screen (Status2) (See page 111)
    - Checking the lamp output and voltage value
    - Checking the lamp usage time, remaining time (estimate), and number times the lamp has been turned on
    - Checking the air filter usage time
    - Checking the number of times the douser has been opened and closed
  - SETUP screen (Setup) (See page 129)
    - Setting the air filter replacement time
  - SETUP screen (Reset) (See page 146)
    - Resetting the air filter usage time
    - Resetting the number of times the douser has been opened and closed

### 3-5-1. LAMP Screen (Adjust)

For NC3240/NC3200/NC2000/NC1200 series, press the “Adjust” button on the LAMP screen to display the LAMP screen (Adjust).

The lamp output is adjusted using this screen.



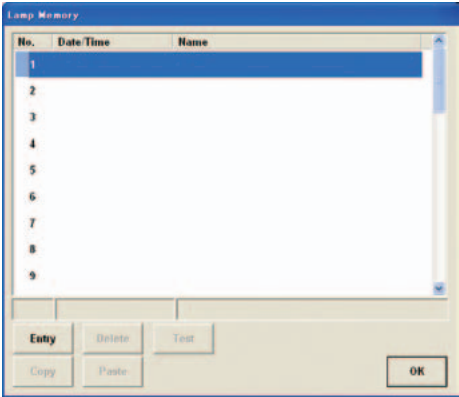
When “Disabled by . . .” is displayed, the output value cannot be adjusted.

Lamp Output	Displays the current lamp output. Press [◀]/[▶] button to adjust the output. The output value can be adjusted by dragging the slide bar between the [◀] and [▶] buttons. If the lamp is off or the douser is closed, “Disabled by . . . (Lamp Off/Douser Close/Lamp Off, Douser Close)” is displayed. When this happens, the output value cannot be adjusted.
FeedBack	Sets the lamp brightness constant mode that uses a brightness sensor. The box on the right side displays the operational status of the Feedback function. <ul style="list-style-type: none"> <li>• Disable: Disables the lamp brightness constant mode (the color of the box is gray).</li> <li>• Enable: Enables the lamp brightness constant mode (the color of the box is blue).</li> </ul>
Lamp Memory	The lamp output power values after adjustment through the LAMP screen can be saved to the memory in the projector. Press the “Memory List” button to display Lamp Memory screen. (See page 84)

Lamp Memory Screen

For NC3240/NC3200/NC2000/NC1200 series, press the “Memory List” on the LAMP window (Adjust) to display the Lamp Memory window. The lamp output power values after adjustment through the LAMP screen can be saved to the memory in the projector.

The registered lamp memory can be assigned to the titles. When a title is selected, the lamp output power values registered in the lamp memory are applied. Refer to “3-7-1. Title Advanced Screen” (page 101) for details.



“Entry” button	Saves the current lamp output power value to the memory.
“Delete” button	Deletes the memory selected in the list from the Lens Memory.
“Test” button	Tests the adjustment value of the memory selected in the list.
“Copy” button	Copies the memory selected in the list.
“Paste” button	Saves the copied memory and overwrites the memory selected in the list.
“OK” button	Closes the Lamp Memory window and returns to the LAMP window.

### 3-5-2. LAMP Screen (Adjust) (NC900 series)

For NC900 series, press the “Adjust” button on the LAMP screen to display the LAMP screen (Adjust). This screen is used to adjust the lamp output power and configure the lamp mode.



Lamp Output	Displays the current lamp output. Press [◀]/[▶] button to adjust the output. The output value can be adjusted by dragging the slide bar between the [◀] and [▶] buttons.
Lamp Mode	Sets the lamp to use. <ul style="list-style-type: none"> <li>• Dual: Uses lamp 1 and lamp 2 at the same time. Turns on/off both lamps.</li> <li>• Lamp 1: Uses only lamp 1 (lamp 2 is not used).</li> <li>• Lamp 2: Uses only lamp 2 (lamp 1 is not used).</li> </ul>
Lamp Memory	The current lamp mode and lamp output power values after adjustment through the LAMP screen can be saved to the memory in the projector. Press the “Memory List” button to display Lamp Memory screen. (See page 86)

**NOTE** If the projector internal temperature becomes abnormally high and the protection function is activated, the error message “752: Down Lamp Power Activated” is displayed. You cannot adjust the lamp output power or configure the lamp mode while the protection function is active. The LAMP window (Adjust) is displayed as follows.

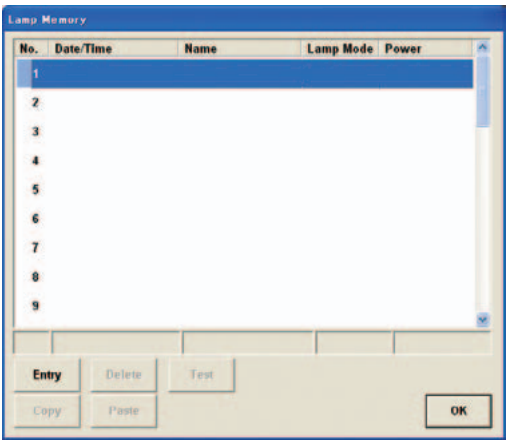
- Lamp Output: Displays “Disabled by Over Temp.” under the slide bar.
- Lamp Mode: Displays “Function Not Available Now!”.

Lamp Memory Screen

For NC900 series, press the “Memory List” on the LAMP window (Adjust) to display the Lamp Memory window. The current lamp mode and lamp output power values after adjustment through the LAMP screen can be saved to the memory in the projector.

The registered lamp memory can be assigned to the titles. When the title is selected, if the current lamp mode is the same as the lamp mode registered in the lamp memory, the lamp output power value registered in the lamp memory is applied. Refer to “3-7-1. Title Advanced Screen” (page 101) for details.

**NOTE** If the projector internal temperature becomes abnormally high and the protection function is activated, the error message “752: Down Lamp Power Activated” is displayed. The lamp output power values are not applied while the protection function is active even if the current lamp mode matches the lamp mode registered in lamp memory.

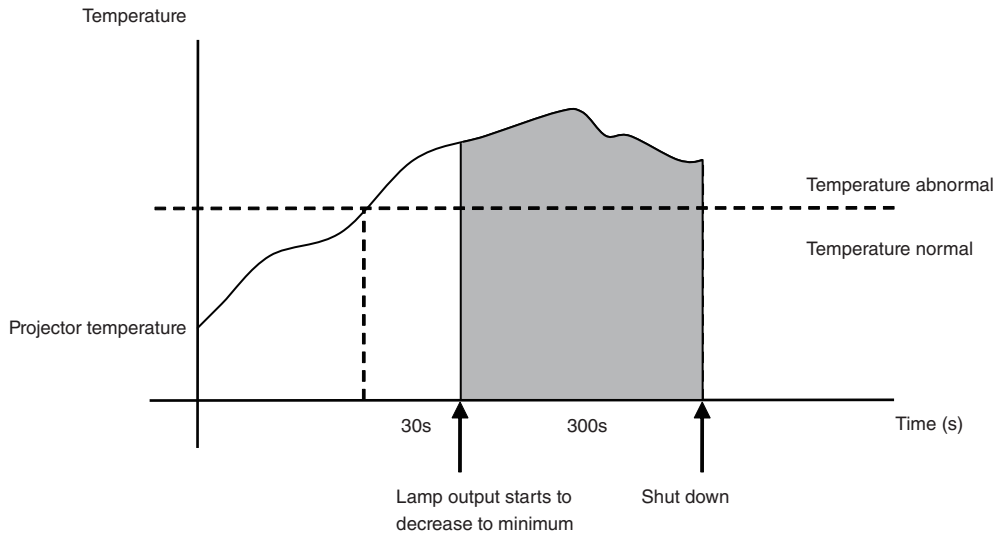


“Entry” button	Saves the current lamp mode and lamp output power value to the memory.
“Delete” button	Deletes the memory selected in the list from the Lens Memory.
“Test” button	Tests the adjustment value of the memory selected in the list.
“Copy” button	Copies the memory selected in the list.
“Paste” button	Saves the copied memory and overwrites the memory selected in the list.
“OK” button	Closes the Lamp Memory window and returns to the LAMP window.

**Caution for adjusting the lamp output**

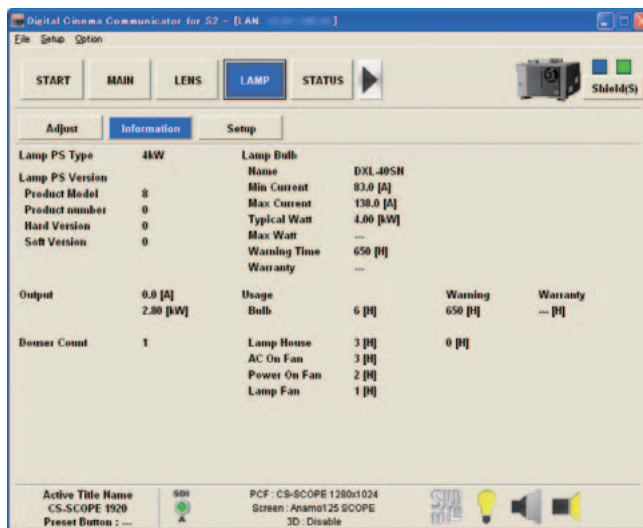
The NC900 series operates as follows if an abnormal temperature is detected in the projector.

1. 30 seconds after an abnormal temperature is detected, the lamp output starts to decrease to the minimum. During the period until the temperature returns to normal, "Disabled by Over Temp." is displayed and the adjustment of the lamp output and the changes of the lamp mode cannot be performed. Furthermore, if the brightness is set to minimum, the projector shuts down.
2. If the abnormal temperature state continues for a period of 300 seconds after the lamp output starts to decrease, the projector shuts down.



### 3-5-3. LAMP Screen (Information)

For NC3240/NC3200/NC2000/NC1200 series, press the “Information” button on the LAMP screen to display the LAMP screen (Information). You can check the current lamp type and output, the lamp bulb information and the bulb and lamp house utilization hours on this screen.



Lamp PS Type	Displays the type of lamp.
Lamp PS Version	Displays the version information of the lamp.
Product Model	
Product Number	
Hard Version	
Soft Version	
Lamp Bulb	Displays the version information of the lamp bulb.
Name	Displays the product name of the lamp bulb.
Min Current	Displays the minimum current setting value (A) of the lamp bulb.
Max Current	Displays the maximum current setting value (A) of the lamp bulb.
Typical Watt	Displays the rated output of the lamp bulb.
Max Watt	Displays the maximum output of the lamp bulb (kW).
Warning Time	Displays the warning time setting value of the lamp bulb.
Warranty	Displays the manufacturer warranty period for the lamp bulb. (See page 90)
Output	Displays the output value of the lamp.
Douser Count	(NC2000/NC1200 series only) Displays the number of times the douser has been opened and closed.
Usage	Displays the usage time of the lamp bulb, lamp house, and cooling fan.
Warning	Displays the usage warning time of the lamp bulb and lamp house.
Warranty	Displays the manufacturer warranty period for the lamp bulb.



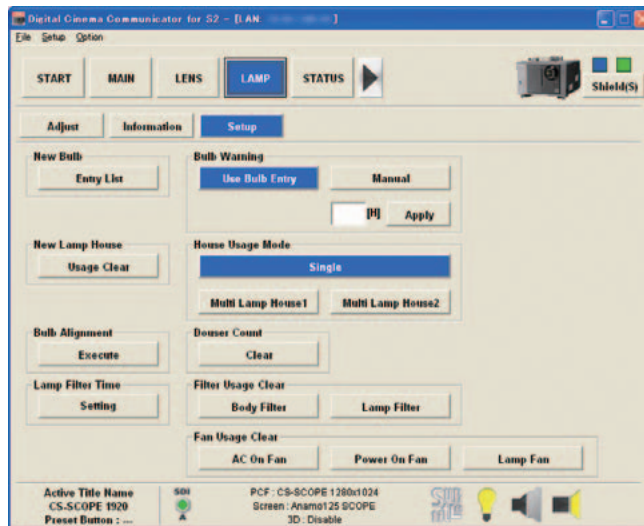
### 3-5-4. LAMP Screen (Setup)

This menu is not available in the User mode.

For NC3240/NC3200/NC2000/NC1200 series, press the “Setup” button on the LAMP screen to display the LAMP screen (Setup). On the LAMP screen (Setup), you can register and change the lamp bulb, display the bulb alignment value, set the bulb alarm time and the usage mode of the lamp house, etc.

**NOTE** Only service personnel should use the following functions. Others should not use them. Use by others may cause failure of the projector.

New Bulb, New Lamp House, Bulb Warning, House Usage Mode



New Bulb	Selects or edits a new entry of the lamp bulb (available in standby status only). Press the “Entry List” button to display the “Bulb Entry” screen. (See page 90)
New Lamp House	Press the “Usage Clear” button to clear the lamp house utilization hours (available in standby status only).
Bulb Alignment	This sets the lamp bulb alignment value. Press the “Execute” button to display the “Bulb Alignment” screen. (See page 95)
Bulb Warning	This sets the lamp bulb alarm time (available in standby status only). <ul style="list-style-type: none"> <li>• Use Bulb Entry: uses the time set by the Bulb Entry screen.</li> <li>• Manual: Uses the value set manually.</li> </ul> For manual setting, input the time and press the “Apply” button. Setting is available from 0 to 9999H.
House Usage Mode	This sets the lamp house usage mode (available in standby status only). <ul style="list-style-type: none"> <li>• Single: To use the lamp house in the single mode</li> <li>• Multi Lamp House 1: To use the lamp house in multiple mode and select the lamp house 1</li> <li>• Multi Lamp House 2: To use the lamp house in multiple mode and select the lamp house 2</li> </ul>
Douser Count	(NC2000/NC1200 series only) The number of times the douser has been opened and closed is cleared by pressing the “Clear” button.
Lamp Filter Time	This sets the time for replacing the air filter (for the lamp). Press the “Setting” button to display the Lamp Filter Time screen (See page 95).
Filter Usage Clear	This clears the air filter usage time. <ul style="list-style-type: none"> <li>• Body Filter: Air filter (for projector main unit)</li> <li>• Lamp Filter: Air filter (for lamp)</li> </ul>

## Menu Functions [For Projector Operation]

Fan Usage Clear	<p>This clears the fan usage time (available in the Installation mode or Service mode).</p> <ul style="list-style-type: none"> <li>• AC On Fan: Projector cooling fan (AC On Fan)</li> <li>• Power On Fan: Projector cooling fan (Power On Fan)</li> <li>• Lamp Fan: Lamp cooling fan</li> </ul>
-----------------	--

### Bulb Entry Screen

Press the "Entry List" button in the LAMP screen (Setup) to display the "Bulb Entry" screen.

You can select or edit a new entry of the lamp bulb on this screen.

No.1 to No.16: Registers information about NEC certified lamp bulbs (see page 92). These cannot be deleted.

Furthermore, items other than Warranty cannot be edited.

No.17 to No.32: Able to register any arbitrary lamp bulbs.

**NOTE** • For the NC3200/NC2000/NC1200 series, certified lamp information is added to No. 1 to No. 16 when you update to the following version or later.

	NC3200	NC2000	NC1200
Projector	—	—	—
Firmware	Ver. 2.003	Ver. 2.002	Ver. 2.001
Data	Ver. 2.003	Ver. 2.002	Ver. 2.001
DCC	Ver. 2.0.0.0	Ver. 2.0.0.0	Ver. 2.0.0.0

- When you upgrade the version from a DCC earlier than Ver. 2.0.0.0, the lamp bulbs that had been registered in No.1 to No.16 are registered in No.17 to No.32.
- If you are using the NC3240/NC3200 series and using a 4kW lamp power supply unit (NC-32PS02), the lamp bulbs you cannot use are displayed in gray.

No.	Name	Current	Typ. Watt	Max Watt	Warning	Warranty
1	DXL 455N(OverDrive)	95.0/175.0[A]	4.50[kW]	6.00[kW]	400[h]	---
2	DXL 605N(OverDrive)	105.0/175.0[A]	6.00[kW]	7.00[kW]	500[h]	---
3	DXL 455N	95.0/145.0[A]	4.50[kW]	4.50[kW]	900[h]	---
4	DXL 605N	105.0/155.0[A]	6.00[kW]	6.00[kW]	1000[h]	---
5	DXL 705N	115.0/180.0[A]	7.00[kW]	7.00[kW]	500[h]	---
6	XBO 6500W/HPN	115.0/180.0[A]	6.50[kW]	6.50[kW]	500[h]	---
7	XDC 4500N	100.0/150.0[A]	4.50[kW]	4.50[kW]	900[h]	---
8	NC-LP4501(OverDrive)	95.0/175.0[A]	4.50[kW]	6.00[kW]	400[h]	---
9	NC-LP6001(OverDrive)	105.0/175.0[A]	6.00[kW]	7.00[kW]	500[h]	---
10	NC-LP4501	95.0/145.0[A]	4.50[kW]	4.50[kW]	900[h]	---

Cert. Bulb Entry  
 Cert. Code    Drive Mode Change    Edit    Delete    Select    Exit

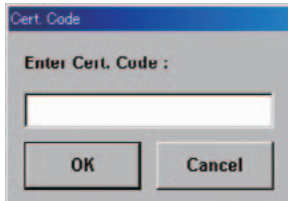
Cert. Bulb Entry	—
"Cert. Code" button	When the Cert. Code included with a certified bulb is entered, the corresponding lamp bulb is selected.
"Drive Mode Change" button	<p>(Only supported by the NC3240/NC3200 series)</p> <p>If you are using a bulb that supports overdrive, you can change the output without changing the entry. When this happens, the lamp usage time is inherited as-is.</p>
"Edit" button	Edits the entry selected in the list. For entries No.1 to No.16, only the Warranty can be edited.
"Delete" button	(No.17 to No.32 only) Deletes the entry selected in the list from the Bulb Entry.
"Select" button	Sets the entry selected in the list to the active status.
"Exit" button	Closes the Bulb Entry screen and returns to the LAMP screen.

### Replacing With a Certified Lamp

**Preparation:** Turn off the power of the projector and set the device to a standby state.

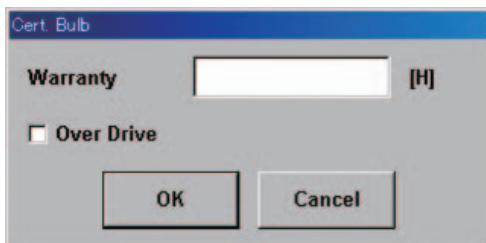
- 1** Click the “Entry List” button on the LAMP screen (Setup).
- 2** Click the “Cert. Code” button on the Bulb Entry screen.
- 3** Enter the Cert. Code and click the “OK” button.

The Cert. Code is included with the lamp bulb.

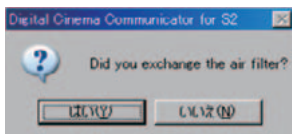


- 4** Enter the manufacturer warranty period in Warranty and click the “OK” button.

If the lamp bulb supports overdrive mode, select the “Over Drive” check box so that you can use overdrive.

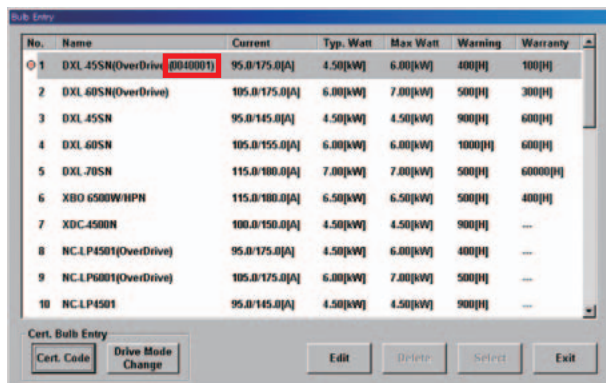


- 5** When the following screen is displayed, click the “Yes” button.



## Menu Functions [For Projector Operation]

When you replace the lamp bulb using the Cert. Code, “(Serial Number)” is displayed after the lamp bulb name.



### List of NEC Certified Digital Xenon Lamp Bulbs

(As of July 2012)

#### NC3240 series/NC3200 series

No.	Bulb Name	Manufacturer
1	DXL-45SN(OverDrive)	USHIO
2	DXL-60SN(OverDrive)	USHIO
3	DXL-45SN	USHIO
4	DXL-60SN	USHIO
5	DXL-70SN	USHIO
6	DXL-41SN	USHIO
7	DXL-41SCN	USHIO
8	DXL-41SN2	USHIO
9	DXL-60SN/L	USHIO
10	DXL-45SN/L	USHIO
11	DXL-31SN2	USHIO
12	DXL-21SN3	USHIO
13	DXL-15SN2	USHIO
14	DXL-12SN2	USHIO
15	XBO 6500W/HPN	OSRAM
16	XBO 4500W/HPN	OSRAM
17	XDC-6000N	Philips
18	XDC-4500N	Philips
64	DXL-45SN(UnderDrive)	USHIO

**NC2000 series**

No.	Bulb Name	Manufacturer
1	DXL-40SN	USHIO
2	DXL-40SCN	USHIO
3	DXL-40SN2	USHIO
4	DXL-20SN3	USHIO
5	DXL-30SN2	USHIO
6	DXL-15SN	USHIO
7	DXL-12SN	USHIO
8	XBO 4000W/HPN	OSRAM
9	XBO 2000W/HPN	OSRAM
10	XBO 3000W/HPN	OSRAM
11	XBO-4000W/HPNL	OSRAM
12	XBO 1200W/HPN	OSRAM
13	XDC-4000N	Philips
14	XDC-4001N	Philips

**NC1200 series**

No.	Bulb Name	Manufacturer
1	DXL-20SN3	USHIO
2	DXL-15SN	USHIO
3	DXL-12SN	USHIO
4	XBO 2000W/HPN	OSRAM
5	XBO 1200W/HPN	OSRAM

### Drive Mode Change

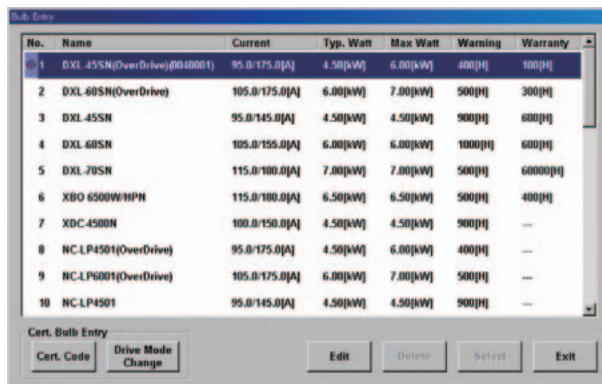
If you are using a certified lamp bulb that supports overdrive mode, you can change the drive mode (between overdrive mode and normal mode) while the lamp bulb is operating by using the Drive Mode Change function.

When the drive mode is changed using the Drive Mode Change function, the air filter and lamp bulb usage times are not initialized.

**NOTE** If you are using the 4kW lamp power supply unit (NC-32PS02), you can only use the Drive Mode Change function if both modes are available.

#### 1 Select the lamp bulb you are using on the Bulb Entry screen.

The explanation given in this section is for the example of using the No.1 "DXL-45SN (OverDrive)".



No.	Name	Current	Typ. Watt	Max Watt	Warning	Warranty
1	DXL-45SN(OverDrive)(0040001)	95.0/175.0[A]	4.50[kW]	6.00[kW]	400[h]	100[h]
2	DXL-60SN(OverDrive)	105.0/175.0[A]	6.00[kW]	7.00[kW]	500[h]	300[h]
3	DXL-45SN	95.0/145.0[A]	4.50[kW]	4.50[kW]	900[h]	600[h]
4	DXL-60SN	105.0/155.0[A]	6.00[kW]	6.00[kW]	1000[h]	600[h]
5	DXL-70SN	115.0/100.0[A]	7.00[kW]	7.00[kW]	500[h]	60000[h]
6	XBO 6500W/HPN	115.0/100.0[A]	6.50[kW]	6.50[kW]	500[h]	400[h]
7	XDC-4500H	100.0/150.0[A]	4.50[kW]	4.50[kW]	900[h]	---
8	NC-LP4501(OverDrive)	95.0/175.0[A]	4.50[kW]	6.00[kW]	400[h]	---
9	NC-LP6001(OverDrive)	105.0/175.0[A]	6.00[kW]	7.00[kW]	500[h]	---
10	NC-LP4501	95.0/145.0[A]	4.50[kW]	4.50[kW]	900[h]	---

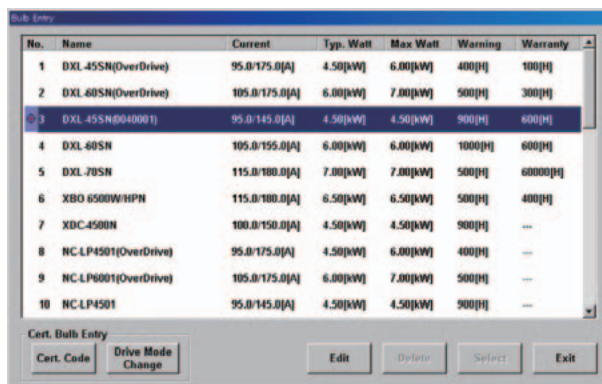
At the bottom, there are buttons for 'Cert. Bulb Entry', 'Cert. Code', 'Drive Mode Change', 'Edit', 'Delete', 'Select', and 'Exit'.

#### 2 Click the "Drive Mode Change" button.

The confirmation dialog is displayed.

#### 3 Click the "Yes" button on the confirmation screen.

The lamp you are using changes to a No. with a different mode. In this example, it changes to No.3 "DXL-45SN".

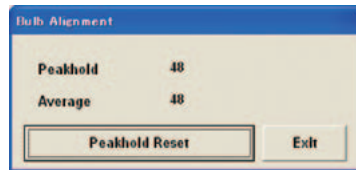


No.	Name	Current	Typ. Watt	Max Watt	Warning	Warranty
1	DXL-45SN(OverDrive)	95.0/175.0[A]	4.50[kW]	6.00[kW]	400[h]	100[h]
2	DXL-60SN(OverDrive)	105.0/175.0[A]	6.00[kW]	7.00[kW]	500[h]	300[h]
3	DXL-45SN(0040001)	95.0/145.0[A]	4.50[kW]	4.50[kW]	900[h]	600[h]
4	DXL-60SN	105.0/155.0[A]	6.00[kW]	6.00[kW]	1000[h]	600[h]
5	DXL-70SN	115.0/100.0[A]	7.00[kW]	7.00[kW]	500[h]	60000[h]
6	XBO 6500W/HPN	115.0/100.0[A]	6.50[kW]	6.50[kW]	500[h]	400[h]
7	XDC-4500H	100.0/150.0[A]	4.50[kW]	4.50[kW]	900[h]	---
8	NC-LP4501(OverDrive)	95.0/175.0[A]	4.50[kW]	6.00[kW]	400[h]	---
9	NC-LP6001(OverDrive)	105.0/175.0[A]	6.00[kW]	7.00[kW]	500[h]	---
10	NC-LP4501	95.0/145.0[A]	4.50[kW]	4.50[kW]	900[h]	---

The interface remains the same as the previous screenshot, with the same buttons at the bottom.

### Bulb Alignment Screen

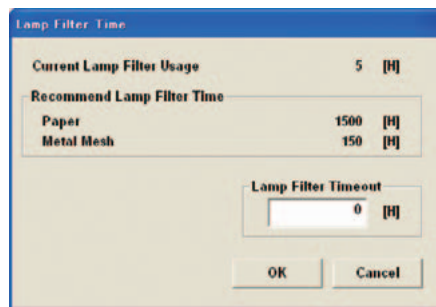
Press the “Execute” button in the LAMP screen (Setup - Bulb Alignment) to display the “Bulb Alignment” screen. This screen is used when adjusting the lamp bulb shaft.



Peakhold	Displays the peak value.
Average	Displays the average.
“Peakhold Reset” button	Resets the peak value.
“Exit” button	Closes the Bulb Alignment screen and returns to the LAMP screen.

### Lamp Filter Time Screen

This can be used when the DCC version is 3.2.0.0 or later and the system firmware version of the projector is 3.20\* or later. Press the “Setting” button in the Lamp Filter Time field on the LAMP screen (Setup) to display the Lamp Filter Time screen. This sets the air filter (for lamp) replacement time. When the usage time of the air filter exceeds the configured time, a warning occurs ((215) Lamp Filter Time Over). The default setting is “0H” (the usage time of the air filter (for lamp) is not monitored).

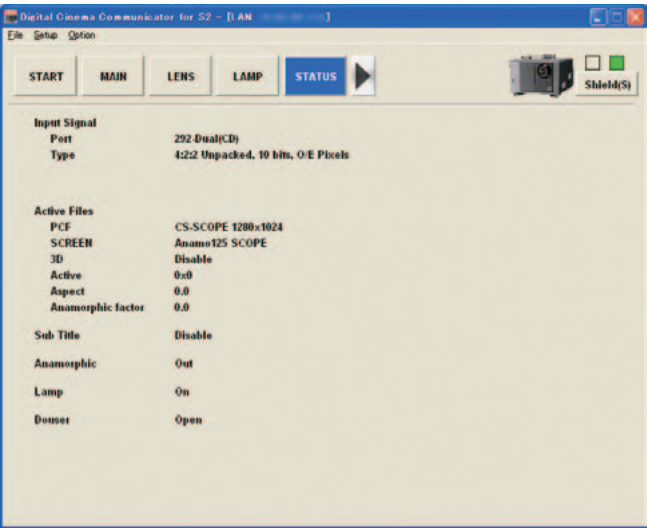


Current Lamp Filter Usage	Displays the current air filter (for lamp) usage time.
Recommend Lamp Filter Time	Displays a guide to the usage time for replacement or cleaning. <ul style="list-style-type: none"> <li>• Paper: Paper filter (replacement)</li> <li>• Metal Mesh: Metal filter (cleaning)</li> </ul>
Lamp Filter Timeout	Sets the time to replace the air filter (for lamp). When the usage time of the air filter exceeds the configured time, a warning occurs ((215) Lamp Filter Time Over).
“OK” button	Closes the Lamp Filter Time screen with the configured settings and returns to the LAMP screen.
“Cancel” button	Closes the Lamp Filter Time screen and returns to the LAMP screen.

## 3-6. STATUS Screen

Press the “STATUS” button from the menu bar to go to the STATUS screen.  
From the STATUS screen, you can check the input signal information and the Projector setting status.

### 3-6-1. STATUS screen (NC3240/NC3200/NC2000/NC1200 series)



Input Signal	Port	Displays the terminal of input signal.
	Type	Displays the type of input signal.
Active Files	PCF	Displays the name of PCF file selected.
	SCREEN	Displays the name of SCREEN file selected.
	3D	Displays the name of 3D file selected.
	Active	Displays the resolution.
	Aspect	Displays the aspect ratio.
	Anamorphic factor	Displays the anamorphic factor.
Sub Title		Indicates whether to use subtitles.
Anamorphic		Displays the status of anamorphic lens/wide converter lens control (Out/In).
Lamp		Displays the status of lamp (On/Off).
Douser		Displays the status of douser (Open/Close).
Convergence		Displays the convergence adjustment value (See page 141).



## 3-6-2. STATUS screen (NC900 series)



Input Signal	Port	Displays the terminal of input signal.
	Type	Displays the type of input signal.
Active Files	PCF	Displays the name of PCF file selected.
	SCREEN	Displays the name of SCREEN file selected.
	3D	Displays the name of 3D file selected.
	Active	Displays the resolution.
	Aspect	Displays the aspect ratio.
	Anamorphic factor	Displays the anamorphic factor.
Sub Title		Indicates whether to use subtitles.
Lamp 1		Displays the status of lamp 1 (On/Off). ("Not Use" is displayed when the lamp is not used)
Lamp 2		Displays the status of lamp 2 (On/Off). ("Not Use" is displayed when the lamp is not used)
Douser		Displays the status of douser (Open/Close).
Convergence		Displays the convergence adjustment value (See page 141).

### 3-7. TITLE Screen

This menu is only available in the Installation or Service mode.

Press the “TITLE” button on the menu bar to display the TITLE screen.

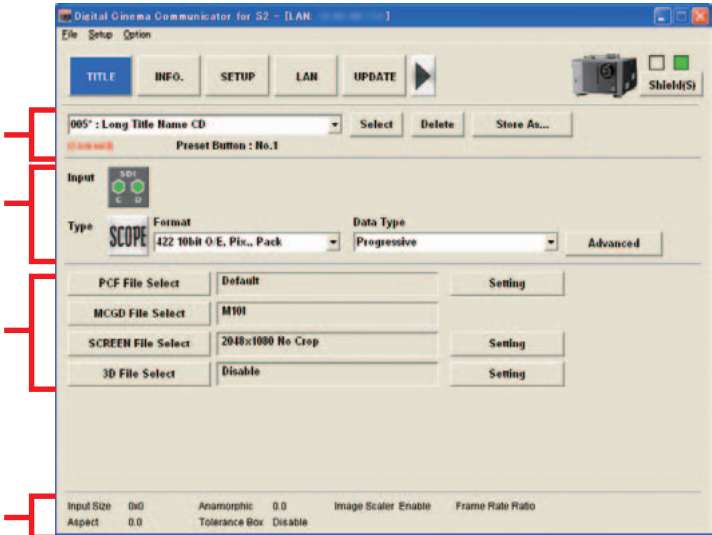
On the TITLE screen you can register or edit titles. For details on how to register or edit titles, see “2-5. Registering Titles” (page 34).

Used to select, delete, and save titles.

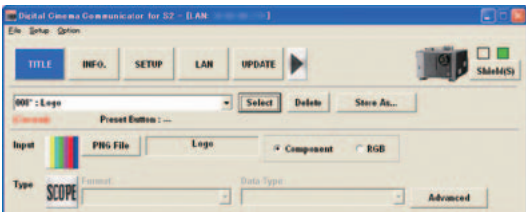
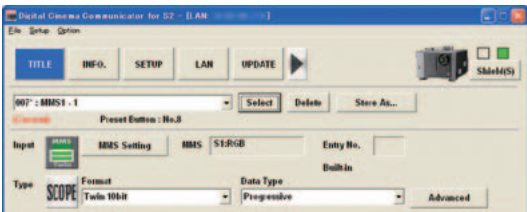
Used to display and set the input port and signal type of the selected title

Used for detailed configuration of the selected title.

Displays information about the selected title.



The items displayed in the Input field differ for MMS titles and test patterns.



Title names (pull-down menu)	Displays the title name to be edited. <ul style="list-style-type: none"> <li>• (Current): Indicates the title is being selected.</li> <li>• Preset Button: Shows that the selected title is assigned to the preset button.</li> <li>• (Update): Indicates the title is being edited.</li> </ul>
Select	Selects the title selected from the pull-down menu (an asterisk (*) is attached to the title number). Some of the buttons cannot be used if the title is not selected.
Delete	Deletes the title selected in the pull-down menu.
Store As...	Registers the title using the information displayed.
Input	A field that shows or sets the input terminal. Pressing the icon allows you to change the corresponding icon.
PNG File	(Displayed only when the test pattern is selected.) Displays the name of PNG file selected in the right column.
Component/RGB	(Displayed only when the test pattern is selected.) Selects Component or RGB signal input.
MMS Setting <sup>(Note)</sup>	(Displayed only when MMS is selected.) Sets the MMS. The name of the selected signal and Entry No. are displayed in the right column.
Type	A field that shows or sets the input source. Pressing the icon allows you to change the corresponding icon.
Format	Selects a format for the input source.
Data Type	Selects a data type for the input source.
Advanced	Sets the details of the input source.(See page 101)
PCF File Select	Selects a PCF file. (See page 100) Displays the name of PCF file selected in the right column.
Setting	This button changes and saves the PCF file settings being used by the title selected for output. (See page 103)
MCGD File Select	Selects a MCGD file. (See page 100) Displays the name of MCGD file selected in the right column.
SCREEN File Select	Selects a SCREEN file. (See page 100) Displays the name of SCREEN file selected in the right column.
Setting	This button changes and saves the SCREEN file settings being used by the title selected for output. (See page 106)
3D File Select	This button selects the 3D file. (See page 100) The currently selected file name is displayed in the field on the right.
Setting	This button changes and saves the 3D file settings being used by the title selected for output. (See page 106)
(View status)	Shows information on the title selected. Any information shown in this status display space is set to the projector. <ul style="list-style-type: none"> <li>• Input Size: Displays the input resolution setting.</li> <li>• Aspect: Displays the input aspect setting.</li> <li>• Anamorphic: Displays the setting of the anamorphic lens.</li> <li>• Tolerance Box: Displays the setting of the white correction mode. (Enable: White correction with priority for brightness; Disable: White correction with priority for color.)</li> <li>• Image Scaler: Displays the setting of the Image Scaler. (Same as the indication in the Title Advanced screen.)</li> <li>• Frame Rate Ratio: Displays the setting of the Frame Rate Ratio. (Same as the indication in the 3D Controls screen.)</li> </ul>

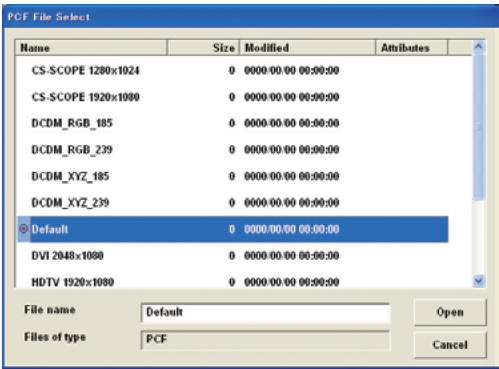
Note: NC900 series does not corresponding to MMS.

Selecting the Settings File

If you press the “\*\*\* File Select” button or the “Import” button, a screen is displayed for selecting an existing settings file.

PCF File Select screen	Selects a PCF file.
MCGD File Select screen	Selects a MCGD file.
SCREEN File Select screen	Selects a SCREEN file.
3D File Select screen	Selects a 3D file.
SOURCE File Select screen	Selects a SOURCE file.
CSC File Select screen	Selects a CSC file.
TCGD File Select screen	Selects a TCGD file.
LUT-CLUT File Select screen	Selects a LUT-CLUT file.
LUT-DG File Select screen	Selects a LUT-DG file.

Select the file to use and press the “Open” button to use the selected file. This screen is an example of the PCF File Select screen.

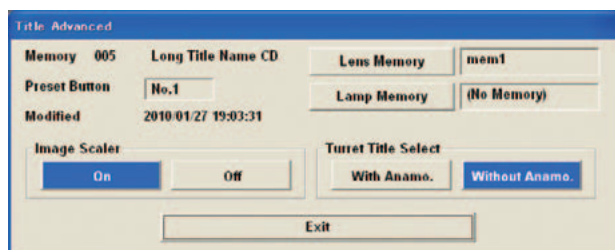


“Open” button	Uses the selected file.
“Cancel” button	Returns to the previous screen.

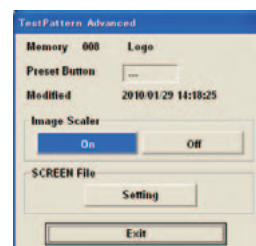
### 3-7-1. Title Advanced Screen

Press the “Advanced” button on the TITLE screen to display the Title Advanced screen. On the Title Advanced screen you set the details of signal type.

#### NC3240/NC3200/NC2000/NC1200 series



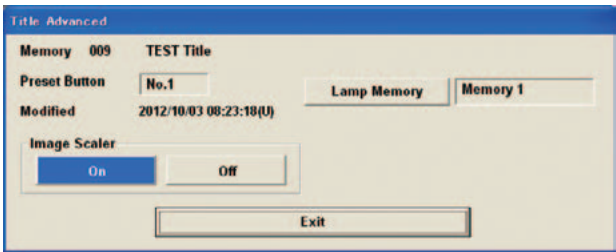
For normal titles and MMS titles



For test patterns

Memory	Displays the title (number and name) selected.
Preset Button	Displays preset button numbers if preset buttons are assigned. For assignment of preset buttons, refer to “3-3-1. Configuring the Preset Buttons” (page 76).
Modified	Displays the date and time when the title was last modified.
“Lens Memory” Button	<p>Select a lens memory to associate with the selected title when the lens memory is used. Press the “Lens Memory” button to display the “Lens Memory” screen. For the setup of lens memory, see the description of “Memory List” buttons on the “LENS” screen. (See page 80)</p> <ul style="list-style-type: none"> <li>When you want to use the lens memory, select it from the “Lens Memory” screen and press the “OK” button.</li> <li>When you do not want to use the lens memory, select “Not Use” from the “Lens Memory” screen and press the “OK” button.</li> <li>The associated lens memory appears in the right column of the “Lens Memory” button.</li> </ul>
“Lamp Memory” Button	<p>Select a lamp memory to associate with the selected title when the lamp memory is used. Press the “Lamp Memory” button to display the “Lamp Memory” screen. For the setup of lamp memory, see the description of “Memory List” buttons on the “LAMP” screen. (See page 84)</p> <ul style="list-style-type: none"> <li>When you want to use the lamp memory, select it from the “Lamp Memory” screen and press the “OK” button.</li> <li>When you do not want to use the lamp memory, select “Not Use” from the “Lamp Memory” screen and press the “OK” button.</li> <li>The associated lamp memory appears in the right column of the “Lamp Memory” button.</li> </ul>
Image Scaler	Controls the scaling circuit. Keep Enable in normal operations.
Turret Title Select	<p>Sets whether the power turret of anamorphic lens is used or not.</p> <ul style="list-style-type: none"> <li>With Anamo.: Turret is used.</li> <li>Without Anamo.: Turret is not used.</li> </ul>
Quad Input	<p>(NC3240 series)</p> <p>Displayed in DCC version 4.0.0.1 and later for titles that use IMB.</p> <p>Select this check box to output video with the IMB in 4K quad mode.</p>
“Exit” button	Used to save all the settings entered and quit the Title Edit submenu/operation.

NC900 series



For normal titles



For test patterns

Memory	Displays the title (number and name) selected.
Preset Button	Displays preset button numbers if preset buttons are assigned. For assignment of preset buttons, refer to “3-3-1. Configuring the Preset Buttons” (page 76).
Modified	Displays the date and time when the title was last modified.
“Lamp Memory” Button	Select a lamp memory to associate with the selected title when the lamp memory is used. Press the “Lamp Memory” button to display the “Lamp Memory” screen. For the setup of lamp memory, see the description of “Memory List” buttons on the “LAMP” screen. (See page 86) <ul style="list-style-type: none"><li>• When you want to use the lamp memory, select it from the “Lamp Memory” screen and press the “OK” button.</li><li>• When you do not want to use the lamp memory, select “Not Use” from the “Lamp Memory” screen and press the “OK” button.</li><li>• The associated lamp memory appears in the right column of the “Lamp Memory” button.</li></ul>
Image Scaler	Controls the scaling circuit. Keep Enable in normal operations.
“Exit” button	Used to save all the settings entered and quit the Title Edit submenu/operation.

TIP

If the lamp memory function is enabled, the result of applying the lamp memory is recorded in the log.

- If the current lamp mode is the same as the lamp mode registered in the lamp memory:  
The lamp output power value registered in the lamp memory is applied. The log below is recorded.  
Load Lamp Memory(xxxW)  
xxx: Output power value registered in the lamp memory (W)
- If the current lamp mode is not the same as the lamp mode registered in the lamp memory:  
The lamp output power value registered in the lamp memory is not applied. The log below is recorded.  
Unload Lamp Memory(xxx<>yyy)  
xxx: Current lamp mode  
yyy: Lamp mode registered in the lamp memory

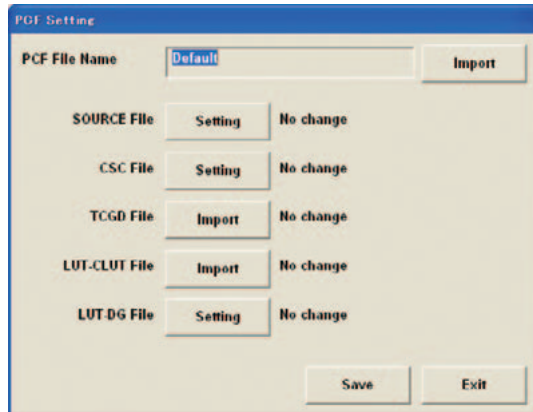
NOTE

If the projector internal temperature becomes abnormally high and the protection function is activated, the error message “752: Down Lamp Power Activated” is displayed. The lamp output power values are not applied while the protection function is active even if the current lamp mode matches the lamp mode registered in lamp memory. The following logs are recorded when this happens.

Unload Lamp Memory No.xx(Over Temp.)  
No.xx: The number of the lamp memory that was not applied

### 3-7-2. PCF Setting Screen

Press the “Setting” button on the TITLE screen to display the PCF Setting screen. On the PCF Setting screen, PCF files are created using the PCF Setting screen. Refer to “2-6. Creating a PCF File” (page 50) for the procedure for creating PCF files.



PCF File Name	Displays the name of PCF file selected.
“Import” button	Used to call an existing PCF file. (See page 100)
SOURCE File	The SOURCE file settings can be changed. Press the “Setting” button to display the SOURCE Setting screen. (See page 104)
CSC File	The CSC file settings can be changed. Press the “Setting” button to display the CSC Setting screen. (See page 105)
TCGD File	Selects a TCGD file. Press the “Import” button to display TCGD File Select screen. (See page 100)
LUT-CLUT File	Selects a LUT-CLUT file. Press the “Import” button to display the LUT-CLUT File Select screen. (See page 100)
LUT-DG File	Selects a LUT-DG file. Press the “Setting” button to display the LUT-DG screen. (See page 105)
“Save” button	Used to create a new PCF file. (Do not use this button in other cases.)
“Exit” button	Returns to the TITLE screen. Press this button when you have entered all values.

## SOURCE Setting Screen

Press the "Setting" button in the SOURCE File field in the PCF Setting screen to display the SOURCE Setting screen.

SOURCE File Name	Displays the name of SOURCE file selected.
"Import" button	Used to call an existing SOURCE file. (See page 100)
Aspect Ratio	Enter or select the final aspect ratio of the content entered.
Position	Sets the image display position. Usually select 0 for all positions.
Input Size	Enter the effective area of the input signal.
"Save" button	Used to create a new SOURCE file. (Do not use this button in other cases.)
"Exit" button	Returns to the previous screen. Press this button when you have entered all values.



### CSC Setting Screen

Press the "Setting" button in the CSC File field in the PCF Setting screen to display the CSC Setting screen.

CSC File Name	Displays the name of CSC file selected.
"Import" button	Used to call an existing CSC file. (See page 100)
Coefficiency	To change the setting, enter a number.
Offset	This does not normally need to be changed.
Brightness	
Contrast	
Saturation	
Hue (deg)	
"Set all 3" check box	<p>This is used when setting all of the setting values to the same value in one go.</p> <p>Checked: The value entered in G also applies to R and B.</p> <p>Not checked: You can set G, R, and B to different values.</p>
"Save" button	Used to create a new CSC file. (Do not use this button in other cases.)
"Exit" button	Returns to the previous screen. Press this button when you have entered all values.

### LUT-DG Setting Screen

Press the "Setting" button in the LUT-DG File field in the PCF Setting screen to display the LUT-DG Setting screen.

File Select Parametric	You should normally select "File Select".
"Import" button	Used to call an existing LUT-DG file. (See page 100)
"OK" button	Confirms the settings.
"Cancel" button	Abandons the settings and returns to the previous screen.

3-7-3. SCREEN Setting Screen

Press the “Setting” button in the SCREEN File Select field in the TITLE screen to display the SCREEN Setting screen. This screen is used to create new SCREEN files and to modify the settings in previously created SCREEN files.

SCREEN Setting

SCREEN File Name

2048x1080 No Crop

Import

Anamorphic factor

0

Screen Presentation

Upper Left

Upper Right

X

0

Lower Left

Lower Right

Y

0

LetterBox

Cropping

Upper Left

Top Curve

Upper Right

Left Curve

Right Curve

Lower Left

Bottom Curve

Lower Right

X

0

Y

0

Save

Exit

3-7-4. 3D Controls Screen

Press the “3D Controls” button in the 3D File Select field of the Title screen to display the 3D Controls screen. This screen is used to create new 3D files and to change the settings in previously created 3D files.

3D Controls

3D File Name

Disable

Import

Frame Rate Ratio

N : M

3D Control

L/R Input Reference

3D Disabled

Input Frame Dominance

Left (L1R1 L2R2)

L/R Display Reference

Not Used

L/R Output Reference Polarity

True

Dark Time Adjustment

Setting

0

us

Actual

0

us

Output Reference Delay

Time

0

us

Phase

0

deg

Save

Exit

## 3-8. INFO Screen

Press the "INFO" button on the menu bar to display the INFO screen.

The INFO screen is made up of the following four screens that allow you to check information and various logs of the projector main unit and multi media switcher.

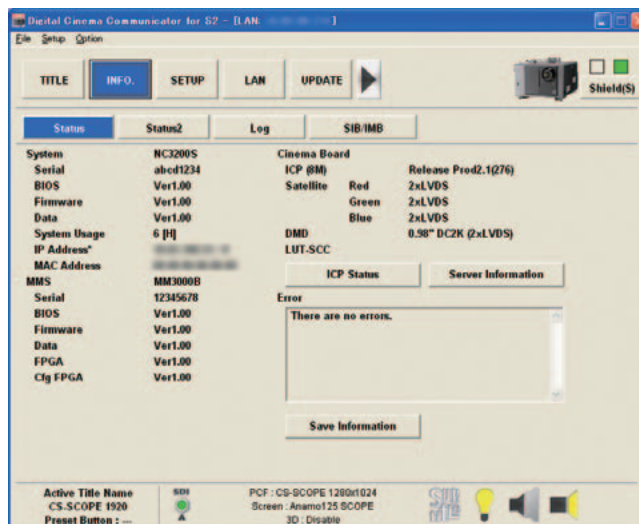
- **Status:** Allows you to check version information and error information for the projector main unit, ICP board, and multi media switcher (MMS), and other devices. You can also save the logs that are saved in the projector main unit onto a computer. (See page 107)
- **Status2:** Allows you to check the states of slot A and slot B in the projector main unit and the installation complete date of the projector main unit (warranty start date). In the NC900 series, you can also check the lamp usage time and estimated remaining time, the air filter and cooling fan usage times, and other information. (See page 111)
- **Log:** Allows you to check the state of the projector main unit and the various logs. (See page 113)
- **SIB/IMB:** Allows you to check the status and version information of the signal input board itself, the security circuit (Enigma) on the signal input board, and the image media block. (See page 126)

### 3-8-1. INFO Screen (Status)

Press the "Status" button on the INFO screen to display the INFO screen (Status).

You can check the device status and various information on this screen. The information that you can check is as follows. You can also save the logs that are saved in the projector main unit onto a computer.

- Version information and error information for the projector main unit, ICP board, slave (NC900 series) and multi media switcher (MMS)
- ICP board status
- Control information from the cinema server (Timeline, Subtitle, and Metadata control information)
- NC3240/NC3200/NC2000/NC1200 series



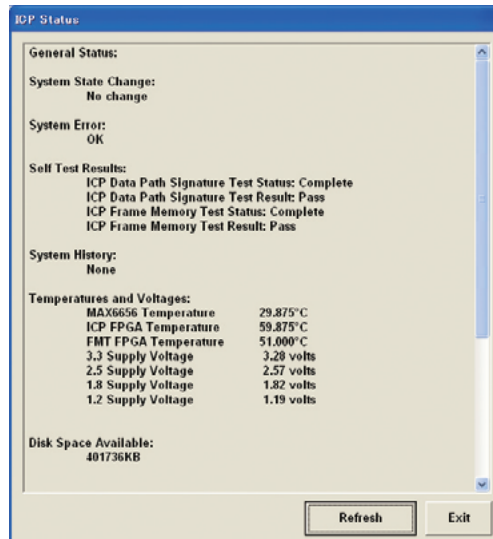
- NC900 series



System		Displays the version information of the projector main unit and the CPU board in the projector.	
	Serial	Displays the serial number of the CPU board.	
	BIOS	Displays the BIOS version of the CPU board.	
	Firmware	Displays the firmware version of the CPU board.	
	Data	Displays the data version of the CPU board.	
	System Usage	Displays the hours of use of the projector main unit.	
	IP Address	Displays the IP address and the subnet mask of the projector main unit.	
	MAC Address	Displays the MAC address of the projector main unit.	
MMS		(NC3240/NC3200/NC2000/NC1200 series) Displays the version information of the MMS connected to the projector head.	
	Serial	Displays the serial number of the MMS.	
	BIOS	Displays the BIOS version of the MMS.	
	Firmware	Displays the firmware version of the MMS.	
	Data	Displays the data version of the MMS.	
	FPGA	Displays the FPGA version of the MMS.	
	Cfg FPGA	Displays the Configuration FPGA version of the MMS.	
Slave MCU		(Only for NC900 series) Displays information about the slave that is built into the projector.	
	Firmware	Displays the version information about the slave firmware.	
Cinema Board		Displays the version information of the ICP board or Satellite board.	
	ICP		Displays the ICP system working version.
	Satellite	Red	Displays the satellite board type of the ICP board (2xLVDS/DDR).
		Green	
		Blue	
	DMD		Displays the DMD type (0.69" DC2K/0.98" DC2K/1.2" DC2K/1.38" DC4K).
	LUT-SCC		Displays the LUT-SCC file name.
	"ICP Status" button		Displays the ICP Status screen. (See page 109)
	"Server Information" button		Displays detailed information about the ICP board.
			Displays the Server Information screen (See page 109).
			This displays the control information from the cinema server.
Error		Displays the error currently occurring.	
"Save Information" button		Saves various information about the CPU board, the ICP board, slave (NC900 series), the MMS, the signal input board (SIB), and the image media block (IMB) in text format.	

### ICP Status Screen

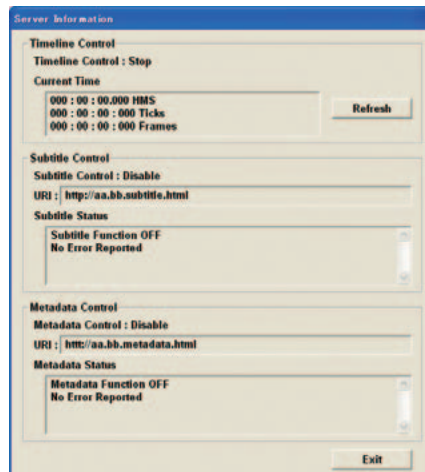
Press the "ICP Status" button in the Cinema Board field of the INFO screen (Status) to display the ICP Status screen. You can check the status of the ICP board using this screen.



"Refresh" button	Updates the displayed contents to the newest information.
"Exit" button	Returns to the previous screen.

### Server Information Screen

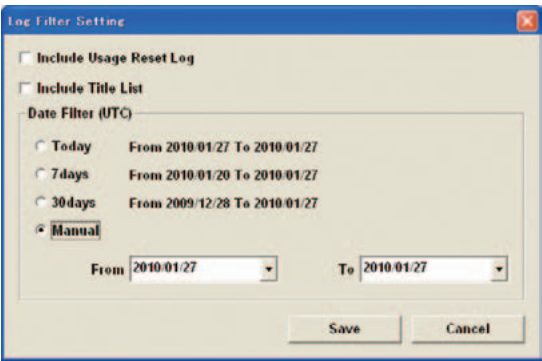
Press the "Server Information" button in the Cinema Board field of the INFO screen (Status) to display the Server Information screen. You can check the control information from the cinema server (Timeline, Subtitle, and Metadata) on this screen.



"Refresh" button	Updates the displayed contents to the newest information.
"Exit" button	Returns to the previous screen.

Log Filter Setting Screen

Press the “Save Information” button in the Error field of the INFO screen (Status) to display the Log Filter Setting screen. This screen is used to configure the period of the log saved on the PC. You can also have reset information and title information included in the log.



“Include Usage Reset Log” check box	When this check box is selected, logs are saved including reset information (Usage Reset Log).
“Include Title List” check box	When this check box is selected, logs are saved including title information.
“Save” button	Saves the log onto the PC using the configured settings.
“Cancel” button	Returns to the previous screen.

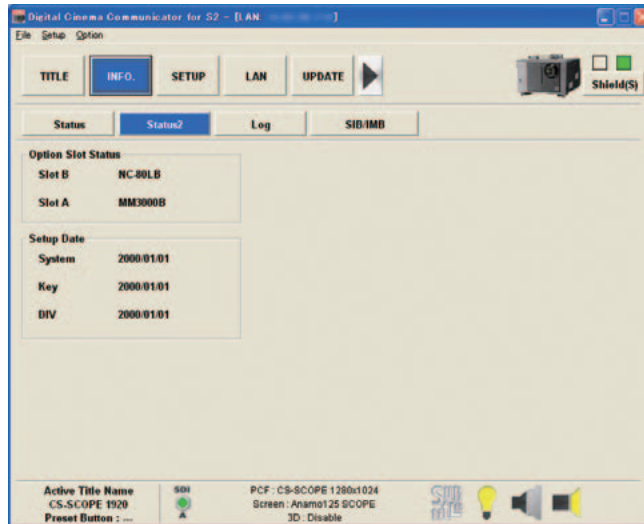
### 3-8-2. INFO Screen (Status2)

Press the "Status2" button on the INFO screen to display the INFO screen (Status2).

You can check the states of slot A and slot B in the projector main unit and the installation complete date of the projector main unit (warranty start date) using this screen.

On the NC900 series, you can check the lamp, air filter, and cooling fan usage times, the number of times the douser has been opened and closed, and other information.

#### NC3240/NC3200/NC2000/NC1200 series



Option Slot Status		Displays information about slot A and slot B. The slot settings are configured from the SETUP screen (Option Slot).
	Slot B	Displays the settings of slot B. Parentheses () are added to the device name when the projector is in standby mode or the installed devices cannot be identified.
	Slot A	Displays the settings of slot A. Parentheses () are added to the device name when the projector is in standby mode or the installed devices cannot be identified.
Setup Date		Displays the installation complete date when of the projector (warranty start date). The installation complete date is configured from the UPDATE screen.
	System	Displays the installation complete date (warranty start date) of the projector as saved in the CPU board.
	Key	Displays the installation complete date (warranty start date) of the projector as saved in the Key board.
	DIV	Displays the installation complete date (warranty start date) of the projector as saved in the DIV board.

## NC900 series



Option Slot Status		Displays information about slot A and slot B. The slot settings are configured from the SETUP screen (Option Slot).
	Slot B	Displays the settings of slot B. Slot B is not available in the NC900 series.
	Slot A	Displays the settings of slot A. Parentheses ( ) are added to the device name when the projector is in standby mode or the installed devices cannot be identified.
Setup Date		Displays the installation complete date when of the projector (warranty start date). The installation complete date is configured from the UPDATE screen.
	System	Displays the installation complete date (warranty start date) of the projector as saved in the CPU board.
	Key	Displays the installation complete date (warranty start date) of the projector as saved in the Key board.
Lamp Output		Displays the lamp output (displays the value (W) and %) and the voltage values (V) or lamp 1 and lamp 2.
Lamp 1/Lamp 2		Displays lamp 1 and lamp 2 information.
	Usage	Displays lamp 1 and lamp 2 usage time. (Unit: hours)
	Warning	Displays lamp 1 and lamp 2 replacement time (estimated). (Unit: hours)
	Remaining <sup>(Note)</sup>	Displays lamp 1 and lamp 2 remaining time (estimated). (Unit: %)
	Strike	Displays the number of times lamp 1 and lamp 2 have been turned on.
Filter Usage		Displays the usage time of the air filter. (Unit: hours)
FAN Usage		Displays the usage time of the cooling fan. (Unit: hours)
Douser Count		Displays the number of times the douser has been opened and closed.
Ballast Version		Displays the ballast (ballast 1 and ballast 2) version information.
	Ballast 1	
	Ballast 2	

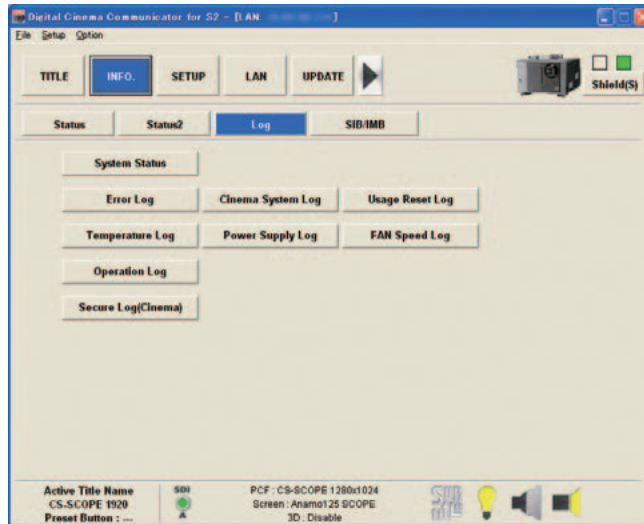
(Note): Displays the amount of usage time remaining (approximate) from the current usage time with the unused state as 100% and 0% when the lamp needs replacement.



### 3-8-3. INFO Screen (Log)

Press the “Log” button on the INFO screen to display the INFO screen (Log).

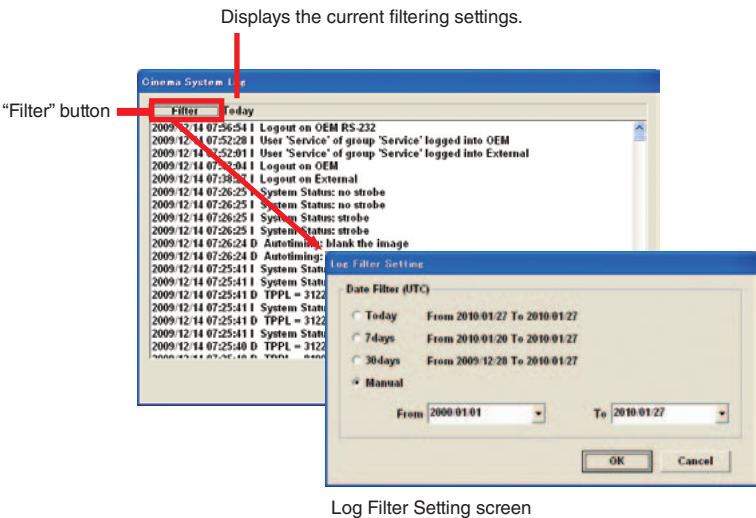
You can check the various logs saved in the projector main unit from this screen.



“System Status” button	Displays the System Status screen. (See page 115) This displays the temperature, voltage, fan speed, and fan status inside the projector main unit (The fan status display is only supported by the NC900 series).
“Error Log” button	Displays the System Error Log screen. (See page 118) This displays CPU board error information.
“Cinema System Log” button	Displays the Cinema System Log screen. (See page 118) This displays ICP board error information.
“Usage Reset Log” button	Displays the User Reset Log screen. (See page 119) (NC3240/NC3200/NC2000/NC1200 series) This displays various information about when the usage times of the lamp bulb, lamp housing, fans, and air filters were reset. (NC900 series) This displays various information about when the lamp (lamp 1 and lamp 2), fans, and air filter usage times were reset.
“Temperature Log” button	Displays the Temperature Log screen. (See page 121) This displays a record of the temperature from when the projector was turned on until it was turned off (peak hold).
“Power Supply Log” button	Displays the Power Supply Log screen. (See page 123) This displays a record of the voltage from when the projector was turned on until it was turned off (peak hold).
“FAN Speed log” button	Displays the FAN Speed Log screen. (See page 124) This displays a record of the fan speed (minimum value) from when the power was turned on until it was turned off (peak hold).
“Operation Log” button	Displays the Lamp Operation Log screen. (See page 124) This displays a record of the operation of the projector.
“Secure Log(Cinema)” button	Displays the Secure Log (Cinema) screen. (See page 125) This displays a log of the security circuit (Enigma) on the signal input board.

Log Filtering Function

Press the “Filter” button to display the Log Filter Setting screen. You can set the period of logs to display using this screen.



Today	Displays only the log for today.
7days	Displays the log for the last 7 days including today. (Default setting)
30days	Displays the log for the last 30 days including today.
Manual	Displays the log for the specified period (from From to To). From: Selects the start date of the period for which to display the logs. To: Selects the end date of the period for which to display the logs. Click “Today” in the calendar to set to today’s date.
“OK” button	Displays the logs that match the specified conditions.
“Cancel” button	Cancels the settings and returns to the previous screen.

## System Status Screen

This screen displays the temperature, voltage, fan speed, and fan status inside the projector main unit.

Click the "Temperature", "Power Supply", "FAN Speed", and "FAN MAP" tabs to switch between the items displayed.

- System Status Screen (Temperature)

Temperature	Current	Upper Limit
Outside Air	21.0 degC	30.0 degC
LPSU Intake	23.5 degC	31.1 degC
Exhaust	25.0 degC	32.2 degC
DMD-B	27.5 degC	33.3 degC
Temp 5	29.0 degC	34.4 degC
Temp 6	31.5 degC	35.5 degC
Temp 7	33.0 degC	36.6 degC
Temp 8	35.5 degC	37.7 degC
MAX6656	66.5 degC	
ICP FPGA	31.2 degC	
FMT FPGA	32.5 degC	

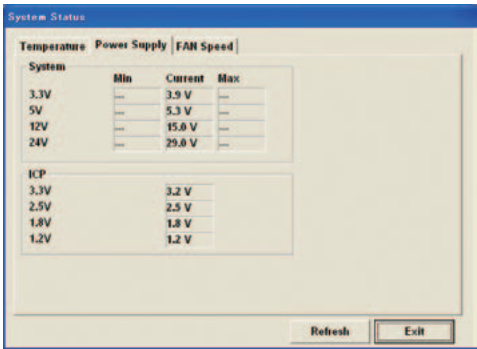
(NC3240/NC3200/NC2000/NC1200 series)

<div>Outside Air</div> <div>LPSU Intake</div> <div>Exhaust</div> <div>DMD-B</div> <div>Temp 5</div> <div>Temp 6</div> <div>Temp 7</div> <div>Temp 8</div> <div>MAX6656</div> <div>ICP FPGA</div> <div>FMT FPGA</div> <div>Current</div> <div>Upper Limit</div>	<div>Displays the temperatures of each part of the projector.</div> <div>Refer to the "Service Manual" for details.</div>
"Refresh" button	Updates the displayed contents to the newest information.
"Exit" button	Returns to the previous screen.

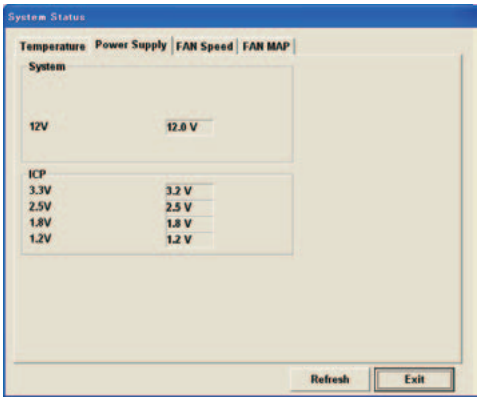
(NC900 series)

<div>DMD</div> <div>Inlet</div> <div>Ballast1</div> <div>Ballast2</div> <div>MAX6656</div> <div>ICP FPGA</div> <div>FMT FPGA</div> <div>Current</div> <div>Upper Limit</div>	<div>Displays the temperatures of each part of the projector.</div> <div>Refer to the "Service Manual" for details.</div>
"Refresh" button	Updates the displayed contents to the newest information.
"Exit" button	Returns to the previous screen.

- System Status Screen (Power Supply)  
(NC3240/NC3200/NC2000/NC1200 series)



(NC900 series)



System		Displays the voltage of the projector. (NC3240/NC3200/NC2000/NC1200 series) Displays the current voltage (Current), upper limit value of the voltage (Max) and lower limit value of the voltage (Min). (NC900 series) Displays the current voltage.
	Current	Displays the current voltage.
	Min	Displays the upper limit value of the voltage. An error occurs if the voltage exceeds this value.
	Max	Displays the lower limit value of the voltage. An error occurs if the voltage drops below this value.
ICP		Displays the ICP board voltage.
"Refresh" button		Updates the displayed contents to the newest information.
"Exit" button		Returns to the previous screen.

- System Status Screen (FAN Speed)

The screenshot shows a 'System Status' window with a tabbed interface. The 'FAN Speed' tab is selected, displaying a table of fan speed parameters. The table has five columns: Fan Name, Min, Precaution, Current, and Max. The rows include Fan 0 through Fan 11, Lamp Cooling Fan 0, Lamp Cooling Fan 1, Pump, and ICP Fan. Most fans have a 'Min' value of 2000 rpm, a 'Precaution' value of 3000 rpm, a 'Current' value around 5000 rpm, and a 'Max' value of 6000 rpm. The Pump and ICP Fan have a 'Current' value of 5012 rpm and 5013 rpm respectively. The 'Refresh' and 'Exit' buttons are at the bottom right.

Fan Name	Min	Precaution	Current	Max
Fan 0	2000 rpm	3000 rpm	5000 rpm	6000 rpm
Fan 1	2000 rpm	3000 rpm	5001 rpm	6000 rpm
Fan 2	2000 rpm	3000 rpm	5002 rpm	6000 rpm
Fan 3	2000 rpm	3000 rpm	5003 rpm	6000 rpm
Fan 4	2000 rpm	3000 rpm	5004 rpm	6000 rpm
Fan 5	2000 rpm	3000 rpm	5005 rpm	6000 rpm
Fan 6	2000 rpm	3000 rpm	5006 rpm	6000 rpm
Fan 7	2000 rpm	3000 rpm	5007 rpm	6000 rpm
Fan 8	2000 rpm	3000 rpm	5008 rpm	6000 rpm
Fan 9	2000 rpm	3000 rpm	5009 rpm	6000 rpm
Fan 10	2000 rpm	3000 rpm	5010 rpm	6000 rpm
Fan 11	2000 rpm	3000 rpm	5011 rpm	6000 rpm
Lamp Cooling Fan 0	2000 rpm	3000 rpm	5010 rpm	6000 rpm
Lamp Cooling Fan 1	2000 rpm	3000 rpm	5011 rpm	6000 rpm
Pump	2000 rpm	3000 rpm	5012 rpm	6000 rpm
ICP Fan	2000 rpm	3000 rpm	5013 rpm	6000 rpm

(NC3240/NC3200/NC2000/NC1200 series)

Fan 0 to Fan 11		Displays the fan speed.
Lamp Cooling Fan 0	Min	Displays the lower limit value of the fan speed. An error occurs if the fan speed drops below this value.
Lamp Cooling Fan 1	Precaution	Displays the warning value of the fan speed. A warning occurs if the fan speed drops below this value.
Pump	Current	Displays the current voltage.
ICP Fan	Max	Displays the upper limit value of the fan speed. An error occurs if the fan speed exceeds this value.
"Refresh" button		Updates the displayed contents to the newest information.
"Exit" button		Returns to the previous screen.

(NC900 series)

Fan 1–Fan 16		Displays the fan speed.
ICP Fan	Min	Displays the lower limit value of the fan speed. An error occurs if the fan speed drops below this value.
	Precaution	Displays the warning value of the fan speed. A warning occurs if the fan speed drops below this value.
	Current	Displays the current voltage.
"Refresh" button		Updates the displayed contents to the newest information.
"Exit" button		Returns to the previous screen.

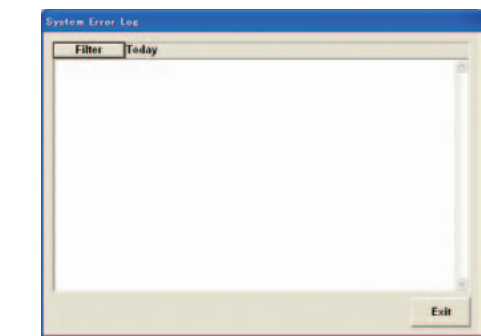
- System Status Screen (FAN MAP)

(NC900 series only)

This screen can be used by users who have Service mode or higher privileges. It shows a schematic diagram of the projector fans and allows you to check the status of each fan (Normal, Precaution, or Error).

System Error Log Screen

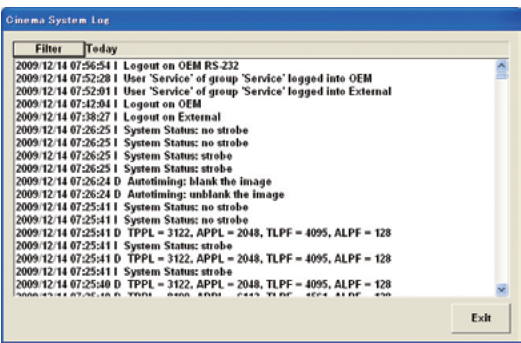
This screen displays a log of CPU board errors.



"Filter" button	Sets the period of the log to display. (See page 110)
"Exit" button	Returns to the previous screen.

Cinema System Log Screen

This screen displays a log of ICP board errors.

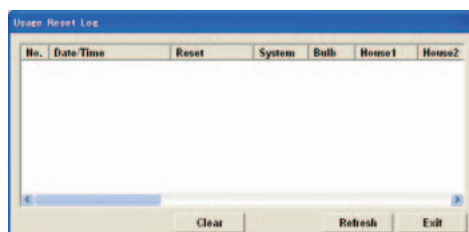


"Filter" button	Sets the period of the log to display. (See page 110)
"Exit" button	Returns to the previous screen.

## Usage Reset Log Screen

This screen can be displayed in Service mode only. When the usage times for the following items are reset, the value immediately before the reset is saved as log information. This screen shows 64 items at most (64 items from the newest one are displayed).

- NC3240/NC3200/NC2000/NC1200 series  
Lamp bulb, Lamp house, Fan, Air filter
- NC900 series  
Lamp, Fan, Air filter



- NC3240/NC3200/NC2000/NC1200 series

No.	Displays the record No.
Date/Time	Displays the date and time.
Reset	Displays the reset subject. <ul style="list-style-type: none"> <li>• Lamp bulb: Bulb</li> <li>• Lamp house: House1/House2</li> <li>• Fan: AC On Fan/Power On Fan</li> <li>• Air filter: Body Filter/Lamp Filter</li> </ul>
System	Displays the utilization hours of the projector main unit.
Bulb	Displays the utilization hours of lamp bulb.
House1	Displays the utilization hours of lamp house 1.
House2	Displays the utilization hours of lamp house 2.
Bulb Name	Displays the bulb entry name.
Min[A]	Displays the minimum current value (A).
Max[A]	Displays the maximum current value (A).
Typical	Displays the lamp output (kW) average.
Max[W]	Displays the maximum value of lamp output (kW).
Warning Time	Displays the warning time.
Bulb Warning	Displays the currently enabled warning time set by the Bulb Warning setting.
AC On Fan	Displays the speeds of the projector cooling fans (AC On Fan). Refer to the "Service Manual" for details.
Power On Fan	Displays the speeds of the projector cooling fans (Power On Fan). Refer to the "Service Manual" for details.
Lamp Fan	Displays the speeds of the lamp cooling fan.
Body Filter	Displays the usage time of the air filters for the projector head.
Lamp Filter	Displays the usage time of the air filters for the lamp.
"Collapse" button	Collapses the displayed contents.
"Clear" button	Clears the usage reset log and closes the screen.
"Refresh" button	Updates the displayed contents to the newest information.
"Exit" button	Returns to the previous screen.

## Menu Functions [For Projector Operation]

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- NC900 series

No.	Displays the record No.
Date/Time	Displays the date and time.
Reset	Displays the reset subject. <ul style="list-style-type: none"><li>• Lamp: Lamp 1/Lamp 2</li><li>• Fan: Fan</li><li>• Air filter: Filter</li></ul>
System	Displays the utilization hours of the projector main unit.
Warning Time	Displays the estimated time for replacement of lamp.
FAN Usage	Displays the usage time of the cooling fan
Filter Usage	Displays the usage time of the air filter.
Lamp 1 Usage	Displays the Lamp 1 usage time.
Lamp 2 Usage	Displays the Lamp 2 usage time.
Lamp 1 Strike	Displays the number of times lamp 1 has been turned on.
Lamp 2 Strike	Displays the number of times lamp 2 has been turned on.
"Clear" button	Clears the usage reset log and closes the screen.
"Refresh" button	Updates the displayed contents to the newest information.
"Exit" button	Returns to the previous screen.



## Temperature Log Screen

This screen displays the maximum temperature recorded in the period from when the projector was turned on until it was turned off.

The upper half of the screen displays the maximum temperatures measured and dates and times for each item from when the power was last turned on until now. The information that is saved in the log when the power is turned off is displayed in sequential order in the lower half of the screen. When saved as a log, information at the time when the log was recorded (all temperatures, fan speeds, and lamp outputs within the projector) is also saved in addition to the maximum temperature and date and time of each item.

You can switch between the number of items displayed (all items or maximum temperatures only) by pressing the [<] button.

Displays information measured from when the power was turned on until now (peak hold).

Displays the information saved as the log when the power was turned off.

Filter Today			
Date/Time	Temp.	Max Val.	Outside Air
2010/01/27 19:23:59	Temp 8	20.7 degC	20.0 degC
2010/01/27 19:23:58	Temp 7	20.6 degC	20.0 degC
2010/01/27 19:23:57	Temp 6	20.5 degC	20.0 degC
2010/01/27 19:23:56	Temp 5	20.4 degC	20.0 degC
2010/01/27 19:23:55	DMD-B	20.3 degC	20.0 degC
2010/01/27 19:23:54	Exhaust	20.2 degC	20.0 degC
2010/01/27 19:23:53	LPSU Intake	20.1 degC	20.0 degC
2010/01/27 19:23:52	Outside Air	20.0 degC	20.0 degC

Switches the display.  
(All items or maximum temperatures only)

### • NC3240/NC3200/NC2000/NC1200 series

"Filter" button	Sets the period of the log to display. (See page 110)
Date/Time	Displays the date and time where the maximum temperature was measured.
Temp.	Displays the item where the maximum temperature was measured.
Max Val.	Displays the maximum temperature.
Outside Air	Displays the temperature at the Date/Time.
LPSU Intake	
Exhaust	
DMD-B	
Temp5	
Temp6	
Temp7	
Temp8	
Fan 0 to Fan 11	Displays the fan speed at the Date/Time.
Lamp Cooling Fan 0	
Lamp Cooling Fan 1	
Pump	
ICP Fan	Displays the lamp output at the Date/Time.
Lamp Output	
"Exit" button	Returns to the previous screen.

- NC900 series

"Filter" button	Sets the period of the log to display. (See page 110)
Date/Time	Displays the date and time where the maximum temperature was measured.
Temp.	Displays the item where the maximum temperature was measured.
Max Val.	Displays the maximum temperature.
DMD	Displays the temperature at the Date/Time.
Inlet	
Ballast1 Ballast2	Displays the temperature at the Date/Time.
Fan 1 to Fan 16	Displays the fan speed at the Date/Time.
ICP Fan	Displays the lamp output at the Date/Time.
Lamp Output	Displays the date and time when the maximum temperature was measured.
"Exit" button	Returns to the previous screen.

## Power Supply Log Screen

This screen displays the maximum and minimum voltage values recorded in the period from when the projector was turned on until it was turned off.

The upper half of the screen displays the maximum/minimum voltages measured and dates and times for each item from when the power was last turned on until now. The information that is saved in the log when the power is turned off is displayed in sequential order in the lower half of the screen.

- NC3240/NC3200/NC2000/NC1200 series

Min			Max		
3.3V	2010-01-28 00:03:29	1.0 V	2010-01-28 00:03:29	1.0 V	
5V	2010-01-28 00:03:30	1.0 V	2010-01-28 00:03:31	1.0 V	
12V	2010-01-28 00:03:32	1.0 V	2010-01-28 00:03:33	1.1 V	
24V	2010-01-28 00:03:34	1.1 V	2010-01-28 00:03:35	1.1 V	

Filter Today		
Date/Time	Power Supply	Voltage
2010-01-27 22:10:39	24V(Max)	1.1 V
2010-01-27 22:10:38	24V(Min)	1.1 V
2010-01-27 22:10:37	12V(Max)	1.1 V
2010-01-27 22:10:36	12V(Min)	1.0 V
2010-01-27 22:10:35	5V(Max)	1.0 V
2010-01-27 22:10:34	5V(Min)	1.0 V
2010-01-27 22:10:33	3.3V(Max)	1.0 V
2010-01-27 22:10:32	3.3V(Min)	1.0 V

- NC900 series

Min			Max		
12V	2012-08-03 11:42:30(1)	1.0 V	2012-08-03 11:42:30(1)	1.0 V	

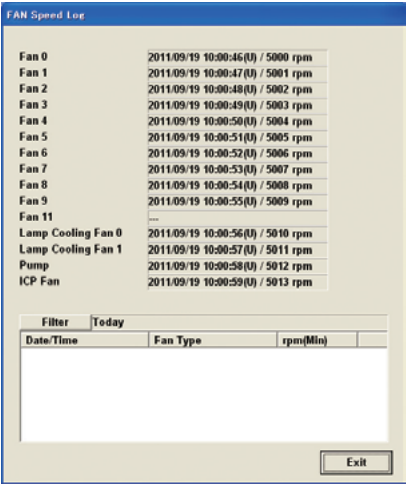
Filter 7 days		
Date/Time	Power Supply	Voltage

"Filter" button	Sets the period of the log to display. (See page 110)
Date/Time	Displays the date and time when the maximum/minimum voltage was measured.
Power Supply	Displays the item where the maximum/minimum voltage was measured. (Max): Displays the maximum value. (Min): Displays the minimum value.
Voltage	Displays the measured voltage.
"Exit" button	Returns to the previous screen.

FAN Speed Log Screen

This screen displays the minimum fan speeds recorded in the period from when the projector was turned on until it was turned off.

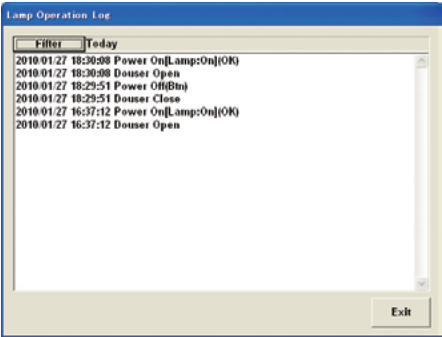
The upper half of the screen displays the minimum fan speeds measured and dates and times for each item from when the power was last turned on until now. The information that is saved in the log when the power is turned off is displayed in sequential order in the lower half of the screen.



"Filter" button	Sets the period of the log to display. (See page 110)
Date/Time	Displays the date and time when the minimum fan speed was measured.
Fan Type	Displays the type of fan.
rpm(Min)	(NC3240/NC3200/NC2000/NC1200 series) Displays the fan speed (minimum value).
Min	(NC900 series) Displays the fan rotation number (minimum value). (Unit: % (Fan 1 to 16), rpm (ICP Fan))
"Exit" button	Returns to the previous screen.

Lamp Operation Log Screen

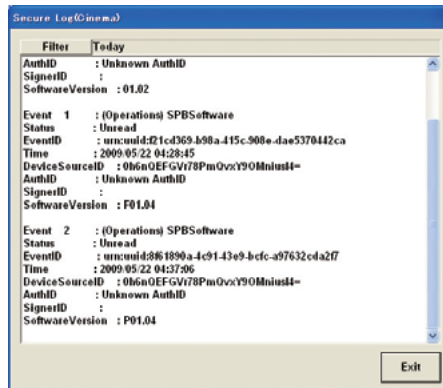
This screen displays a record of the operation of the projector.



"Filter" button	Sets the period of the log to display. (See page 110)
"Exit" button	Returns to the previous screen.

**Secure Log(Cinema) Screen**

This screen displays a log of the security circuit (Enigma) on the signal input board.



"Filter" button	Sets the period of the log to display. (See page 110)
"Exit" button	Returns to the previous screen.

### 3-8-4. INFO Screen (SIB/IMB)

Press the “SIB/IMB” button on the INFO screen to display the INFO screen (SIB/IMB).

This screen displays version information about the signal input board, the security circuit (Enigma) built into the signal input board, and the image media block (IMB).



SIB Version	Displays information about the signal input board.
Main	Displays version information about the signal input board.
OS	Displays OS version information about the signal input board.
BIOS	Displays BIOS version information about the signal input board.
Firmware	Displays firmware version information about the signal input board.
FPGA H/W	Displays FPGA H/W version information about the signal input board.
FPGA S/W	Displays FPGA S/W version information about the signal input board.
EDID	Displays EDID version information about the signal input board.
"Current Status" button	Displays the SIB Status screen. (See page 127) Displays version information about the SDI input port of the signal input board.
Enigma Version	Displays information about the security circuit (Enigma) built into the signal input board.
Enigma	Displays version information about Enigma.
FPGA Firmware	Displays version information about the FPGA firmware.
Login List	Displays version information about the Login List.
Security Officer List	Displays version information about the Security Officer List.
"Enigma Status" button	Displays the Enigma Status screen. (See page 128) Displays detailed information about Enigma.
IMB Version	Displays information about the image media block (IMB).
Identifier	Displays vender information about IMB. <ul style="list-style-type: none"> <li>• NEC: NEC IMB</li> <li>• Doremi: Doremi IMB</li> <li>• GDC: GDC_KXHXwngJjNuk</li> </ul>
Version	Displays version information about IMB.
"IMB Status" button	Displays the IMB Status screen. (See page 128) Displays the IMB status, error conditions, and security status.

**SIB Status Screen**

Press the "Current Status" button on the INFO screen (SIB/IMB) to display the SIB Status screen.

This screen displays detailed information about the SDI input ports (SDI-A, SDI-B, SDI-C, and SDI-D) on the signal input board.

The screenshot shows the 'SIB Status' window with the following data:

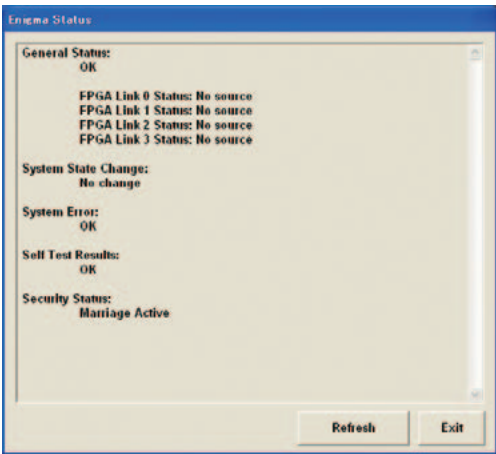
SDI Status		Error Total	
SDI-A	Carrier Detect	SDI-A	11
	Unknown signal	SDI-B	202
	SMPTE 274M 1080p 24Hz	SDI-C	3003
SDI-B	Carrier Detect	SDI-D	40004
	Detect SMPTE Signal	Error Frame	
	SMPTE 296M 720p 60Hz	SDI-A	22
SDI-C	No Carrier	SDI-B	303
	Detect SMPTE Signal	SDI-C	4004
	SMPTE 274M 1080p 24Hz	SDI-D	50005
SDI-D	Carrier Detect		
	Unknown signal		
	SMPTE 274M 1080p 24Hz		

Buttons: Refresh, Exit

SDI Status	Displays detailed information on the SDI input status.
	<ul style="list-style-type: none"> <li>• Carrier Detect</li> <li>• SDT Lock</li> <li>• STD</li> <li>• CRC Error</li> </ul>
Error Total	Displays information about the accumulated errors.
"Clear" button	Clears the error counter.
Error Frame	This displays error information within one frame.
"Refresh" button	Updates the displayed contents to the newest information.
"Exit" button	Returns to the previous screen.

Enigma Status Screen

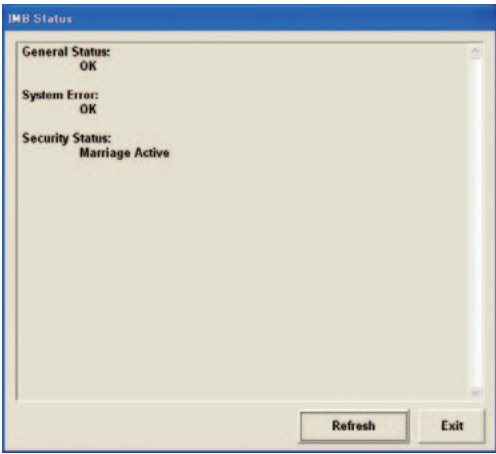
Press the “Enigma Status” button on the INFO screen (SIB/IMB) to display the Enigma Status screen. This screen displays detailed information about Enigma (the security circuit built into the signal input board).



“Refresh” button	Updates the displayed contents to the newest information.
“Exit” button	Returns to the previous screen.

IMB Status Screen

Press the “IMB Status” button on the INFO screen (SIB/IMB) to display the IMB Status screen. This screen displays detailed information about IMB.



“Refresh” button	Updates the displayed contents to the newest information.
“Exit” button	Returns to the previous screen.



## 3-9. SETUP Screen

This menu is only available in the Installation or Service mode.

Display and setting are available even when the projector is in the standby status.

Press the "SETUP" button on the menu bar to display the SETUP screen.

The SETUP screen consists of windows below.

- **NC3240/NC3200/NC2000/NC1200 series**

- Setup: Use this window for configuring various settings for the projector. (See page 129)
- Installation: Use this window for setting at installation. (See page 137)
- Color Setting: Use this window for making color adjustments. (See page 143)
- MMS Setting: Use this window for configuring the MMS connection settings. (See page 144)
- Option Slot: Use this window for setting for slot A or slot B. (See page 145)

- **NC900 series**

- Setup: Use this window for configuring various settings for the projector. (See page 129)
- Installation: Use this window for setting at installation. (See page 137)
- Color Setting: Use this window for making color adjustments. (See page 143)
- Option Slot: Use this window for setting for slot A or slot B. (See page 145)
- Reset: This screen is used for resetting the lamp and filter usage times and the number of times the douser has been opened and closed, and for returning to the factory default state (See page 146).

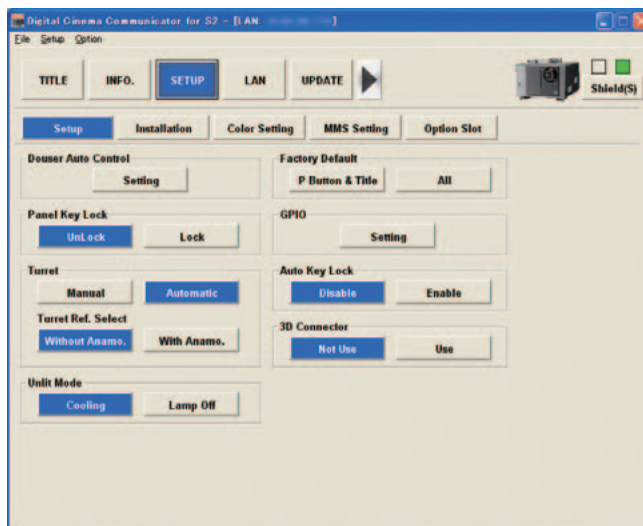
**NOTE** The following sub menus and sub menu items can only be configured when the projector is turned on.

- SETUP screen (Color Setting)
- "Convergence", "IMB Maintenance" and "Enigma Maintenance" (in the SETUP screen (Installation))

### 3-9-1. SETUP Screen (Setup)

Press the "Setup" button on the "SETUP" screen to display the "SETUP (Setup)" window.

The operating settings of the projector main unit are configured using this screen.



- NC3240/NC3200/NC2000/NC1200 series

Item	Description	Ref.page
Douser Auto Control	Allows you to configure the operation when the projector automatically opens and closes the douser.	131
Panel Key Lock	Locks the operating buttons on the projector control panel so that they cannot be operated.	131
Turret	Controls the turret that the anamorphic lens is attached to.	131
Unlit Mode	Sets the projector operation when the lamp does not turn on for some reason.	132
Factory Default	Returns adjustment values that have been adjusted to the factory default settings for all adjustment and setting values recorded in the projector and all registered title and preset button assignments.	132
GPIO	Allows you to change the functions allocated to the GPIO ports on the projector, the timing when GPIO control is executed, and other settings.	133
Auto Key Lock	Automatically locks the operating buttons on the control panel so that they cannot be operated.	135
3D Connector	Set the ports on the projector used for inputting and outputting control signals for the 3D system (3D Input Reference and 3D Display Reference).	135
Sleep Timer	Allows you to turn off the projector power after a specified time.	136

- NC900 series

Item	Description	Ref.page
Douser Auto Control	Allows you to configure the operation when the projector automatically opens and closes the douser.	131
Panel Key Lock	Locks the operating buttons on the projector control panel so that they cannot be operated.	131
Silent Mode	Controls the operation of the projector buzzer, status indicator, LCD backlight and indicators on the control panel.	132
Filter Message	Sets the air filter replacement time (estimated).	132
Unlit Mode	Sets the projector operation when the lamp does not turn on for some reason.	132
GPIO	Allows you to change the functions allocated to the GPIO ports on the projector, the timing when GPIO control is executed, and other settings.	133
Auto Key Lock	Automatically locks the operating buttons on the control panel so that they cannot be operated.	135
3D Connector	Set the ports on the projector used for inputting and outputting control signals for the 3D system (3D Input Reference and 3D Display Reference).	135
Sleep Timer	Allows you to turn off the projector power after a specified time.	136

### Douser Auto Control

Press the "Setting" button in the Douser Auto Control field of the SETUP screen (Setup) to display the Douser Auto Control screen.

In this screen, you can configure the projector main unit to automatically open and close the douser. When set to Enable, the projector main unit automatically opens and closes the douser. Furthermore, when set to Disable, the user needs to open and close the douser manually.



Open(Power On)	If set to Enable, when the projector power is turned on, the douser is opened and closed automatically. (By default, this is preset to Enable.)
Lamp On	If set to Enable, when the lamp is turned on, the douser is opened and closed automatically. (By default, this is preset to Enable.)
Title Select	If set to Enable, when the signal is switched, the douser is opened and closed automatically. (By default, this is preset to Disable.)
"OK" button	Applies the settings that have been selected.
"Cancel" button	Cancels the settings and returns to the previous screen.

### Panel Key Lock

The control buttons on your projector are locked to be inoperative.

Unlock	Disable the lock on the control buttons.
Lock	Enable a lock on the control buttons on your projector.

**NOTE** When the buttons on the projector's control panel are locked, press the EXIT button on the projector for about 10 sec. to unlock them (The key lock setting on the projector becomes Unlock).

### Turret

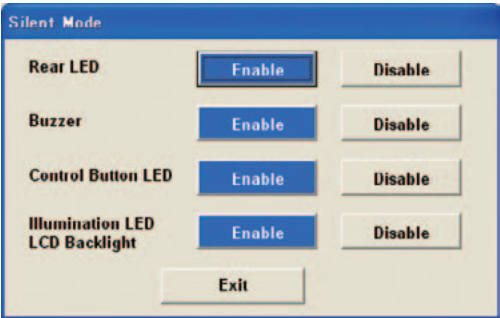
This item is displayed in the NC3240, NC3200, NC2000, and NC1200 series.

Controls the turret on which the anamorphic lens is mounted.

Manual	Manually control the turret.
Automatic	The anamorphic lens selected at Title switches automatically when the title is switched.
Turret Ref. Select	<p>Sets the initial setting (use or not use) of the turret. This setting is applied when you create a new title.</p> <ul style="list-style-type: none"> <li>Without Anamo: Disables anamorphic lens.</li> <li>With Anamo: Enables anamorphic lens.</li> </ul>

Silent Mode

This item is displayed in the NC900 series. Controls the operation of the projector buzzer and LEDs. Items that are set to Disable do not operate. This is set to Enable (operate) by default.



Rear LED	Controls turning the status indicator LED on and off.
Buzzer	Controls whether the buzzer sounds or does not sound.
Control Button LED	Controls turning on and off of the button indicators in the projector control panel.
Illumination LED LCD Backlight	Controls turning on and off of the illumination (Illumination LED) for the projector control panel and the backlight (LCD Backlight) for the LCD screen.
"Exit" button	Returns to the previous screen.

**TIP** When Illumination LED and LCD Backlight are set to Disable, you can change the setting to Enable by long-pressing (3 seconds) the EXIT key and UP key on the projector.

Filter Message

This item is displayed in the NC900 series. Sets the air filter replacement time (estimated). Once the configured time has elapsed, the error message "Filter Over Time" is displayed. This is set to "0" (do not display message) by default.

Unlit Mode

Sets the projector operation when the lamp does not light up for some reason.

Cooling	If the lamp does not light up, perform cooling and then shutdown the projector.
Lamp Off	If the lamp does not light up, switch to the Lamp-Off state. (Default setting)

Factory Default

This item is displayed in the NC3240, NC3200, NC2000, and NC1200 series.  
Resets all adjustment and setting values stored to the projector and all registered titles and preset button assignment to the statuses when shipped from the factory.

P Button & Title	Resets the preset button assignment and all registered titles.
All	Resets all data.

**NOTE**

- Do not use this function usually.
- Files previously deleted or rewritten cannot be restored.

## GPIO

Press the "Setting" button in the GPIO field of the SETUP screen (Setup) to display the GPIO Setting screen. You can change the function that is allocated to the GPIO port of the projector, the timing with which GPIO control is executed, etc. from this screen. Refer to the user's manual of the projector for details on the GPIO port.

No.0 to No.15	Allocates functions to GPI1 (EXT_GPIN1) to GPI4 (EXT_GPIN4). Refer to the following page for details on the correspondence between the setting number (No.0 to No.15) and GPI (EXT_GPIN).
GPO_1 to GPO_4	Allocates functions to EXT_GPOUT1 to EXT_GPOUT4.
Projector Heartbeat	Sets the heartbeat output interval.
"Heartbeat stop in cooling and standby" checkbox	Sets whether to output or not output heartbeats during cooling and standby. <ul style="list-style-type: none"> <li>• Checked: Does not output heartbeats during cooling and standby.</li> <li>• Not checked: Outputs heartbeats during cooling and standby.</li> </ul>
Ready/Busy Bit Assign	Configures the logic setting of the Ready/Busy bit of the GPIO control.
Projector Error Status Bit Assign	Configures the logic setting of the error status bit of the projector.
"Error Status List Setup" button	Displays the Error Status List screen. (See page 134) Sets the output messages that turn on the Error Status Bit.
IMB Play/End Status Bit Assign	Configures the logic setting of the bit for confirming the status of media block operation.
Idle effective pulse width	Configures the OFF pulse width that is required before inputting an ON pulse.
Each Function effective pulse width	Configures the pulse width after an ON pulse is input until the GPIO function is executed.
"OK" button	Applies the settings that have been selected.
"Cancel" button	Cancels the settings and returns to the previous screen.

## Menu Functions [For Projector Operation]

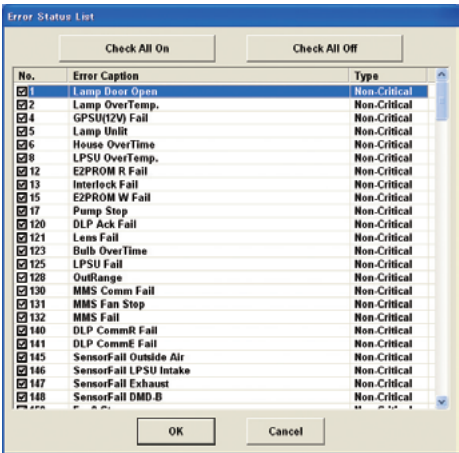
The correspondence between setting number (No.0 to No.15) and GPI (EXT\_GPIN) is shown in the following table.

No.	GPI4 (EXT_GPIN4) (Pin No. 8-27)	GPI3 (EXT_GPIN3) (Pin No. 7-26)	GPI2 (EXT_GPIN2) (Pin No. 6-25)	GPI1 (EXT_GPIN1) (Pin No. 5-24)
0	OFF	OFF	OFF	OFF
1	OFF	OFF	OFF	ON
2	OFF	OFF	ON	OFF
3	OFF	OFF	ON	ON
4	OFF	ON	OFF	OFF
5	OFF	ON	OFF	ON
6	OFF	ON	ON	OFF
7	OFF	ON	ON	ON
8	ON	OFF	OFF	OFF
9	ON	OFF	OFF	ON
10	ON	OFF	ON	OFF
11	ON	OFF	ON	ON
12	ON	ON	OFF	OFF
13	ON	ON	OFF	ON
14	ON	ON	ON	OFF
15	ON	ON	ON	ON

### Error Status List Screen

Press the “Error Status List Setup” button in the GPIO Setting screen to display the Error Status List screen.

This screen sets the error messages that turn on the Projector Error Status Bit. If an error occurs where the check box for the error message is set to on, the Projector Error Status Bit is turned on. By default, all of the error messages are set to on.



“Check All On” button	Selects all of the items.
“Check All Off” button	Clears all of the items.
“OK” button	Confirms the settings.
“Cancel” button	Cancels the settings and returns to the previous screen.

**Auto Key Lock**

Automatically locks the control buttons on your projector so that they cannot be used. When the auto key lock function is enabled, the key lock is set under the following conditions.

- When the projector enters the standby state, the key lock is activated.
- When no operations are performed on the control panel of the projector main unit for 30 seconds or more, the key lock is activated.

If you press the KEY LOCK button on the projector for one second or longer, the key lock is cleared, but the key lock is automatically locked applied again if the key lock conditions are satisfied.

Disable	Disables the auto key lock function.
Enable	Enables the auto key lock function.

**3D Connector**

Selects the port for 3D video systems used as the control signal input/output for the 3D video system.

If you select "Not Use", the GP I/O port is used as the control signal input/output for the 3D video system.

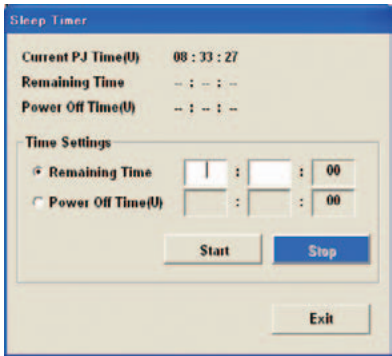
Not Use	Does not use the 3D port as the control signal input/output for the 3D video system (uses the GP I/O port).
Use	Uses the 3D port as the control signal input/output for the 3D video system.

Sleep Timer

Allows you to turn off the projector power after a specified time. You can select from the following two methods.

- Remaining Time  
Once the specified time has elapsed, the projector power is turned off.
- Power Off Time(U)  
Once the specified time (specified in UTC) is reached, the projector power is turned off.

Set the remaining time until the power is turned off or the time when the power is turned off and then click the “Start” button to begin operation. Click the “Stop” button to stop the timer.



Current PJ Time	Displays the time (UTC) on the clock built into the projector.
Remaining Time	Displays the remaining time until the power is turned off.
Power Off Time	Displays the time (UTC) when the power is turned off.
Time Settings	Sets the method of turning off the power.
Remaining Time	Once the "configured time" has elapsed, the projector power is turned off.
Power Off Time(U)	Once the "configured time" is reached, the projector power is turned off.
"Start" button	Enables the timer.
"Stop" button	Disables the timer.
"Exit" button	Returns to the previous screen.



### 3-9-2. SETUP Screen (Installation)

Press the "Installation" button on the SETUP screen to display the SETUP screen (Installation).

The SETUP screen (Installation) is used to configure the settings required when the projector is installed, change the pass-codes, adjust the lens center, calibrate the lens, and perform maintenance on the IMB and Enigma.



#### Image Orient

This item is displayed in the NC3240, NC3200, NC2000, and NC1200 series.

Make a selection according to the setup position of your projector and screen.

Normal-F	Projection is made from front of the screen.
Normal-R	Projection is made from behind the screen

Orientation

This item is displayed in the NC900 series. It contains the following settings.

- Image Orient: Selects the projection method to match the installation conditions of the projector and screen.
- Fan Tilt Setting: Adjusts the position of the cooling fan to match the installation conditions.

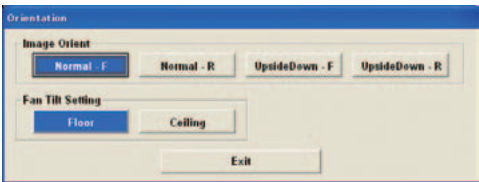


Image Orient	Normal-F	Installed on a stand or similar and projecting from the front of the screen.
	Normal-R	Installed on a stand or similar and projecting from the rear of the screen.
	UpsideDown-F	Installed on the ceiling and projecting from the front of the screen.
	UpsideDown-R	Installed on the ceiling and projecting from the rear of the screen.
Fan Tilt Setting	Floor	Select when the projector is installed on a stand or similar.
	Ceiling	Select when the projector is installed on the ceiling.
"Exit" button		Returns to the previous screen.

**NOTE** Always check that the Fan Tilt Setting is configured appropriately for the projector installation conditions. If the Fan Tilt Setting differs from the projector installation conditions, the lamp will heat up, and this may cause it to shatter or break.

## Fan Speed Mode

This item is displayed in the NC900 series. It sets the rotation speed of the cooling fan.



Auto	Operates the fan at the appropriate rotation speed to suit the temperature inside the projector.
High Speed	The fan always rotates at high speed. Configure this setting when using the projector continuously for several days.
High Altitude	Configure this setting when using the projector in a location at an altitude of approximately 1600m/5280 feet or higher.
"Exit" button	Returns to the previous screen.

### NOTE

- Always select "High Speed" if you are using the projector continuously for several days.
- Always set the fan mode to "High Altitude" if you are using the projector in a location at an altitude of approximately 1600m or higher. If you do not select "High Altitude", the interior of the projector will heat up, causing damage.
- If you using the projector at high elevations at altitudes of approximately 1600m or higher without setting the fan mode to "High Altitude", the temperature protector may activate and automatically turn off the power. Furthermore, since the lamp temperature rises after the lamp is turned off, the temperature protector may activate and the power may not be able to be turned on. If this happens, wait for a while before turning on the power.
- If the projector is used at low elevations (altitudes less than approximately 1600m) with "High Altitude" selected, the lamp may become over cooled and the screen may flicker.
- The time until replacement of internal components (lamps, etc.) may be reduced when used at high elevations.

## Baudrate

To select the transmission speed (bps) for your projector (SYSTEM) and a PC when they are connected by a commercially available RS-232C straight cable. Select one from 4800, 9600, 19200 and 38400. Select the transfer speed corresponding to the speed of the connected devices.

## Date/Time

Use this to set the date and time on the projector.

The internal clock in the projector operates on coordinated universal time (UTC). You can set the internal projector time to the time in your region by setting the time difference between the standard time in your region and UTC.

UTC Time	Displays the universal coordinated time.
Projector Time	Displays the date and time of the projector main unit.
Adj.	Adjusts the projector time in units of one hour. ▲: Adds one hour. ▼: Subtracts one hour.
"PC Local" button	Sets the projector time to the time on the PC.
"Apply" button	Updates it in the changed Date/Time.

Language (DCC)

Select a language that is displayed on the menu. The menu language of this software(DCC) is switched (Only the English language is supported as the menu language of the projector main unit).

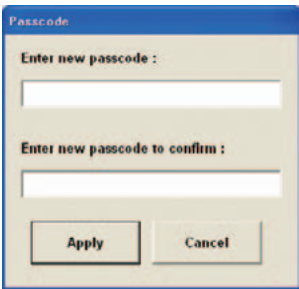


English	Displays in English.
中文	Displays in Chinese (simplified characters).
Russian	Displays in Russian.
日本語	Displays in Japanese.
Espanha	Displays in Spanish.
Portugal	Displays in Portuguese.
"OK" button	Changes the language selected as the language to display in the DCC menus.
"Cancel" button	Abandons the settings and returns to the previous screen.

**TIP** If a Chinese font or Japanese font (MS Gothic) is not installed on your PC, then displaying Chinese or Japanese is not supported and the [中文] button or [日本語] button is not displayed.

Passcode

Use this to change the pass code of the Installation mode, the Advanced User mode or the Service mode. The Service mode pass code can only be changed in Service mode.



Enter new passcode	Input new pass code.
Enter new passcode to confirm	Input new pass code to confirm.
"Apply" button	The new passcode is activated.
"Cancel" button	Abandons the settings and returns to the previous screen.

### New Router Setup

Use this to configure the initial settings of the router when replacing the router built into the projector.

### Lens Center

Press the "Execute" button to move the lens shift position to the center. The center position may slightly shift depending upon mounting conditions of the lens.

### Lens Calibrate

Calibrate Zoom and the Focus lens (support by the NC2000/1200 Series only).

Execute this function whenever replacing the lens.

### Convergence

This can be used when the DCC version is 3.3.0.1 or later and the system working version of the ICP board in the projector is Release Prod 3.2 or later.

Click the "Adjust" button to display the Convergence screen. The Convergence screen is used to adjust the electrical convergence of each of the R, G, and B. The adjustment range is 0 (no adjustment) to 3. This is set to 0 (no adjustment) by default.

### IMB Maintenance

This menu can only be used when the projector is turned on.

If the IMB Marriage has been cleared, the Marriage is initiated by performing Re-Marriage.

Press the "Re-Marriage" button to display the login window. Enter your ID and password to initiate the marriage. Please ask the service personnel for the ID and password.

**TIP** The following error message is displayed when in the non-marriage state.

584: IMB: Marriage NOT Active

### Enigma Re-Marriage

This menu can only be used when the projector is turned on.

#### • [Re-Marriage] button

If the Projector marriage has been cleared, it can be initiated by performing re-marriage.

Press the “Re-Marriage” button to display the login window. Enter your ID and password to initiate the marriage. Please ask the service personnel for the ID and password.

**TIP** The following error message is displayed when in the non-marriage state.  
484: Marriage NOT Active

#### • [Arm Tamper] button

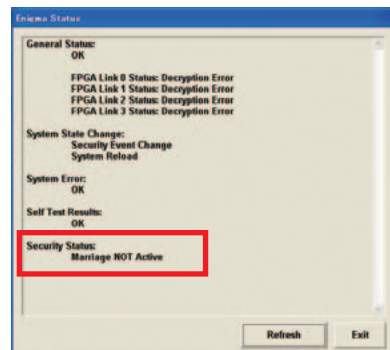
If the Enigma Security Tamper has become disabled for some reason, it can be restored to the active state by pressing the [Arm Tamper] button.

You can check if the Enigma Security Tamper has become disabled by using the following screen.

- **Error field in the INFO screen (Status)** (See page 107)  
→ “481: Security Enclosure Not Armed” is displayed.
- **Security Status field in the Enigma Status screen** (See page 128)  
→ “Security Enclosure Armed” is not displayed.



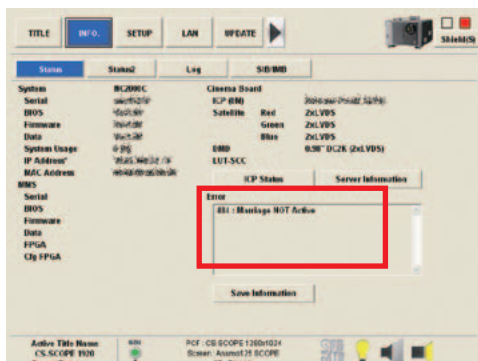
INFO screen (Status)



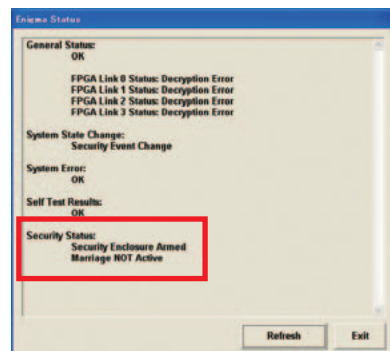
Enigma Status screen

In this case, press the [Arm Tamper] button to restore the Security Tamper to the active state.

When the Security Tamper is activated, the error message is cleared from the Error field in the INFO screen (Status). Furthermore, “Security Enclosure Armed” is displayed in the Security Status field in the Enigma Status screen.



INFO screen (Status)

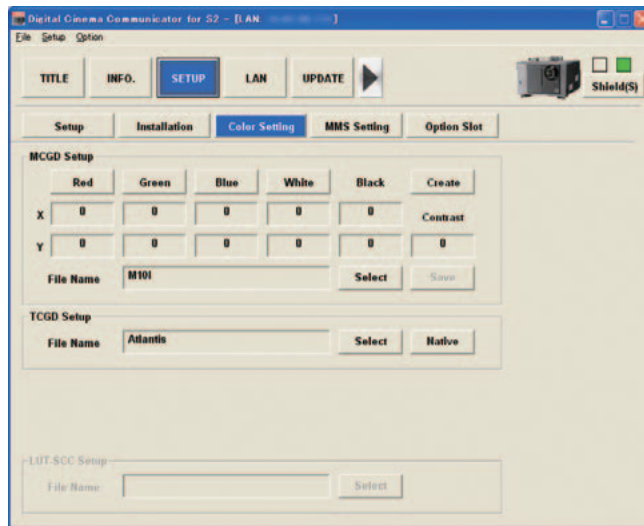


Enigma Status screen

### 3-9-3. SETUP Screen (Color Setting)

This screen can only be configured when the projector is turned on.

Press the “Color Setting” button on the SETUP screen to display the SETUP screen (Color Setting). This screen is used to adjust the colors. For details of the settings, see “2-3. Adjusting Colors” (page 24).



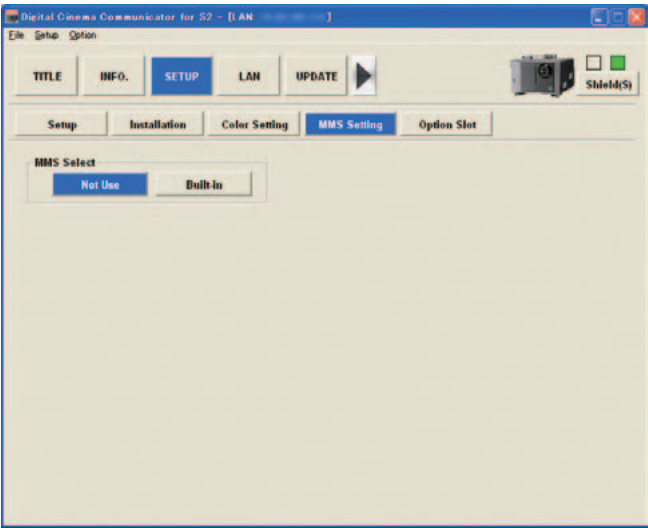
MCGD Setup		Used for the MCGD settings.
	“Create” button	Start creating the MCGD data. Upon input completion, press the “Save As...” button to save the settings.
	“Select” button	Used to call an existing MCGD file. (See page 100)
TCGD Setup		Set a target color (TCGD). In Pospro mode, the TCGD Setup screen is displayed. On the TCGD Setup screen, more detail target color (TCGD) setup is enabled.
	“Native” button	Used for the Native color.
	“Select” button	Used to call an existing TCGD file. (See page 100)
LUT-SCC Setup		Displays the currently set LUT-SCC filename. It also allows the LUT-SCC file to be changed.
	“Select” button	Used when changing the LUT-SCC file.

**NOTE** LUT-SCC Setup can be used if the ICP board system working version is Release Prod 3.1 or later. To change the LUT-SCC file, follow the instructions of the service support department.

3-9-4. SETUP Screen (MMS Setting)

For NC3240/NC3200/NC2000/NC1200 series, press the “MMS Setting” button on the SETUP screen to display the SETUP screen (MMS Setting).  
This screen configures whether or not the MMS is used. Refer to “MM3000B Installation Manual” for the configuration procedure for using the MMS.

**NOTE** In DCC version 3.3.1.0 and later, the MMS Setting cannot be used. To use the MM3000B in DCC version 3.3.1.0 and later, select “MM3000B” in Slot A in the SETUP screen (Option Slot). (See page 145)



MMS Select		Select the “Built-in” when you use an optional multimedia switcher (MMS).
	“Not Use” button	Not to use MMS.
	“Built-in” button	To use the incorporated MMS (optional).

**TIP** For NC3240/NC3200/NC2000/NC1200 series, the following settings are required when using the MMS (if the DCC version is lower than 3.3.1.0).

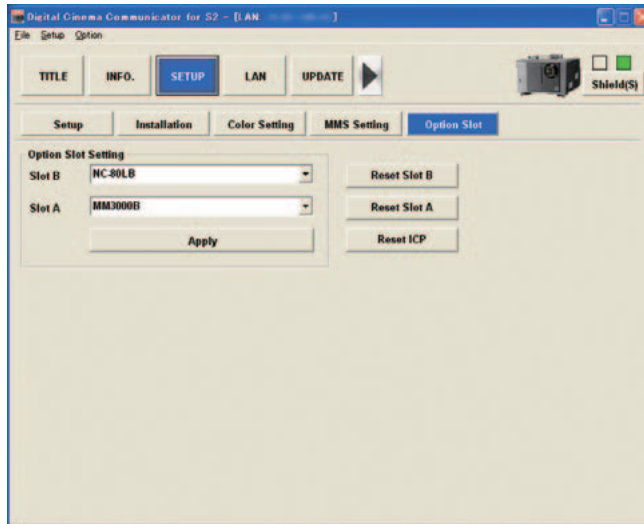
- SETUP screen (Option Slot): Selects “MM3000B” in slot A
- SETUP screen (MMS Setting): Selects “Built-in” in the MMS Select field



### 3-9-5. SETUP Screen (Option Slot)

Press the "Option Slot" button on the SETUP screen to display SETUP screen (Option Slot).

This screen configures the devices installed in slot A and slot B.



Option Slot Setting		Configures the devices mounted in slot A and slot B.
	Slot B	Selects the devices mounted in slot B. <ul style="list-style-type: none"> <li>• NC-80LB: Signal Input Board</li> <li>• NC-80DS: Signal Input Board</li> <li>• IMB: Image Media Block</li> <li>• No Board: (No devices are installed)</li> <li>• Not Available: Not Available (for NC900 series)</li> </ul>
	Slot A	Selects the devices mounted in slot A. <ul style="list-style-type: none"> <li>• NC-80LB: Signal Input Board</li> <li>• NC-80DS: Signal Input Board</li> <li>• IMB: Image Media Block</li> <li>• MM3000B: Multimedia Switcher</li> <li>• No Board: (No devices are installed)</li> </ul>
	"Apply" button	Applies the settings that have been selected.
"Reset Slot B" button		Resets slot B in an emergency. You should not normally use this. This cannot be used when the projector main unit is in the standby state. (Since Slot B is not available in the NC900 series, the "Reset Slot B" button cannot be used.)
"Reset Slot A" button		Resets slot A in an emergency. You should not normally use this. This cannot be used when the projector main unit is in the standby state.
"Reset Slot ICP" button		Resets the ICP board in an emergency. You should not normally use this. This cannot be used when the projector main unit is in the standby state.

**TIP** For NC3240/NC3200/NC2000/NC1200 series, the following settings are required when using the MMS.

**If the DCC version is 3.3.1.0 or later**

- SETUP screen (Option Slot): Selects "MM3000B" in slot A

**If the DCC version is lower than 3.3.1.0**

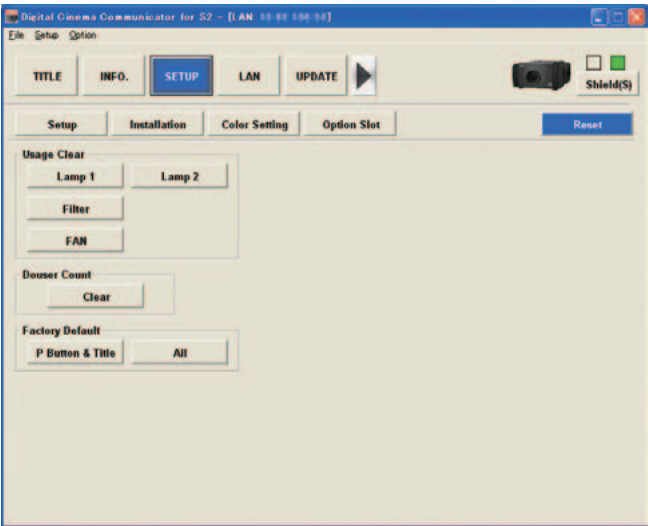
- SETUP screen (Option Slot): Selects "MM3000B" in slot A
- SETUP screen (MMS Setting): Selects "Built-in" in the MMS Select field

3-9-6. SETUP Screen (Reset)

In the NC900 series, pressing the “Reset” button in the SETUP Screen displays the SETUP Screen (Reset) screen. This screen is used to reset the lamp and air filter usage times and the number of times the douser has been opened and closed, and to return the projector settings to the factory default state.

The menus that can be used in the SETUP Screen (Reset) vary depending on the mode.

- Advanced User or User  
Only Lamp1, Lamp2, and Filter in Usage Clear can be used.
- Installation or Service  
All functions can be used.



Usage Clear		Clears the usage times and projector settings.
	Lamp 1	Clears the usage time of lamp 1.
	Lamp 2	Clears the usage time of lamp 2.
	Filter	Clears the usage time of the air filter.
	Setting	Clears the projector settings.
Douser Count		Press the “Clear” button to clear the number of times the douser has been opened and closed.
	“Clear” button	
Factory Default		Returns adjustment values that have been adjusted to the factory default settings for all adjustment and setting values recorded in the projector and all registered title and preset button assignments.
	P Button & Title	Resets the preset button allocations and all registered titles.
	All	Resets all data.

NOTE

- You should not normally use the Factory Default function.
- Deleted files and overwritten files cannot be recovered by executing the Factory Default function.

## 3-10. LAN Screen

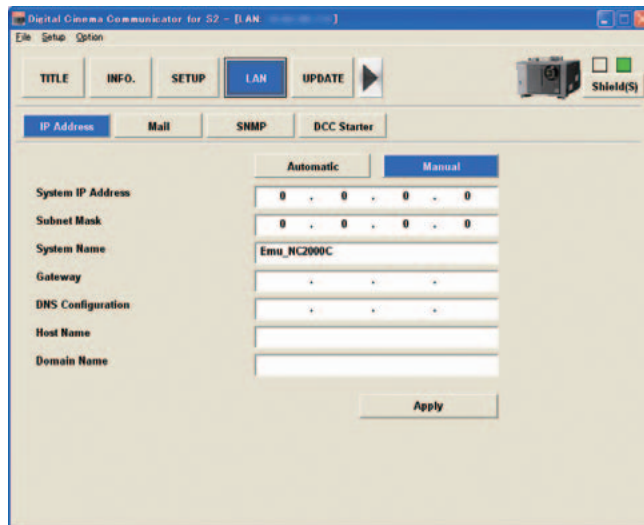
This menu is only available in the Installation or Service mode.

Display and setting are available even when the projector is in the standby status.

Press the "LAN" on the menu bar to display the LAN Screen.

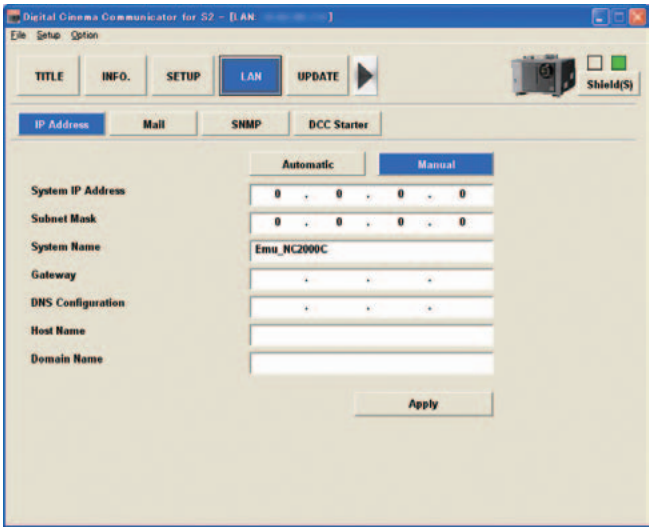
The "LAN" screen consists of windows below.

- IP Address: Used when making LAN settings of SYSTEM. (See next page)
- Mail: Used to set up mail function. (See page, 149)
- SNMP: Used to set up SNMP. (See page, 150)
- DCC Starter: Screen for setting the IP address for connecting from the computer to the projector using DCC Starter. (See page, 154)



3-10-1. LAN Screen (IP Address)

Press the “IP Address” button on the LAN screen to display the LAN (IP address) screen.  
This screen is used to configure the IP address of the projector main unit.

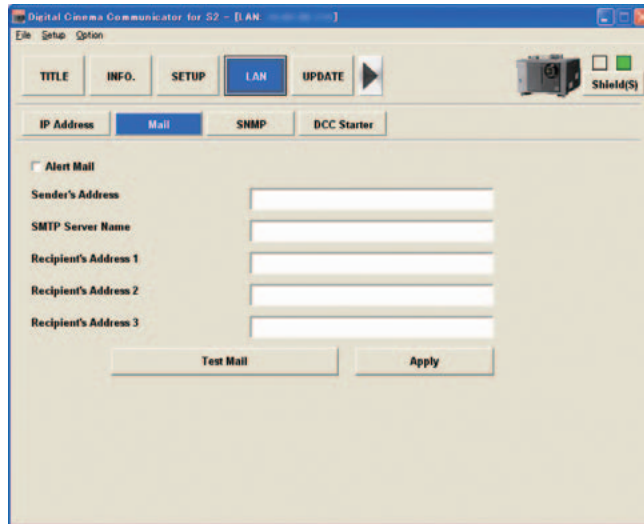


Automatic/Manual	Select Automatic if IP address is automatically assigned by a DHCP server through the network connected to your projector. If not, select Manual. In this case, you must make entries in the IP Address and Subnet Mask fields. Automatic: IP address, subnet mask and gateway are automatically assigned by a DHCP server. Manual: IP address, subnet mask, etc. are assigned by the network administrator. Entries are required.
System IP Address	Set/display the IP address of the projector main unit.
Subnet Mask	Set/display the subnet mask number.
System Name	To display/set the identification name of the system board on the network
Gateway	Set/display the default gateway of the network connected to the Projector.
DNS Configuration	Type in the IP address of DNS server on the network connected to the Projector.
Host Name	To display/set the identification name of the projector main unit on the network
Domain Name	Type in domain name of the network connected to the Projector.
"Apply" button	Used to apply the entered settings.

### 3-10-2. LAN Screen (Mail)

Press the "Mail" button on the LAN screen to display the LAN (Mail) screen.

This screen is used to configure the settings for sending projector status notifications by email.

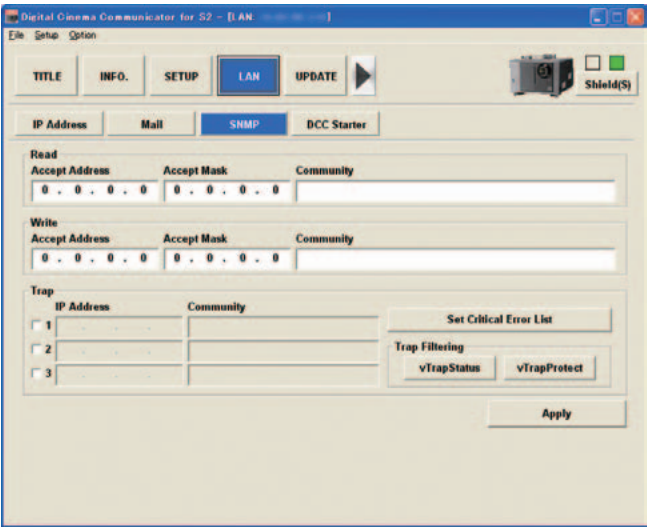


Alert Mail	<p>This option notifies your computer of an error message via email when using wireless or wired LAN.</p> <ul style="list-style-type: none"> <li>• Check On: To enable the mail notification function</li> <li>• Check off: To disable the mail notification function</li> </ul>
Sender's Address	Enter the sender's address for the email from your projector. This address is for "From:" of the email.
SMTP Server Name	Set the SMTP server of the network to which the projector is connected. The SMTP server should be set in IP address format. If it is set using the host name, the projector will not be able to connect to the SMTP server.
Recipient's Address 1 Recipient's Address 2 Recipient's Address 3	Enter the recipient's address for the email from your projector. You can set up to 3 recipient's addresses. This address is for "To:" of the email.
"Test Mail" button	Click on this button to check the email data you have entered above.
"Apply" button	Change contents are updated.

- NOTE**
- If the transmission error occurs or the mail fails to be delivered in Test Mail operation, check the LAN settings.
  - If the Recipient's Address is wrong, the transmission error may not occur. If the test mail is not delivered properly, check the Recipient's Address.

3-10-3. LAN Screen (SNMP)

Press the “SNMP” button on the LAN screen to display the LAN (SNMP) screen.  
This screen is used to configure Simple Network Management Protocol (SNMP) settings.



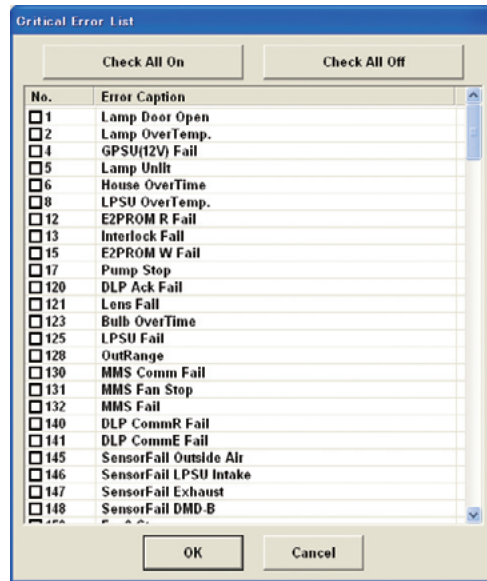
Read	Sets the IP address and the community name used for reading from the SNMP manager.	
Write	Sets the IP address and the community name used for writing from the SNMP manager.	
Trap	Sets the IP address and the community name of the Trap destination. You can specify 3 Trap destinations at most. <ul style="list-style-type: none"><li>• With check mark: To send Trap to the destination specified in the right space</li><li>• Without check mark: Not to send Trap to the destination specified in the right space</li></ul>	
	"Set Critical Error List" button	Sets the error message level. (See page 151)
	Trap Filtering	Configures the SNMP Trap send settings.
	"vTrapStatus" button	Configures an SNMP Trap to be sent when a particular event occurs in the projector (See page 152).
	"vTrapProtect" button	Sets the error messages that send an SNMP Trap. (See page 153)
"Apply" button		Change contents are updated.

TIP

- The access authority of the SNMP manager is checked as follows:  
((host IP Address:PC) AND (accept mask:setting)) == (accept address:setting) [Setting Example]
- The setting will be as follows when 192.168.10.\* group is allowed.  
accept address : 192.168.10.0  
accept mask : 255.255.255.0
- The setting will be as follows when 192.168.10.2 only is allowed.  
accept address : 192.168.10.2  
accept mask : 255.255.255.255
- The setting will be as follows if any SNMP manager is allowed.  
accept address : 0.0.0.0  
accept mask : 0.0.0.0
- The setting will be as follows if any SNMP manager is not allowed.  
accept address : 255.255.255.255  
accept mask : 255.255.255.255

**Critical Error List Screen**

Press the "Set Critical Error List" button on the LAN screen (SNMP) to display the Critical Error List screen. You can configure the levels of error messages by using this screen. If an error that has the check box selected occurs it is categorized as "Critical", and if an error that has the check box cleared occurs it is categorized as "Non-Critical". The default setting is for all of the check boxes to be cleared (Non-Critical).



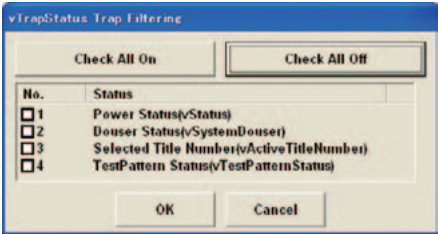
"Check All On" button	Selects all of the items.
"Check All Off" button	Clears all of the items.
"OK" button	Confirms the settings.
"Cancel" button	Cancels the settings and returns to the previous screen.

**vTrapStatus Trap Filtering Screen**

Press the “vTrapStatus” button in the LAN Screen (SNMP) to display the vTrapStatus Trap Filtering screen. This screen allows you to configure to send an SNMP Trap when a particular event occurs in the projector.

When an event where the check box is selected occurs, an SNMP Trap (Trap no. 2) is sent. When the check box is clear, the SNMP Trap is not sent.

Under the default settings, all of the check boxes are clear (do not send SNMP Traps).



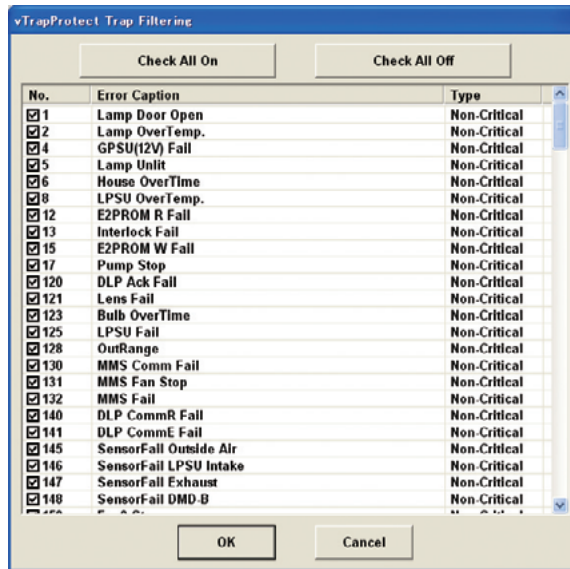
“Check All On” button	Selects all of the items.
“Check All Off” button	Clears all of the items.
Power Status (vStatus)	Sends an SNMP Trap when the projector power is turned on or off.
Douser Status (vSystemDouser)	Sends an SNMP Trap when the douser is opened or closed.
Selected Title Number (vActiveTitleNumber)	Sends an SNMP Trap when a title is selected.
TestPattern Status (vTestPatternStatus)	Sends an SNMP Trap when test pattern is selected.
“OK” button	Confirms the settings.
“Cancel” button	Cancels the settings and returns to the previous screen.



**vTrapProtect Trap Filtering Screen**

Press the "vTrapProtect" button on the LAN screen (SNMP) to display the vTrapProtect Trap Filtering screen. You can configure the error messages that send an SNMP Trap by using this screen. If an error that has check box selected occurs, an SNMP Trap (Trap number 2) is sent. If an error occurs that has the check box cleared, an SNMP Trap is not sent.

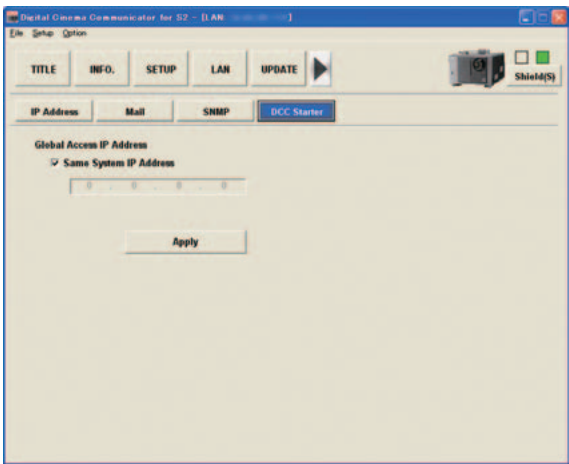
By default, all of the check boxes are set to on (send SNMP Trap).



"Check All On" button	Selects all of the items.
"Check All Off" button	Clears all of the items.
"OK" button	Confirms the settings.
"Cancel" button	Cancels the settings and returns to the previous screen.

3-10-4. LAN Screen (DCC Starter)

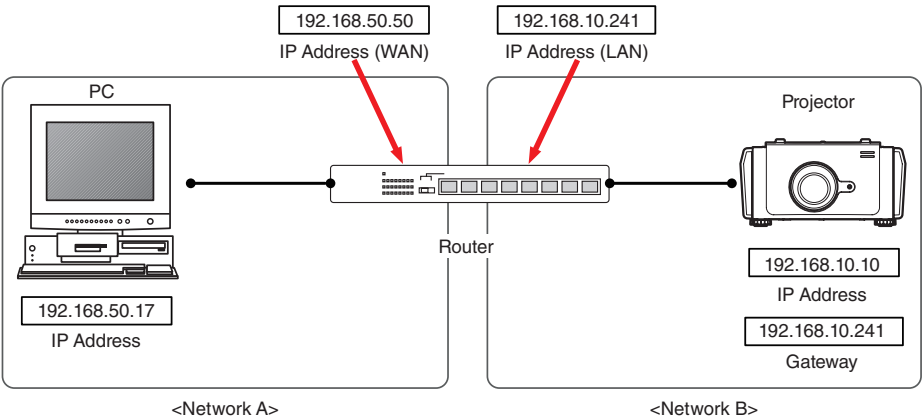
Press the “DCC Starter” button on the LAN screen to display the LAN (DCC Starter) screen.  
This screen is used to set the IP address when connecting to a projector using the DCC from Web browser when connecting between a computer and projector on different networks such as via a router.



Global Access IP Address	This is set when connecting to a projector starting the DCC from Web browser when connecting between a computer and projector on different networks such as via a router. This does not need to be set when the computer and projector are within the same network.	
Same System IP Address	• Check On:	The IP address of the projector main unit (System IP Address) is used. (By default, the check box is selected.)
	• Check Off:	Set an IP address different from the projector main unit (In the example settings on the next page, this is the IP address of the WAN side of the router).
"Apply" button	Used to apply the entered settings.	

Setting Example

When connecting from a PC in network A to a projector in network B, the Global Access IP Address is set to the WAN side IP address of the router “192.168.50.50”. When connecting to the projector using DCC Starter, the connection is made to the projector (IP address: 192.168.10.10) via the router (IP address: 192.168.50.50).



## 3-11. UPDATE Screen

This menu can be used in Service mode only. This menu can be displayed/set even if the projector main unit is in standby state.

When the "UPDATE" button in the menu bar is pressed, the UPDATE screen is displayed.



Backup to PC		Saves the Cinema file that is registered in this device in the PC.
	skip PNG Files	Check on this option when omitting backup of the PNG file.
	"Titles" button	Backs up the information for the 100 titles registered in the projector main unit and the files saved on the ICP board to a pre-specified folder. The index file that can be used by Restore is generated. Information on the lens memory and lamp memory is not saved.
	"All Cinema Files" button	Backs up all the files of the ICP board. At the same time, an Index file such as a batch file is generated. The index file that can be used by Restore is generated.
	"Set Settings" button	Backs up user setting information to a pre-specified folder. The index file that can be used by Restore is generated.
	"All" button	Backs up in one step all of the information backed up by the [Titles], [All Cinema Files], and [Set Settings] buttons. This should be used when the projector power is turned on.
Compare		Compares the cinema files on the ICP board registered in the projector with the cinema files backed up in the specified folder. (See page 158)
	"Compare Cinema File" button	The cinema files on the ICP board are compared to the cinema files backed up in the specified folder using the file names and timestamps of the files, and the result is displayed in the Compare screen.
Restore from PC		Restores the title information registered in the projector main unit, the cinema files in the ICP board, and the user settings information that was saved using Backup to PC.
	"skip MCGD Files" check box	Check on this option when omitting restoration of the MCGD file. Since some MCGD files are large, restoration requires a long time.
	"Restore" button	Reads the selected Index file and executes a restore.
Update		A collection of update related items.
	System Update	Writes the firmware and data of the NC projector in this device. (See page 166)
	"System Data" button	Executes updating of the system data of the CPU board.
	"System firmware" button	Executes updating of the firmware of the CPU board.

## Menu Functions [For Projector Operation]

	Slave	Only for NC900 series Writes the slave firmware. (See page 166)
	"Firmware" button	Executes an update of the slave firmware.
	ICP Update	Writes the firmware of the ICP board. (See page 166)
	"ICP firmware" button	Executes updating of the IPC board.
	SIB Update	Writes the firmware and FPGA of the signal input board. (See page 166)
	"Firm & FPGA" button	Executes updating of the signal input board.
	"EDID" button	Executes an EDID update of the signal input board.
	Enigma Update	Writes the firmware of the Enigma. (See page 166)
	"Enigma firmware" button	Executes updating of the Enigma.
	ICP / Enigma Update	Updates the Secure Data in the ICP board and Enigma. (See page 166)
Maintenance	"Secure Data" button	Executes updating of the secure data of the ICP board and the Enigma.
	Check Version	Checks whether or not the versions of the CPU board, ICP board, signal input board, Enigma on the projector main unit, projector built-in router, lens firmware, DCC, ICP configuration file match the specified versions. (See page 164) This also updates the firmware and data. (See page 166)
	"Check" button	Executes a check of the version information. This also updates the firmware and data.
	Maintenance	A collection of device maintenance and administration related items.
	Information Viewer	Checks the log file that was saved using "Save Information" (See page 160).
	"Information Viewer" button	Starts the Information Viewer.
	Setup Date	Configures the date when the projector was set up (starting date of the warranty period).
	"Setting" button	Configures the date when the projector was set up. This is used to copy from the backup information when new settings are created or boards are replaced.
	Enigma	This can only be used when the projector is turned on. Sets the internal clock of Enigma.
	"Enigma RTC" button	The internal clock of Enigma is set to the date and time of the PC.
	"Enigma Input" button	This can only be used when the projector is turned on. Temporarily disables the security circuit of the SDI input port of the signal input board (for debugging). This is cleared if any of the following conditions are met. <ul style="list-style-type: none"> <li>• A title is selected</li> <li>• The projector is turned off</li> <li>• SIB Reset is performed</li> </ul>
	Factory Test	Executes the inspection function that is used at the factory. You cannot normally use this. (This item is not displayed in the NC900 series.)
	"Maintenance" button	Executes the inspection function. You cannot normally use this.
	Debug Option	Acquires detailed information from the projector for investigating the cause when a problem occurs. When using this function, follow the directions of the technician from our company.
	Setting	
	"Macro File Tools" button	Starts the Macro File Tool. The Macro File Tool is used to confirm that the cinema files used by the titles registered in the projector main unit exist. Refer to the Service Manual for details.
	Signature Test	Configures whether to run (Enable) or not run (Disable) a wiring test (Datapath Signature Test) between the ICP board and FSB when the projector starts up. (This is set to Enable (run test) by default.)
	"Others" button	Executes the maintenance function that is used such as when a circuit board is replaced. When using this function, follow the directions of the service support division.

**TIP** The following function except "Update" can be used while the power is ON.

- Backup to PC
- Compare
- Restore from PC

### 3-11-1. Backing Up and Restoring Setting Information

You can backup the cinema file, title information, and projector setting information to a PC by using Backup to PC on the UPDATE screen. Setting information that has been backed up can be restored by using Restore from PC on the UPDATE screen.

#### Format of Index file names

The format of the Index file names that are automatically generated during a backup is as follows.

**<Projector model name> + <Main unit firmware version> + <Backup type>.txt**

Example: If the title information is backed up on an NC2000 series with firmware version 012345, an Index file named "nc20b-k012345idxT.txt" is created.

Projector model names	NC900 Series: nc7bk NC1200 Series: nc12bk NC2000 Series: nc20bk NC3200 Series: nc32bk NC3240 Series: nc40bk
Backup types	Titles: idxT All Cinema Files: idxC Set Settings: idxS All: idxA

#### Files and Setting Information that is Backed Up

Title information (Titles)	Backs up the title information that is registered in the projector and the Cinema files that are needed in order to display the titles.
Cinema file (All Cinema Files)	Files with the following file extensions that are saved on the ICP board are backed up (You can select whether or not to include PNG files in the backup). <div>.MACRO/.PCF/.MCGD/.SCREEN/.SOURCE/.3D/.PNG</div>
Setting information (Set Settings)	Backs up the user setting information (ncuser.bin).
Title information/Cinema file/Setting information (All)	Backs up the content of all of the above three items.

**NOTE** When you are executing backups, specify a different folder each time you execute the backup. If a backup file exists in the specified folder, the file is overwritten with the same name.

#### States Where Backup and Restore can be Performed

The projector states where backup and restore can be performed are shown in the following table.

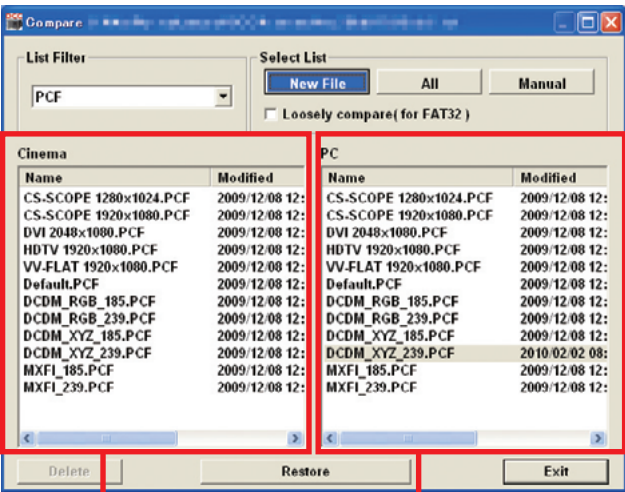
	Backup	Restore
Title information (Title: idxT)	Turned on state	
Cinema file (All Cinema Files: idxC)	Turned on state	
Setting information (Set Settings: idxS)	Standby state and power-on state	Standby state
Title information/Cinema file/Setting information (All: idxA)	Standby state and power-on state	

3-11-2. Comparing Cinema Files

Press the “Compare Cinema Files” button on the UPDATE screen to display the file selection screen. When you select the Index file created when the cinema files being compared were backed up, the Compare screen is displayed.

The cinema files on the ICP board registered in the projector are compared with the cinema files backed up in the specified folder by using this screen. Timestamps are used to compare the files.

Cinema file comparisons can only be used when the projector is turned on.



Cinema files in projector  
main unit

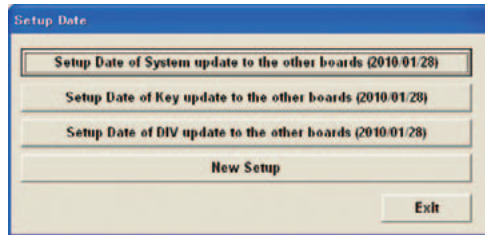
Cinema files backed up on  
PC

List Filter	Displays only files with the selected file extension.
Select List	Configures how files are selected on the PC.
"New File" button	Executes a cinema file comparison and selects all of the files where the timestamp is different.
"All" button	Selects all of the files on the PC.
"Manual" button	Allows you to select the files on the PC manually.
Loosely compare(for FAT32)	When this checkbox is selected, differences in the seconds part of the timestamps are ignored.
"Delete" button	Deletes the selected files from the projector.
"Restore" button	Transfers the files selected on the PC to the projector.
"Exit" button	Closes the Compare windows.

### 3-11-3. Setting the Setup Date of the Projector

Press the "Setting" button in the Setup Date field of the UPDATE screen to display the Setup Date screen.

This screen is used to set the setup date (warranty start date) of the projector. The projector setup date data is saved in three locations (CPU board, Key board, DIV board). If any of this data is lost, the record of the setup date can be restored from the remaining data. Always set the setup date to the same date.



"Setup Date of System update to the other boards" button	Restores the setup date on the CPU board. This is used when the CPU board is repaired or replaced.
"Setup Date of Key update to the other boards" button	Restores the setup date on the Key board. This is used when the Key board is repaired or replaced.
"Setup Date of DIV update to the other boards" button	Restores the setup date on the DIV board. This is used when the DIV board is repaired or replaced.
"New Setup" button	This is used to newly set the setup date. This sets the setup date on the CPU board, Key board, and DIV board to the current date. Do not use this except when installing the projector.
"Exit" button	Closes the Setup Date window.

### 3-11-4. Checking Log Files Using the Information Viewer

Press the “Information Viewer” button in the UPDATE screen to display the file selection screen.

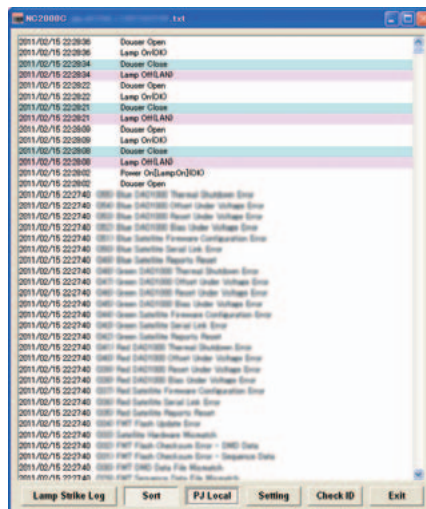
When you select a log file, the log is displayed in the Information Viewer. In the Information Viewer, you can use the following functions to easily check the log files.

- Sort and display logs in time order
- Switch the time in the logs between UTC and projector main unit time
- Highlight rows that contain specified keywords
- Check that log files have not been forged

In addition to the above, you can also check the number of times the lamp lit up and did not light up within the period of the log you are viewing (Lamp Strike Log).



State immediately after starting Information Viewer



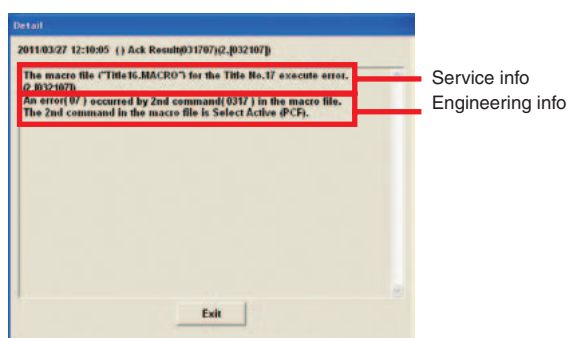
State with log sorting and highlighted display active

“Detail” button	<p>This is displayed when the DCC version is 3.3.1.0 or later.</p> <p>When the “Sort” button is pressed to display the logs in time series order, the “Detail” button becomes enabled if any of the following are selected.</p> <ul style="list-style-type: none"> <li>• Ack Result (031702)</li> <li>• Ack Result (031704)</li> <li>• Ack Result (031707) (*****)</li> </ul> <p>Click the “Detail” button to display the detailed information.</p>
“Lamp Strike Log” button	<p>Displays the Lamp Strike Log screen. (See page 161)</p> <p>Allows you to check the number of times the lamp lit up and did not light up within the period of the log you are viewing.</p>
“Sort” button	<p>Press this button to sort the logs in time order. Press the button again to return to the original display.</p>
“PJ Local” button	<p>When this button is pressed, the dates and times in the logs are displayed using the date and time of the projector.</p> <p>When the button is not pressed, the dates and times in the log are displayed in UTC.</p>
“Setting” button	<p>Displays the Display Pattern Setting screen. (See page 162)</p> <p>This is used to set the keywords for displaying rows highlighted.</p>
“Check ID” button	<p>Allows you to check that the log files have not been forged.</p> <p>If the logs have not been forged: “This file is trusted.”</p> <p>If it is possible that the logs have been forged: “There is a possibility that this file is falsified.”</p>
“Exit” button	<p>Exits the Information Viewer.</p>



### Ack Result Detailed Information

When the "Sort" button is pressed to display the logs in time series order, the "Detail" button becomes enabled if Ack Result (\*\*\*\*\*) is selected. At this time, click the "Detail" button to display the Ack Result detailed information. The displayed information contains information for service personnel and information for developers.



### Lamp Strike Log Screen

This screen allows you to check the number of times the lamp lit up and did not light up within the period of the log you are viewing.

If the lamp usage start or end times are not recorded in the log file you are viewing, the fields are displayed empty. Similarly, if the number of times the lamp lit up and did not light up are not definite, they are displayed enclosed in parentheses ( ).

Lamp Strike Log					
Bulb	from	to	Lamp On	Unlit	
DXL405N			(7)	(0)	
XB0-4000W/HPN	2011/02/15 22:25:51	2011/02/15 22:27:57	4	0	
NC-16LP401S	2011/02/15 22:27:57	2011/03/02 11:45:29	(4)	(0)	

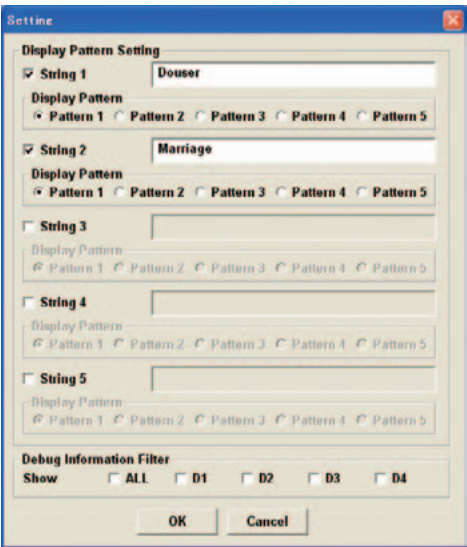
Log Range : 2012/02/08 00:00:00 - 2012/02/15 23:59:59

PJ Local Exit

Log Range	Displays the period of the log file you are viewing.
"PJ Local" button	When this button is pressed, the dates and times in the logs are displayed using the date and time of the projector. When the button is not pressed, the dates and times in the log are displayed in UTC.
"Exit" button	Exits the Lamp Strike Log screen.

Display Pattern Setting Screen

This screen is used to select the keywords and display pattern for displaying highlights in the logs.

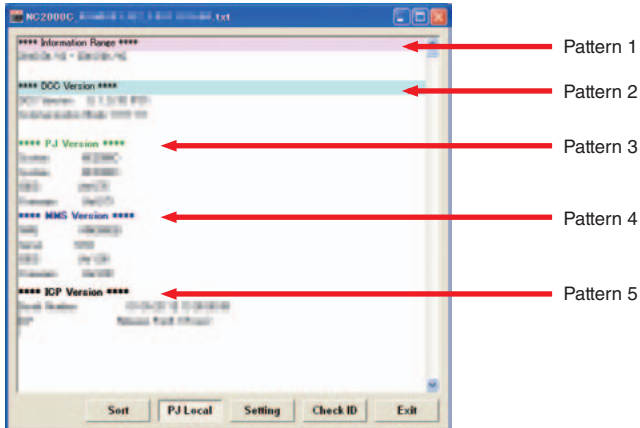


String 1 to String 5	When the checkbox is selected, you can set the keyword and highlight display pattern. Keywords are case sensitive.
Display Pattern	Selects the pattern for displaying rows highlighted.
Debug Information Filter	Configures the debug logs to display. Logs where the check box is selected are not displayed. D1: Douser Debug Log D2: Lens Memory Log D3: Lamp Memory Log D4: Title Select Log ALL: Hides all debug logs.
"OK" button	Displays the logs highlighted according to the configured settings.
"Cancel" button	Abandons the settings and returns to the Information Viewer.

**TIP**

The following shows an example display of the highlighted display.

- Pattern 1: The background color of the row is displayed pink.
- Pattern 2: The background color of the row is displayed cyan.
- Pattern 3: The text of the row is displayed bold and green.
- Pattern 4: The text of the row is displayed bold and deep blue.
- Pattern 5: The text of the row is displayed bold.



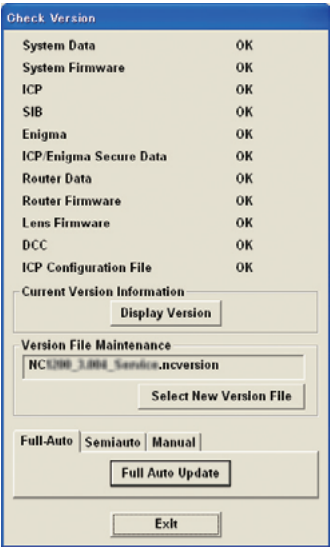
3-11-5. Checking the Version Information

Press the “Check” button in the Check Version field of the UPDATE screen to display the Check Version screen. You can check whether the version information of the projector CPU board, ICP board, built-in router, signal input board, Enigma, lens firmware, ICP configuration file, and DCC matches the version information defined in a Version File.

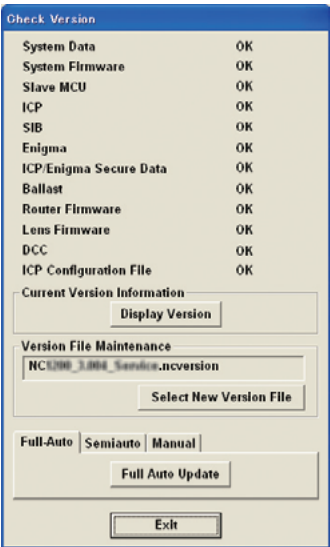
NOTE

- When you use this function the first time after installing the DCC, it will not operate properly since the Version File does not exist. Click the “Select New Version File” button and select the Version File. (See next page)
- Check that the start of the selected Version File is the same as the model name of the projector main unit. Example: For the NC3240S-A, check that the file is displayed as “NC3240-A\_\*.ncversion” (with the version number inserted for the asterisks \*).

- NC3240/NC3200/NC2000/NC1200 series



- NC900 series



System Version System Firmware Slave MCU (only for NC900 series) ICP SIB Enigma ICP/Enigma Secure Data Ballast (only for NC900 series) Router Data Router Firmware Lens Firmware (Only for NC2000/NC1200/ NC900 series) DCC ICP Configuration File	Displays the result of comparing the version information with the Version File.  OK: The versions match. Different: There are differences. ---: Not subject to comparison.  If the result is Different, it is possible that the Version File is not up to date. Use the most recent Version File to perform the check again.
Current Version Information	Displays the current version information of the projector CPU board, slave (NC900 series), ICP board, built-in router, signal input board, Enigma, lens firmware, ICP configuration file, and DCC
"Display Version" button	Displays the Display Version screen. Allows you to check the current version information of the projector CPU board, slave (NC900 series), ICP board, built-in router, signal input board, Enigma, lens firmware, ICP configuration file, and DCC.
Version File Maintenance	Displays the definition file (*.ncversion) that is read by DCC.
"Select New Version File" button	Sets the selected file as the new version file.
"Full-Auto" tab	Used for Full-Auto Update. (See page 167)
"Full Auto Update" button / "Update End" button	Begins Full-Auto Update. When the Full-Auto Update finishes, the button changes to "Update End". Click the "Update End" button to finish the Full-Auto Update (shuts down the projector).
"Semiauto" tab	Used for Semiauto Update. (See page 169)
"Semiauto Update" button / "Update End" button	Begins Semiauto Update. When the Semiauto Update finishes, the button changes to "Update End". Click the "Update End" button to finish the Semiauto Update (shuts down the projector).
"Manual" tab	Used for manual updating. (See page 173)
"Special Mode Boot" button	Starts the projector in special mode when executing an update.
"Special Mode Off" button	Exits special mode and starts the projector in normal mode when executing an update.
"Exit" button	Closes the Check Version screen.

### Changing the Version File

If the Check Version screen is displayed first or "File Open Error" is displayed in the Version File field, the version check is not operating correctly. Set the Version File using the following procedure.

Furthermore, if you are executing an update, you should set the Version File contained in the release package you obtained.

#### 1 Click the "Check" button in "Check Version" in the UPDATE screen.

The Check Version screen is displayed.

#### 2 Click the "Select New Version File" button.

The Version File (\*.ncversion) file selection screen is displayed.

#### 3 Select the latest Version File and click the "Open" button.

The current versions are compared with the version definitions in the selected Version File, and the check results are updated on the Check Version screen.

### 3-11-6. Updating the Firmware and Data

There are three methods for updating the firmware and data as follows.

**Full-Auto Update: (Page 167)**

Compares the versions in the definition file with the current devices, and only performs updates on devices that require an update. In the full-auto update, the user settings continue unchanged. You should normally use the full-auto update.

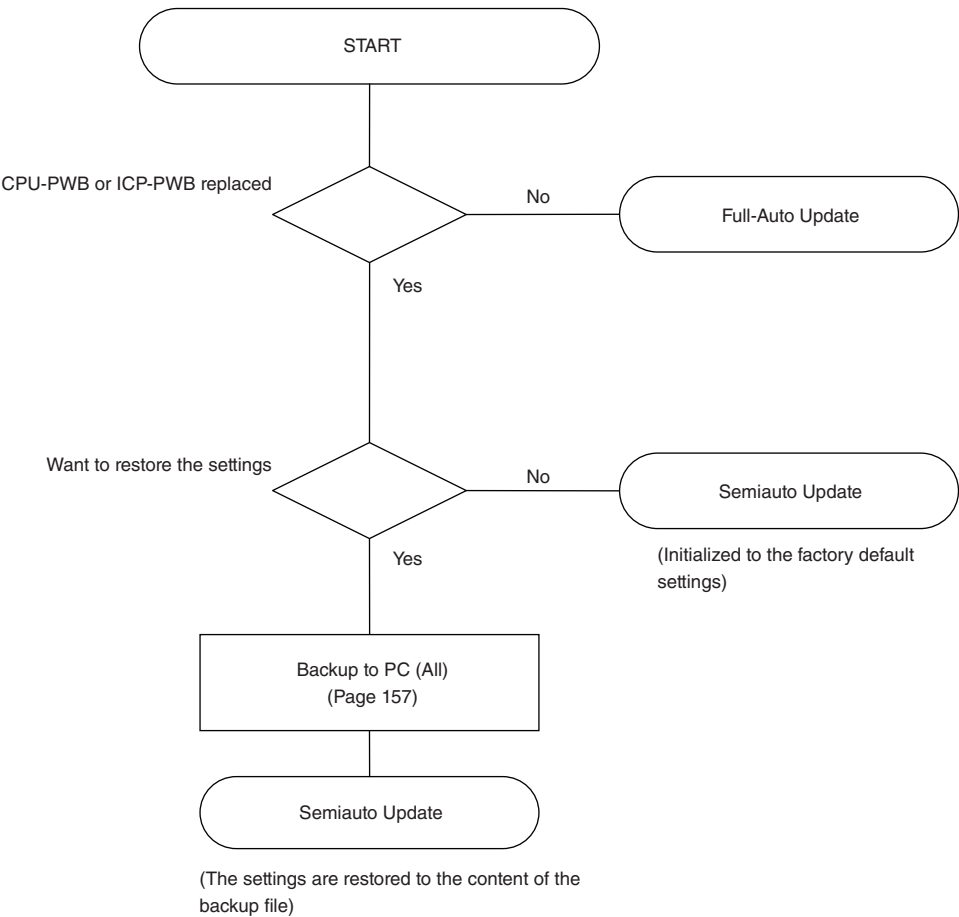
**Semiauto Update: (Page 169)**

This is used when replacing the CPU-PWB or ICP-PWB. It forcefully updates all of the devices to the latest version. In the semiauto update, although the settings are initialized to the factory default settings, the original settings can be restored by using a backup file (idxA) created in advance.

**Manual Update: (Page 173)**

Performs an update on each device.

The flow when using the full-auto update and semiauto update is shown below.



**Full-Auto Update****Preparation:**

- Obtain the latest release package (NC\_S2\_RP\*.\*\*.Service) and store it in a local drive on your computer.
- Change to the Version File contained in the release package (See page 165)
- Display the UPDATE screen.

**NOTE** Perform the update by adhering to the following warnings. If you do not adhere to these warnings, there is a risk that the projector will no longer be able to start correctly.

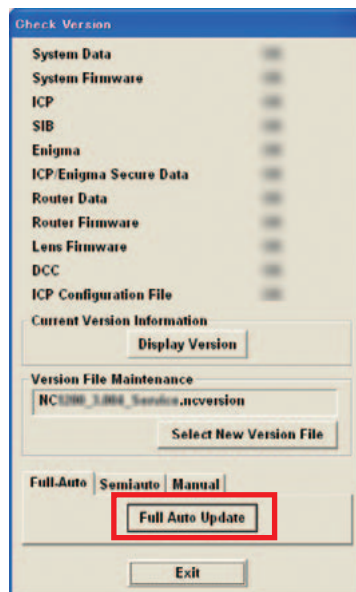
- Do not turn off the main power to the projector during the update.
- Do not turn off the PC during the update. Turn power saving functions off.
- Do not disconnect the LAN cable connecting the PC and projector main unit during the update.

**1** Click the “Check” button in “Check Version” in the UPDATE screen.

The Check Version screen is displayed.

**2** Click the “Full Auto Update” button in the “Full-Auto” tab.

The Full-Auto Update File (\*.ncrelease) selection screen is displayed.

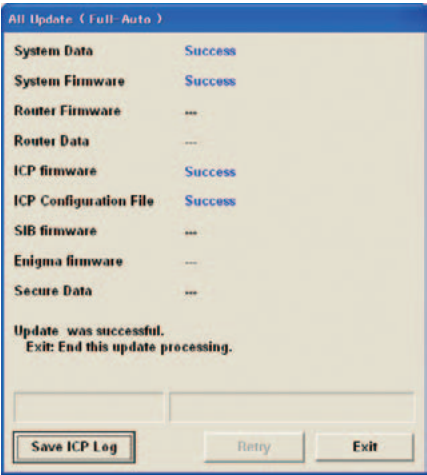


**3** Select the Full-Auto Update File and click the [Open] button.

A progress bar is displayed and the update begins. The update proceeds automatically. When the update has finished, the All Update screen is displayed.

**4** Check the results of the update.

If “Error” is not displayed, the update has completed successfully. Proceed to step 6.



Success	The update succeeded.
Error	The update failed.
"Save ICP Log" button	Saves the ICP installation log while the update was executing to a file.
"Retry" button	Executes the update again. This can only be used if the ICP firmware update has failed.
"Exit" button	Closes the All Update screen.

**If Error is displayed (the update has failed for the items where “Error” is displayed)**

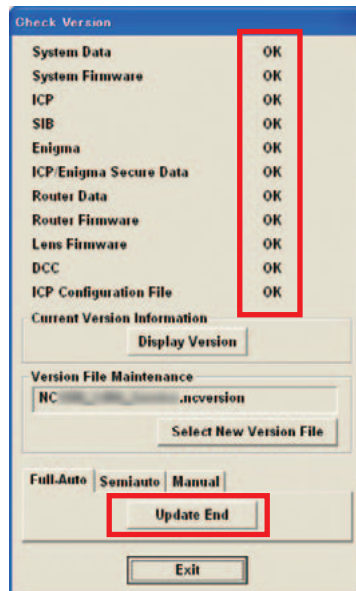
If the ICP firmware update fails, the “Retry” button is enabled. Click the “Retry” button to execute the update again. If the update fails again, click the “Save ICP Log” button to save the log from when the update was executed. After the log has been saved, click the “Exit” button to cancel the update. Next, contact your distributor (and provide them with the log you saved).

**5** Once the update is successful, click the “Exit” button.

The All Update screen closes.



- 6** Check that all of the Check Version results are “OK,” and then click the “Update End” button in the “Full-Auto” tab.



Once the projector enters standby mode, the update is complete.

#### If Different is displayed

Click the “Update End” button in the “Full-Auto” tab. When the projector enters standby mode, return to step 3 and execute the update again (excluding the Router Firmware and Lens Firmware).

### Semiauto Update

#### Preparation:

- Obtain the latest release package (NC\_S2\_RP\*.\*\*\_Service) and store it in a local drive on your computer.
- Change to the Version File contained in the release package (See page 165)
- Display the UPDATE screen.

**NOTE** Perform the update by adhering to the following warnings. If you do not adhere to these warnings, there is a risk that the projector will no longer be able to start correctly.

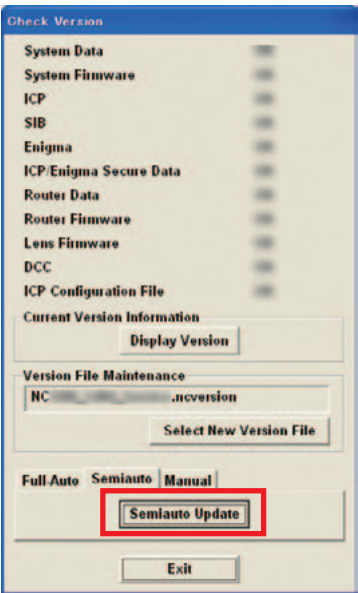
- Do not turn off the main power to the projector during the update.
- Do not turn off the PC during the update. Turn power saving functions off.
- Do not disconnect the LAN cable connecting the PC and projector main unit during the update.

- 1** Click the “Check” button in “Check Version” in the UPDATE screen.

The Check Version screen is displayed.

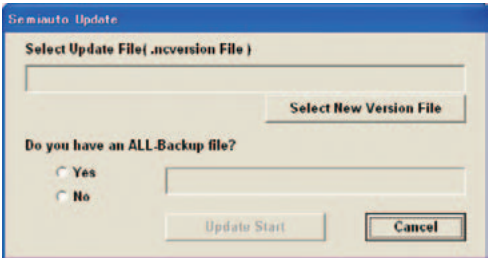
**2** Click the “Semiauto Update” button in the “Semiauto” tab.

The update confirmation screen is displayed.



**3** Click the [Yes] button on the confirmation screen.

The Semiauto Update screen is displayed.



"Select New Version File" button	Selects the Version File used for the update.
Do you have an ALL-Backup file?	Click [Yes] to restore the settings by using the backup file.
"Update Start" button	Starts the update.
"Cancel" button	Stops the update.

**4** Click the [Select New Version File] button.

The file selection screen is displayed. Select the Version File (\*.ncversion) and click the [Open] button to return to the Semiauto Update screen.

**5** To restore the settings using the backup file (All), select [Yes] in “Do you have an ALL-Backup file?”

The file selection screen is displayed. Select the index file where the backup type is “ALL (idxA)” and click the [Open] button to return to the Semiauto Update screen.

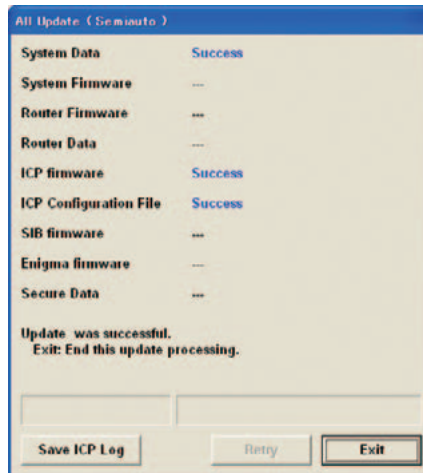
**TIP** To not restore the settings, select [No]. If you select [No], you are left with the factory default settings when the semiauto update finishes.

## 6 Click the [Update Start] button.

A progress bar is displayed and the update begins. The update proceeds automatically. When the update has finished, the All Update screen is displayed.

## 7 Check the results of the update.

If "Error" is not displayed, the update has completed successfully. Proceed to step 6.



Success	The update succeeded.
Error	The update failed.
"Save ICP Log" button	Saves the ICP installation log while the update was executing to a file.
"Retry" button	Executes the update again. This can only be used if the ICP firmware update has failed.
"Exit" button	Closes the All Update screen.

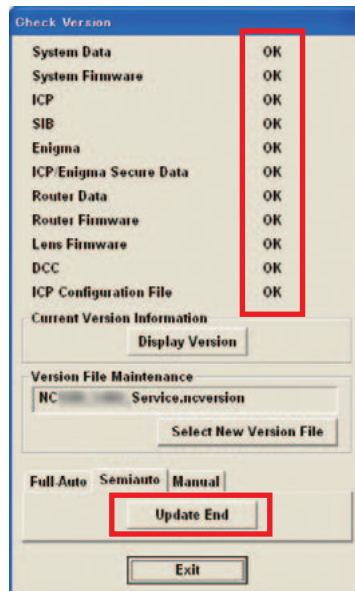
### If Error is displayed (the update has failed for the items where "Error" is displayed)

If the ICP firmware update fails, the "Retry" button is enabled. Click the "Retry" button to execute the update again. If the update fails again, click the "Save ICP Log" button to save the log from when the update was executed. After the log has been saved, click the "Exit" button to cancel the update. Next, contact your distributor (and provide them with the log you saved).

## 8 Once the update is successful, click the "Exit" button.

The All Update screen closes.

- 9** Check that all of the Check Version results are “OK,” and then click the “Update End” button in the “Semiauto” tab.



Once the projector enters standby mode, the update is complete.

### If Different is displayed

Click the “Update End” button in the “Semiauto” tab. When the projector enters standby mode, return to step 3 and execute the update again (excluding the Router Firmware and Lens Firmware).

## Manual Update

### Preparation:

- Obtain the latest release package (NC\_S2\_RP\*.\*\*.Service) and store it in the local drive of the personal computer.
- Turn off the power of the projector and set the device to a standby state.
- Display the UPDATE screen.

### NOTE

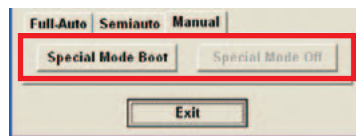
- Set the projector to the standby state before updating the firmware. The firmware cannot be updated while the power is ON.
- For EDID update, following the instructions of the service support department. To update the EDID, the SIB firmware and FPGA need to be updated to the latest version in advance.
- Perform the update by adhering to the following warnings. If you do not adhere to these warnings, there is a risk that the projector will no longer be able to start correctly.
  - Do not turn off the projector until updating is completed.
  - Do not turn off the PC during the update. Furthermore, turn off the power saving function.
  - Do not disconnect the LAN cable connecting the PC and projector main unit during the update.

### About Special Mode

Updates to devices with the exception of the CPU board are performed by putting the projector in Special Mode.

The projector is put into Special Mode from the "Manual" tab on the Check Version screen (see page 164).

- Switching to Special Mode: Click the "Special Mode Boot" button
- Returning to normal mode: Click the "Special Mode Off" button  
(The projector shuts down)



### 1 If you are updating a device other than the CPU board, put the projector into Special Mode.

If you are updating the CPU board, there is not need to switch to Special Mode. (See page 173)

### 2 Click the button of update to use in the UPDATE screen.

A file selection screen is displayed.

The buttons of the updates that are used are shown in the following table.

CPU board	System Firmware	System Update "System firmware" button
	System Data	System Update "System Data" button
Slave	Firmware	Slave "Firmware" button
ICP board	Firmware	ICP Update "ICP firmware" button
Signal input board	Firmware & FPGA	SIB Update "Firm & FPGA" button
	EDID	SIB Update "EDID" button
Enigma	Firmware	Enigma Update "Enigma firmware" button
ICP board/Enigma	Secure Data	ICP/Enigma Update "Secure Data" button

**3** Select the appropriate file from the folder where files that are used for updates are saved.

A progress bar is displayed and firmware updating starts. The following message is displayed on the screen when the update is complete.

CPU board	System Firmware	"System firmware update complete."
	System Data	"Update requires rebooting the projector."
Slave	Firmware	"Update Slave MCU Firmware was Successful."
ICP board	Firmware	"Update Release <version no.> was successful."
Signal input board	Firmware & FPGA	"Update Result: Success"
	EDiD	"Result: Success New Version: <version no.>"
Enigma	Firmware	"Update Result: Success"
ICP board/Enigma	Secure Data	"Update Result: Success"

**4** If you are updating a device other than the CPU board, return from Special Mode to normal mode.

When returning to normal mode, the projector main unit shuts down. (See page 173)

**3-11-7. Macro File Tools**

Starts the Macro File Tool. The Macro File Tool is used to confirm that the cinema files used by the titles registered in the projector main unit exist. Refer to the Service Manual for details.

**3-11-8. Others**

Press the [Other] button to in the UPDATE screen to display the Maintenance Others screen. The Maintenance Others screen allows you to use a variety of maintenance functions. Use as required by following the directions of the service support department.

**S/N Maintenance**

This function can be used with DCC version 3.3.1.0 and later.

If you have replaced any of the circuit boards in the projector (CPU board, Key board, PJDIV board) such as due to faults, always execute this function and execute serial number maintenance.

NOTE

- Always execute this function before turning the projector power on. If you turn the projector on before executing this function, the serial numbers may change.
- Do not change the projector settings (LAN settings, slot setting, date/time settings, etc.) before executing this function.

- 1** Put the projector into standby mode.
- 2** Set the IP address of the computer to an IP address in the same network as the projector.
- 3** Start the DCC and change to Service mode.
- 4** In the UPDATE screen, click the [Others] button.  
The Maintenance Others screen is displayed.
- 5** In the Maintenance Others screen, click the [Check] button in S/N Maintenance.

The S/N Maintenance screen is displayed. A list of the serial numbers and projector usage times are displayed in the S/N Maintenance screen.

- 6** Check the serial number label of the projector, select the serial number that is the same as the projector, and click the [Execute] button.

A confirmation screen is displayed.

- 7** Check the serial numbers and projector usage times, and click the [Yes] button.

Writing the serial numbers begins. Once it has finished, "Result: OK" is displayed in the S/N Maintenance screen.

**TIP** You can return to the serial number list screen only once by clicking the [Undo] button.

- 8** Click the [Exit] button.

The serial number maintenance screen closes.

#### Read Cert Tool

When DCC version 4.0.0.0 or later is installed, ReadCert.exe is installed at the same time. Click the [Read Cert Tool] button to execute ReadCert.exe. Refer to the service manual for details.

#### FMT Reset Recovery

When set to Enable, if a Satellite Link Error or Report Reset occurs in the projector while projecting a movie, software recovery (Formatter Subsystem Reset) is executed automatically.

This is set to Disable by default, and software recovery is not executed automatically.

**NOTE** The NC900 series does not support this function.

#### Slave Data Restore

This menu can only be used in the NC900 series. It restores the data from a previously used slave board onto a new slave board. This is used when the slave board is replaced such as for repairs.

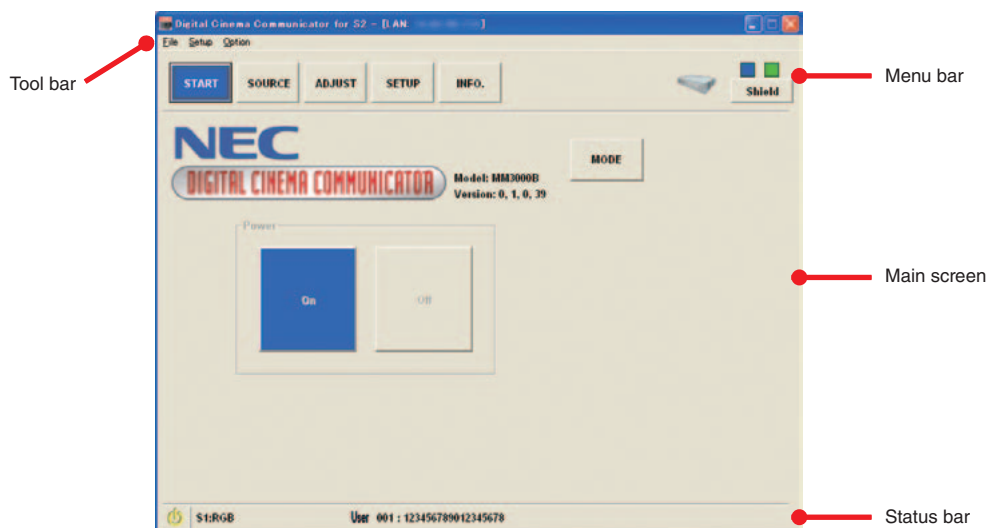
## 4. Menu Functions [For MMS Operation]

This chapter describes the menu functions of multimedia switcher (MMS) operation.

See “3. Menu Functions [For Projector Operation]” (page 66) for the projector operation menus.

### 4-1. Basic Screen

The screen configuration of the DCC is as follows. Refer to “1-5. Description of the Sections in the screen” (page 13) for details on the functions of each section.





## 4-2. MMS Operation Menu List

Menus in parentheses are those for our service personnel.

Menus with (\*) are those planned to be supported in future. (Not currently supported)

Menu	Submenu		Description	Ref. page
START	MODE		To change the menu mode.	178
SOURCE	Input Terminal		To select the input terminal.	180
	Test Pattern (*)		This is a function for the output inspection.	180
	Entry List		Use this function to display and edit the list of the signals registered to the switcher.	181
	Default List (*)		Use this to display the list of signals registered to the switcher in default setting.	190
ADJUST	Picture	Brightness	Adjusts the brightness level or the back raster intensity.	192
		Contrast	Adjusts the intensity of the image according to the incoming signal.	
		Color	Increases or decreases the color saturation level.	
		Hue	Varies the color level from +/- green to +/-blue. The red level is used as reference.	
		Sharpness	Controls the detail of the image.	
	Input Settings	Page 1 of 6	Input Position	193
			Input Resolution	
		Page 2 of 6	Setup Level	194
			"7.5 IRE" must be chosen to project products manufactured in USA.	
		Page 3 of 6	Pixel Adjust	195
			Clamp Timing	
			Signal Type	
		Page 4 of 6	Sync Protection	196
			VD Delay	
		Page 5 of 6	Y/C Delay	197
			3D Y/C Separation	
			Video Filter	
		Page 6 of 6	Equalizer	198
	Resize	Page 1 of 2	Resolution	199
			Aspect Ratio	
			Overscan	
		Page 2 of 2	(Zoom)	201
			Anamorphic factor	
	Options	Page 1 of 3	Noise Reduction	202
			Select Color Matrix	
			Contrast Enhancement	
		Page 2 of 3	Blanking	203
		Page 3 of 3	Signal Level	204
			(Synchronize)	
			(De-Interlacing)	

Menu	Submenu		Description	Ref. page
SETUP	Page 1 of 3	Background	To display a black screen or logo when no signal is available.	205
		Factory Default	To reset the adjusted values to those at the shipment from the factory.	
		Sync Termination(RGB)	To select the impedance of RGB input terminal.	
		Passcode	To configure the passcodes of the Installation mode of the multi media switcher.	
	Page 2 of 3	Auto Adjust	To set whether the display position and pixel shift are automatically adjusted.	207
		Communication Speed	To set the serial communications of the switcher. Cannot be used on the MM3000B.	
		Output Timing	To select the form of the output signal.	
		(Output Resolution)	To select the display resolution.	
	Page 3 of 3	Keystone (*)	To adjust the keystone correction.	208
		Auto White	To automatically adjust the input level of the RGB input signal.	
INFO.	Source Info.		To display the information of the input signal.	209
	MMS Info.		To check the version information of firmware or the like.	

## 4-3. START Screen

When DCC is activated and the “START” button on the menu bar is pressed, the START screen is displayed.  
On the START screen, you can change the user mode. Refer to “1-6-3. Changing the menu mode” (page 18) for details on changing the mode.



“MODE” button	This button changes the menu mode.
---------------	------------------------------------

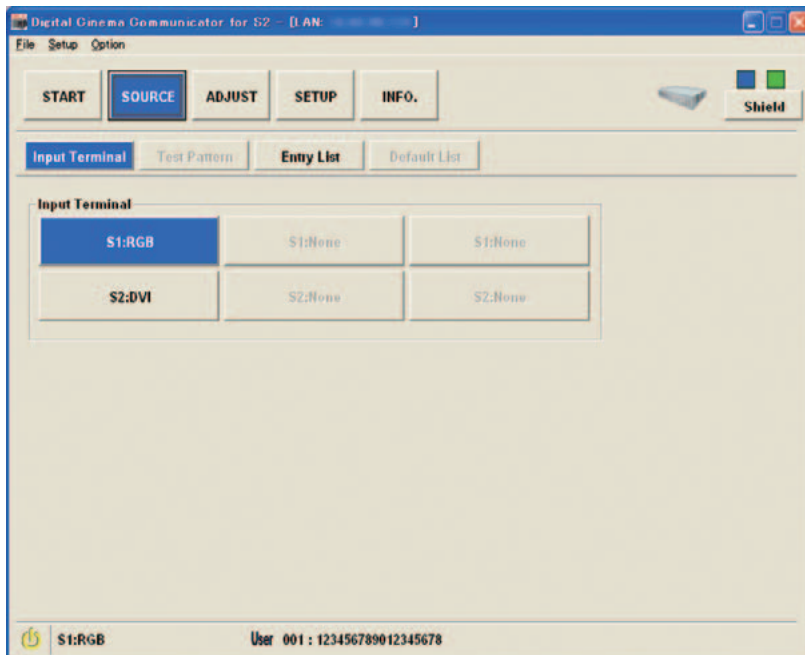
## 4-4. SOURCE Screen

When the "SOURCE" button on the menu bar is pressed, the SOURCE screen is displayed.

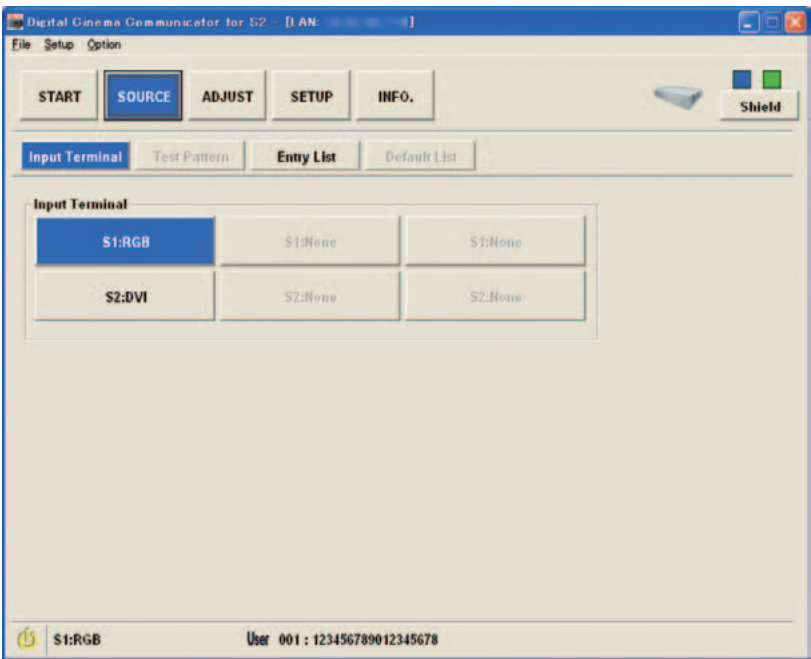
On the SOURCE screen, you can select an input terminal.

The SOURCE screen comprises the following four screens.

- Input Terminal: Selects an input terminal used for projection. (See next page)
- Test Pattern: Outputs test pattern. (See next page) **[Not currently supported]**
- Entry List: This screen registers in the multimedia switcher memory the adjustment values of the signals that are being projected as the signal list. The signal list that has been registered in the multimedia switcher is displayed/set. (See page 181)
- Default List: Displays a list at multimedia switcher shipment. (See page 190) **[Not currently supported]**



4-4-1. SOURCE Screen (Input Terminal)



Use this menu to select the input terminal for projection. The currently selected input terminal has the button name displayed in blue.

S1 to S2 are for Slot 1 to Slot 2 in the back view below.

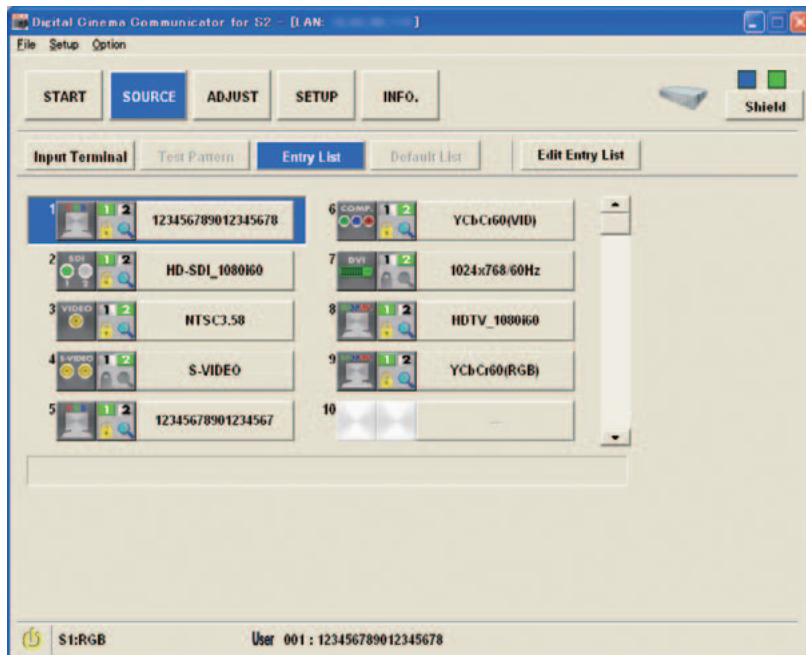
Slot 1	Slot 2
--------	--------

If any signal is not input, nothing is displayed in the screen (Black when shipped from the factory). The signal input information can be displayed by "Source Information" (See page 209).

4-4-2. SOURCE Screen (Test Pattern) [Not currently supported]

Use this to output the test pattern. While the test pattern is displayed, adjustments are not available.

## 4-4-3. SOURCE Screen (Entry List)



If the adjustment values of the signals that are being projected are changed, the values are registered in the Entry List as the signal list automatically.

- Switching of the input terminal
- Change of the signal input to the switcher










You can call the registered signal (its adjusted value) from the Entry List when required.







- NOTE**
- 100 patterns at most can be registered to the Entry List. When the number of items registered to the Entry List reaches 100, the registration becomes unavailable and the error message is displayed for registration trial. Delete the signal (its adjusted value) that is not necessary from the Entry List.
  - When a signal is registered while an Entry List is being displayed, the latest list may not be displayed. In this case, update the screen by pressing the "Entry List" button.

The meanings of the icons that are displayed are as follows.

Icon Explanation

Indicates the input terminals and the signal types.

	RGB input terminal of MM-RGB interface board		Component input terminal of MM-RGB interface board
	SDI 1 input terminal of MM-SDI interface board		CVBS input terminal of MM-VIDEO interface board
	SDI 2 input terminal of MM-SDI interface board		S-VIDEO input terminal of MM-VIDEO interface board
	DVI input terminal of MM-DVI interface board		Component input terminal of MM-VIDEO interface board
	Blank		

	Indicates the signal of slot 1.		(Lock on) Indicates that the signal is locked. Signals cannot be edited/deleted.
	Indicates the signal of slot 2.		(Lock off) Indicates that the signal is not locked. Signals can be edited/deleted.
			(Skip off) When a signal is detected, it is not skipped.
			(Skip on) When a signal is detected, it is skipped.

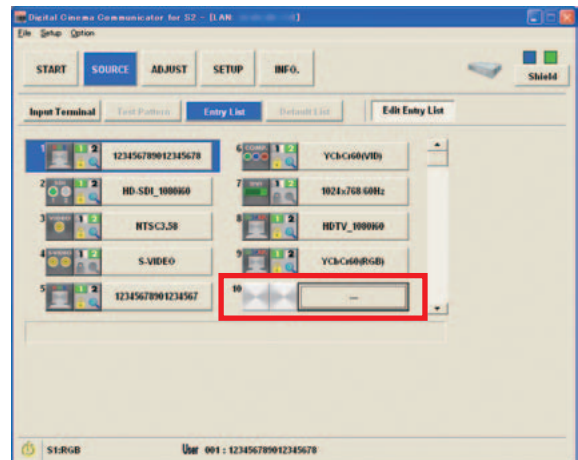
## Storing the projected signal (Store)

**1** Press the “Edit Entry List” button.

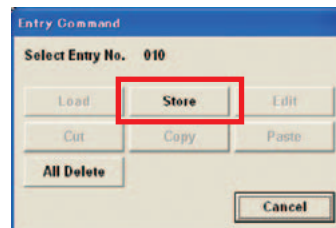
The “Edit Entry List” button is depressed, setting device to the Edit mode.

**2** Press the number to be registered in Edit Entry List.

The Entry Command List screen is displayed.

**3** Press the “Store” button.

The signal is registered.



## Selecting signal from Entry List (Load)

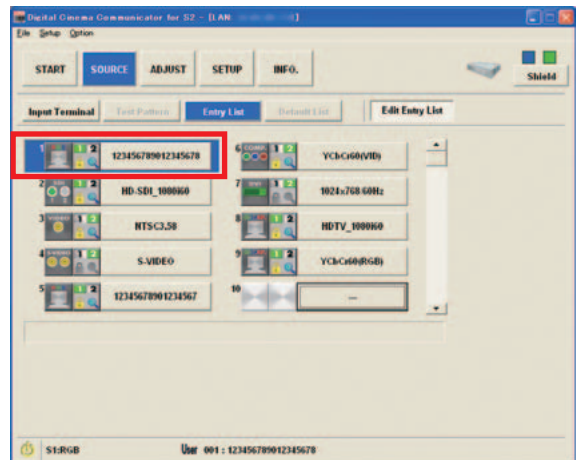
### 1 Press the “Edit Entry List” button.

The “Edit Entry List” button is depressed, setting the device to the Edit mode.

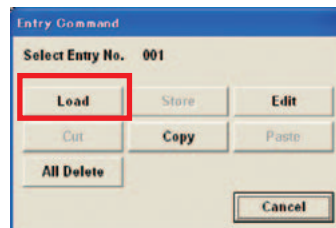


### 2 Select a signal from the list.

The Entry Command List screen is displayed.



### 3 Press the “Load” button.





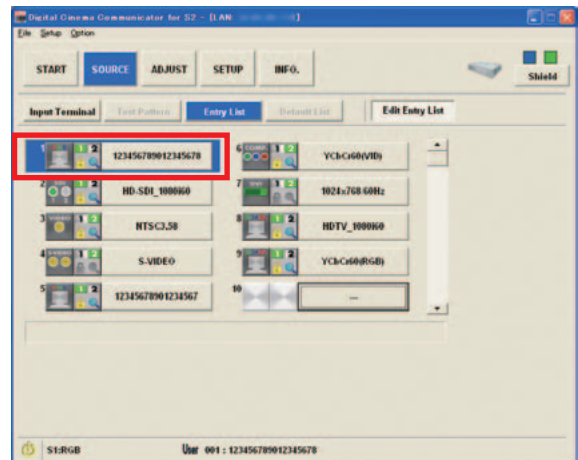
## Editing signal of Entry List (Edit)

**1** Press the “Edit Entry List” button.

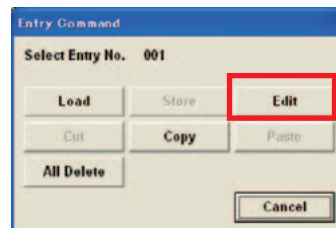
The “Edit Entry List” button is depressed, setting the device to the Edit mode.

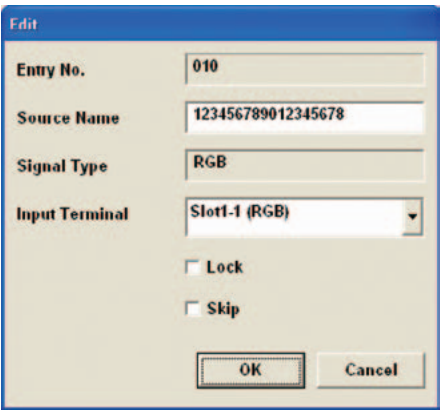
**2** Press the number to be edited by the Edit Entry List.

The Entry Command List screen is displayed.

**3** Press the “Edit” button.

The Edit screen is displayed.





Entry No.	To display the registration No. (Read only)
Source Name	Up to 18 alphanumeric characters can be used.
Signal Type	To display the signal format. (Read only)
Input Terminal	Video and S-video signals can be switched between video and S-video. When editing the signal currently projected, you cannot change the input terminal.
Lock	Set so that the selected signal cannot be deleted when "All Delete" is executed. The changes cannot be saved.
Skip	Set so that the selected signal will be skipped during auto search.
"OK" button	Updates the settings and closes the Edit screen.
"Cancel" button	Returns to the previous screen.

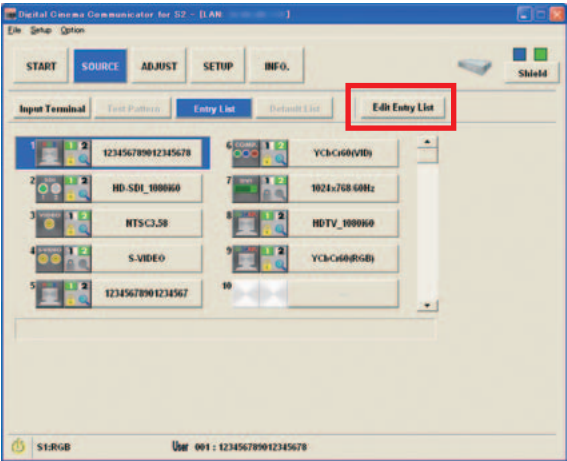
**4** Click on the "OK" button.

**NOTE** When editing the signal currently projected, you cannot change the input terminal.

**Cutting signal from Entry List (Cut)**

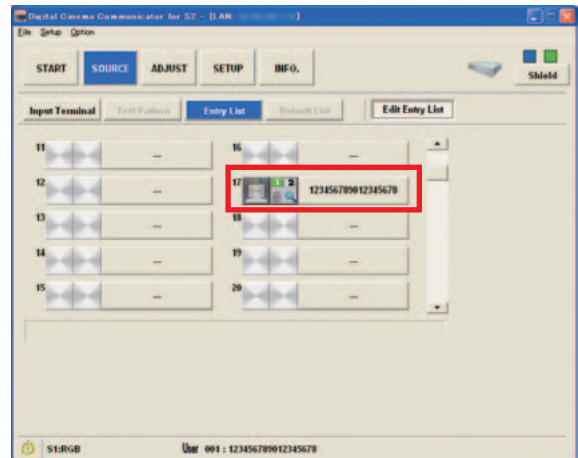
**1** Press the "Edit Entry List" button.

The "Edit Entry List" button is depressed, setting the device to the Edit mode.



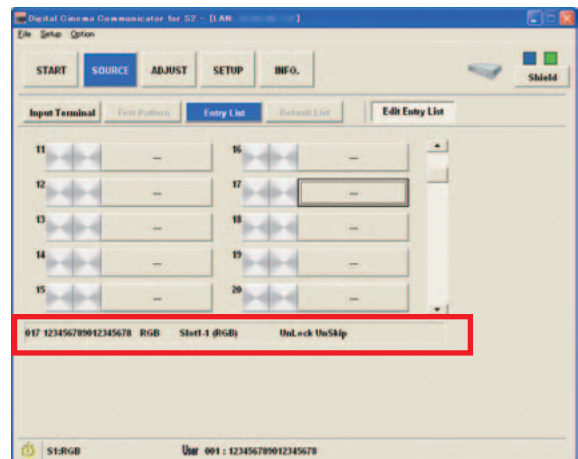
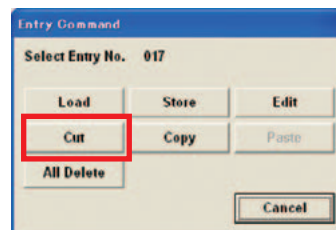
**2** Press the signal to be deleted by the Entry List.

The Entry Command List screen is displayed.



**3** Press the “Cut” button.

A signal is deleted from the Entry List and the deleted signal is displayed in the bottom clip board of the Entry List.



**NOTE** You cannot delete the currently projected signal.

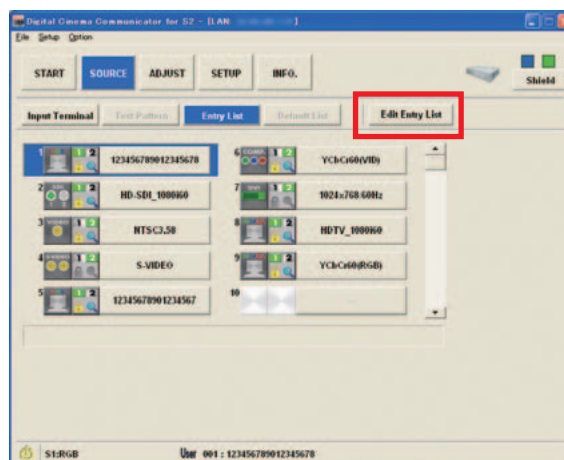
**TIP**

- The contents of a clipboard can be passed (copied) in the signal list using the “Paste” button on the Edit Command screen.
- The contents of a clipboard are not cleared even if the Entry List is closed.

## Copying signal of Entry List (Copy/Paste)

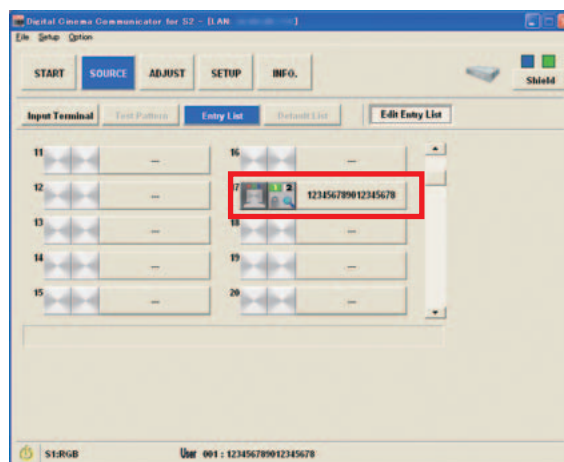
### 1 Press the “Edit Entry List” button.

The “Edit Entry List” button is depressed, setting the device to the Edit mode.



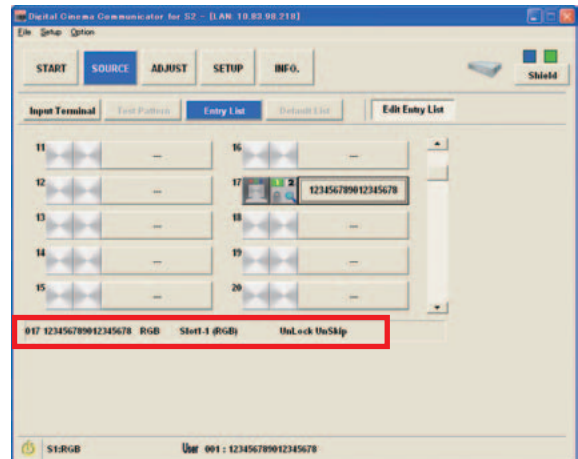
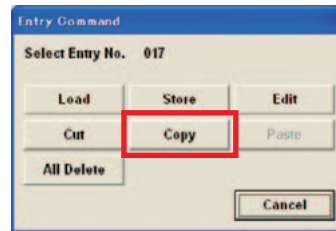
### 2 Press the signal to be copied in the Entry List.

The Entry Command List screen is displayed.

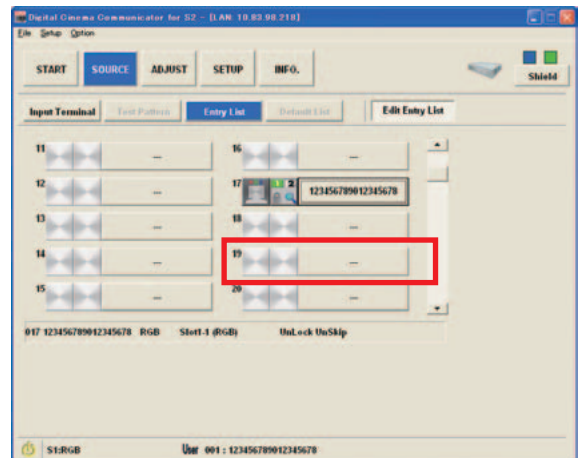


**3** Press the “Copy” button.

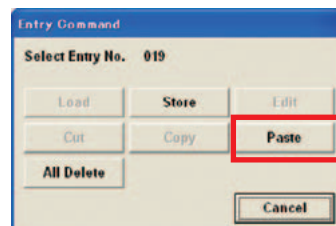
A signal is copied from the Entry List and the copied signal is displayed in the bottom clip board of the Entry List.

**4** Press the number of the pasting destination in the Entry List.

The Entry Command List screen is displayed.

**5** Press the “Paste” button.

The contents of the clip board are pasted.

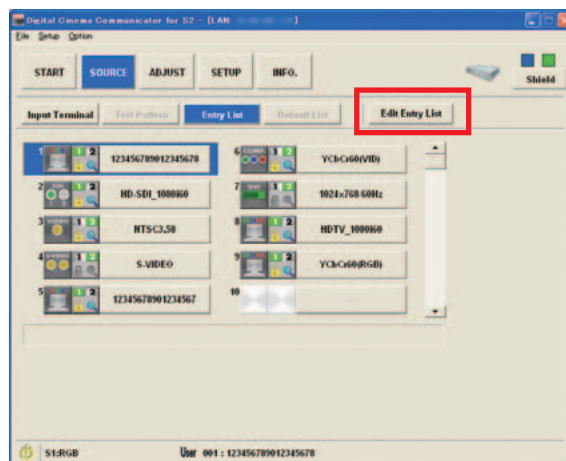
**NOTE**

- The contents cannot be pasted to the registration number that is currently being projected.
- When the signal that was “locked” on the Edit screen is selected, [Paste] is disabled and no contents are pasted.

## Deleting all items in Entry List (All Delete)

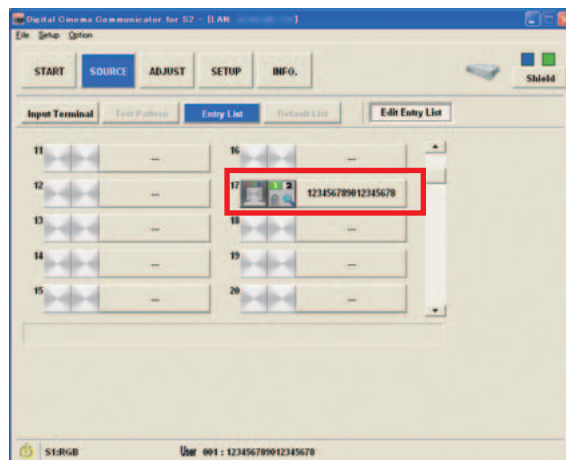
### 1 Press the “Edit Entry List” button.

The “Edit Entry List” button is depressed, setting the device to the Edit mode.



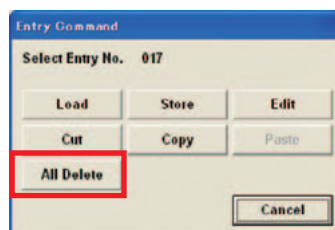
### 2 Press any signal in the Entry List.

The Entry Command List screen is displayed.



### 3 Press any signal in the Entry List.

When a confirmation dialog is displayed, press the “Yes” button.



**NOTE** The signals locked from the Entry Edit screen are not deleted.

## 4-4-4. SOURCE Screen (Default List) [Not currently supported]

A signal list at factory shipment is displayed.

## 4-5. ADJUST Screen

When the "ADJUST" button on the menu bar is pressed, the ADJUST screen is displayed.

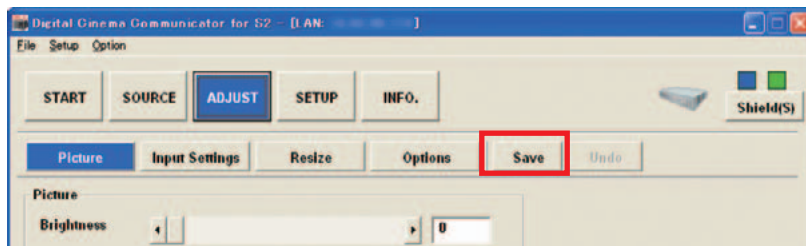
On the ADJUST screen, adjust the image that is projected on the screen.

The ADJUST screen comprises the following four screens.

- Picture: Adjust the brightness, contrast, color, phase, and sharpness. (See next page)
- Input Settings: Adjust input signals. (page 193)
- Resize: Adjust the image size. (page 199)
- Options: Adjust various attributes such as noise reduction. (page 202)

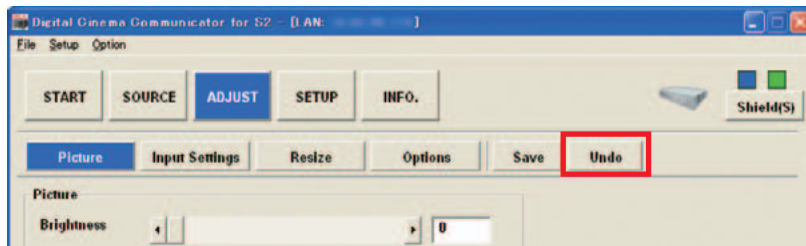
### Save the adjusted values.

On the ADJUST screen, the adjusted values can be saved in the multimedia switcher memory. To save the adjusted values, press the "Save" button on the ADJUST screen. The contents that are saved are the adjustment value of all the sub-screens (Picture, Input Settings, Resize, and Options) of the ADJUST screen.



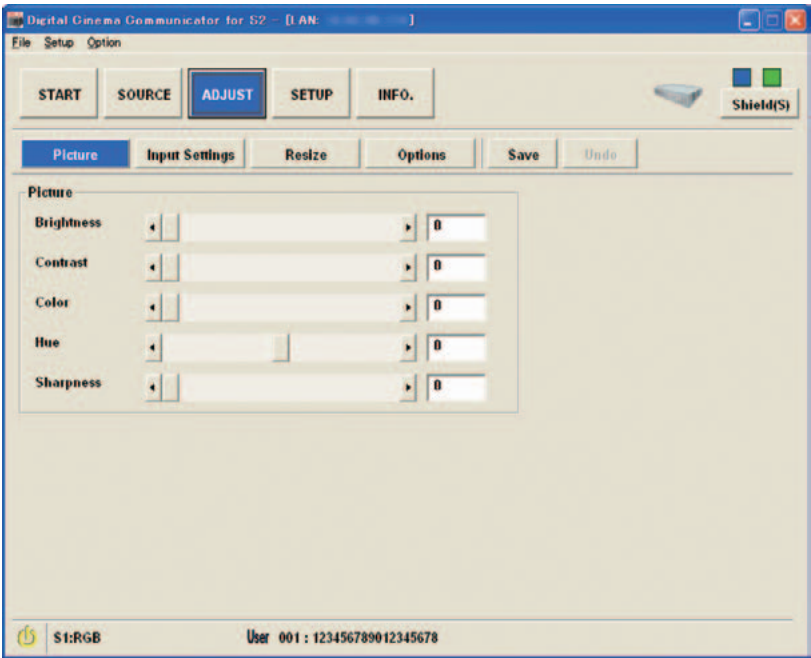
### Return the adjustment values to the original value.

To reset the adjusted values to the state where they were saved, press the "Undo" button on the ADJUST screen.



4-5-1. ADJUST Screen (Picture)

On this screen, you can adjust the brightness, contrast, color, phase, and sharpness of the image.



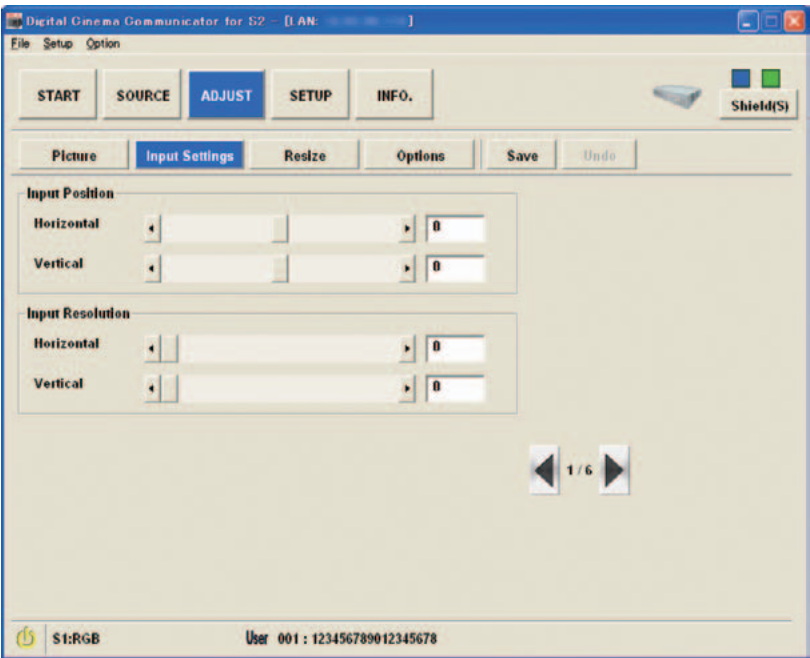
Brightness	Adjusts the brightness level or the back raster intensity.
Contrast	Adjusts the intensity of the image according to the incoming signal.
Color	Increases or decreases the color saturation level.
Hue	Varies the color level from +/- green to +/-blue. The red level is used as reference.
Sharpness	Controls the detail of the image.



### 4-5-2. ADJUST Screen (Input Settings)

On this screen, you can adjust input signals.  
The ADJUST screen (Input Settings) comprises six pages. To switch pages, press the button at the right-bottom of the screen.

Page 1 of 6

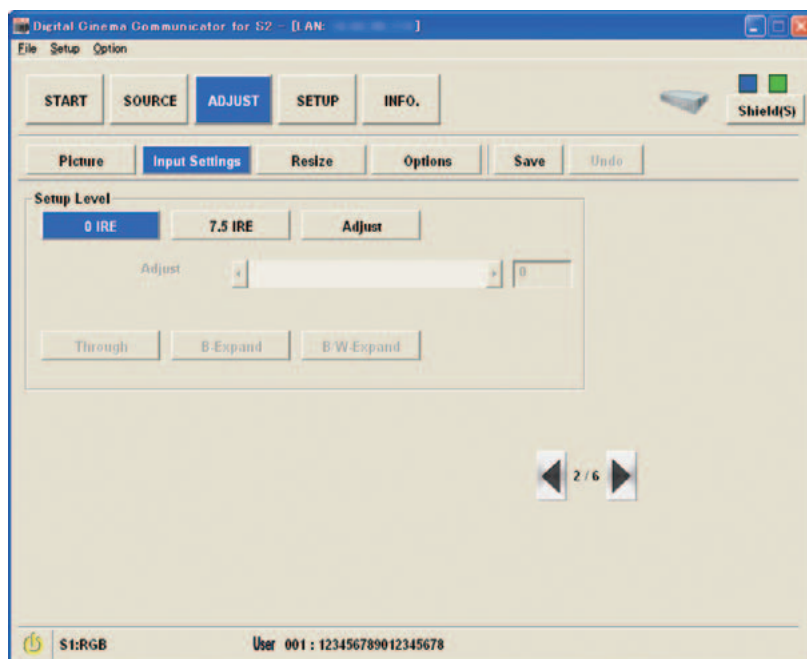


- **Input Position**  
Adjust the taking start position for the input video images.

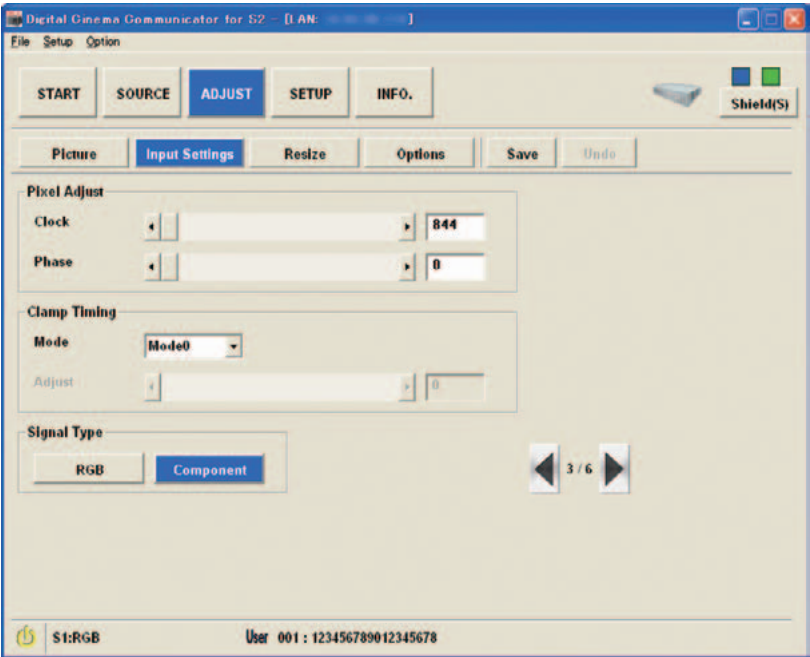
Horizontal	To adjust the taking start position (horizontal).
Vertical	To adjust the taking start position (vertical) .

- **Input Resolution**  
Adjust the taking width for the input video images (vertical/horizontal).  
When the resolution of the input signal cannot be detected properly with Auto Adjust, this function can be used to manually set the correct resolution.

**NOTE** If the setting of [De-Interlacing] (See page 204) is "Basic", this function is not available.



- **Setup Level**  
“7.5 IRE” must be chosen to project products manufactured in USA. Through, B-Expand, and B/W-Expand are enabled only when the input signal is SDI.

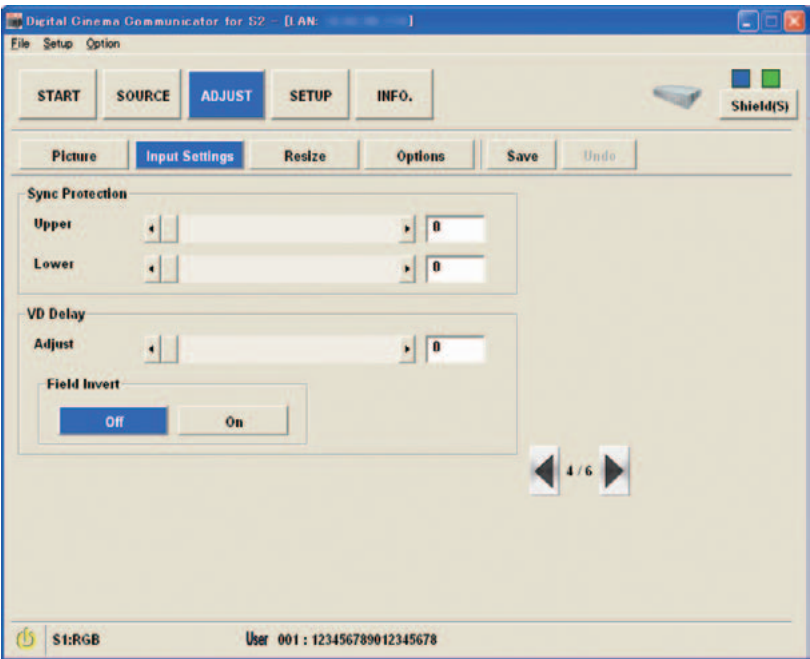


- **Pixel Adjust**  
Displays the Clock and Phase adjustments.

Clock	Use this item to fine tune the computer image or to remove any vertical banding that might appear.
Phase	Use this item to adjust the clock phase or to reduce video noise, dot interference or cross talk.

- **Clamp Timing**  
Use this to adjust the black level clamp for RGB/YCbCr signal input. Execute this adjustment mainly when non-standard signal is input.  
Select one from Mode 0 to Mode 4 to obtain the optimum image quality. If the image quality is not improved, select “Adjust” and make adjustments using the slide bar.
- **Signal Type**  
If the image color is unnatural when RGB or component signal is projected, switch the setting.  
This function is available only when any terminal of the MM-RGB board is selected.

RGB	To switch to RGB input.
Component	To switch to component signal input.

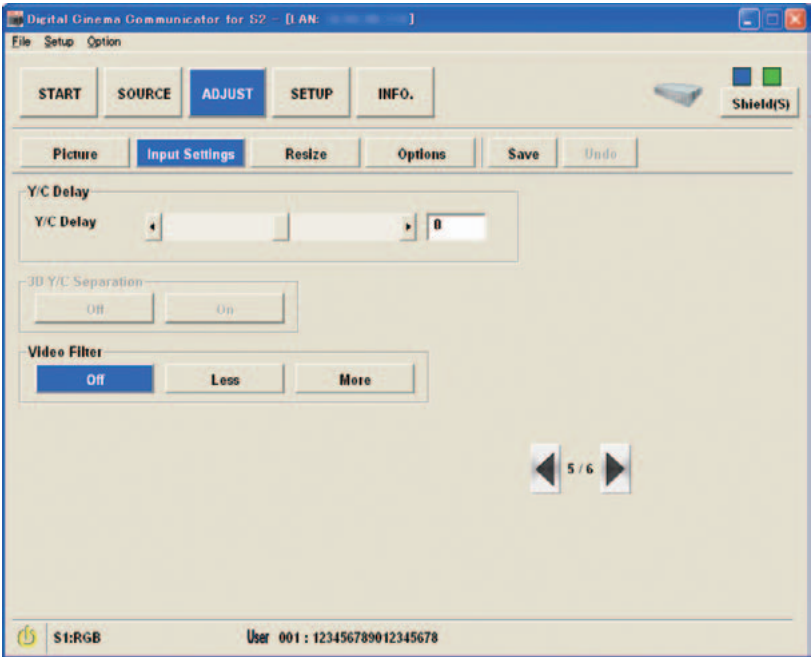


- **Sync Protection**  
When a VCR, DVD, or some other equipment that supports Copy-guard (a copy prevention system) is played back, the screen may be displayed in a curved manner. Adjustments are made in such circumstances.

Upper	To adjust the winding of image at the screen top (copy guard signal, mask start position)
Lower	To adjust the winding of image at the screen bottom (copy guard signal, mask end position)

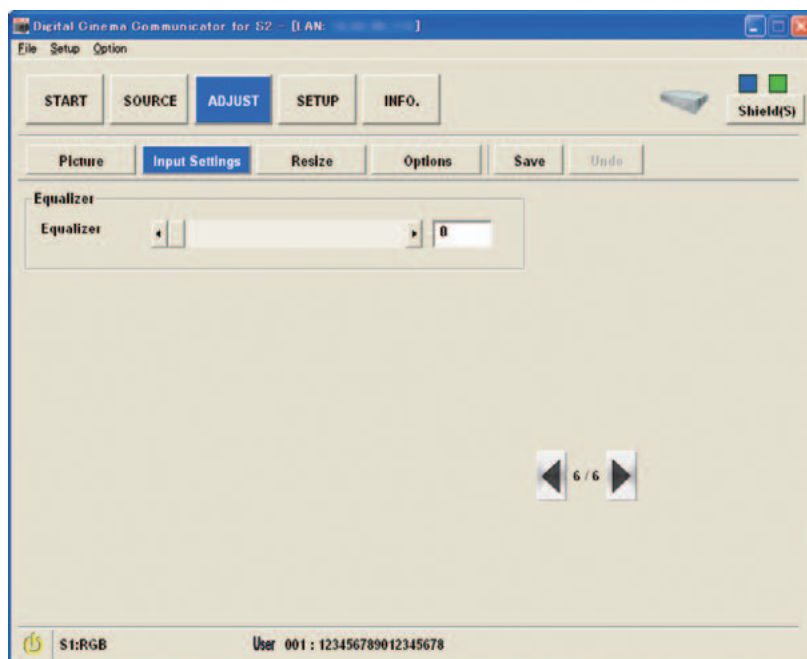
- **VD Delay**

Adjust:	This feature is used to correct vertical jitter of a signal. When connecting with a scan converter: If an image from the scan converter is not correctly displayed, adjust to select the best level point so that the image is displayed correctly.
Field Invert:	This feature is used to correct diagonal lines of a non-standard interlaced signal when they appear jaggy. Invert the odd or even field of a video signal.



- **Y/C Delay**  
Use this to adjust the phases of brightness (Y) signal and color (C) signal. Execute adjustment when the color at the video image contour is not appropriate.  
You cannot select this for RGB signal.
- **3D Y/C Separation**  
This option turns on or off the 3 dimension separation feature.  
This can be selected only for the NTSC 3.58 composite video signal.
- **Video Filter**  
Grainy image or jitter (slight shaking of characters) by the RGB signal and the component signal are reduced.  
When the switcher is shipped from the plant, it is set to the status suitable to each signal in advance. Set this when grainy images or jitter are noticeable depending on the signal.

Off	Video Filter is not used.
Less	Video Filter is used a little bit.
More	Video Filter is used a lot.



- **Equalizer**

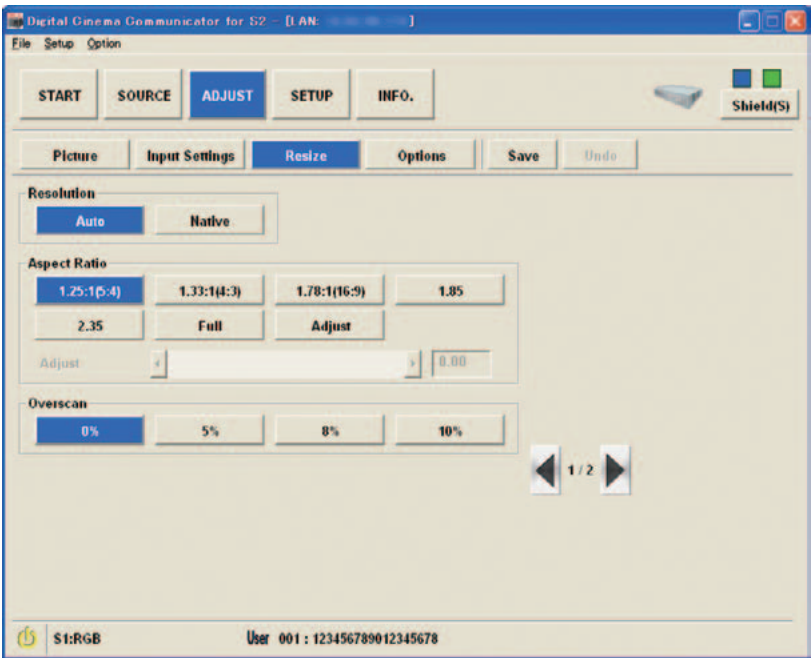
When projecting a DVI signal, averages the brightness of the entire image and adjusts the contrast. Use this if there are variations in the luminance.

This function can only be used when the connector in the MM-DVI board is selected.

4-5-3. ADJUST Screen (Resize)

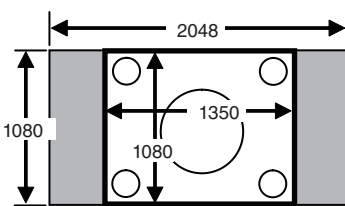
On this screen, you can adjust an image size.  
The ADJUST screen (Resize) comprises two pages. To switch pages, press the button at the right-bottom of the screen.

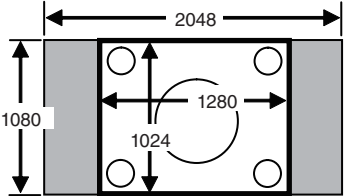
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• Resolution

When projecting input signals, you can enlarge/reduce the image by maintaining the aspect ratio that is set in “Aspect Ratio” (See next page).

Auto	<p>This function enlarges or reduces the image with the signal resolution (VGA, SVGA, XGA, SXGA, U-XGA and so on) according to the display size set by “Output Resolution” with keeping the aspect ratio set by [Aspect Ratio].</p> <p>Example: When the input signal is “SXGA (1280 * 1024)”, the “Output Resolution” setting is “2K * 1K (2048 * 1080)” and the “Aspect Ratio” setting is “1.25:1 (5:4)”</p> 
------	--

Native	<p>Projects at the native resolution.</p> <p>Example: When the input signal is "SXGA (1280 * 1024)", the "Output Resolution" setting is "2K * 1K (2048 * 1080)"</p> 
--------	---

**NOTE** When "Resolution" has been set to [Native], "Aspect Ratio", "Anamorphic factor" and "Overscan" will not be available.

• **Aspect Ratio**

You can select the aspect ratio for input signal.

1.25:1 (5:4)	Select this for input of 5:4 SXGA signal
1.33:1 (4:3)	Select this for input of 4:3 signal
1.78:1 (16:9)	Select this for input of 16:9 squeeze signal
1.85:1	Select this for input of 1.85:1 Vista size signal.
2.35:1	Select this for input of 2.35:1 Cinemascope signal.
Full	Select this to have the ratio corresponding to the output resolution of the switcher.
Adjust	Select this to set the aspect ratio freely.

**NOTE**

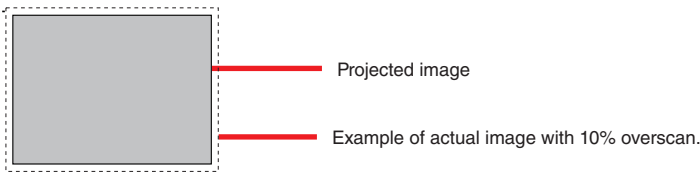
- When [Resolution] is set to [Native], the aspect function is disabled and cannot be selected.
- When this machine is used for projecting images for business purpose or for public viewing, compression or enlargement of the screen with [Aspect Ratio] or other image size switching function could infringe the copyright protected under the Copyright Law.

**TIP**

- The video image size with a horizontal dimension longer than that for the standard aspect ratio of 4:3 in NTSC is called "Letter box". There are other aspect sizes for movie films: "Vista size" (1.85:1) and "Cinemascope" (2.35:1).
- When the video image with the aspect ratio of 16:9 is squeezed horizontally into the ratio of 4:3 is called "Squeeze".

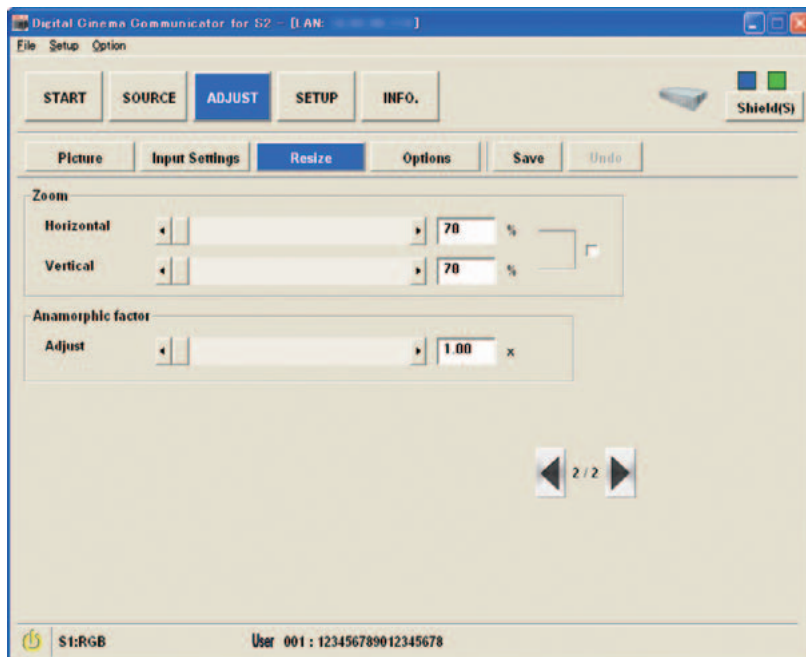
• **Overscan**

Set the ratio of overscan (processing to cut the frame area around the screen).  
You can select a percentage from 0%, 5%, 8%, and 10%.



**NOTE** When "Resolution" is set to [Native], the function cannot be selected.





- **Zoom**

This menu is enabled in service mode.

Vertical and horizontal enlarge ratios are individually adjusted.

**NOTE** The adjustable range of this function depends on the adjustment status of [Anamorphic factor] (See this page).

- **Anamorphic factor**

Adjust the horizontal reduction magnification (anamorphic factor) of the input video image.

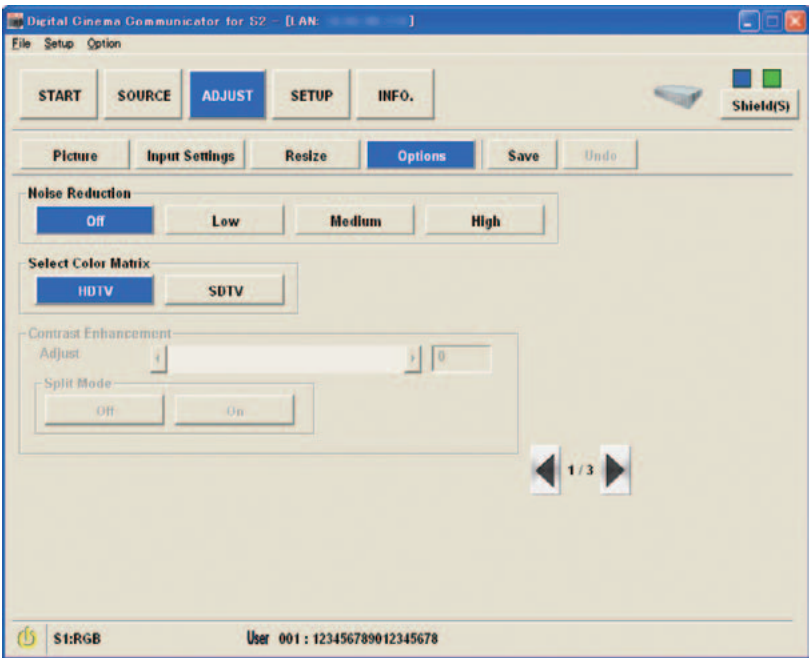
With the anamorphic lens or the like mounted to the projector, you can reduce the video image that is projected with horizontal enlargement and resize it. Use this to project ordinary contents without removing the anamorphic lens.

**NOTE** The adjustable range of this function depends on the adjustment status of [Zoom] (See this page).

4-5-4. ADJUST Screen (Options)

On this screen, you can make various adjustments such as noise reduction.  
The ADJUST screen (Options) comprises three pages. To switch pages, press the button at the right-bottom of the screen.

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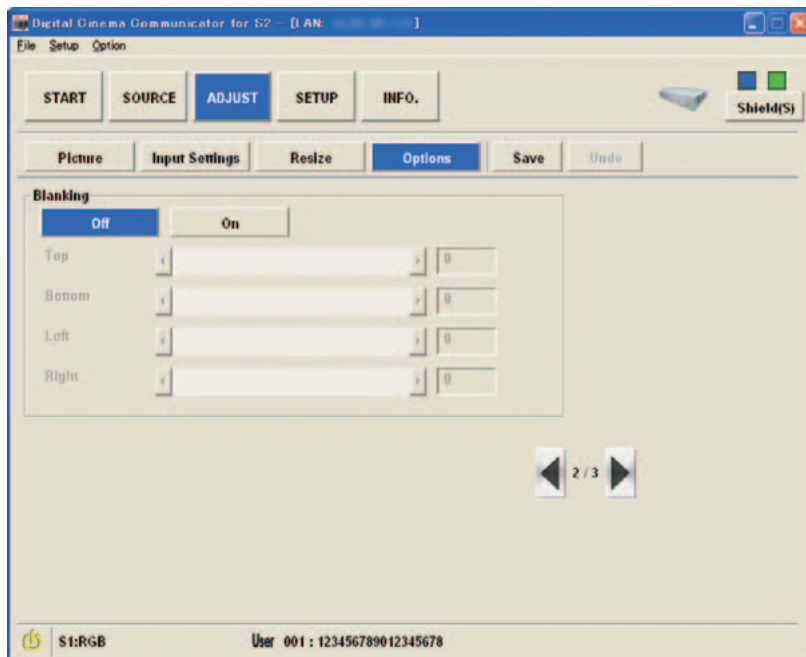
- **Noise Reduction**  
Select one of the three levels for reducing video noise: Low, Medium or High.  
This can be used with SDTV signal. This feature is not available for RGB signal.

**NOTE** If the setting of [De-Interlacing] (See page 204) is “Basic”, this function is not available.

- **Select Color Matrix**  
Selects the signal type.

HDTV	Color matrix according to high definition TV specifications
SDTV	Color matrix according to standard TV specifications

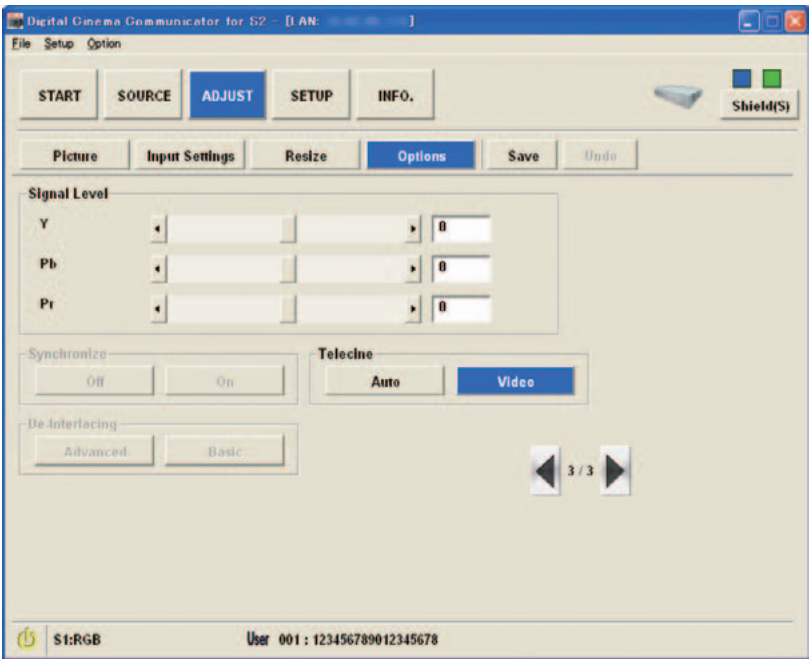
- **Contrast Enhancement**  
This function improves the video contrast taking advantage of human view characteristics. This is enabled for the signal input to MM-VIDEO and for the SD-SDI signal input to MM-SDI (optional).  
This cannot be used with 1080 HDTV signals (MM-RGB, MM-SDI).



- Blanking

The display range (Blanking) is adjusted at the top end, bottom end, left end and right end of the video signal.

**NOTE** Adjustment value for one step depends on the type of input signal.



- Signal Level**  
Adjust the input level of each signal. The adjustment items depend on the input signal. This function is available only when any terminal of the MM-RGB board or MM-VIDEO board is selected.

When RGB signal is input	Red/Green/Blue
When video/S-video/component signal is input	Y/Cb/Cr
When HDTV signal is input	Y/Pb/Pr

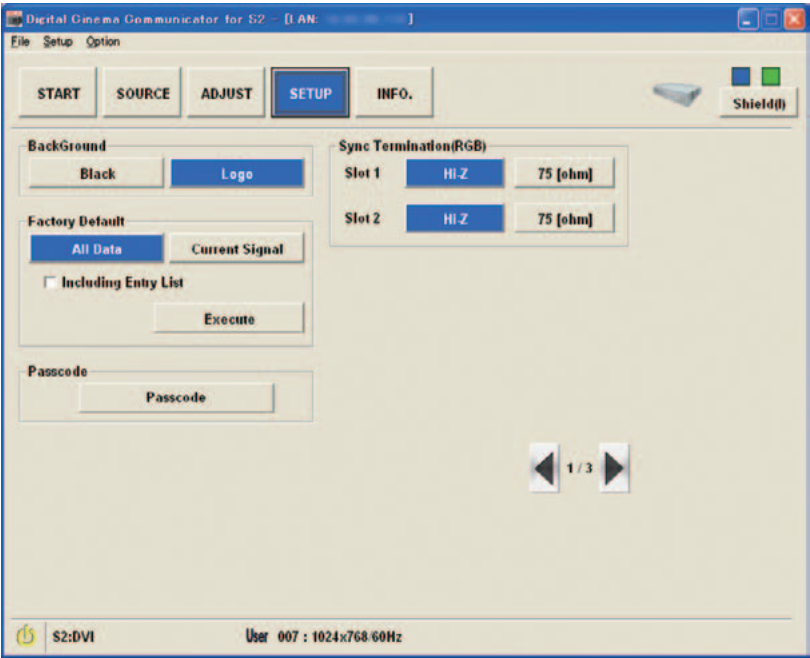
- Synchronize**  
This function is enabled when “Output Timing” (see Page 207) on Page 2 of Setup Menu is set for synchronization. Use this to change the synchronization mode of the projected signal.  
When the vertical frequency of the input signal exceeds 60Hz, this function cannot be used. In this case, the setting is “Off”.
- De-Interlacing**  
When the interlace signal is input, select the de-interlace processing mode of the switcher. Usually, select “Advanced (Default)”.
- If you select Basic, the video delay caused in the switcher becomes smaller (<sup>Note</sup>), but the image quality is deteriorated.

(Note) The difference of the video delay caused in this unit is as follows:  
(Delay for “Advanced”) - (Delay for “Basic”) = Delay for 4 vertical synchronizations

# 4-6. SETUP Screen

When the “SETUP” button on the menu bar is pressed, the SETUP screen is displayed.  
On the SETUP screen, you can set various attributes of the multimedia switcher.  
The SETUP screen comprises three pages. To switch pages, press the button at the right-bottom of the screen.

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- **Background**  
Select the background color when any signal is not input.

Black	For black background color.
Logo	For display of image at background.

**NOTE** If you change the background color when any signal is not input, the color is not changed quickly. The background color is changed when any signal is input or the input terminal is switched for selection (re-selection is acceptable).

**TIP** When “Logo” is selected, the “NEC” logo is displayed. Changing the display logo is “not currently supported”.

• **Factory Default**

Reset various settings and the signals registered to the “Entry List” to the status when shipped from the plant.

All Data	Use this to return all settings in the Setup menu to the status when shipped from the plant. After initialization, the selected input terminal is switched to Slot-1. When [Including Entry List] is checked, the signals already registered to the switcher are deleted in addition to those deleted by [All Data]. Note that, however, the locked signals are not deleted. To execute reset, press the “Execute” button
Current Signal	Use this to return the video adjustment of the currently displayed signal to the status when shipped from the plant and to display the image again.

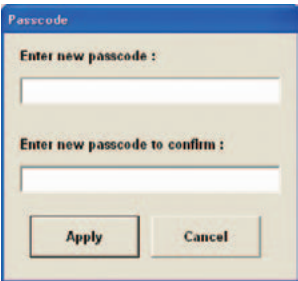
• **Sync Termination (RGB)**

Select the impedance of RGB input terminal (RGB).

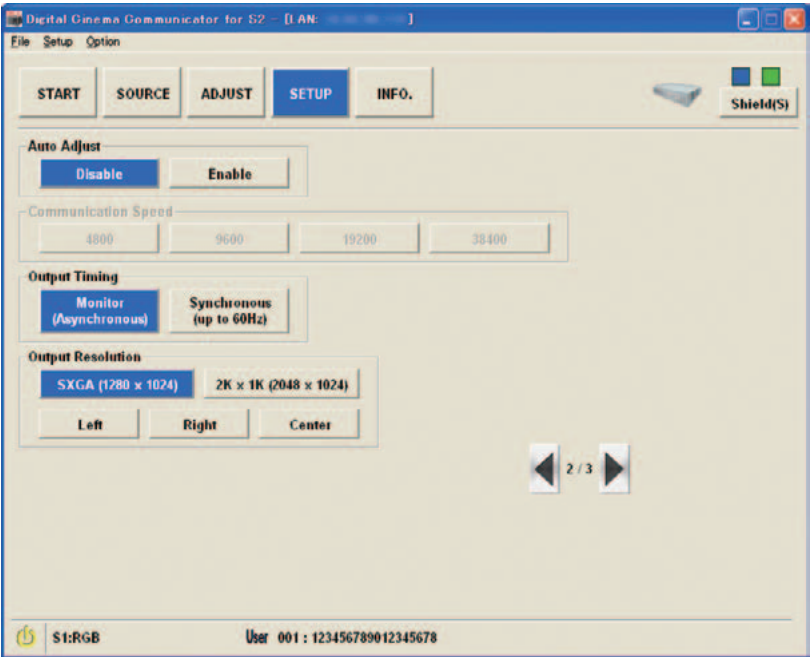
Hi-Z	When the impedance of the output terminal on the connected device does not support 75 ohm.
75 [ohm]	When the impedance of the output terminal on the connected device supports 75 ohm.

• **Passcode**

Changes the passcode of Installation mode for the multimedia switcher. Press the “Passcode” button to display the Pass-code screen.



Enter new passcode	Input new pass code.
Enter new passcode to confirm	Input new pass code to confirm.
“Apply” button	The new passcode is activated.
“Cancel” button	Abandons the settings and returns to the previous screen.



- **Auto Adjust**  
Enabling Auto Adjust. When “Auto Adjust” is set to “Enable”, the Switcher automatically determines the best resolution for the current RGB input signal to project an image.  
The image can be automatically adjusted for position and stability; “Horizontal Position”, “Vertical Position”, “Clock”, “Phase” and “Resolution”.

Disable	User can adjust the image display functions (“Horizontal Position”, “Vertical Position”, “Clock”, “Phase” and “Resolution”) manually.
Enable	Automatically adjusts image “Horizontal Position”, “Vertical Position”, “Clock”, “Phase” and “Resolution”.

**NOTE** For some video images, proper adjustment cannot be made automatically or it takes time for adjustment after signal switching. In such cases, manually execute the adjustment (See page 191).

- **Communication Speed**  
To set the serial communication speed of the switcher. Cannot be used on the MM3000B.
- **Output Timing**  
This selects the format of the DVI output signal.

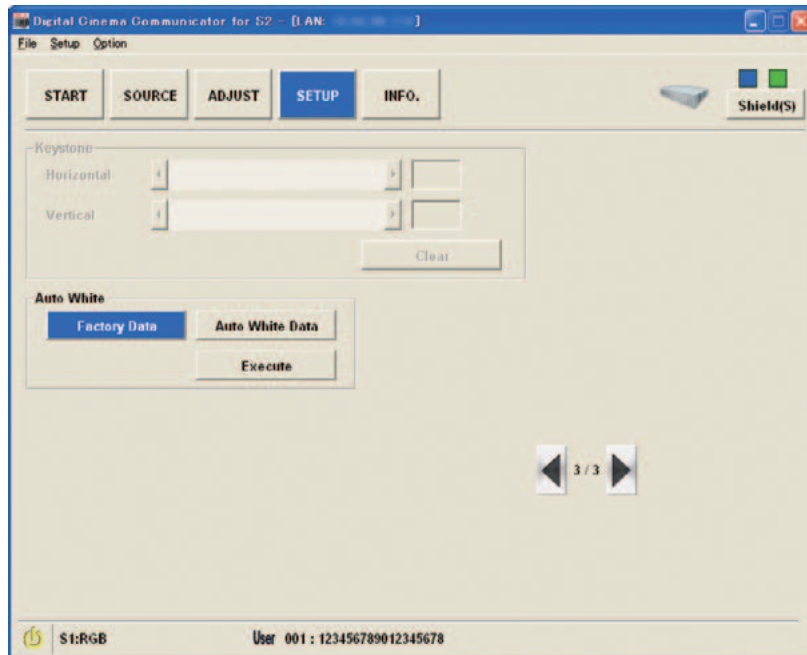
Output Timing Setting		Refresh rate
SXGA	Monitor Asynchronous	60 Hz fixed, Asynchronous output
	Synchronous (up to 60 Hz)	Synchronized with input. Fixed output at 60 Hz for input over 60 Hz.
2K x 1K (2048 x 1080)	Monitor Asynchronous	60 Hz fixed, Asynchronous output
	Synchronous (up to 60 Hz)	Synchronized with input. Fixed output at 60 Hz for input over 60 Hz.

- **Output Resolution**

This menu is enabled in the service mode.

This selects the display resolution of the DLP cinema projector that is connected to the DVI output connector. SXGA (1280\*1024) is for inspection. Use 2K\*1k (2048\*1080).

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- **Keystone [Not currently supported]**

This is for correction of the keystone distortion. To return to the status without correction, press "Clear" button.

**NOTE** Adjustment is not available when [Resolution] is set to [Native].

- **Auto White**

The colors R, G and B are automatically adjusted to the optimum input levels when the RGB type signal is input.

For automatic adjustment, check [Auto White Data] and press "Execute" button with a window video data having a white area representing at least 50% vertically and horizontally displayed at the center.

This function is available only when a terminal of the MM-RGB board is selected and the [Signal type] (See page 195) is set to "RGB".



## 4-7. INFO Screen

When the "INFO." button on the menu bar is pressed, the INFO screen is displayed.

The INFO screen displays the information of the signal that is being projected and multimedia switcher status.

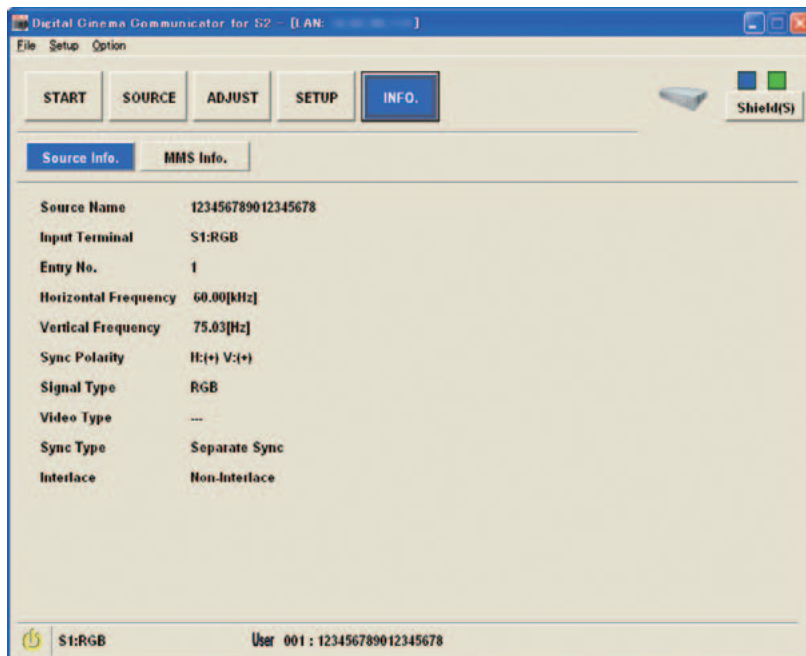
The INFO screen comprises the following two screens.

- Source Info.: Displays the information on the signal that is input to the multimedia switcher. (See this page)
- MMS Info.: Displays version information and error information of the multimedia switcher. (See page 210)

### 4-7-1. INFO Screen (Source Info.)

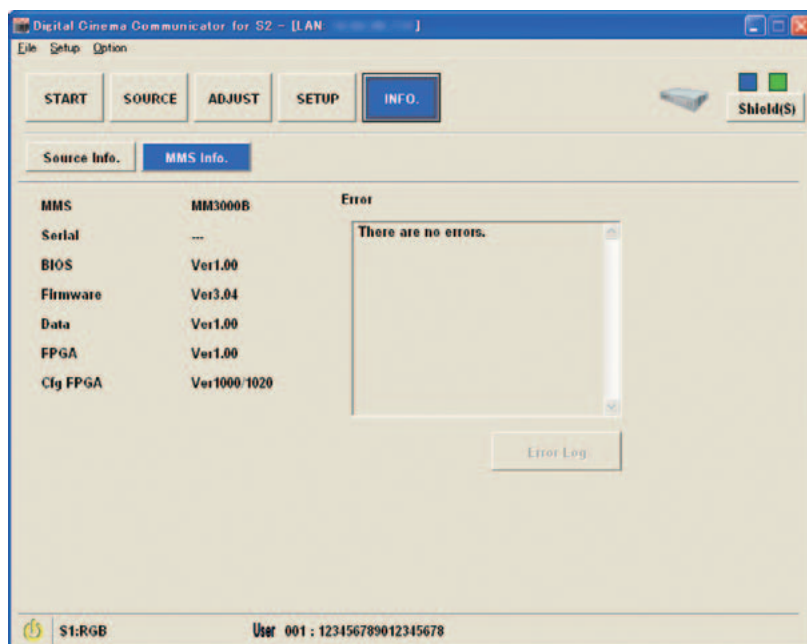
This function displays the information of the signal input to the machine.

Use this to check whether the input signal is suitable to the machine when colors in the display screen are extremely inappropriate, images are rolling or video images do not appear. Also refer to Corresponding Resolution List (see "User's Manual").



## 4-7-2. INFO Screen (MMS Info.)

Version information and error information of the multimedia switcher can be confirmed.



- Error  
This function is not available on MM3000B.

## 5. Appendix

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### 5-1. Trouble Shooting

Phenomenon	Checkpoint	Reference page
Cannot connect to the projector or multimedia switcher	Check whether the LAN cable becomes disconnected from the computer where DCC is installed or from the projector main unit.	—
	Check whether the IP address and host name are set correctly.	11
Cannot operate DCC	Check whether the shield button is set to "ON".	14
(NC3240/NC3200/NC2000/NC1200 series) Though use of the anamorphic lens (With Anamo.) is set in the title setting, the anamorphic lens does not move.	Check whether the cable of the anamorphic lens stand is disconnected.	—
	Check whether "Turret" in the SETUP screen (Setup) is set to "Manual".	129

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## 1. TROUBLESHOOTING

### 1-1. RS-232 Protocol Command & System Flow

#### Use Tera Term as RS232 console

Set up the serial port of Tera Term with the menu item “Setup/Serial Port...” as figure 1. Here, the Port field is, for example, COM4 which is the corresponding RS232 port connecting to the slave MCU.

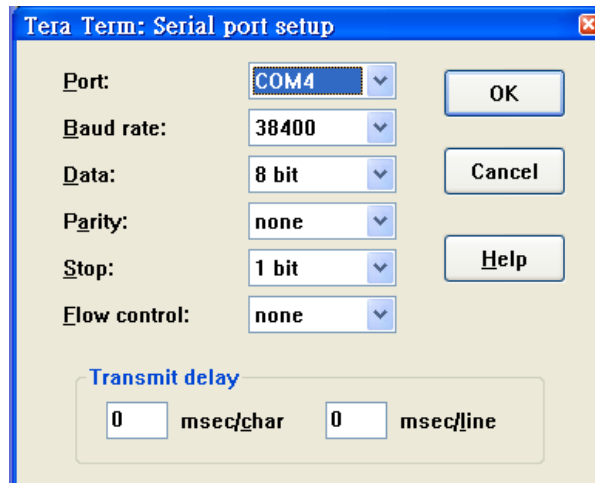


Figure 1: Serial port setting of Tera Term

Setup the terminal of Tera Term with menu item “Setup/Terminal...” as figure 2.

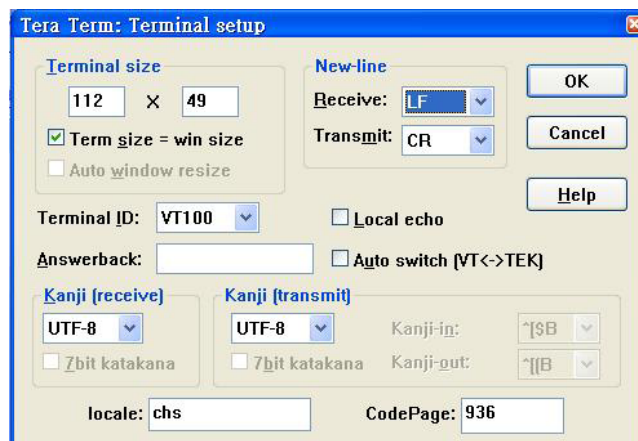


Figure 2: Terminal setting of Tera Term

## TROUBLESHOOTING

### Use Tera Term to log message

Tera Term provides a way to log messages of RS232 console with time stamp included. Execute menu item “File/Log...” of Tera Term, check plain text and time stamp in the option box as figure 3.

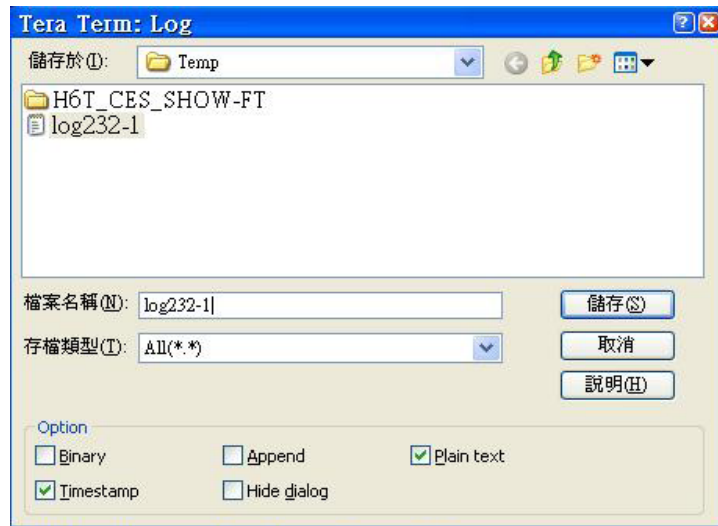


Figure 3: Message log setting of Tera Term

### \*\* RS-232 Retrieve Error Code Comment

Step1. Connect RS-232, and enter RS-232 comment interface.

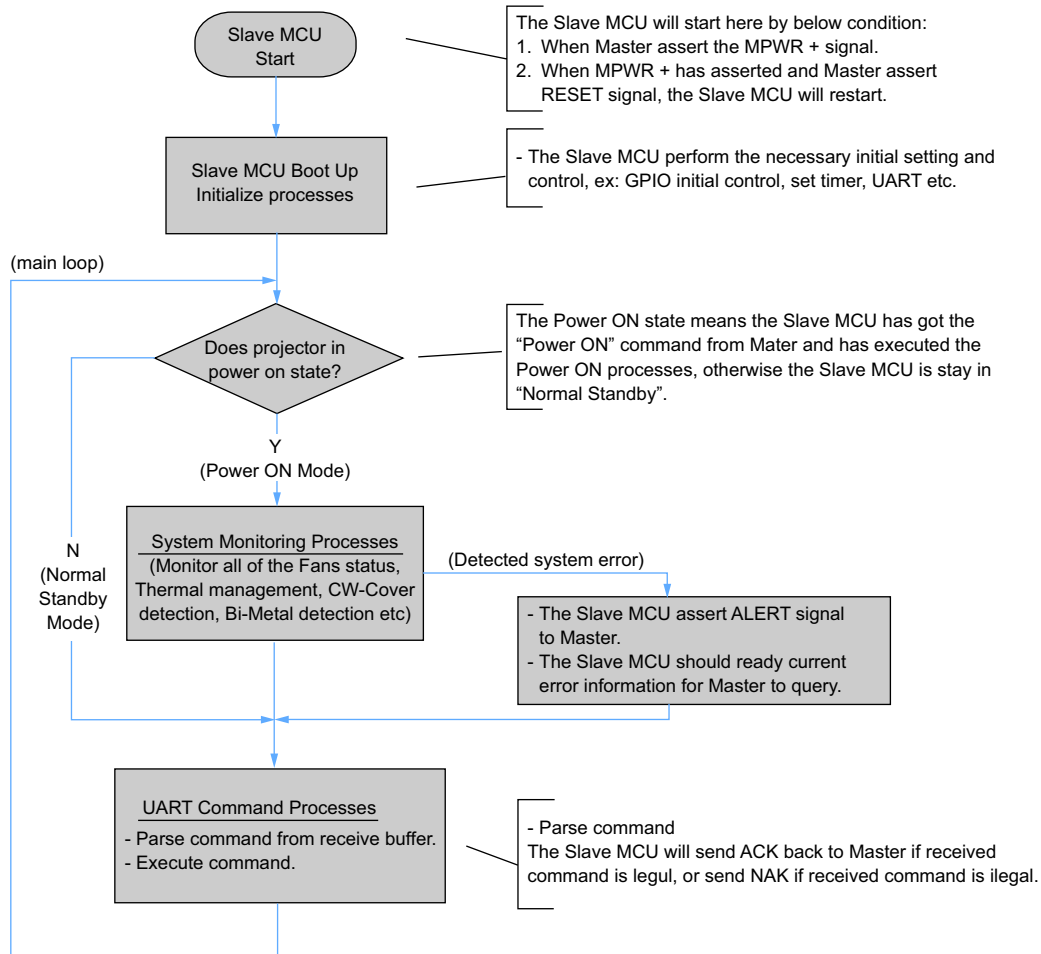
Key in “op demsg = 1”, then system will feedback “OP DEMSG = 1”.

Step2. Next, key in “op r\_err”, and then it will show 3 error codes.

And, the first error code will be the current root cause of defective symptom.

## TROUBLESHOOTING

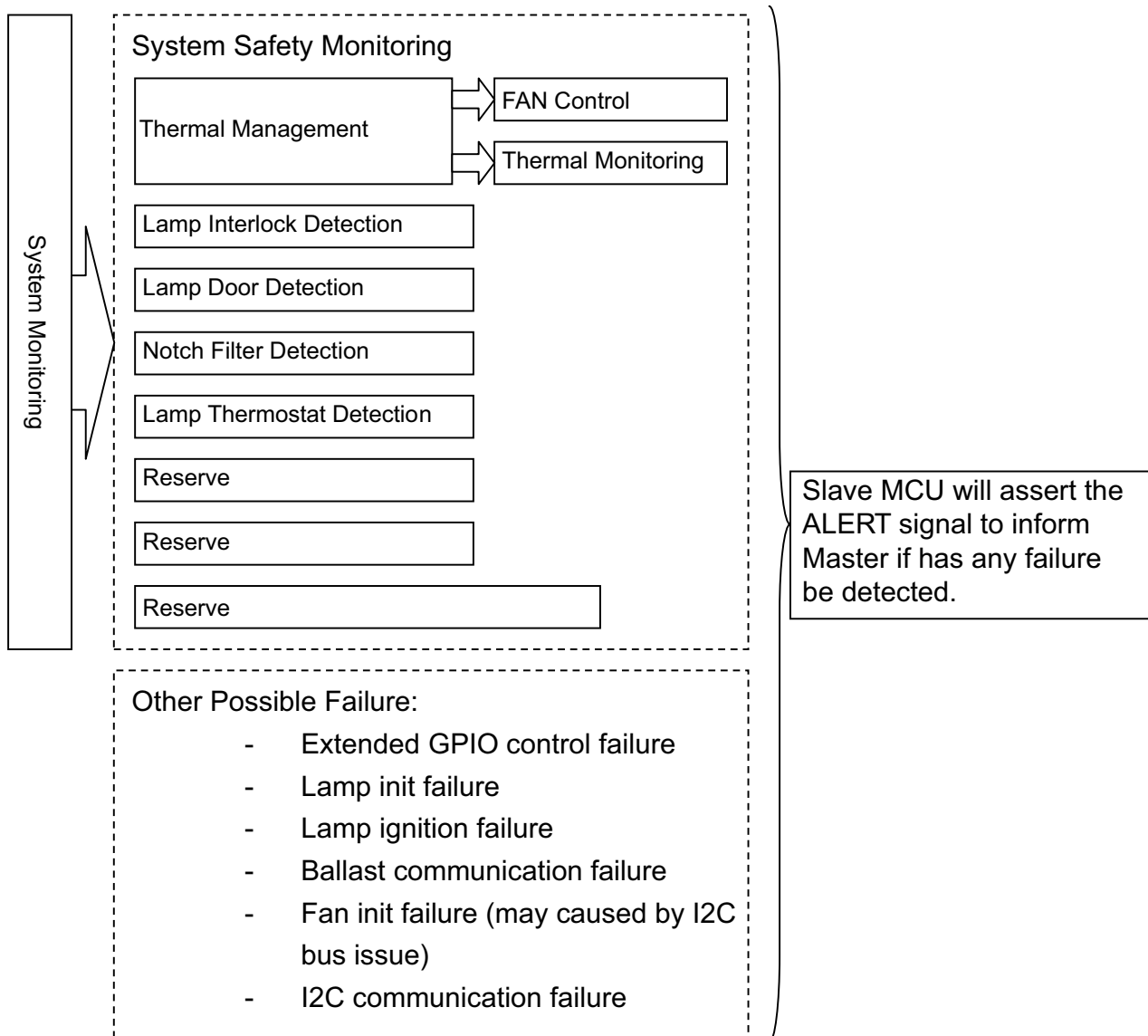
### The Main Flow Chart of Slave MCU



#### Notes:

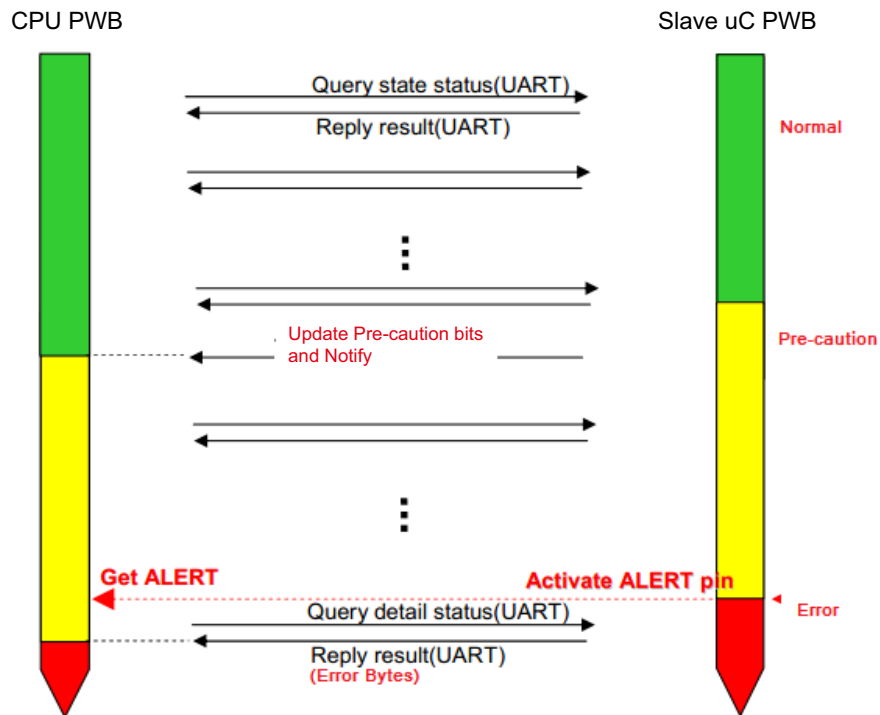
- The Slave MCU will always running the main loop after the Master assert the MPWR+ signal, the Slave MCU should not stuck in any error state.
- If Slave MCU detected any system error,
  - The Slave MCU asserts the ALERT signal.
  - The Master should send query command to Slave to get error code back.
  - The Slave MCU waiting Master's instruction to execute following operation.

### System Monitoring Processes

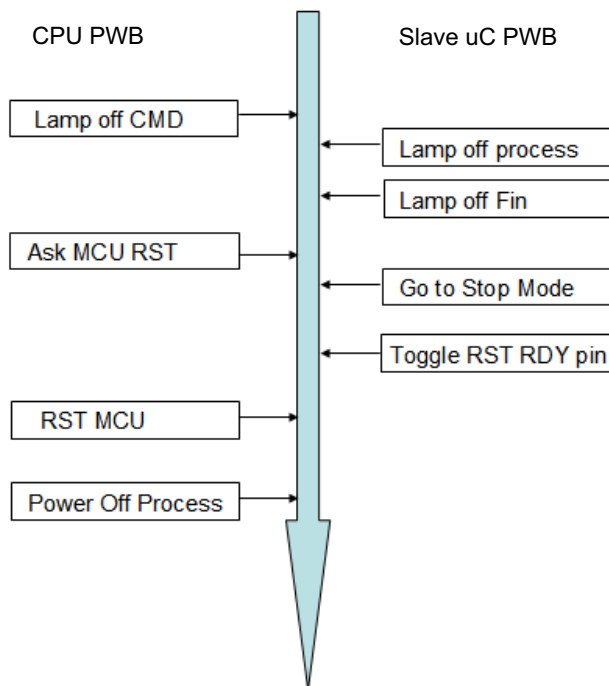


## TROUBLESHOOTING

Process pre-caution and error sequence:

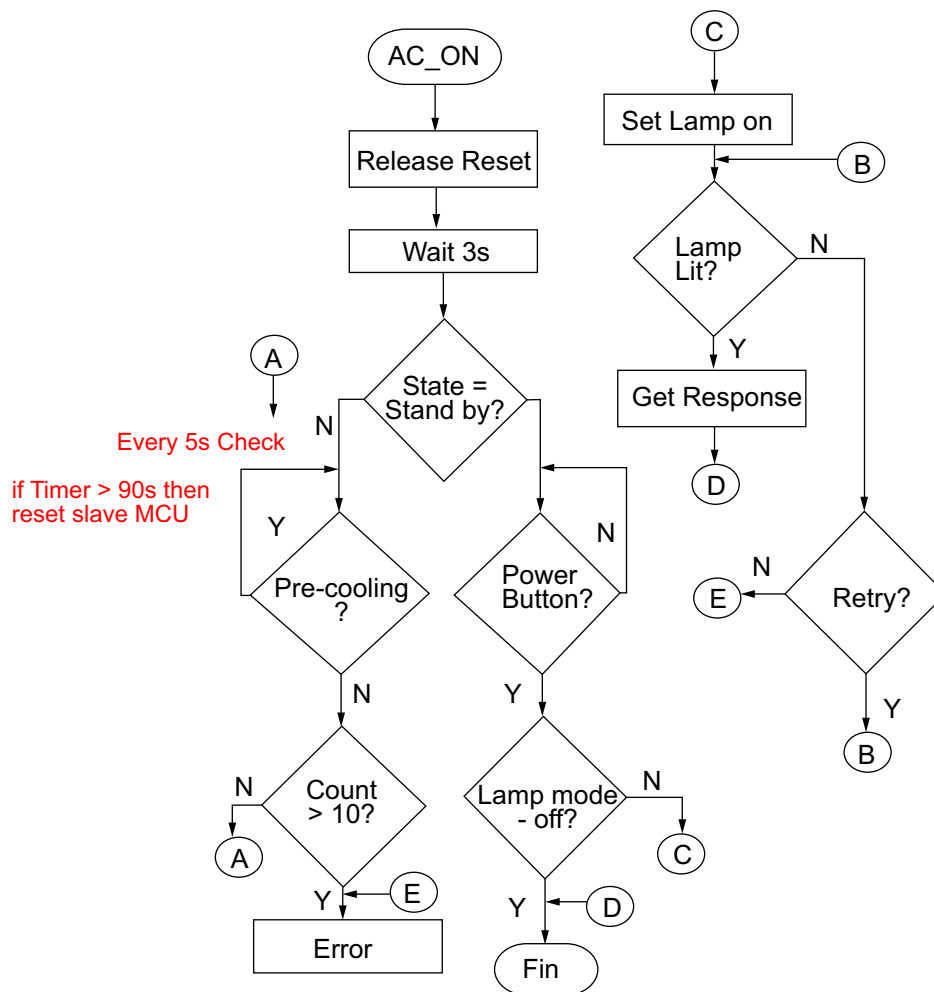


Process Power off and Lamp off only Sequence:



## TROUBLESHOOTING

Process AC-ON, Lamp Control Sequence:



## TROUBLESHOOTING

### 1-2. Troubleshooting & Error Code

#### Error Code Definition

In Delta RS232 debug mode, the slave MCU will response with error code in case of system error like lamp fail, or thermal situation failure, etc. They are defined as below table.

System error codes were defined as following tables

Byte 0	Definition	Byte 1	Definition
Bit 0	ErrMsgOverTempInlet	Bit 0	ErrMsgFan1RotateError
Bit 1	ErrMsgOverTempDMD	Bit 1	ErrMsgFan2RotateError
Bit 2	ErrMsgOverTempLamp	Bit 2	ErrMsgFan3RotateError
Bit 3	Reserved	Bit 3	ErrMsgFan4RotateError
Bit 4	ErrMsgOverTempBallast1	Bit 4	ErrMsgFan5RotateError
Bit 5	ErrMsgOverTempBallast2	Bit 5	ErrMsgFan6RotateError
Bit 6	ErrMsgInletSensorError [5]	Bit 6	ErrMsgFan7RotateError
Bit 7	ErrMsgInDMDSensorError	Bit 7	ErrMsgFan8RotateError

Byte 2	Definition	Byte 3	Definition
Bit 0	ErrMsgFan9RotateError	Bit 0	ErrMsgInterLockOpen
Bit 1	ErrMsgFan10RotateError	Bit 1	ErrMsgSystemI2cFail
Bit 2	ErrMsgFan11RotateError	Bit 2	ErrMsgEepromFail
Bit 3	ErrMsgFan12RotateError	Bit 3	Reserved
Bit 4	ErrMsgFan13RotateError	Bit 4	Reserved
Bit 5	ErrMsgFan14RotateError	Bit 5	ErrMsgLampDoorOpen [5]
Bit 6	ErrMsgFan15RotateError	Bit 6	Reserved
Bit 7	ErrMsgFan16RotateError	Bit 7	ErrMsgSoftwareI2cFail

Byte 4	Definition	Byte 5	Definition
Bit 0	ErrMsgPreCooling	Bit 0	ErrMsgFan1DriverError
Bit 1	ErrMsgLamp1DoorOpen [5]	Bit 1	ErrMsgFan2DriverError
Bit 2	ErrMsgLamp2DoorOpen [5]	Bit 2	ErrMsgFan3DriverError
Bit 3	ErrMsg12VOverSpec[7]	Bit 3	ErrMsgFan4DriverError
Bit 4	ErrMsgBallast1UartError	Bit 4	ErrMsgFan5DriverError
Bit 5	ErrMsgBallast2UartError	Bit 5	ErrMsgFan6DriverError
Bit 6	ErrMsgFanInitError	Bit 6	ErrMsgFan7DriverError
Bit 7	ErrMsgExGpioFail	Bit 7	ErrMsgFan8DriverError

## TROUBLESHOOTING

---

Byte 6	Definition	Byte 7	Definition
Bit 0	ErrMsgFan9DriverError	Bit 0	ErrMsgNotchFilterOpen [5]
Bit 1	ErrMsgFan10DriverError	Bit 1	Reserved
Bit 2	ErrMsgFan11DriverError	Bit 2	Reserved
Bit 3	ErrMsgFan12DriverError	Bit 3	Reserved
Bit 4	ErrMsgFan13DriverError	Bit 4	Reserved
Bit 5	ErrMsgFan14DriverError	Bit 5	Reserved
Bit 6	ErrMsgFan15DriverError	Bit 6	Reserved
Bit 7	ErrMsgFan16DriverError	Bit 7	Reserved

[1] Detect rule:

### Error Code Message – Troubleshooting and what parts need to replace

- ErrMsgOverTempInlet  
When Inlet temp > 45 in stand by mode or  
Force ECO mode toggle and Inlet temp > 43 continue 5 mins  
Temp. is over spec. Check if there is anything blocks in inlet or replace Inlet thermal sensor.
- ErrMsgOverTempDMD  
When DMD temp > 70 in stand by mode or  
Force ECO mode toggle and DMD temp > 70 continue 5 mins  
Temp. is over spec. Check or replace DMD thermal sensor.
- ErrMsgOverTempLamp  
Thermal Break toggle and Polling time is 500ms.  
Check or replace Lamp thermal break.
- ErrMsgOverTempBallast1  
When Blaster temp > 90 in stand by mode or  
Force ECO mode toggle and Blaster temp > 90 continue 5 mins  
Check or replace Ballast1 thermal break.



## TROUBLESHOOTING

---

- ErrMsgOverTempBallast2  
When Blaster temp > 90 in stand by mode or  
Force ECO mode toggle and Blaster temp > 90 continue 5 mins  
Check or replace Ballast2 thermal break.
- ErrMsgInletSensorError  
When Inlet Sensor read value = -20 or Inlet Sensor loss connect.  
Check or replace Inlet thermal sensor.
- ErrMsgInDMDSensorError  
When DMD Sensor read value = -20 or Inlet Sensor loss connect.  
Check or replace DMD thermal sensor.
- ErrMsgFan1RotateError - Fan1 gets error during projector working. Check and replace fan 1
- ErrMsgFan2RotateError - Fan2 gets error during projector working. Check and replace fan 2
- ErrMsgFan3RotateError - Fan3 gets error during projector working. Check and replace fan 3
- ErrMsgFan4RotateError - Fan4 gets error during projector working. Check and replace fan 4
- ErrMsgFan5RotateError - Fan5 gets error during projector working. Check and replace fan 5
- ErrMsgFan6RotateError - Fan6 gets error during projector working. Check and replace fan 6
- ErrMsgFan7RotateError - Fan7 gets error during projector working. Check and replace fan 7
- ErrMsgFan8RotateError - Fan8 gets error during projector working. Check and replace fan 8
- ErrMsgFan9RotateError - Fan9 gets error during projector working. Check and replace fan 9
- ErrMsgFan10RotateError-Fan10 gets error during projector working. Check and replace fan 10
- ErrMsgFan11RotateError-Fan11 gets error during projector working. Check and replace fan 11
- ErrMsgFan12RotateError-Fan12 gets error during projector working. Check and replace fan 12
- ErrMsgFan13RotateError-Fan13 gets error during projector working. Check and replace fan 13
- ErrMsgFan14RotateError-Fan14 gets error during projector working. Check and replace fan 14
- ErrMsgFan15RotateError-Fan15 gets error during projector working. Check and replace fan 15
- ErrMsgFan16RotateError-Fan16 gets error during projector working. Check and replace fan 16

When FanX speed < Target speed 80% keep 15 seconds.

## TROUBLESHOOTING

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- ErrMsgInterLockOpen  
Inter Lock Open toggle and Polling time is 500ms.  
Check if connectors are unplugged from slave board to interlock board or replace slave board and interlock board.
- ErrMsgSystemI2cFail  
Read Exter IO fail and Polling time is 500ms.  
Check or replace slave board.
- ErrMsgEepromFail  
When read EEPROM fail in system initial.  
Check or replace slave board.
- ErrMsgLampDoorOpen  
Lamp Door (1 or 2) Open toggle and Polling time is 500ms.  
Check the lamp1 & Lamp2 door.
- ErrMsgSoftwareI2cFail  
It's blaster UART Fail  
Check or replace slave board.
- ErrMsgPreCooling  
When fan initial fail in pre-cooling mode.  
Check or replace all Fan Driver boards and Fans.
- ErrMsgLamp1DoorOpen  
When Lamp Door 1 Open toggle and Polling time is 500ms.  
Check the lamp1 door.
- ErrMsgLamp2DoorOpen  
When Lamp Door 2 Open toggle and Polling time is 500ms.  
Check the Lamp2 door.

## TROUBLESHOOTING

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- ErrMsg12VOverSpec  
When 12V voltage >12.6 or <11.4 and Polling time is 1s.  
Check 12V input voltage on slave board or replace power board.
- ErrMsgBallast1UartError  
When ballast1 communication no response.  
Check or replace Ballast1 or slave board.
- ErrMsgBallast2UartError  
When ballast2 communication no response.  
Check or replace Ballast2 or slave board
- ErrMsgFanInitError  
When AC on make fan to high speed, if it is fail toggle.  
When Lamp on make fan to target speed, if it is fail toggle.  
Check or replace all Fan Driver boards and Fans.
- ErrMsgExGpioFail  
When Lamp on process get ExGpio fail.  
Check or replace slave board
- ErrMsgFan1DriverError - Check or replace Fan Driver D board.
- ErrMsgFan2DriverError - Check or replace Fan Driver C board.
- ErrMsgFan3DriverError - Check or replace slave board.
- ErrMsgFan4DriverError- Check or replace Fan Driver D board.
- ErrMsgFan5DriverError- Check or replace Fan Driver D board.
- ErrMsgFan6DriverError- Check or replace Fan Driver C board.
- ErrMsgFan7DriverError- Check or replace Fan Driver E board
- ErrMsgFan8DriverError- Check or replace Fan Driver C board.
- ErrMsgFan9DriverError- Check or replace Fan Driver B board.
- ErrMsgFan10DriverError- Check or replace Fan Driver B board.
- ErrMsgFan11DriverError- Check or replace Fan Driver E board

## TROUBLESHOOTING

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- ErrMsgFan12DriverError- Check or replace Fan Driver E board
- ErrMsgFan13DriverError- Check or replace Fan Driver E board
- ErrMsgFan14DriverError- Check or replace slave board.
- ErrMsgFan15DriverError- Check or replace Fan Driver D board.
- ErrMsgFan16DriverError- Check or replace Fan Driver C board.  
When Fan Driver IC no response.

- ErrMsgNotchFilterOpen  
Notch Filter Open toggle and Polling time is 500ms.  
Check or replace Notch Filter

[2] Detect rule:  
Polling time 100ms, if there have detect continue 10 times. It will issue the statue change.

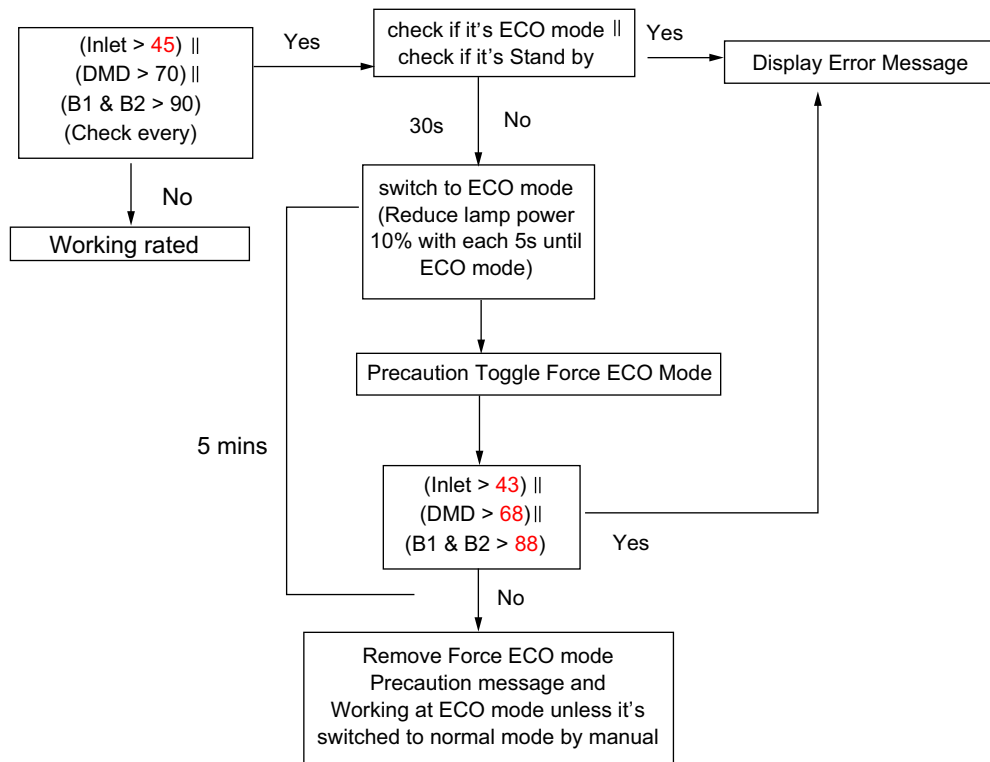
- [3] Detect rule: When those 3 errors happen, the blaster error will filter. To avoid user misunderstand.
- a. HW toggle to cut off lamp time:  
During Lamp off: 4.89ms  
During Lamp on: 0.471ms
  - b. The error code show up in software.

Lamp Door1	Lamp Door1	ErrMsgLampDoorOpen	ErrMsgLampDoor1Open	ErrMsgLampDoor2Open
Close	Close	0	0	0
Close	Open	1	0	1
Open	Close	1	1	0
Open	Open	1	1	1

## TROUBLESHOOTING

[4] Detect rule: Toggle Force ECO mode rule

(Temp. define is for Sensor read value.)



Precaution	Toggle Temp	Clear Temp
Inlet Sensor	> 41	< 39
DMD Sensor	> 68	< 66
Blaster1&2 Sensor	> 88	< 86

Error (Force ECO Mode)	Toggle Temp	Clear Temp
Inlet Sensor	> 45	< 43
DMD Sensor	> 70	< 68
Blaster1&2 Sensor	> 90	< 88

## TROUBLESHOOTING

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[5] Detect rule:

### Hardware & Software Failure Detection

- By hardware, the hardware design will cut off the power of ballast to protect system immediately.
- By software, the Slave MCU should polling all the FAN status via the P00~P04 of PCA9555 (IC338), if detect any failure that come from FAN driver IC, the Slave MCU will assert the ALERT signal, then go back to the main loop processes of Slave MCU.

### Lamp Thermostat Detection

The Slave MCU polling the signal status from the P13 of PCA9555 (IC27), the status '1' indicates failure and '0' indicates normal.

### Lamp Interlock Detection

The Slave MCU polling the signal status from the P15 of PCA9555 (IC27), the status '1' indicates failure and '0' indicates normal.

### Lamp Door Detection

The Slave MCU polling the signal status from the P16 of PCA9555 (IC27), the status '1' indicates failure and '0' indicates normal.

### Notch Filter Detection

The Slave MCU polling the signal status from the P17 of PCA9555 (IC27), the status '1' indicates failure and '0' indicates normal.

#### \* Software Design Notes \*

- The Slave MCU should polling these statuses of "Lamp Thermostat Detection", "Lamp Interlock Detection", "Lamp Door Detection" and "Notch Filter Detection" by order.
- When Slave MCU detected one of above mentioned failure, the Slave MCU will assert the ALERT signal.
- There is hardware protection design to cut off the power of ballast 1 and ballast 2 when system occur any one of above mentioned failure.

## TROUBLESHOOTING

### 1-3. Connection Diagrams Troubleshooting

#### 1-3-1. Slave uC Board

##### SLAVE uC Board side

CN202 to SMPS BD

VFB12+	1	→	12.V +/- 5%
	2		
VFB12-	3	-	GND
	4		

J6 To Router BD Power

12V	1	→	12.V +/- 5%
GND	2	-	GND

J3 To LED Status with Buzzer BD (CN1)

Note: Pin to Pin

5V	1	→	LED power source.
STL2	2	←	When low status, R LED will light (Open Drain) (Hi = 5V)
STL3	3	←	When low status, G LED will light (Open Drain) (Hi = 5V)
5V	4	→	Buzzer power source.
BZ	5	←	Buzzer Control Signal When low status, Buzzer will alert. (Open Drain) (Hi = 5V)

J100 To MOTOR BD (J100)

Note: Pin to Pin

GND	1	-	GND
GND	2	-	GND
12V	3	→	12V +/- 5% Power output to Motor BD
12V	4		
GND	5	-	GND
MOTO TX2	6	→	UART Interface between SLAVE uC BD and Motor BD (Hi = 3.3V)
MOTO RX2	7	←	
3.3V	8	→	3.3V +/- 5% Power output to Motor BD

J91 for Fan14

FG1	1	←	FAN Speed indication. (Pluse) (5V)
Vout	2	→	Fan voltage out
GND	3	-	GND

J92 for Fan3

FG1	1	←	FAN Speed indication. (Pluse) (5V)
Vout	2	→	Fan voltage out
GND	3	-	GND
-	4	-	
-	5	-	

## TROUBLESHOOTING

### J7 To PWM Fan Driver BD – B (J9850)

Note: Pin to Pin

12V	1	→	12V Output
12V	2		
GND	3	–	GND
5V	4	→	5V Output
GND	5	–	GND
I2C_SCL	6	→	I2C communication between uC BD and Fan Driver BD
I2C_SDA	7	↔	
FAN_Driver BD_Flag	8	←	If FAN actual RPM is out of the programmed value, ALERT pin goes low.

### J8 To Fan Driver BD – C (J9810)

Note: Pin to Pin

12V	1	→	12V Output
12V	2		
GND	3	–	GND
5V	4	→	5V Output
GND	5	–	GND
I2C_SCL	6	→	I2C communication between uC BD and Fan Driver BD
I2C_SDA	7	↔	
FAN_Driver BD_Flag	8	←	If FAN actual RPM is out of the programmed value, ALERT pin goes low.
–	9	–	–

### J9 To Fan Driver BD – D (CN9817)

Note: Pin to Pin

12V	1	→	12V Output
12V	2		
GND	3	–	GND
5V	4	→	5V Output
GND	5	–	GND
I2C_SCL	6	→	I2C communication between uC BD and Fan Driver BD
I2C_SDA	7	↔	
FAN_Driver BD_Flag	8	←	If FAN actual RPM is out of the programmed value, ALERT pin goes low.
–	9	–	–
–	10	–	–



## TROUBLESHOOTING

### J10 To Fan Driver BD – E (CN9820)

Note: Pin to Pin

12V	1	→	12V Output
12V	2		
GND	3	–	GND
5V	4	→	5V Output
GND	5	–	GND
I2C_SCL	6	→	I2C communication between uC BD and Fan Driver BD
I2C_SDA	7	↔	
FAN_Driver BD_Flag	8	←	If FAN actual RPM is out of the programmed value, ALERT pin goes low.
–	9	–	–
–	10	–	–
–	11	–	–

### J17 To Ballast 1 Control Interface

Note: Pin to Pin

TXD	1	←	Ballast UART Interface.
GND	2	–	GND
3.3V	3	→	Ballast Control Interface Power Source
SCI/Lampsync	4	→	Lamp Lit input/Lamp sync input
RXD	5	→	Ballast UART Interface.

### J18 To Ballast 2 Control Interface

Note: Pin to Pin

TXD	1	←	Ballast UART Interface.
GND	2	–	GND
3.3V	3	→	Ballast Control Interface Power Source
SCI/Lampsync	4	→	Lamp Lit input/Lamp sync input
RXD	5	→	Ballast UART Interface.
–	6	–	–

### J11 NTC1

DC Voltage	1	←	Per the temperature.
3V3	2	←	Normal: 3V3/Other voltage: SLAVE uC BD 3V3 suppling is something wrong.

### J12 NTC2

DC Voltage	1	→	Per the temperature.
–	2	–	–
3V3	3	←	Normal: 3V3/Other voltage: SLAVE uC BD 3V3 suppling is something wrong.

### J28 Tamper Switch

TAMP0_1	1	←	When the Tamp. Switch is pressed, it is Lo status. (Normal, no issue) Unpressed, it is Hi status. (NG, 4.5V +/- 5%)
GND	2	–	–
SD_NO_TAMPER_O	3	→	Notice!! This pin is connected to a battery. Don't measure this line by any equipment in board slot-in condition.

## TROUBLESHOOTING

### J29 Tamper Switch

TAMP1_1	1	←	When the Tamp. Switch is pressed, it is low status. (Normal, no issue) Unpressed, it is Hi status. (NG, 4.5V +/- 5%)
GND	2	—	GND
SD_NO_TAMPER_O	3	→	Notice!! This pin is connected to a battery. Don't measure this line by any equipment in board slot-in condition.

### J30 Tamper Switch

TAMP2_1	1	←	When the Tamp. Switch is pressed, it is low status. (Normal, no issue) Unpressed, it is Hi status. (NG, 4.5V +/- 5%)
GND	2	—	GND
SD_NO_TAMPER_O	3	→	Notice!! This pin is connected to a battery. Don't measure this line by any equipment in board slot-in condition.

### J24 for Notch Filter SW

3.3V	1	←	Normal: 3V3/Other voltage: SLAVE uC BD 3V3 supplying is something wrong.
—	2	—	—
3.3V	3	→	Normal: 3V3/Other voltage: (1) Notch filter is not at right position. (2) Notch Filter Switch had broken.

### J25 for Lamp Door 1

3.3V	1	←	Normal: 3V3/Other voltage: Check J24.
3.3V	2	—	Normal: 3V3/0V: (1) Lamp Door 1 had been opened. (2) Lamp Door 1 switch had broken.

### J52 for Lamp Door 2

3.3V	1	←	Normal: 3V3/Other voltage: Check J24.
—	2	—	—
3.3V	3	→	Normal: 3V3/0V: (1) Lamp Door 2 had been opened. (2) Lamp Door 2 switch had broken.

### J26 for Lamp Thermostat

3V3	1	←	Normal: 3V3/0V: To go back to check J25
3V3	2	→	Normal: 3.3V/0V: Lamp Thermostat is detecting the lamp (s) is (are) temperature.

		LMP2_Dr_NG	Lamp2_OTP	Lamp1_OTP	Interlock_ExiO	LMP_Dr_NG	Notch_NG	LMP1_CONTn	LMP2_CONTn
J52 Open	Lamp2 Door open	1	X	X	X	X	X	X	X
J27 Open	Lamp2 cover temp (Reserved)	X	1	0	X	0	0	X	X
J26 Open	Lamp1 cover temp	X	1	1	X	0	0	X	X
J4 Open	Interlock SW NG	X	X	X	1	X	X	X	X
J25 Open	Lamp1 Door open	X	1	1	X	1	0	X	X
J24 Open	Notch Filter Door Open	X	1	1	X	1	1	X	X
J33 between pin 1&3 Open	Lamp2 Model Insert NG (Reserved)	X	X	X	X	X	X	X	1
J33 between pin 4&6 Open	Lamp1 Model Insert NG (Reserved)	X	X	X	X	X	X	1	X

Note: (1) X: Don't Core (2) 1: Hi Level 0: Lo Level

### J4 To Interlock BD

5V	1	→	Normal: 5V3/0V: Check PTC3 resistor value by Multimeter. (Normal value < 10ohm)
Photo Diode positive, (input)	2	←	Normal: 5V/0V: The circuit loop between pin1 & pin2 is opened.
Photo Diode positive, (output)	3	→	Normal: 0V/5V: The circuit loop between pin3 & pin4 is opened.
GND	4	—	GND

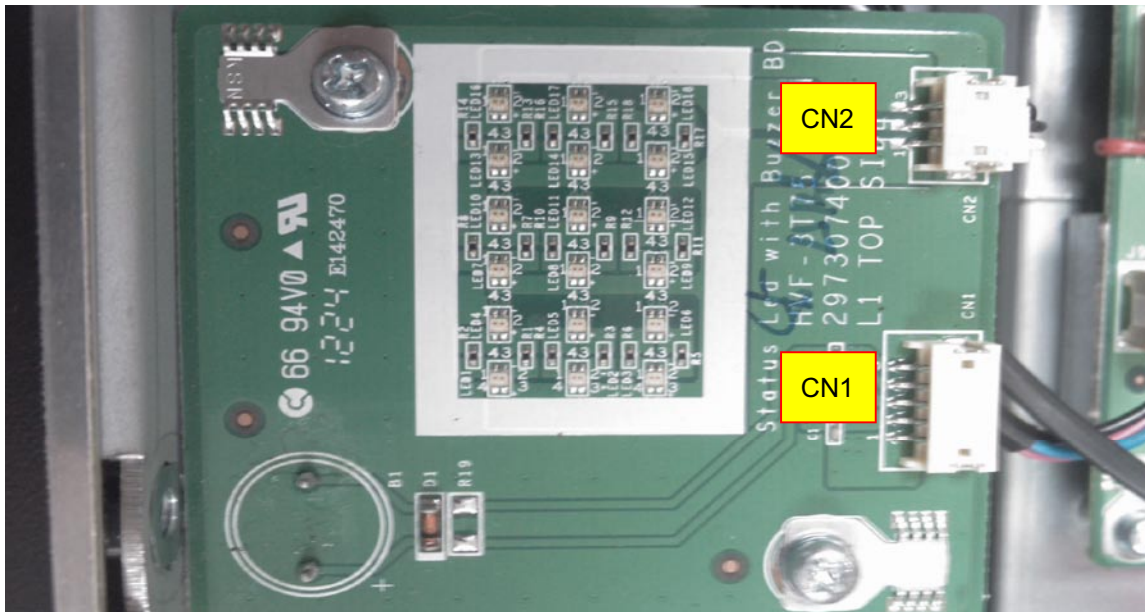
## TROUBLESHOOTING

### J604 to Key BD & LCD Module

SCL	1	→	I2C communication between EEBOX and keypad
SDA	2	↔	
GND	3	–	GND
GND	4	–	GND
5V	5	→	Keypad BID & LCD Module 5V Power Supply
5V	6	→	Keypad BID & LCD Module 5V Power Supply
–	7	–	–
–	8	–	–
GND	9	–	GND
GND	10	–	GND
KEYIN_3	11	←	Key detection, Matrix in _3
KEYIN_4	12	←	Key detection, Matrix in _4
KEYIN_2	13	←	Key detection, Matrix in _2
KEYOUT_0	14	→	Key detection, Matrix out _0
KEYIN_1	15	←	Key detection, Matrix in _1
KEYOUT_1	16	→	Key detection, Matrix out _1
KEYIN_0	17	←	Key detection, Matrix in _0
KEYOUT_2	18	→	Key detection, Matrix out _2
LED_ST1	19	→	Key Lock Indicator LED Control_Green; Hi: LED off. Lo: on
KEYOUT_3	20	→	Key detection, Matrix out _3
LED_ST0	21	→	Key Lock Indicator LED Control_White; Hi: LED off. Lo: on
KEYOUT_4	22	→	Key detection, Matrix out _4
LED_PW1	23	→	No connection at Keypad BD
LCD_R_Wn	24	→	LCD Module,; H: Read Mode, L: Write Mode
GND	25	–	GND
GND	26	–	GND
5V	27	→	Keypad BD & LCD Module 5V Power Supply
5V	28	→	Keypad BD & LCD Module 5V Power Supply
LCD_PW0	29	→	LCD Module Back Light & LED illumination BD Power Control signal: Hi: Light off, Lo: Light On.
LCD_RS	30	→	LCD Module; H Data signal, L: Instruction signal
LCD_B7	31	→	LCD Module Data stream 7
LCD_E	32	→	LCD Module; Read/Write enable signal
GND	33	–	GND
LCD_B4	34	→	LCD Module Data stream 4
LCD_B6	35	→	LCD Module Data stream 6
LCD_B5	36	→	LCD Module Data stream 5
GND	37	–	GND
GND	38	–	GND
GND	39	–	GND
–	40	–	–

## TROUBLESHOOTING

### 1-3-2. Status LED with Buzzer Board



#### Status LED with Buzzer BD

CN1 From SLAVE uC BD (J3)  
Note: Pin to Pin

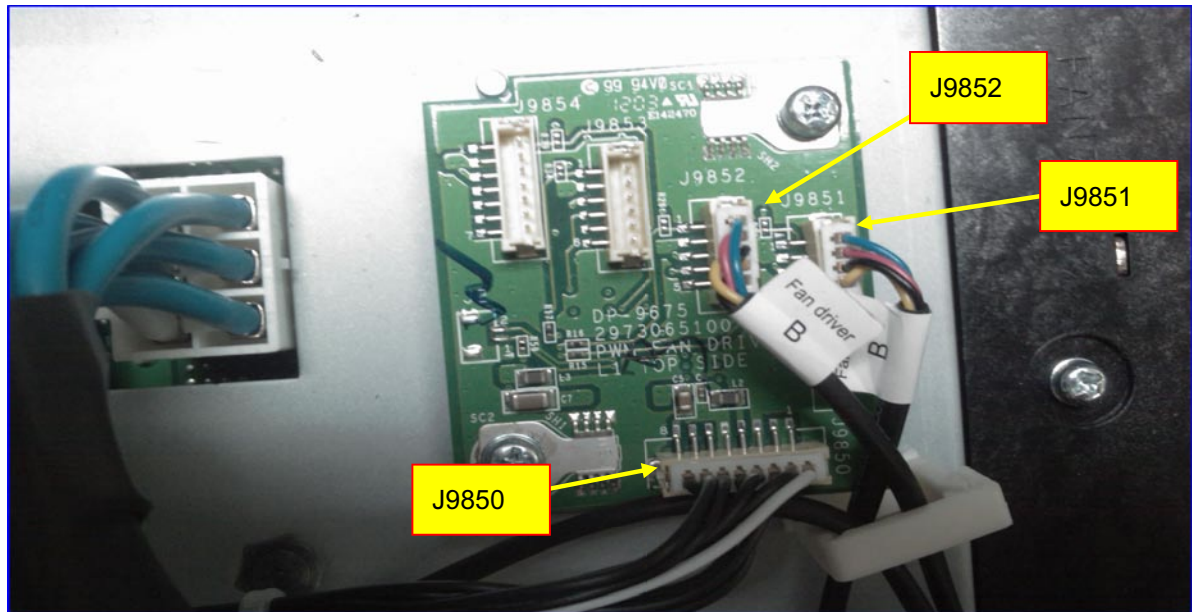
5V	1	←	LED power source.
STL2	2	→	When low status, R LED will light
STL3	3	→	When low status, G LED will light
5V	4	←	Buzzer power source.
BZ	5	→	When low status, Buzzer will alert.

CN2 To Status LED BD (J3)  
Note: Pin to Pin

5V	1	→	LED power source.
STL2	2	←	When low status, R LED will light
STL3	3	←	When low status, G LED will light

## TROUBLESHOOTING

### 1-3-3. PWM Fan Driver Board – B side



#### PWM Fan Driver BD -B side

J9850 From SLAVE uC BD (J7)

Note: Pin to Pin

12V	1	←	12V Input
12V	2		
GND	3	–	GND
5V	4	←	5V Input
GND	5	–	GND
I2C_SCL	6	←	I2C communication between uC BD and Fan Driver BD
I2C_SDA	7	↔	
FAN_Driver BD_Flag	8	→	If Fan actual RPM is out of the programmed value, ALERT pin goes low.

## TROUBLESHOOTING

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### J9851 for Fan9

TACH1	1	←	FAN Speed indication. (Pluse)(5V)
12V	2	→	The PWM Fan Voltage input
GND	3	—	GND
PWM1	4	→	FAN Speed control Output(PWM)

### J9852 for Fan10

TACH2	1	←	FAN Speed indication. (Pluse)(5V)
12V	2	→	The PWM Fan Voltage input
GND	3	—	GND
PWM2	4	→	FAN Speed control Output(PWM)
—	5	—	—

### J9853 —

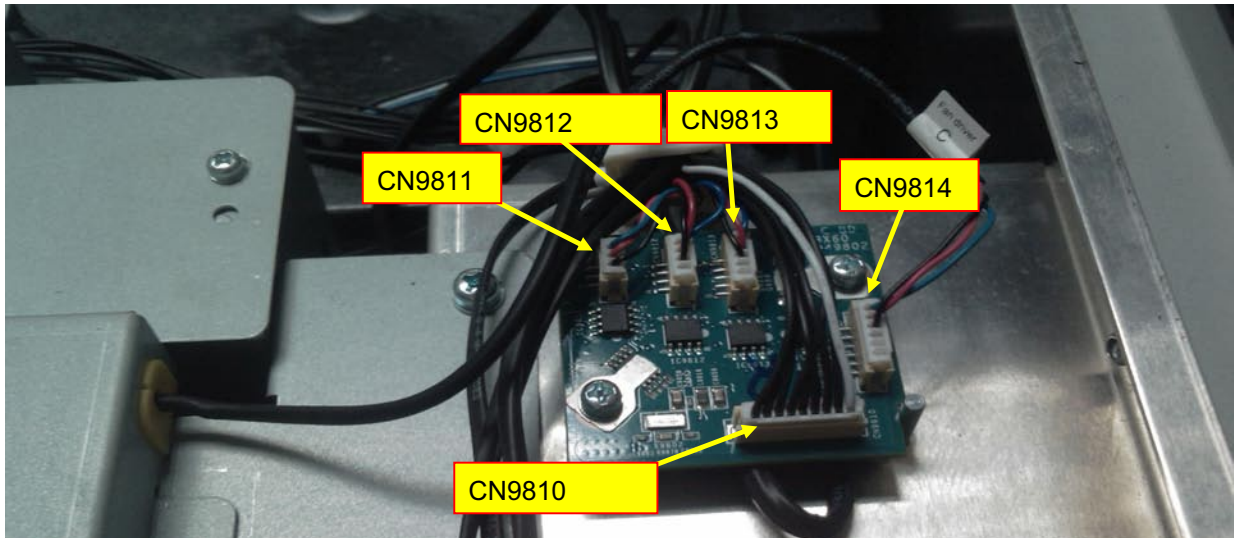
TACH3	1	←	FAN Speed indication. (Pluse)(5V)
12.5V	2	→	The PWM Fan Voltage input
GND	3	—	GND
PWM3	4	→	FAN Speed control Output(PWM)
—	5	—	—
—	6	—	—

### J9854 —

TACH4	1	←	FAN Speed indication. (Pluse)(5V)
12.5V	2	→	The PWM Fan Voltage input
GND	3	—	GND
PWM4	4	→	FAN Speed control Output(PWM)
—	5	—	—
—	6	—	—
—	7	—	—

## TROUBLESHOOTING

### 1-3-4. Fan Driver Board – C side



#### Fan Driver BD – C side

J9810 From SLAVE uC BD (J8)

Note: Pin to Pin

12V	1	←	12V Input
12V	2		
GND	3	–	GND
5V	4	←	5V Input
GND	5	–	GND
I2C_SCL	6	←	I2C communication between uC BD and Fan Driver BD
I2C_SDA	7	↔	
FAN_Driver BD_Flag	8	→	If FAN actual RPM is out of the programmed value, ALERT pin goes low.
–	9	–	–

J9811 for Fan8

FG1	1	←	FAN Speed indication. (Pluse)(5V)
Vout	2	→	Fan voltage out
GND	3	–	GND

J9812 for Fan6

FG1	1	←	FAN Speed indication. (Pluse)(5V)
Vout	2	→	Fan voltage out
GND	3	–	GND
–	4	–	–

## TROUBLESHOOTING

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CN9813 for Fan16

FG1	1	←	FAN Speed indication. (Pluse)(5V)
Vout	2	→	Fan voltage out
GND	3	—	GND
—	4	—	—
—	5	—	—

CN9814 for Fan2

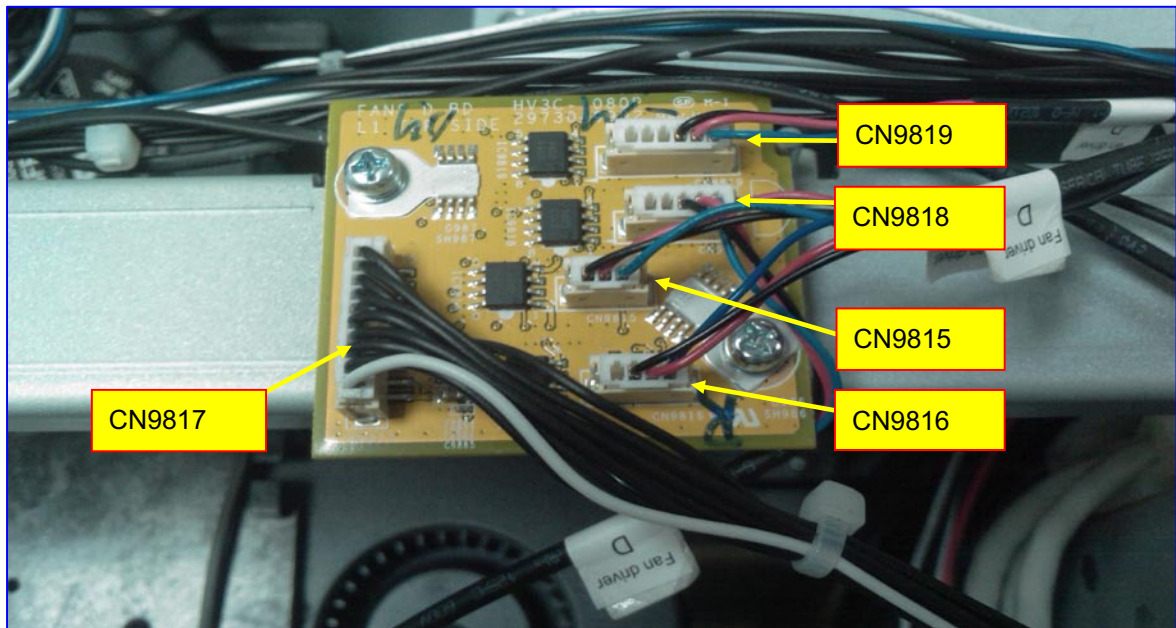
FG1	1	←	FAN Speed indication. (Pluse)(5V)
Vout	2	→	Fan voltage out
GND	3	—	GND
—	4	—	—
—	5	—	—
—	6	—	—



## TROUBLESHOOTING

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### 1-3-5. Fan Driver Board – D side



## TROUBLESHOOTING

### Fan Driver BD – D side

CN9817 From SLAVE uC BD (J9)

Note: Pin to Pin

12V	1	←	12V Input
12V	2		
GND	3	–	GND
5V	4	←	5V Input
GND	5	–	GND
I2C_SCL	6	←	I2C communication between uC BD and Fan Driver BD
I2C_SDA	7	↔	
FAN_Driver BD_Flag	8	→	If FAN actual RPM is out of the programmed value, ALERT pin goes low.
–	9	–	–
–	10	–	–

CN9815 for Fan15

FG1	1	←	FAN Speed indication. (Pluse)(5V)
Vout	2	→	Fan voltage out
GND	3	–	GND

CN9816 for Fan1

FG1	1	←	FAN Speed indication. (Pluse)(5V)
Vout	2	→	Fan voltage out
GND	3	–	GND
–	4	–	–

CN9818 for Fan5

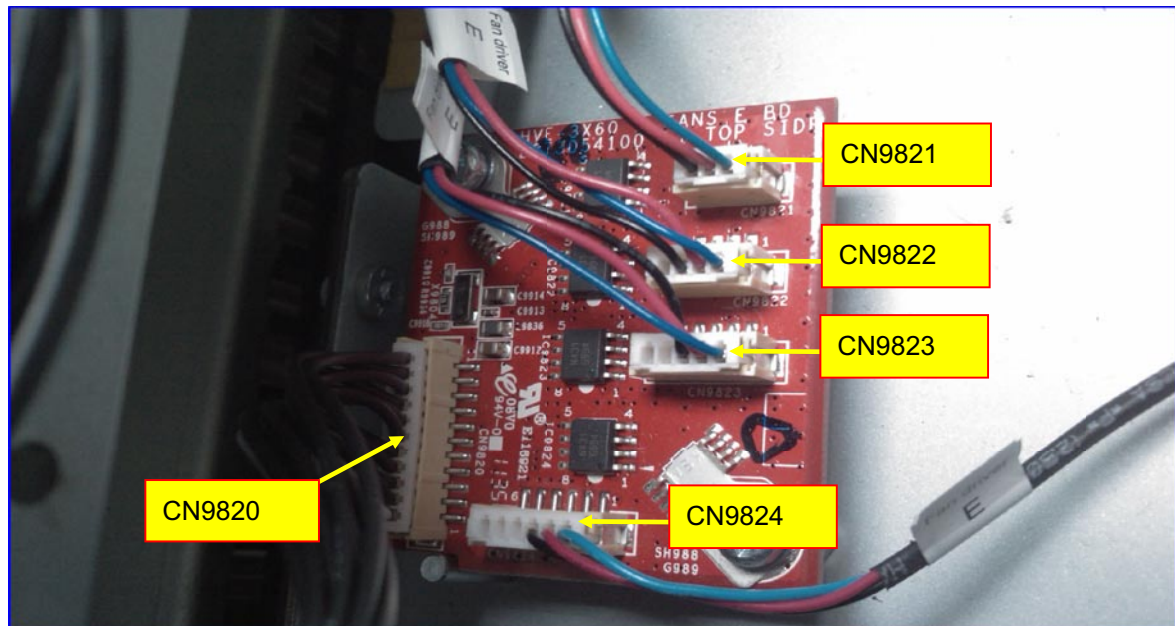
FG1	1	←	FAN Speed indication. (Pluse)(5V)
Vout	2	→	Fan voltage out
GND	3	–	GND
–	4	–	–
–	5	–	–

CN9819 for Fan4

FG1	1	←	FAN Speed indication. (Pluse)(5V)
Vout	2	→	Fan voltage out
GND	3	–	GND
–	4	–	–
–	5	–	–
–	6	–	–

## TROUBLESHOOTING

### 1-3-6. Fan Driver Board – E side



## TROUBLESHOOTING

### Fan Driver BD – E side

CN9820 From SLAVE uC BD (J10)

Note: Pin to Pin

12V	1	←	12V Input
12V	2		
GND	3	–	GND
5V	4	←	5V Input
GND	5	–	GND
I2C_SCL	6	←	I2C communication between uC BD and Fan Driver BD
I2C_SDA	7	↔	
FAN_Driver BD_Flag	8	→	If FAN actual RPM is out of the programmed value, ALERT pin goes low.
–	9	–	–
–	10	–	–
–	11	–	–

CN9821 for Fan7

FG1	1	←	FAN Speed indication. (Pluse)(5V)
Vout	2	→	Fan voltage out
GND	3	–	GND

CN9822 for Fan12

FG1	1	←	FAN Speed indication. (Pluse)(5V)
Vout	2	→	Fan voltage out
GND	3	–	GND
–	4	–	–

CN9823 for Fan13

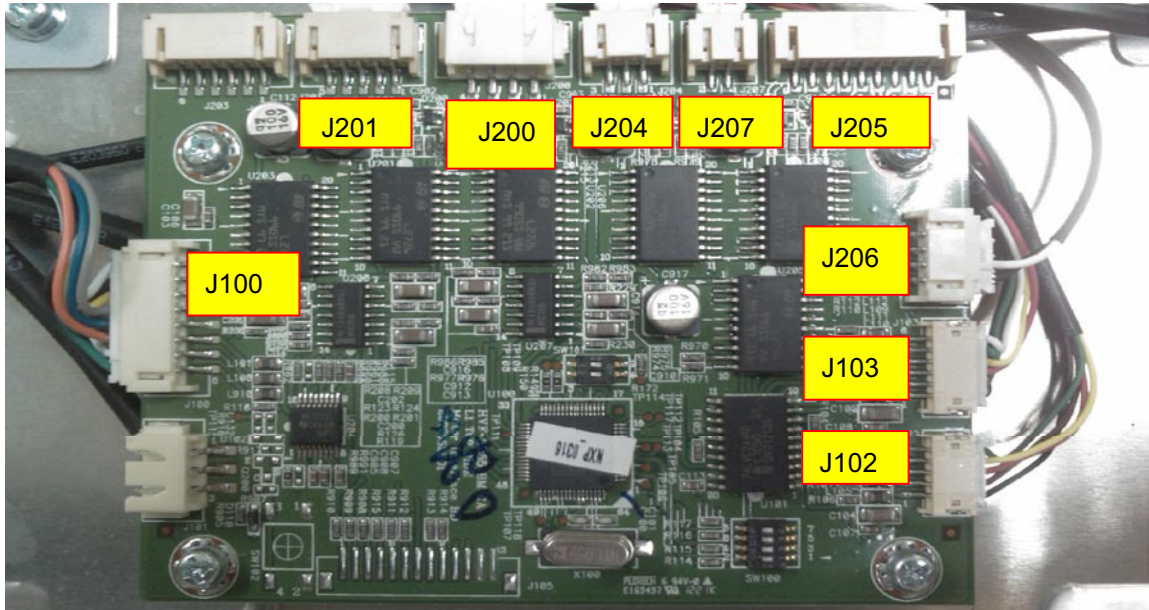
FG1	1	←	FAN Speed indication. (Pluse)(5V)
Vout	2	→	Fan voltage out
GND	3	–	GND
–	4	–	–
–	5	–	–

CN9824 for Fan11

FG1	1	←	FAN Speed indication. (Pluse)(5V)
Vout	2	→	Fan voltage out
GND	3	–	GND
–	4	–	–
–	5	–	–
–	6	–	–

## TROUBLESHOOTING

### 1-3-7. Motor Board side



#### Motor BD side

J100 From SLAVE uC BD (J100)

Note: Pin to Pin

GND	1	—	GND
GND	2	—	GND
12.5V	3	←	12.5V Power output to Motor BD
12.5V	4		
GND	5	—	GND
MOTO_TX2	6	→	UART Interface between SLAVE uC BD and Motor BD.
MOTO_RX2	7	←	
3.3V	8	←	3.3V Power output to Motor BD

J102 to Horizontal Sensor (on Lens Holder)

SDOUT_H1	1	←	Serial data output. Data Out is clocked on the falling edge of SCLK.
SDIN_H1	2	→	Serial data input. Data In is clocked on the rising edge of SCLK.
3.3V	3	→	The voltage is sent to HORI. SENSOR BD
SCLK_H1	4	→	System clock input for serial I/O and all internal logic
GND	5	—	GND

J103 to Vertical Sensor (on Lens holder)

SDOUT_H1	1	←	Serial data output. Data Out is clocked on the falling edge of SCLK.
SDIN_H1	2	→	Serial data input. Data In is clocked on the rising edge of SCLK.
3.3V	3	→	The voltage is sent to HORI. SENSOR BD
SCLK_H1	4	→	System clock input for serial I/O and all internal logic
GND	5	—	GND
EE_SDA	6	↔	EEPROM I2C interface (EE_SDA / SCLK_H1).

## TROUBLESHOOTING

### J200 to Lens Up/Down Motor

Down signal return path	1	←	Down signal return path
Down	2	→	Motor Control signal for Lens position down (12V / 0V)
Up	3	→	Motor Control signal for Lens position up (12V / 0V)
Up signal rerurn path	4	←	Up signal return path

### J201 to Lens Left/Right Motor

Left signal return path	1	←	Left signal return path
Left	2	→	Motor Control signal for Lens position left. (12V / 0V)
Floating	3	–	Floating
Right	4	→	Motor Control signal for Lens position Right. (12V / 0V)
Right signal return path	5	←	Right signal return path

### J204 ZOOM IN/OUT

ZOOM In	1	←	ZOOM IN control signal (12V / 0V)
–	2	←	–
ZOOM Out	3	→	ZOOM OUT control signal (12V / 0V)

### J207 FOCUS NEAR/FAR

Focus Near	1	←	FOCUS NEAR control signal (12V / 0V)
Focus Far	2	←	FOCUS FAR control signal (12V / 0V)

### J206 SHUTTER OPEN/CLOSE

OSP_OUT	1	→	Shutter out off the optical path.
OSP_IN	2	→	Shutter out off the optical path.
SHTR_O_C	3	←	No used
GND	4	–	GND

### J205 Encoder ZOOM In/Out ; Encoder Focus Near/Far

E_Q_ZOOM	1	→	Zoom Encoder Signal A
F_I_ZOOM	2	→	Zoom Encoder Signal B
GND	3	–	GND
Vin	4	→	12V
F_Q_FCS	5	→	Focus Encoder Signal A
F_I_FCS	6	→	Focus Encoder Signal B
GND	7	–	GND
Vin	8	→	12V
–	9	–	–

## TROUBLESHOOTING

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### 1-3-8. Keypad Board side

#### Keypad Board side

J602 LCD Module

GND	1	–	GND
5V	2	→	LCD Module Power Source
V0	3	←	Input Voltage for LCD
LCD_RS	4	→	LCD Module; H : Data signal, L : Instruction signal
LCD_R_Win	5	→	LCD Module; H : Read Mode, L : Write Mode
LCD_E	6	→	LCD Module; Read/Write enable signal
–	7	–	–
–	8	–	–
–	9	–	–
–	10	–	–
LCD_B4	11		LCD Module Data stream 4
LCD_B5	12		LCD Module Data stream 5
LCD_B6	13		LCD Module Data stream 6
LCD_B7	14		LCD Module Data stream 7
VLED	15		LED Module Backlight Power source
GND	16	–	GND
–	17	–	–
–	18	–	–
–	19	–	–
–	20	–	–

## TROUBLESHOOTING

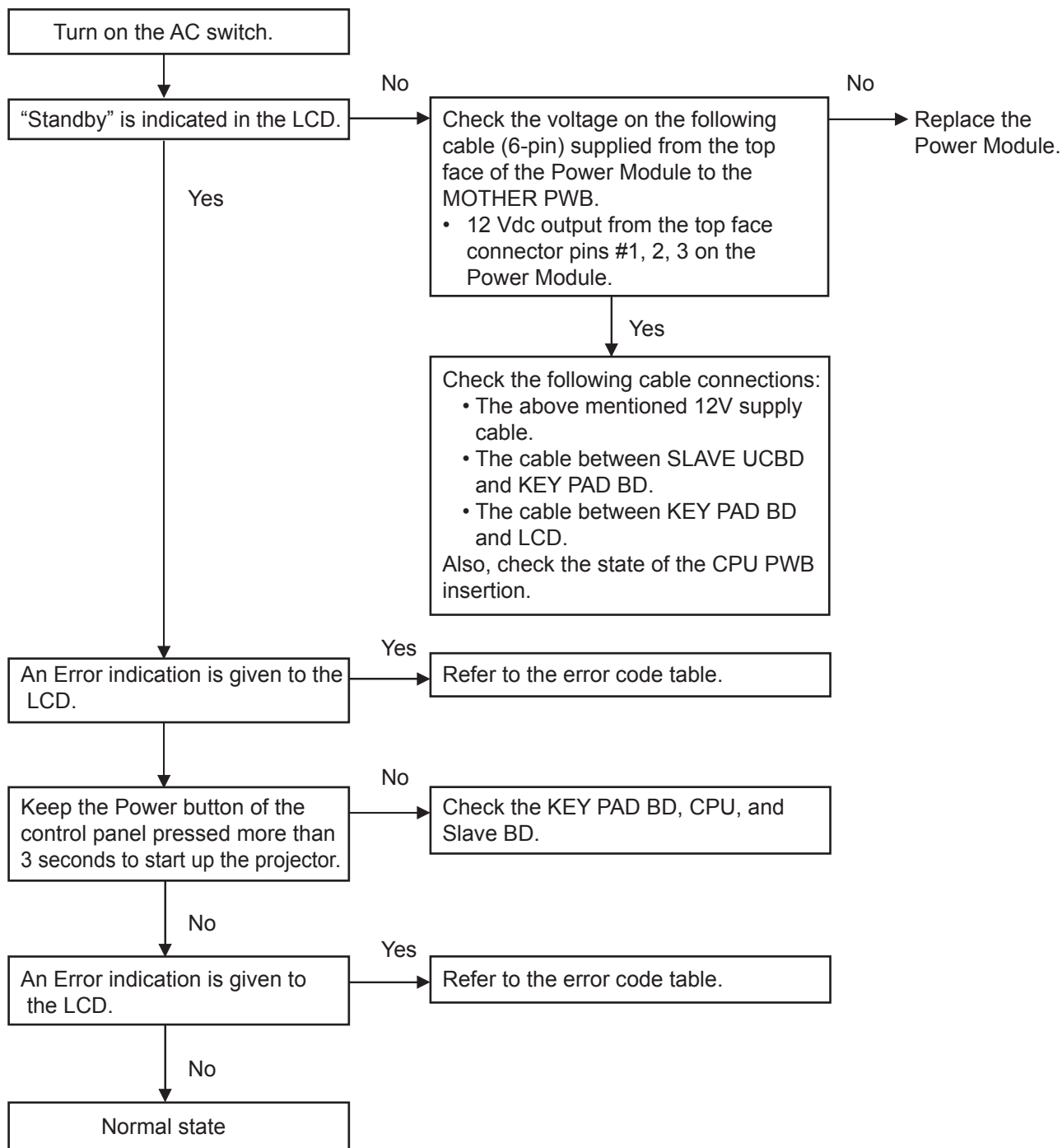
J604 to Key BD & LCD Module

SCL	1	→	I2C communication between EEBOX and Keypad
SDA	2	↔	
GND	3	–	GND
GND	4	–	GND
5V	5	→	Keypad BD & LCD Module 5V Power Supply
5V	6	→	Keypad BD & LCD Module 5V Power Supply
–	7	–	–
–	8	–	–
GND	9	–	GND
GND	10	–	GND
KEYIN_3	11	←	Key detection, Matrix in_3
KEYIN_4	12	←	Key detection, Matrix in_4
KEYIN_2	13	←	Key detection, Matrix in_2
KEYOUT_0	14	→	Key detection, Matrix out_0
KEYIN_1	15	←	Key detection, Matrix in_1
KEYOUT_1	16	→	Key detection, Matrix out_1
KEYIN_0	17	←	Key detection, Matrix in_0
KEYOUT_2	18	→	Key detection, Matrix out_2
LED_ST1	19	→	Key Lock Indicator LED Control _ Green; Hi : LED off, Lo : LED on
KEYOUT_3	20	→	Key detection, Matrix out_3
LED_ST0	21	→	Key Lock Indicator LED Control _ White; Hi : LED off, Lo : LED on
KEYOUT_4	22	→	Key detection, Matrix out_4
LCD_PW1	23	→	No connection at Keypad BD
LCD_R_Wn	24	→	LCD Module; H : Read Mode, L : Write Mode
GND	25	–	GND
GND	26	–	GND
5V	27	→	Keypad BD & LCD Model 5V Power Supply
5V	28	→	Keypad BD & LCD Model 5V Power Supply
LED_PW0	29	→	LCD Module Back Light & LED illumination BD Power Control signal; Hi : off, Lo :off
LCD_RS	30	→	LCD Module; H : Data signal, L : Instruction signal
LCD_B7	31	→	LCD Module Data stream7
LCD_E	32	→	LCD Module; Read/Write enable signal
GND	33	–	GND
LCD_B4	34	→	LCD Module Data stream 4
LCD_B6	35	→	LCD Module Data stream 6
LCD_B5	36	→	LCD Module Data stream 5
GND	37	–	GND
GND	38	–	GND
GND	39	–	GND
–	40	–	



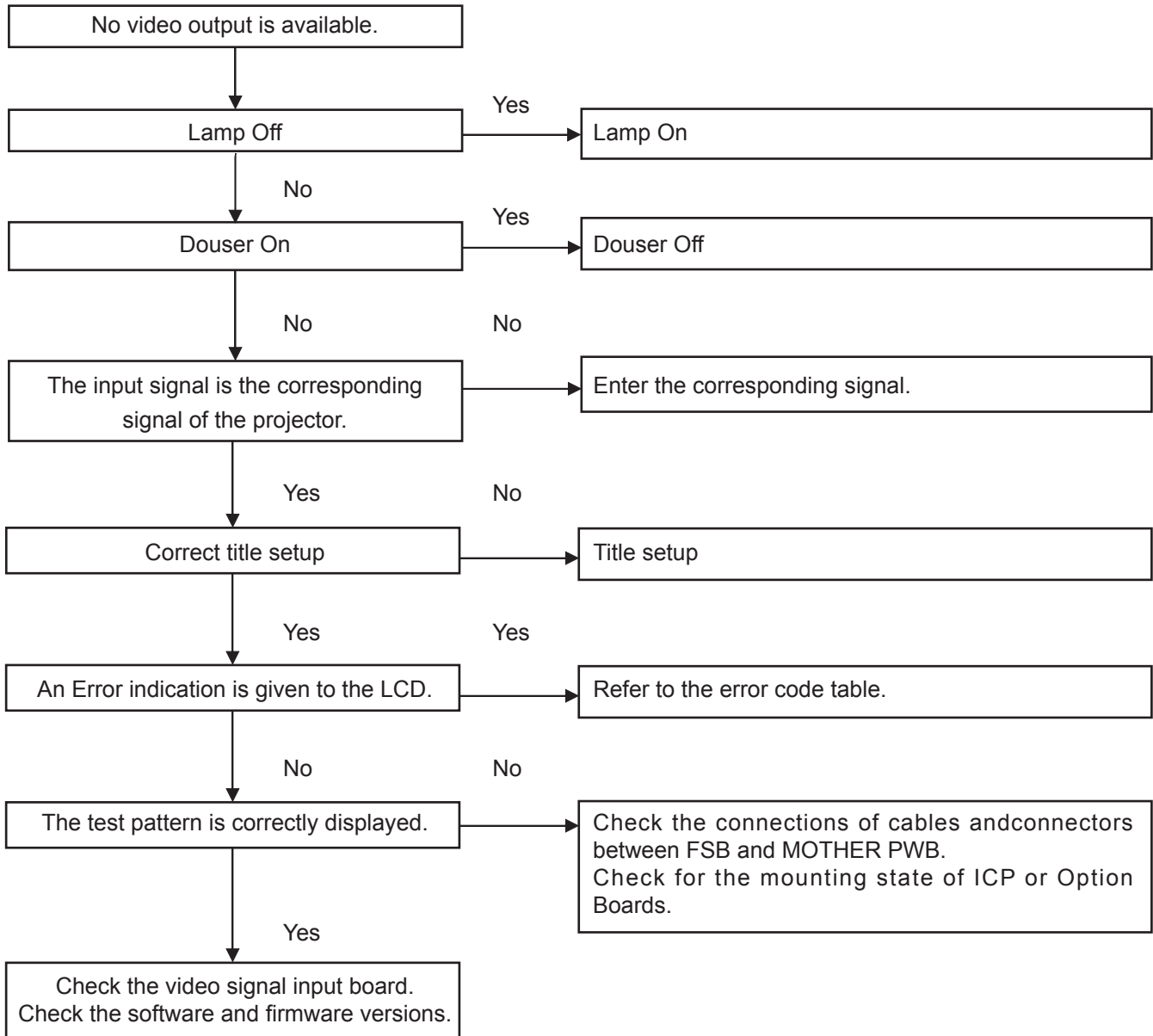
## TROUBLESHOOTING

### Troubleshooting when start-up failure occurred



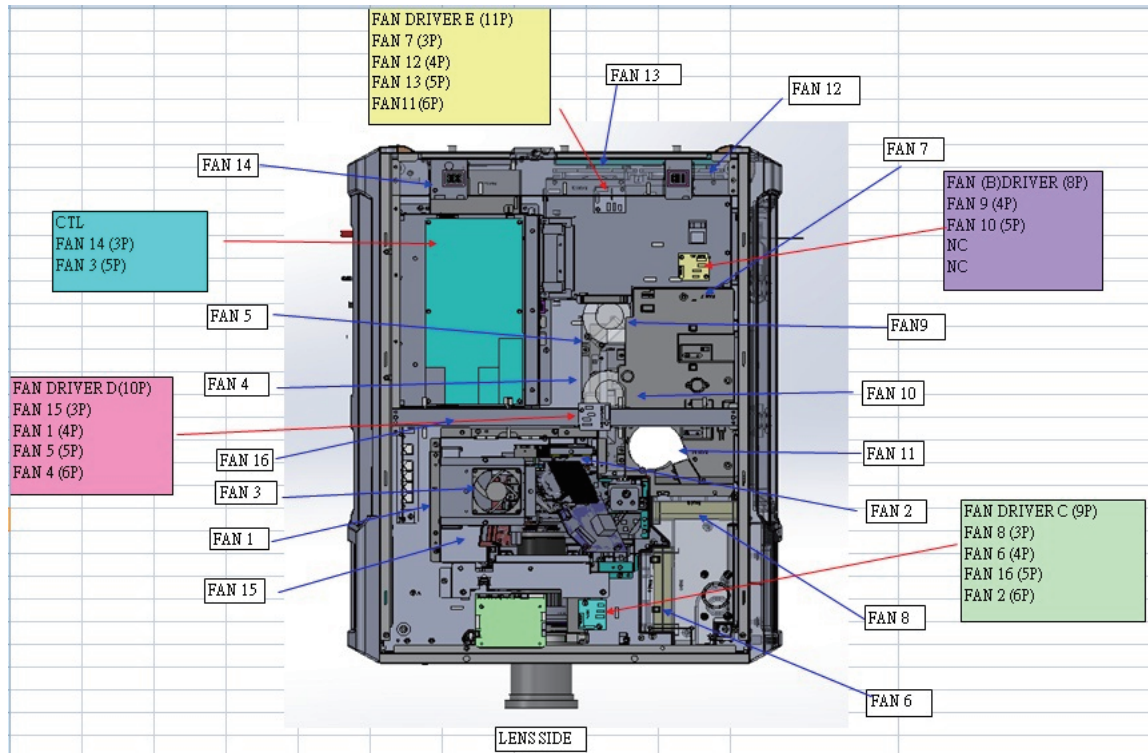
## TROUBLESHOOTING

### Troubleshooting when output video is abnormal



## TROUBLESHOOTING

### FAN layout



FAN No.	FAN PART No. (TYPE)	CONNECTOR	LOCATION
FAN1	79TY1171(AFB1212H-SM09)	FAN D-4P	FIP inlet (DMD R)
FAN2	79TY1201(AFB-0612HC-F00)	FAN C-6P	DMD B
FAN3	79TY1221(AFB0712VHE-F00)	CTL 5P	PRISM
FAN5	79TY1131(AFB0512VHD-F00)	FAN D-5P	ROD-FRONT(LAMP 1)
FAN4	79TY1121(AFB0512VHD-F00)	FAN D-6P	ROD-REAR (LAMP 2)
FAN6	79GP1121(AFB1212H-SM09)	FAN C-4P	PRISM+SYSTEM-OUT
FAN7	79TM1351(AFB1212H-SM09)	FAN E-3P	LAMP IN
FAN8	79TM1351(AFB1212H-SM09)	FAN C-3P	LAMP-OUT
FAN9	79TM1311(BFB0712HD-SP01)	FAN B-4P	LAMP 2-BURNER
FAN10	79TM1321(BFB0712HD-SP01)	FAN B-5P	LAMP 1-BURNER
FAN11	79TY1211(BFB0712LD-SE01)	FAN P-6P	FOR FAN 8
FAN12	79GP1121(AFB1212H-SM09)	FAN E-4P	POWER IN
FAN13	79TY1161(AFB1212H-SM09)	FAN E-5P	POWER IN
FAN14	79TY1141(AFB1212HHE-CF00)	CTL 3P	NEC MUDULE OUT
FAN15	79TY1191(AFB-0612HC-F00)	FAN D-3P	DMD R
FAN16	79TY1151(AFB1212H-SM09)	FAN E-5P	POWER IN
ICP FAN	79TY1181(EFB0512HA-F00)		On CPU Board

# TROUBLESHOOTING

## Error Code List

Error code	Error message	Description	Solution
4	GPSU(12V) Fail	Power supply is abnormal.	Confirm that 12 Vdc is output from #1, 2, 3 pins of the Power Supply cable (6-pin) supplied from the top face of the Power Module to the MOTHER PWB. If not confirmed, replace the Power Module. (Refer to the Start-up failure page.)
5	Lamp Unlit	Lamp doesn't light up.	Check the J17 and J18 cable of the Slave uC PWB.
12	E2PROM R Fail	E2PROM data read error is detected.	Check the respective boards (cables) of the CPU and KEYPAD.
15	E2PROM W Fail	E2PROM data write error is detected.	Check the respective boards (cables) of the CPU and KEYPAD.
120	DLP Ack Fail	ICP failed operation. It could be caused by configuration files lost, disk space issue, or DISKCHIP corruption issue.	ICP, CPU, ROUTER, LAN cable  Check the following and correct them if any error is discovered. ① Check version info to examine whether the firmware and data of the CPU PWB has been written correctly. Rewrite it if it is written wrong. ② Check version info to examine whether the firmware and data of the ICP board has been written correctly. Rewrite it if it is written wrong. ③ Confirmation of PWB mounting conditions 1) Is the CPU PWB correctly mounted on the MOTHER PWB? 2) Is the ICP PWB correctly mounted on the MOTHER PWB? After confirming the above mentioned conditions, turn the power supply ON. If there is still an error, replace the ICP and CPU PWBs in this order. If the error disappears, then the replaced PWB is found to be faulty.
121	Lens Fail	Lens unit control error	Check the MOTHER PWB.
140	DLP CommR Fail	No communication with the ICP board. (Communication I/F is RS-232C)	Confirm that the RS-232 I/F between CPU and ICP is normally started (The status of front LED).
141	DLP CommE Fail	No communication with the ICP board and DCC. (Communication I/F is Ethernet)	Confirm that the Ethernet I/F between CPU and ICP is normally started (The status of front LED).
151	Fan1 Stop	Fan1 has stopped.	Check the corresponding FAN (referring to the layout), cable, and Fan Drive board.
152	Fan2 Stop	Fan2 has stopped.	
153	Fan3 Stop	Fan3 has stopped.	
154	Fan4 Stop	Fan4 has stopped.	
155	Fan5 Stop	Fan5 has stopped.	
156	Fan6 Stop	Fan6 has stopped.	
157	Fan7 Stop	Fan7 has stopped.	
158	Fan8 Stop	Fan8 has stopped.	
159	Fan9 Stop	Fan9 has stopped.	
164	ICP Fan Stop	ICP Fan has stopped.	Check the CPU board and the fan of the same board.
165	GPI MACRO(n) Selection Invalid	Selection of preset button (n) through GPI is invalid because metadata is enabled.	Indicates control prohibitions status (command).
166	GPI Control Invalid	Projector control through GPI is invalid because projector is busy.	Indicates control prohibitions status (command).
177	Tamper Fail	Service door tamper switch of projector is open.	Examine the fixing method for the related installations. Check the J28, J29, J30 cables of the Slave uC PWB
178	Marriage Tamper Fail	Marriage tamper switch of projector is open.	Check the fitting conditions of the ICP/NC-80LB with the MOTHER board, and ENIGMA boards provided on the NC-80LB. Check the NC-80LB front cover mounting, the MOTHER PWB, TAMPER board, Tamper Switches, and cables.
180	CPU Fail(Mem)	System Test Failed during lamp on. (Memory)	Check the CPU board.
201	Error Log Write Fail	Failed to write error log.	Check the CPU board.
215	Filter Time Over	The time to exchange filters.	Filter cumulative time exceeded.
220	Fan Exchange Time	The time to exchange fans	Fan cumulative time exceeded.
230	Router Fail	Failed to control router.	Check the router (including power supply), LAN cables, and the CPU.
232	MAC Write Fail	Failed to setup MAC address of CPU board.	Check the CPU board.
235	Router Self Check Fail	Router health-check error.	Confirm to the separate sheet of troubleshooting. (Router Trouble Shooting LDD0017 rev*.*.pdf)
240	SIB Comm Fail	Failed to communicate with SIB.	Check the LAN cable. Check the fitting conditions of the NC-80LB/DS board (IC1600, IC1604) with the MOTHER board. After confirming the above mentioned conditions, turn the power supply ON and examine the error-related status. If there is still an error, replace the NC-80LB/DS and check the error-related status.
241	SIB Error	SIB internal error.	Check the NC-80LB/DS
242	SIB FPGA Reboot	Executed to re-boot SIB FPGA for recovery.	Indicates SIB FPGA Status.
245	Fan10 Stop	Fan10 has stopped.	Check the corresponding FAN (referring to the layout), cable, and Fan Drive board.
246	Fan 11 Stop	Fan11 has stopped.	
247	Fan 12 Stop	Fan12 has stopped.	
248	Fan 13 Stop	Fan13 has stopped.	
249	Fan 14 Stop	Fan14 has stopped.	

## TROUBLESHOOTING

Error code	Error message	Description	Solution
251	Fan1 Stop Precaution	Fan1 Stop Precaution.	Prepare for a corresponding FAN for replacement.
252	Fan2 Stop Precaution	Fan2 Stop Precaution.	
253	Fan3 Stop Precaution	Fan3 Stop Precaution.	
254	Fan4 Stop Precaution	Fan4 Stop Precaution.	
255	Fan5 Stop Precaution	Fan5 Stop Precaution.	
256	Fan6 Stop Precaution	Fan6 Stop Precaution.	
257	Fan7 Stop Precaution	Fan7 Stop Precaution.	
258	Fan8 Stop Precaution	Fan8 Stop Precaution.	
259	Fan9 Stop Precaution	Fan9 Stop Precaution.	
263	ICP Fan Stop Precaution	ICP Fan Stop Precaution.	
264	Fan10 Stop Precaution	Fan10 Stop Precaution.	
265	Fan11 Stop Precaution	Fan11 Stop Precaution.	
266	Fan12 Stop Precaution	Fan12 Stop Precaution.	
267	Fan13 Stop Precaution	Fan13 Stop Precaution.	
268	Fan14 Stop Precaution	Fan14 Stop Precaution.	
270	SD Tamper Terminate	Terminated service door tamper event latched by Enigma board.	No actions needed. (This is a message to indicate that the Enigma SDT event has been cleared. This is not a specific problem.)
271	IMB:SD Tamper Terminate	Terminated service door tamper event latched by IMB. * This message would be shown on Log, not on LCD.	No actions needed. (This is a message to indicate that the IMB/IMS SDT event has been cleared. This is not a specific problem.)
301	System Error	ICP system status error	Check the ICP PWB and FSB PWB connection.
302	Self Test Error	ICP system status error To recover the issue, update ICP to higher than Prod3.0 or equal. If that can not remove the issue, remove and reseat the ICP board.	Check the ICP (including the S/W, F/W versions).  Check the following and correct them if any error is discovered. ① Check the connecting conditions around the connectors on the FSB PWB in the following points: Insufficient connection, Slantwise insertion, Wrong insertion. ② Check connections at the relay PWB (FSB side) Are all connectors mounted correctly? Search for slantwise insertion, insufficient insertion, and/or wrong insertion. MOTHER PWB side 1) Is the relay PWB correctly mounted on the MOTHER PWB? 2) Pull it out of the MOTHER PWB and check whether any pin is broken. ③ Is the ICP PWB correctly mounted on the MOTHER PWB? Is the ICP PWB inserted completely? Pull out the ICP PWB and insert it again. ④ Is there any fault in the connector cable? Is there any broken connector cable? After confirming the above mentioned conditions, turn the power supply ON again and check the error-related status. If there is still an error regardless of the above-mentioned actions, take the following actions: 1) Replace the ICP PWB and check the error-related status. 2) Replace the FSB PWB and check the error-related status. If the error disappears, then the replaced PWB is found to be faulty.
303	Install Release Package Error	ICP system status error It could be caused by disk space issue or DISKCHIP corruption issue.	If there is still an error after installing the ICP SW, replace the ICP PWB.
304	Load Release Package Error	ICP system status error It could be caused by disk space issue or DISKCHIP corruption issue.	
305	Key Error	ICP system status error	
306	Certificate Error	ICP system status error	If this error still stays even after the projector power supply turned OFF and ON, this is due to a fault (data disappearance) in the ICP PWB. Replace the PWB.
317	ICP Normal Configuration Error	ICP system status error	Check the ICP PWB and FSB PWB connection.
318	ICP Boot Configuration Error	ICP system status error	
319	FMT Normal Configuration Error	ICP system status error	
320	FMT Boot Configuration Error	ICP system status error	
321	FMT Satellite Configuration Error	ICP system status error	
322	1.20V Supply out of range	ICP system status error	
323	1.80V Supply out of range	ICP system status error	
324	2.50V Supply out of range	ICP system status error	
325	3.30V Regulator out of range	ICP system status error	
326	ICP FPGA Temperature out of range	ICP system status error	
327	FMT FPGA Temperature out of range	ICP system status error	
328	ICP Flash Update Error	ICP system status error	
329	FMT Sequence Data File Mismatch	ICP system status error	
330	FMT DMD Data File Mismatch	ICP system status error	
331	FMT Flash Checksum Error - Sequence Data	ICP system status error	
332	FMT Flash Checksum Error - DMD Data	ICP system status error	
333	Satellite Hardware Mismatch	ICP system status error	
334	FMT Flash Update Error	ICP system status error	
335	Red Satellite Reports Reset	ICP system status error	
336	Red Satellite Serial Link Error	ICP system status error	
337	Red Satellite Firmware Configuration Error	ICP system status error	

# TROUBLESHOOTING

Error code	Error message	Description	Solution
338	Red DAD1000 Bias Under Voltage Error	ICP system status error	Check the cable between FSB and MOTHER PWB, and ICP.
339	Red DAD1000 Reset Under Voltage Error	ICP system status error	
340	Red DAD1000 Offset Under Voltage Error	ICP system status error	
341	Red DAD1000 Thermal Shutdown Error	ICP system status error	
342	Green Satellite Reports Reset	ICP system status error	
343	Green Satellite Serial Link Error	ICP system status error	
344	Green Satellite Firmware Configuration Error	ICP system status error	
345	Green DAD1000 Bias Under Voltage Error	ICP system status error	
346	Green DAD1000 Reset Under Voltage Error	ICP system status error	
347	Green DAD1000 Offset Under Voltage Error	ICP system status error	
348	Green DAD1000 Thermal Shutdown Error	ICP system status error	
349	Blue Satellite Reports Reset	ICP system status error	
350	Blue Satellite Serial Link Error	ICP system status error	
351	Blue Satellite Firmware Configuration Error	ICP system status error	
352	Blue DAD1000 Bias Under Voltage Error	ICP system status error	
353	Blue DAD1000 Reset Under Voltage Error	ICP system status error	
354	Blue DAD1000 Offset Under Voltage Error	ICP system status error	
355	Blue DAD1000 Thermal Shutdown Error	ICP system status error	
356	RTC Error	Indicates that ICP RTC is set to a date before January 1, 2009, and is likely invalid. If the year value is less than 2009, then the time is considered to be "invalid".	When IMB/MS/Enigma is mounted, check if RTC of each board is incorrect (before 01.01.2009).
370	ICP Frame Memory Test Result Fail	ICP self test error due to "Frame memory error"	Check the ICP PWB and FSB PWB connection.
372	ICP Data Path Signature Test Result Fail	ICP self test error due to "Data Path Signature Test Result"	Check the ICP PWB and FSB PWB connection.
400	Enigma Comm Fail	No communication with the Enigma board.	Check the connection with NC-80LB, LAN I/F, and firmware version. Check points: ① Check the cable connected to the router. Check whether the power and LAN cables are correctly connected. ② Confirm that the CPU PWB is firmly inserted in the MOTHER PWB. ③ Confirm that the NC-80LB is firmly inserted in the MOTHER PWB. ④ Confirm that the Enigma board is correctly mounted on the NC-80LB After conforming the above mentioned conditions, turn the power supply ON and examine the error-related status. If there is still an error, replace the Enigma and NC-80LB PWBs in this order. Turn the power supply ON each time a PWB is replaced. The faulty PWB can be identified according to the error status.
410	System Error	Enigma Status error	Check connections between the Enigma board and NC-80LB/DS, and also the versions of LAN I/F and F/W.
411	Self Test Error	Enigma Status error	
412	Install Release Package Error	Enigma Status error	
413	Load Release Package Error	Enigma Status error	
414	TI Login List Package Error	Enigma Status error	
415	Security Officer Login List Package Error	Enigma Status error	
419	Certificate or Key Error	Enigma Status error	
420	ICP Communications Status	Enigma fails to do logical marriage to ICP when Enigma powers up. Because of no communications with ICP during logical marriage.	Confirm that the ICP PWB is normally started. Check LAN I/F.
426	User Loader Integrity Error	Enigma is in FIPS error state.(Integrity check error)	Check connections between the Enigma board and NC-80LB, LAN I/F, and the firmware version.
427	Main Application Integrity Error	Enigma is in FIPS error state.(Integrity check error)	
428	RNG Hardware Integrity Error	Enigma is in FIPS error state.(Integrity check error)	
429	DRNG Algorithm Integrity Error	Enigma is in FIPS error state.(Integrity check error)	
430	RSA Algorithm Integrity Error	Enigma is in FIPS error state.(Integrity check error)	
431	AES Algorithm Integrity Error	Enigma is in FIPS error state.(Integrity check error)	
432	HMAC Algorithm Integrity Error	Enigma is in FIPS error state.(Integrity check error)	
433	SHA Algorithm Integrity Error	Enigma is in FIPS error state.(Integrity check error)	
434	TLS Integrity Error	Enigma is in FIPS error state.(Integrity check error)	
435	FPGA Configuration Integrity Error	Enigma is in FIPS error state.(Integrity check error)	
436	FPGA CineLink 2 Decryption Integrity Error	Enigma is in FIPS error state.(Integrity check error)	
437	RTC Error	Indicates that Enigma RTC is set to a date before January 1, 2009, and is likely invalid. If the year value is less than 2009, then the time is considered to be "invalid"	Check connections between the Enigma board and NC-80LB, LAN I/F, and the firmware version.
442	FPGA Configuration Error	Enigma Status error	
443	FPGA Temperature out of range	Enigma Status error	
446	RNG Hardware Duplicate Output Error	Enigma is in FIPS error state.(Integrity check error)	
447	DRNG Algorithm Duplicate Output Error	Enigma is in FIPS error state.(Integrity check error)	
450	1.20V Supply out of range	Enigma Status error	
451	1.80V Supply out of range	Enigma Status error	
452	2.50V Supply out of range	Enigma Status error	
453	3.30V Regulator out of range	Enigma Status error	
458	SelfTest User Loader Integrity Error	Enigma is in FIPS error state.(Self test result)	
459	SelfTest Main Application Integrity Error	Enigma is in FIPS error state.(Self test result)	Check connections between the Enigma board and NC-80LB, LAN I/F, and the firmware version.
460	SelfTest RNG Hardware Integrity Error	Enigma is in FIPS error state.(Self test result)	
461	SelfTest DRNG Algorithm Integrity Error	Enigma is in FIPS error state.(Self test result)	
462	SelfTest RSA Algorithm Integrity Error	Enigma is in FIPS error state.(Self test result)	
463	SelfTest AES Algorithm Integrity Error	Enigma is in FIPS error state.(Self test result)	
464	SelfTest HMAC Algorithm Integrity Error	Enigma is in FIPS error state.(Self test result)	
465	SelfTest SHA Algorithm Integrity Error	Enigma is in FIPS error state.(Self test result)	
466	SelfTest TLS Integrity Error	Enigma is in FIPS error state.(Self test result)	
467	SelfTest FPGA Configuration Integrity Error	Enigma is in FIPS error state.(Self test result)	
468	SelfTest FPGA CineLink. 2 Decryption Integrity Error	Enigma is in FIPS error state.(Self test result)	

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# TROUBLESHOOTING

Error code	Error message	Description	Solution
458	SelfTest User Loader Integrity Error	Enigma is in FIPS error state.(Self test result)	Check connections between the Enigma board and NC-80LB, LAN I/F, and the firmware version.
459	SelfTest Main Application Integrity Error	Enigma is in FIPS error state.(Self test result)	
460	SelfTest RNG Hardware Integrity Error	Enigma is in FIPS error state.(Self test result)	
461	SelfTest DRNG Algorithm Integrity Error	Enigma is in FIPS error state.(Self test result)	
462	SelfTest RSA Algorithm Integrity Error	Enigma is in FIPS error state.(Self test result)	
463	SelfTest AES Algorithm Integrity Error	Enigma is in FIPS error state.(Self test result)	
464	SelfTest HMAC Algorithm Integrity Error	Enigma is in FIPS error state.(Self test result)	
465	SelfTest SHA Algorithm Integrity Error	Enigma is in FIPS error state.(Self test result)	
466	SelfTest TLS Integrity Error	Enigma is in FIPS error state.(Self test result)	
467	SelfTest FPGA Configuration Integrity Error	Enigma is in FIPS error state.(Self test result)	
468	SelfTest FPGA CineLink. 2 Decryption Integrity Error	Enigma is in FIPS error state.(Self test result)	
474	Security Tamper	Security tamper condition exists in Enigma.	Indicates Enigma security tamper is detected.
475	Top Side Security Enclosure Open	Security tamper condition exists in Enigma.	Indicates details of security tamper detection information. (Replace Enigma board.)
476	Bottom Side Security Enclosure Open	Security tamper condition exists in Enigma.	
477	Security Battery Event	Battery tamper condition exists in Enigma.	Replace Enigma board.
478	Software Commanded Zeroization	Destroyed Enigma key by software command.	Press the [Arm Tamper] button that is available in the SETUP-Installation menu of the DCC to set the Enigma Tamper function effective.
481	Security Enclosure Not Armed	Enigma security not armed.	Press the [Re-Marriage] button that is available in the SETUP-Installation menu of the DCC to clear the Enigma Physical Marriage event. At the time of clearing, confirm that there are no errors of Nos. 270 and 271.
482	Physical Marriage Tamper	Latched physical marriage tamper condition on Enigma board.	Press the [Re-Marriage] button that is available in the SETUP-Installation menu of the DCC to establish Logical Marriage between Enigma and ICP. At the time of Marriage, confirm that there are no errors of Nos. 270 and 271.
483	Logical Marriage Tamper	Logical marriage tamper condition exists in Enigma.	Press the [Re-Marriage] button that is available in the SETUP-Installation menu of the DCC to establish Logical Marriage between Enigma and ICP. At the time of Marriage, confirm that there are no errors of Nos. 270 and 271.
484	Marriage NOT Active	Marriage between ICP and Enigma has NOT been established (active).	Press the [Re-Marriage] button that is available in the SETUP-Installation menu of the DCC to establish Logical Marriage between Enigma and ICP. At the time of Marriage, confirm that there are no errors of Nos. 270 and 271.
486	Service Door Tamper	Latched service door tamper condition on Enigma board.	Close all the SDT switches. After that, use a main unit key and make a login (anyone of the Advanced User, Installation, and Service) into the projector main unit and clear the SDT event.
487	Security Log Error	Security log is full and no more log entries can be created in Enigma. It is the server's responsibility to avoid the issue.	Replace Enigma board.
488	Security Battery Low Warning	Close to "(477) Security Battery Event".	Charge up the battery cells for the Enigma PWB.
489	Security Log Warning	Security log is almost full in Enigma. Close to "(487) Security Log Error".	Since the Security Log is almost full, log drains required on server side. (This treatment is a server's role.)
500	IMB Comm Fail	No communication with the IMB.	Check the connection with IMB/IMS board, and LAN I/F, firmware versions.
510	IMB: System Error	IMB Status error	Check the IMB/IM PWB.
511	IMB: Self Test Error	IMB Status error	Replace the IMB/IM PWB.
519	IMB: Certificate or Key Error	IMB Status error	Check the connection of IMB/IMS PWBs, LAN I/F, and firmware version. Confirm that the ICP PWB is normally started
520	IMB: ICP Communications Status	IMB fails to do logical marriage to ICP when IMB powers up. Because of no communications with ICP during logical	Replace the IMB/IM PWB.
537	IMB: RTC Error	IMB RTC is "invalid".	Check the IMB/IM PWB.
543	IMB: FPGA Temperature out of range	IMB Status error	Replace the IMB/IM PWB.
550	IMB: Supply voltage out of range	IMB Status error	Check the IMB/IM PWB.
574	IMB: Security Tamper	Security tamper condition exists in IMB.	Replace the IMB/IM PWB.
577	IMB: Security Battery Event	Battery tamper condition exists in IMB.	Press the [Arm Tamper] button that is available in the SETUP-Installation menu of the DCC to set the IMB Tamper function effective.
581	IMB: Security Enclosure Not Armed	IMB security not armed.	Press the [Re-Marriage] button that is available in the SETUP-Installation menu of the DCC to clear the IMB Physical Marriage event. At the time of clearing, confirm that there are no errors of Nos. 270 and 271.
582	IMB: Physical Marriage Tamper	Latched physical marriage tamper condition on IMB.	Press the [Re-Marriage] button that is available in the SETUP-Installation menu of the DCC to establish Logical Marriage between IMB and ICP. At the time of Marriage, confirm that there are no errors of Nos. 270 and 271.
583	IMB: Logical Marriage Tamper	Logical marriage tamper condition exists in IMB.	Press the [Re-Marriage] button that is available in the SETUP-Installation menu of the DCC to establish Logical Marriage between IMB and ICP. At the time of Marriage, confirm that there are no errors of Nos. 270 and 271.
584	IMB: Marriage NOT Active	Marriage between ICP and IMB has NOT been established (active).	Press the [Re-Marriage] button that is available in the SETUP-Installation menu of the DCC to establish Logical Marriage that has been canceled between IMB and ICP.
586	IMB: Service Door Tamper	Latched service door tamper condition on IMB.	Close all the SDT switches. After that, use a main unit key and make a login (anyone of the Advanced User, Installation, and Service) into the projector main unit and clear the SDT event.
588	IMB: Security Battery Low Warning	Close to "(577) IMB: Security Battery Event".	Charge up the battery cells for the IMB/IMS PWBs.
700	Slave Comm Fail	Failed to communicate with slave MCU.	Communication with Slave uC PWB failed. Check the Slave uC PWB
701	Slave Status Fail	Slave MCU is in unexpected status.	The status of the Slave uC PWB is out of expectation. Check the Slave uC PWB
702	Lamp Lit Change	Lamp lit status becomes with unexpected state. (It could appear while dual lamp mode.)	Started in 2 lamps light-up mode, and succeeded in one lamp activation. In 2 lamps light-up status, only one lamp turned off.



## TROUBLESHOOTING

Error code	Error message	Description	Solution
703	Slave Comm Ack Fail	Slave fails to execute the command.	① Check version info to examine whether the firmware of the Slave uC PWB has been written correctly. Rewrite it if it is written wrong. ② Check version info to examine whether the firmware and data of the CPU board has been written correctly. Rewrite it if it is written wrong. ③ Confirmation of Slave uC PWB mounting conditions After confirming the above conditions, turn the power supply ON. If there is still an error, replace the Slave uC and CPU PWBs in this order. If the error disappears then the replaced PWB is found to be faulty.
710	Lamp1 OverTime	Lamp1 cumulative time is over.	Lamp 1 Cumulative time is exceeded.
711	Lamp2 OverTime	Lamp2 cumulative time is over.	Lamp 2 Cumulative time is exceeded.
740	SensorFail Inlet	Failed to read inlet sensor.	Check the J4 cable of the Slave uC PWB.
741	SensorFail DMD	Failed to read DMD sensor.	Check the J11 cable of the Slave uC PWB.
750	OverTemp.DMD Precaution	Set inside temperature (DMD) is close to over temperature.	Check ambient temperature, suction air and exhaust. Check the J11 cable of the Slave uC PWB.
751	OverTemp.Inlet Precaution	Set inside temperature (Inlet) is close to over temperature.	Check ambient temperature, suction air and exhaust. Check the J12 cable of the Slave uC PWB.
752	Down Lamp Power Activated	Down lamp power to decrease set inside temperature.	The Power is lowered to Min level, because of the temperature error in the Set. Check ambient temperature, suction air and exhaust.
753	OverTemp.Ballast1 Precaution	Set inside temperature (Ballast1) is close to over temperature.	Check ambient temperature, suction air and exhaust. Check the Ballast2.
754	OverTemp.Ballast2 Precaution	Set inside temperature (Ballast2) is close to over temperature.	Check ambient temperature, suction air and exhaust. Check the Ballast2.
760	OverTemp.DMD	Set inside temperature (DMD) is abnormal.	Check ambient temperature, suction air and exhaust. Check the J11 cable of the Slave uC PWB.
761	OverTemp.Inlet	Set inside temperature (Inlet) is abnormal.	Check ambient temperature, suction air and exhaust. Check the J4 cable of the Slave uC PWB.
762	OverTemp.Lamp	Set inside temperature (Lamp) is abnormal.	Check ambient temperature, suction air and exhaust. Check the J26 cable of the Slave uC PWB. * Supplementary explanation is in the margin.
764	OverTemp.Ballast1	Set inside temperature (Ballast1) is abnormal.	Check ambient temperature, suction air and exhaust. Check the Ballast1.
765	OverTemp.Ballast2	Set inside temperature (Ballast2) is abnormal.	Check ambient temperature, suction air and exhaust. Check the Ballast2.
781	Interlock Open	Interlock is open.	Short-circuit between each 1-2 pins, 3-4 pins on the Interlock BD (on lens' left). Check the Slave uC PWB, J4 cable.
782	SystemI2cFail	Failed to control sensors connecting to GPIO chip. (Slave board internal abnormality)	Replace the Slave uC PWB.
783	EepromFail	Slave MCU failed to read back all of data from EEPROM on slave MCU board due to unexpected data or something. (Slave board internal abnormality)	
785	SoftwareI2cFail	I2C/UART conversion chip control failed on slave board. (Slave board internal abnormality)	
786	PreCooling	Failed to precool.	If there's no other error than this Pre-Cooling failure and in the case the error stays after turning AC-ON, replace the Slave uC PWB.
787	Lamp1 Door Open	Lamp1 door (cover) is open	Check the Lamp 1 door. Check the J25 cable of the Slave uC board. Check the Lamp 1 door switch. * Supplementary explanation is in the margin.
788	Lamp2 Door Open	Lamp2 door (cover) is open	Check the Lamp 2 door. Check the J52 cable of the Slave uC PWB. Check the Lamp 2 door switch. * Supplementary explanation is in the margin.
789	Ballast1UartError	Communication error between slave MCU and ballast1.	Check the J17 cable of the Slave uC PWB. Check the Ballast1.
790	Ballast2UartError	Communication error between slave MCU and ballast2.	Check the J18 cable of the Slave uC PWB. Check the Ballast2.
791	FanInitError	Failed to initialize fans.	Check the FanDrive board B/C/D/E (including cable connections). * For FanDrive board, refer to the FAN layout.
792	ExGpioFail	Failed to control the signal connecting to Ballast. (Slave board internal abnormality)	Replace the Slave uC PWB.
793	Notch Filter Open	Notch Filter Cover is open.	Check the Notch Filter Cover. Check the Slave uC PWB, J24 cable. * Supplementary explanation is in the margin.
800	Fan15 Stop	Fan15 has stopped.	Check the corresponding FAN (referring to the layout), cable, and Fan Drive board. Prepare for a corresponding FAN for replacement.
801	Fan16 Stop	Fan16 has stopped.	
810	Fan15 Stop Precaution	Fan15 Stop Precaution	
811	Fan16 Stop Precaution	Fan16 Stop Precaution	

[Supplementary explanation]

The following 4 errors will be output according to the priority order.

If multiple errors occurred at same time, the error of the higher priority will be output and others will not be displayed.

• Error output priority order (from the top)

793 Notch Filter Open (J24 = Open)

↓

762 OverTemp.Lamp (J26 = Open)

↓

787 Lamp1 Door Open (J25 = Open)

↓

788 Lamp2 Door Open (J52 = Open)

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## TROUBLESHOOTING

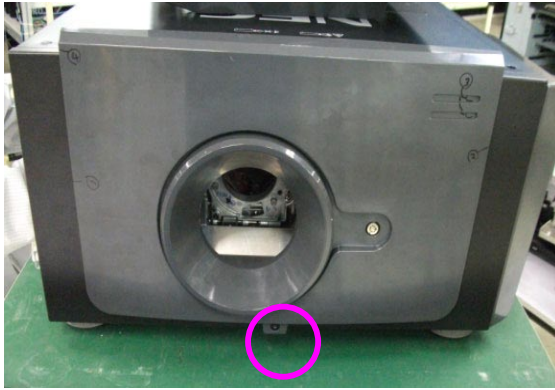
### ICP\_LEDs

LED Identifier	Short Description	Full Description
PWR		<p>Indicates the presence of the internal regulator enable signal. This signal enables the following regulators:</p> <p><u>ICP</u> 3.3VDC, 2.5VDC, 1.8VDC, and 1.2VDC</p> <p><u>Satellites</u> 3.3VDC and 2.5VDC</p> <p><u>USB</u> 5.0VDC</p> <p>Off = Internal regulators not enabled Blue = Internal regulators enabled</p>
SOFT	Software State	<p>Indicates the state of the software application.</p> <p>Off = FAIL (State 0) Red = FAIL (State 1) Yellow = FAIL (State 2) Green = OK</p>
OS	Operating System State	<p>Indicates the state of the Operating System.</p> <p>Off = FAIL (State 0) Red = FAIL (State 1) Yellow = FAIL (State 2) Green = OK</p>
FMT	FMT FPGA State	<p>Indicates the configured state of the FMT FPGA.</p> <p>Off = N/A Red = Unable to configure FPGA with Main or Boot application Yellow = Boot Application Green = Main Application</p>
ICPS	ICP FPGA State	<p>Indicates the configured state of the ICP FPGA.</p> <p>Off = N/A Red = Unable to configure FPGA with Main or Boot application Yellow = Boot Application Green = Main Application</p>
PORT A	Status of Port A	<p>Indicates the status of ICP input port A.</p> <p>Off = No Source Present Red = TBD Yellow = TBD Green = Active Source Present</p>
PORT B	Status of Port B	<p>Indicates the status of ICP input port B.</p> <p>Off = No Source Present Red = TBD Yellow = TBD Green = Active Source Present</p>



## 1. KEY PART REPLACEMENT (Method of disassembly/Photo taken from life)

### 1-1 Top/Left Outside Cover & Fan Driver D Board & Slave UC Board



Use key to unlock the screw and open the front cover. Torque: 7~8 kgf-cm.



Use key to unlock the screw and open the top cover. Then, loosen 3 screws on the top cover. Torque: 7~8 kgf-cm.



Use key to unlock the screw and open the left outside cover. Torque: 7~8 kgf-cm.



Loosen 2 screws and open and take out 2 pcs left outside cover.

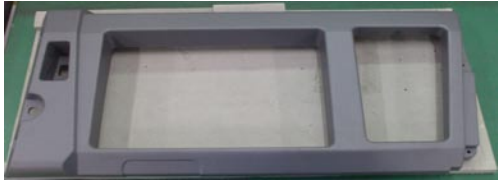
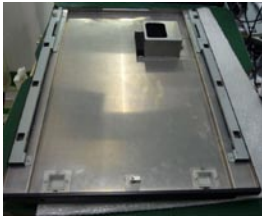


Loosen 2 screws on the top cover. Torque: 7~8 kgf-cm.

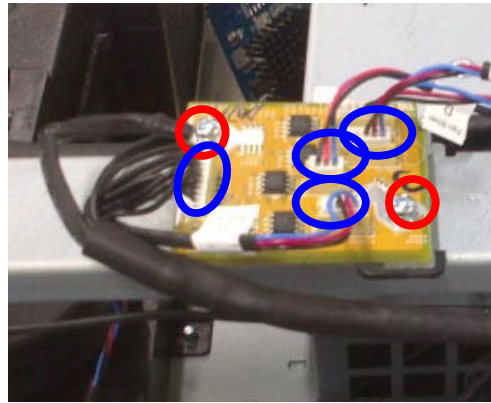


Open and take out the top cover.

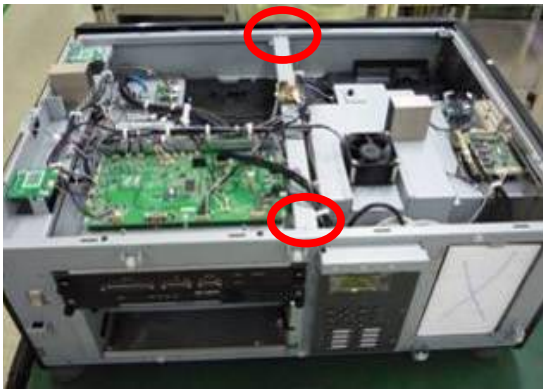
## KEY PART REPLACEMENT (Method of disassembly/Photo taken from life)



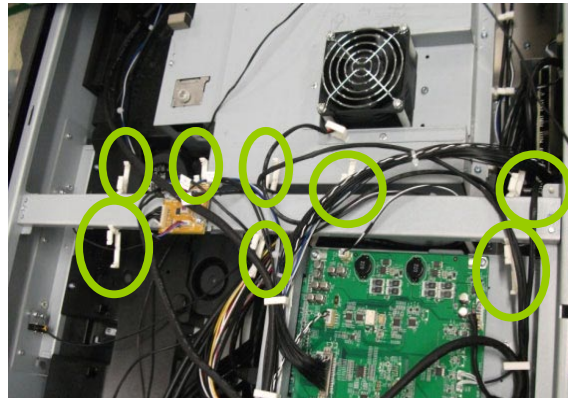
Take the top cover and 2 pcs left outside cover on the desk.



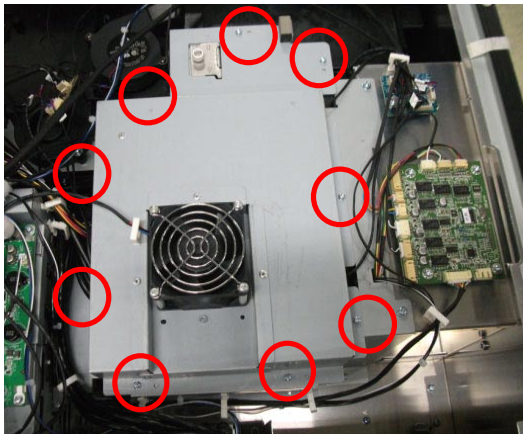
Loosen 2 screws on the FAN DRIVER D board and unplug 4 connectors. Torque: 5~6 kgf-cm



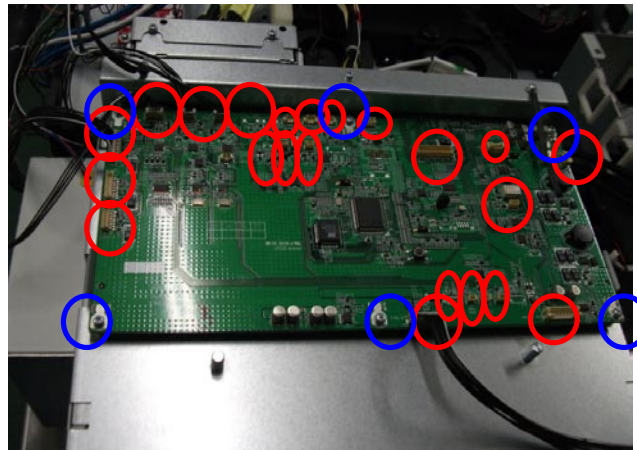
Loosen 2 screws on the bracket. Torque: 5~6 kgf-cm. Then, take the bracket off.



Open the 8 pcs fasteners to loosen all cables.



Loosen 9 screws on the FIP shield cover and take it off. Torque: 5~6 kgf-cm

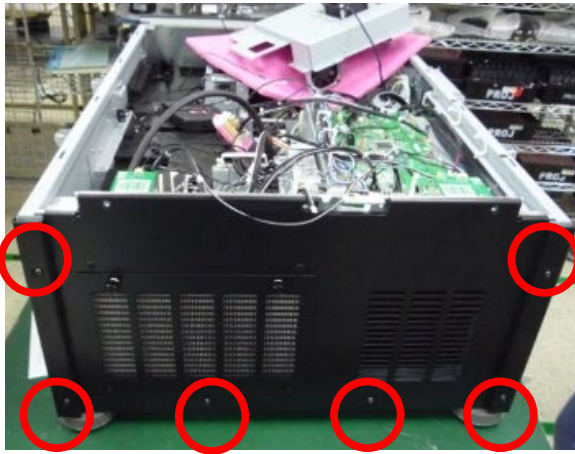


Loosen 6 screws on the Slave UC BD and unplug 22 pcs connectors. Then, take it off. Torque: 5~6 kgf-cm



## KEY PART REPLACEMENT (Method of disassembly/Photo taken from life)

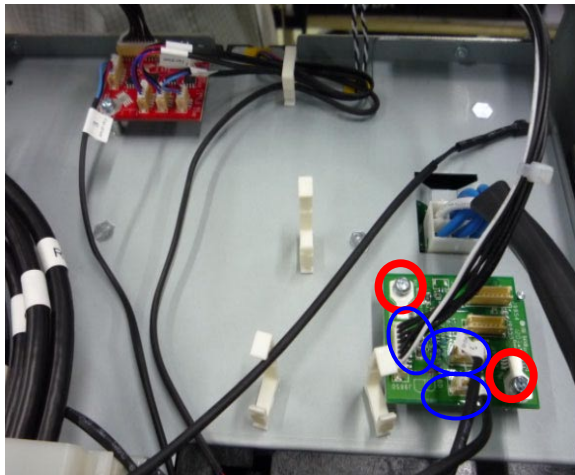
### 1-2 Rear Outside Cover & Fan B Board & Fan E Board



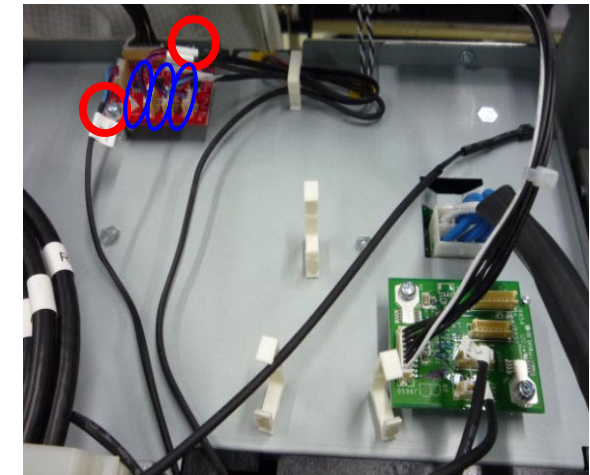
Loosen 6 screws on the rear cover. Then, take out the rear cover. Torque: 7~8 kgf-cm



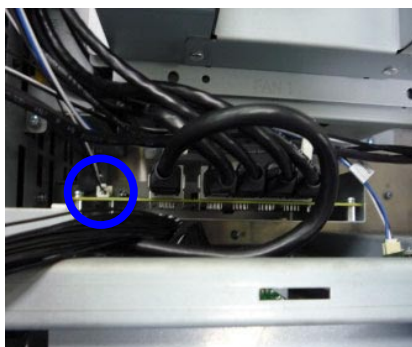
Loosen 2 screws on the rear LED bracket. Torque: 5~6 kgf-cm. Then, take it off.



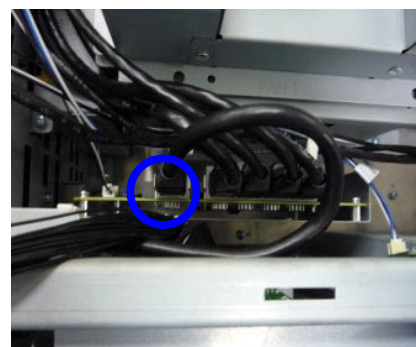
Loosen 2 screws on the Fan B board and unplug 3 connectors. Then, take it off. Torque: 5~6 kgf-cm



Loosen 2 screws on the Fan E board and unplug 3 connectors. Then, take it off. Torque: 5~6 kgf-cm



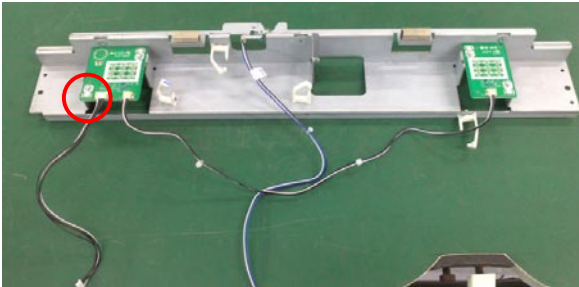
Unplug 1 connector on the Router board.



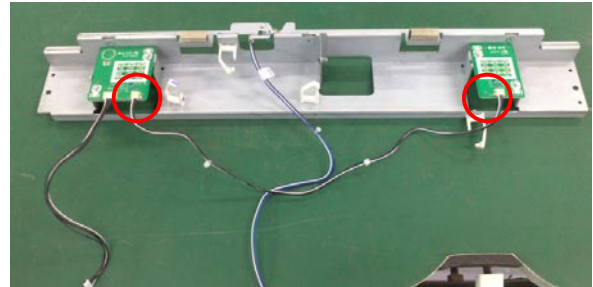
Unplug 1 Internet cable on the Router board.

## KEY PART REPLACEMENT (Method of disassembly/Photo taken from life)

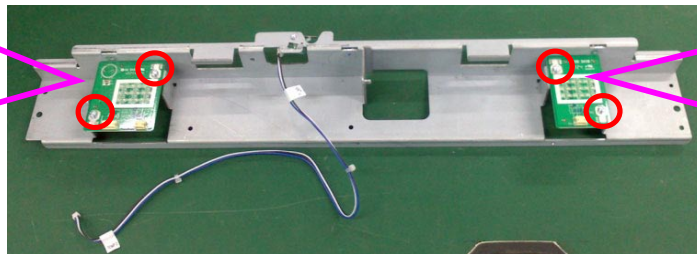
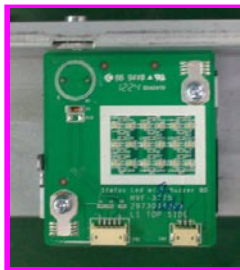
### 1-3 LED Status Board & LED Buzzer Board & Security Board



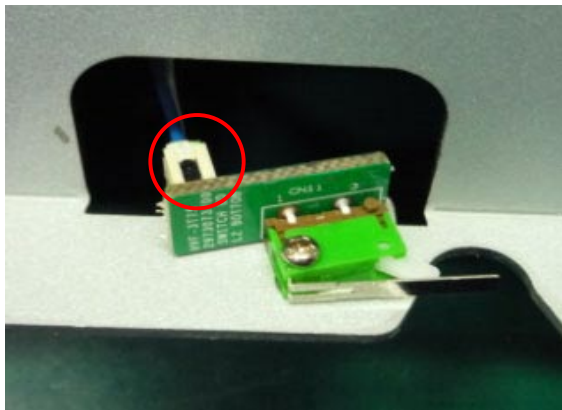
Unplug 1 connector from the LED Buzzer Board.



Unplug 2 connectors from the LED Status Board & LED Buzzer Board.



Loosen 4 screws on LED Status Board & LED Buzzer BD. Torque: 5~6 kgf-cm.



Unplug 1 connector from security switch board. Then, take it off.

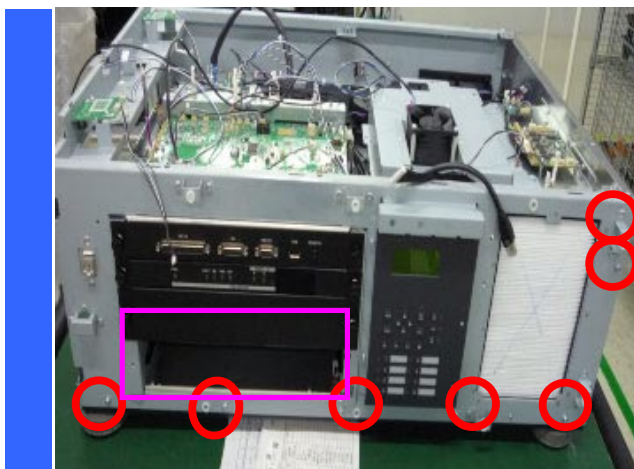


Put security switch board on the desk.



## KEY PART REPLACEMENT (Method of disassembly/Photo taken from life)

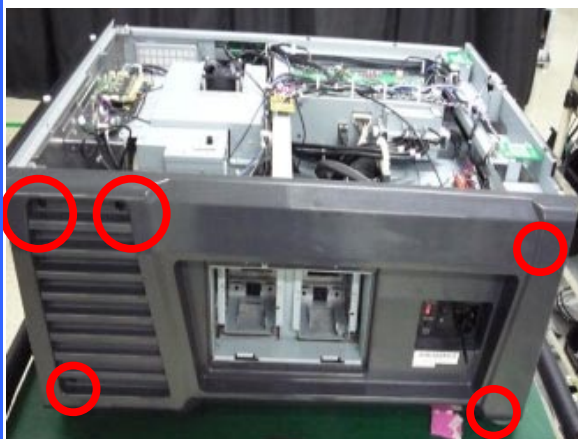
### 1-4 Left Inside / Lamp Door / Right Outside / Right Inside Cover & Lamp Door Switch



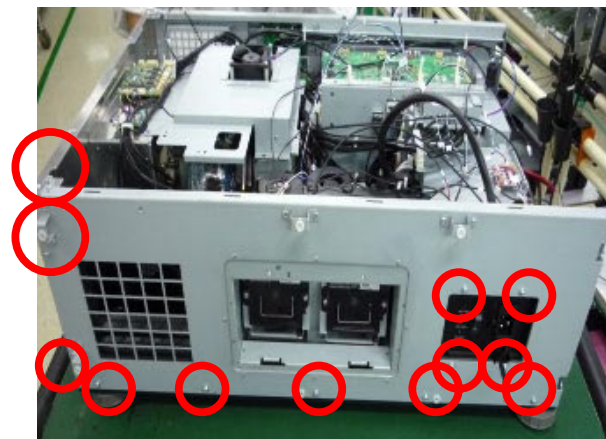
Loosen 7 screws and take the right outside cover off. Torque: 7~8 kgf.cm. Take off the Bracket. Torque: 1.25~1.75 kgf.cm.



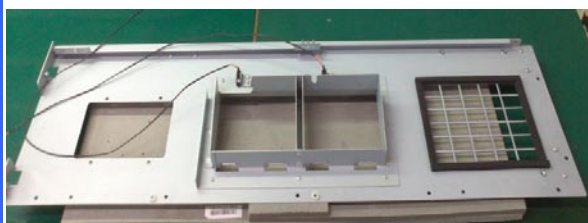
Loosen 2 screws and take the Lamp door cover off. Torque: 7~8 kgf-cm



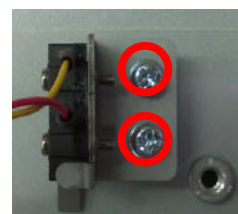
Loosen 3 screws on right outside cover and take the right outside cover off. Torque: 7~8 kgf-cm



Loosen 12 screws on right inside cover and take the right outside cover off. Torque: 7~8 kgf-cm.



Put right inside cover on the desk.



Loosen 2 screws on right inside cover and take the Lamp door switch off. Torque: 1.5~2 kgf-cm.

## KEY PART REPLACEMENT (Method of disassembly/Photo taken from life)

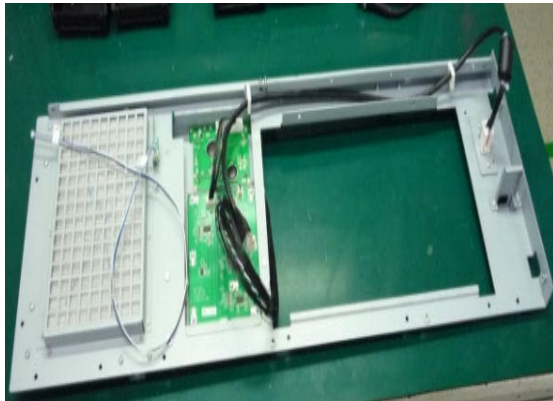
### 1-5 Lamp Door / Right Outside / Right Filter



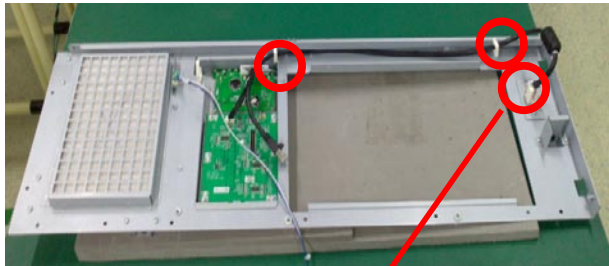
Put Lamp1 & Lamp 2 cover on the desk.



Put right outside cover on the desk.



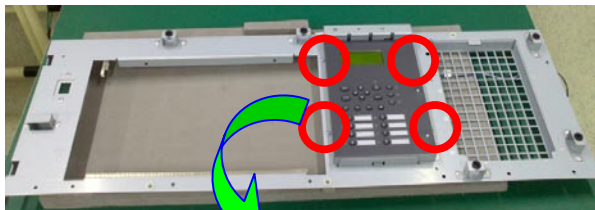
Loosen 3 screws on right inside cover and take the right outside cover off.  
Torque: 7~8 kgf-cm



Unplug the 2 pcs fastener and one cable connector.



Take the right filter off from the right inside cover.

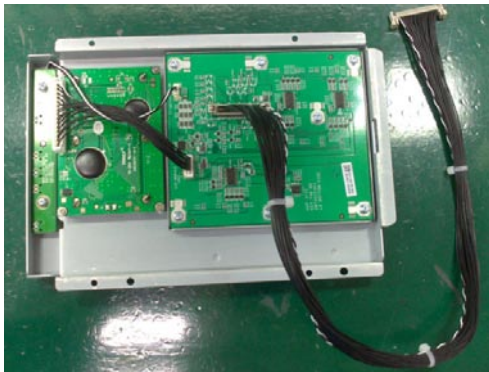


Loosen 4 screws on right inside cover and take the LCD/Keypad/Backlight module off.  
Torque: 1.5~2 kgf-cm.

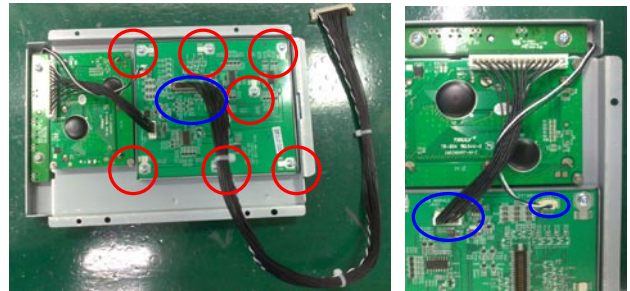


## KEY PART REPLACEMENT (Method of disassembly/Photo taken from life)

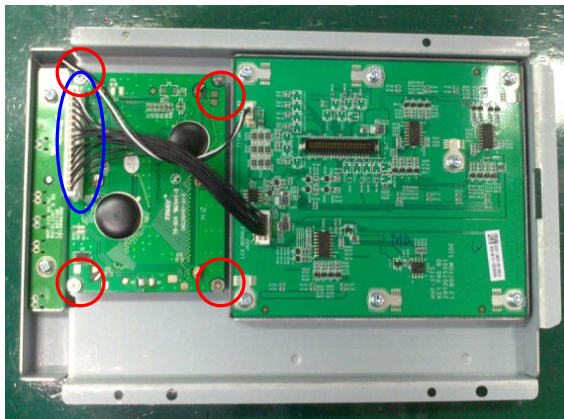
### 1-6 LCD/Keypad/Backlight Board



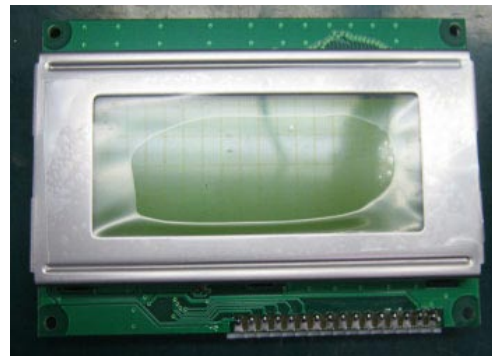
Put LCD/Keypad/Backlight module on the desk.



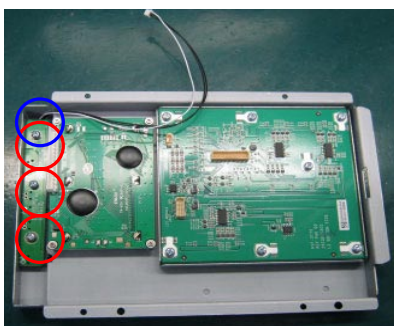
Loosen 7 screws and unplug the 3 pcs connectors from the keypad board.  
Torque: 5~6 kgf-cm. Then, take it off.



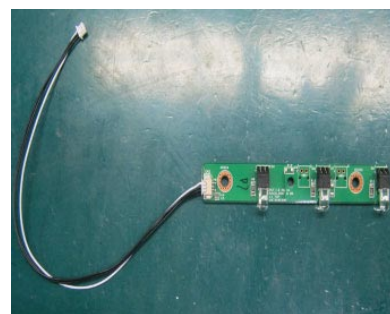
Loosen 4 screws and unplug the 3 pcs connectors on the LCD board.  
Torque: 1.5~2 kgf-cm.



Put LCD board on the desk.



Loosen 3 screws and unplug the 1 pc connector from the Backlight board.  
Torque: 5~6 kgf-cm. Then, take it off.

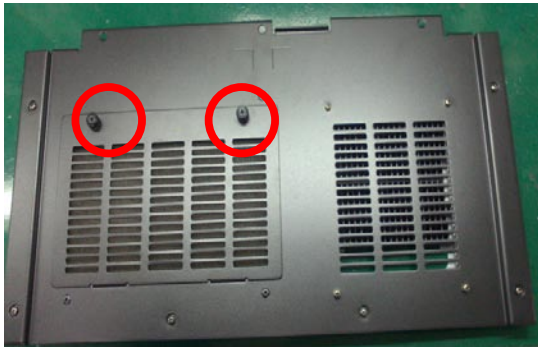


Put Backlight board on the desk.

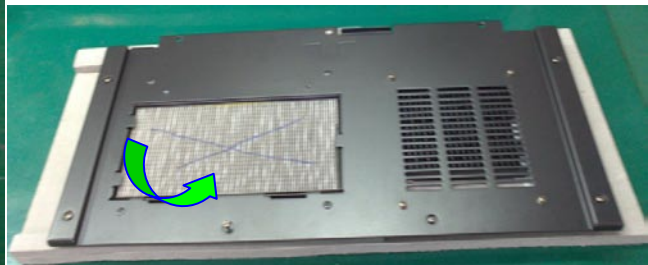


## KEY PART REPLACEMENT (Method of disassembly/Photo taken from life)

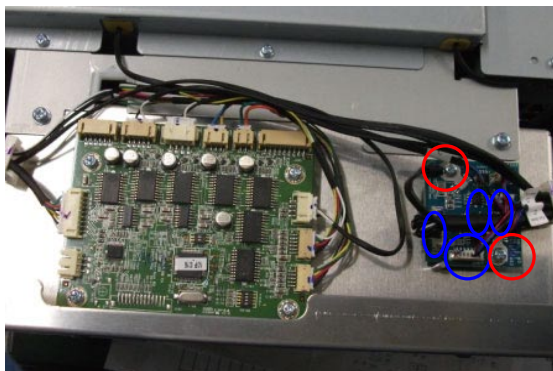
### 1-7 Rear Outside Cover & Rear Filter & Fan C board & Motor Driver Board



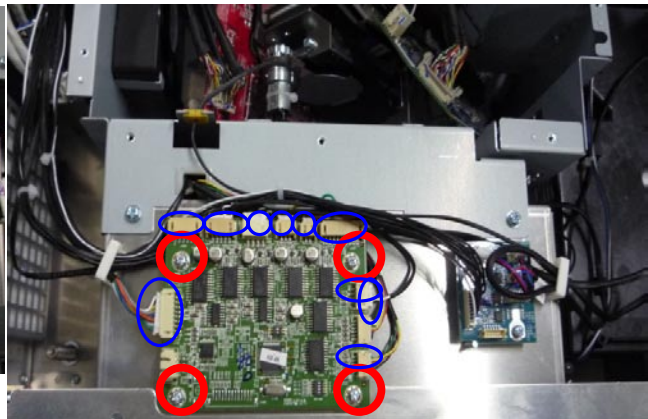
Loosen 2 screws on the rear outside cover.



Take the rear filter off.



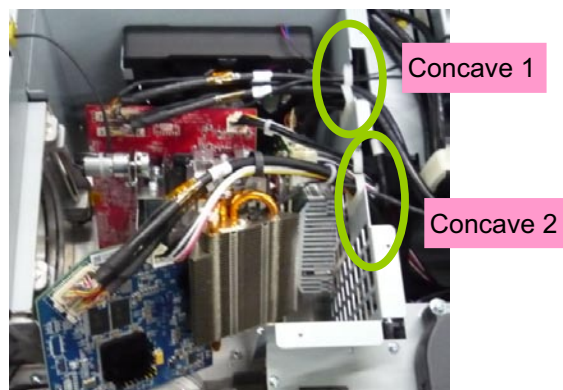
Loosen 2 screws and unplug 4 connectors on the Fan C board. Then, take off it.



Unplug 10 connectors on the Motor driver board, and loosen 4 screws. Finally, take out it.



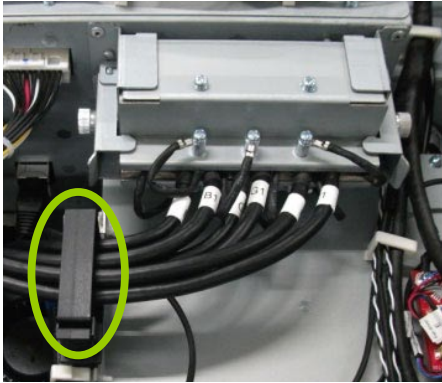
Loosen Fan 15 wire from R formatter board signal cable.



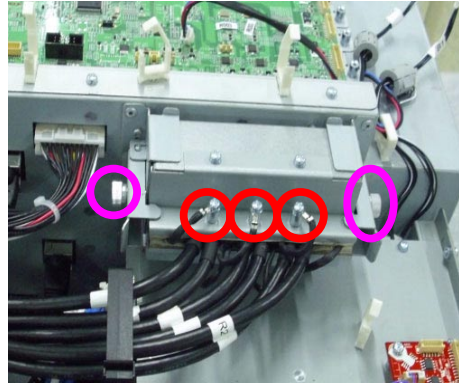
Pull the R/G/B power cable, B signal cable, heat-sink cable from concave 2. And, pull R/G signal cable, Fan 1 and Fan 15 wire from concave 2.

## KEY PART REPLACEMENT (Method of disassembly/Photo taken from life)

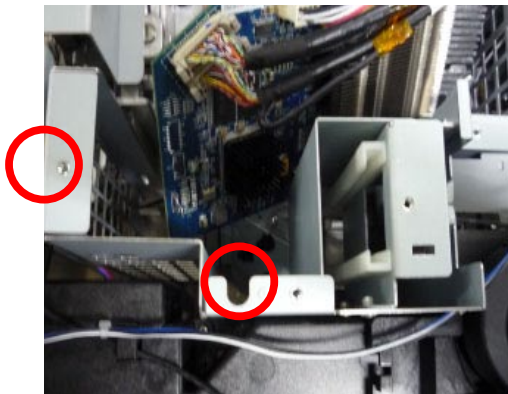
### 1-8 FIP Bracket Shield & Lamp Shield



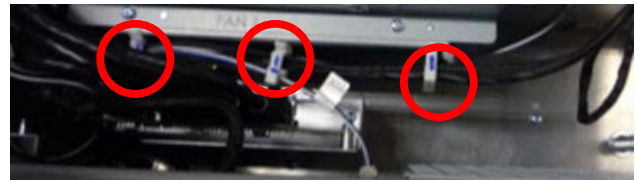
Open the big fastener to pull the FIP signal cables and Fan 9 & F10 wires.



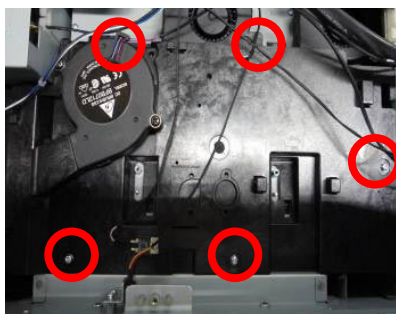
Loosen these 3 pcs screws and 2 pcs fixed screws on two sides. Torque: 1.25~1.75 kgf-cm



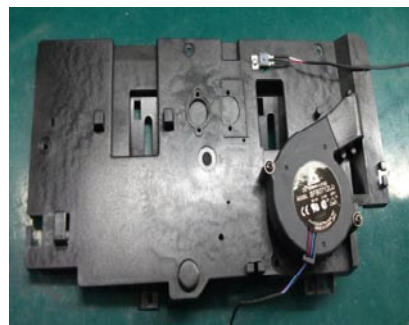
Loosen 1 left screw (Torque: 7~8 kgf-cm) and 1 middle screw (Torque: 5~6 kgf-cm) on the FIP bracket shield.



Loosen 3 fasteners from FIP bracket shield. And, then pull Fan 11 wire from lamp shield.



Loosen 5 pcs screws on the lamp shield. Torque: 5~6 kgf-cm

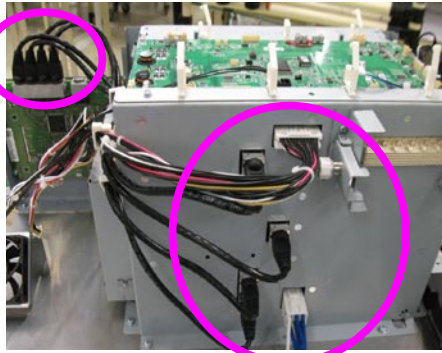


Take lamp shield off on the desk.

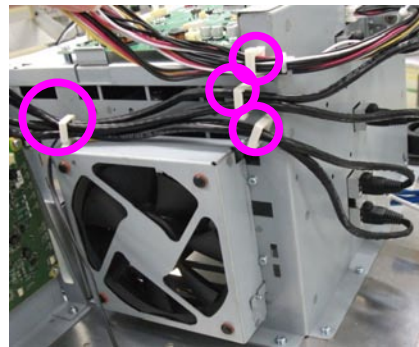


## KEY PART REPLACEMENT (Method of disassembly/Photo taken from life)

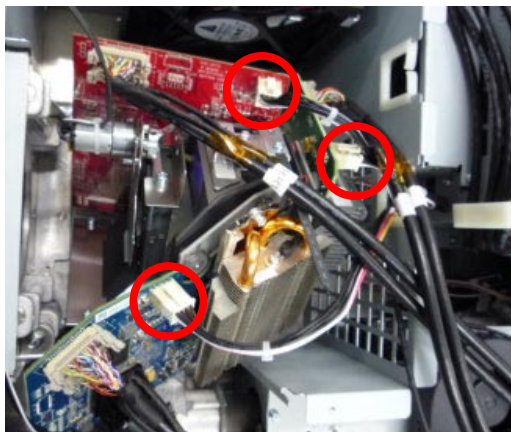
### 1-9 Fan 14 Module & Power Module & Control Module



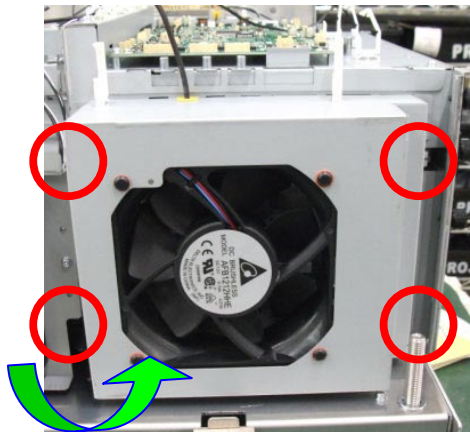
Unplug 3 connectors from control module.



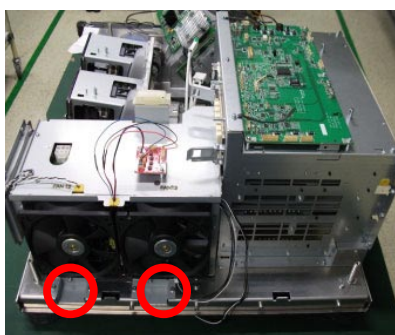
Loosen 4 fasteners to release all cables from control module.



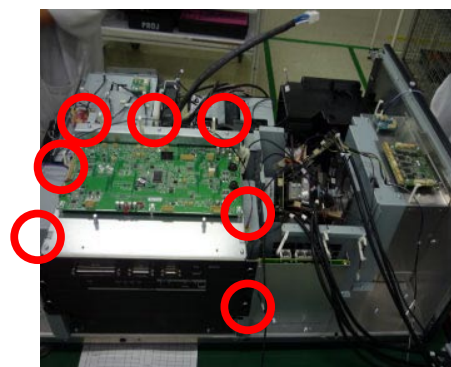
Unplug 3 connectors from R/G/B formatter board.



Loosen 4 screws and then take out Fan 14 module. Torque: 5~6 kgf-cm.



Loosen 2 screws on the power module.  
Torque: 7~8 kgf-cm



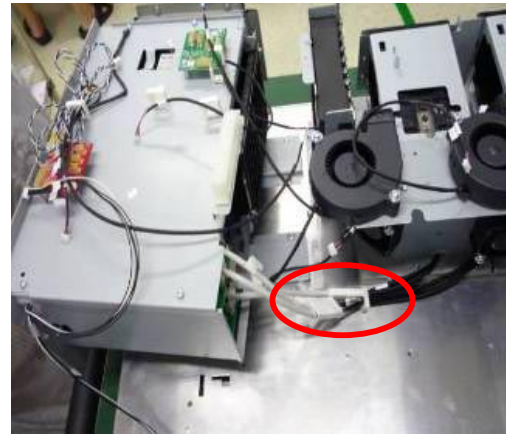
Loosen 7 screws on the control module.  
Then, take it off. Torque: 7~8 kgf-cm

## KEY PART REPLACEMENT (Method of disassembly/Photo taken from life)

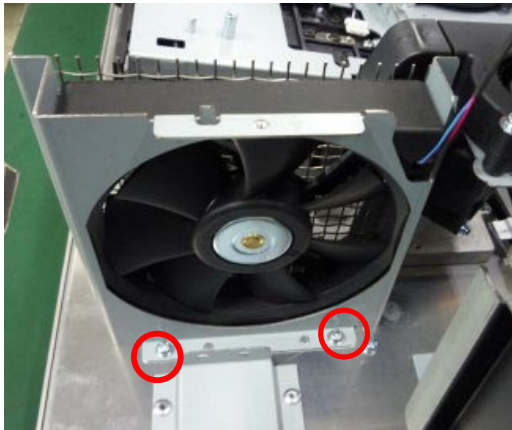
### 1-10 Power Module & Control Module & Fan 7 Module & Air Flow Guide Cover



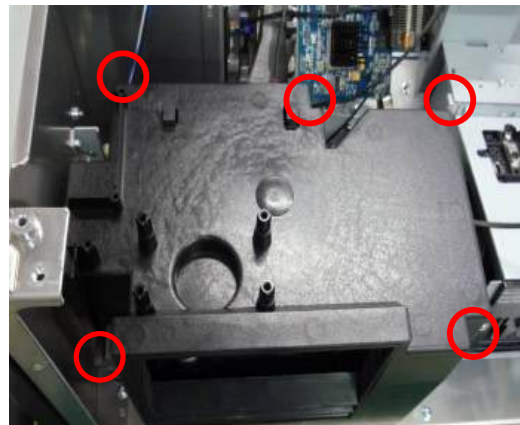
Take control module off on the desk.



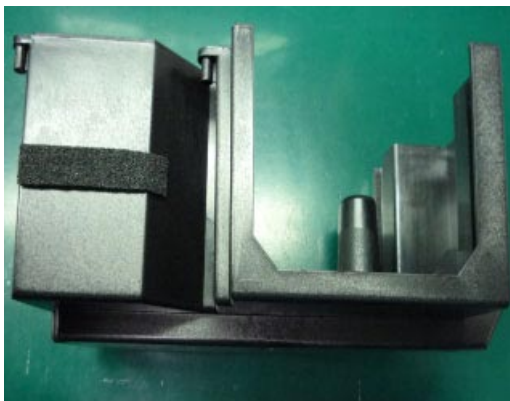
Unplug the 2 pcs lamps and ballasts cables to take power module off.



Loosen 2 screws on the Fan 7 module to take it off. Torque: 7~8 kgf-cm.



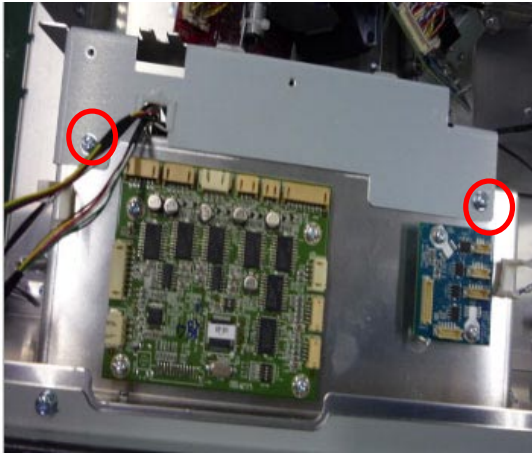
Loosen 5 screws on the air flow guide cover and then take it off. Torque: 7~8 kgf-cm.



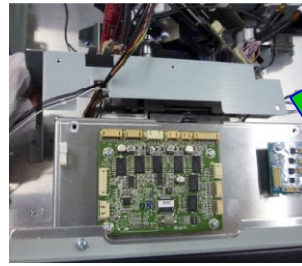
Take air flow guide cover off.



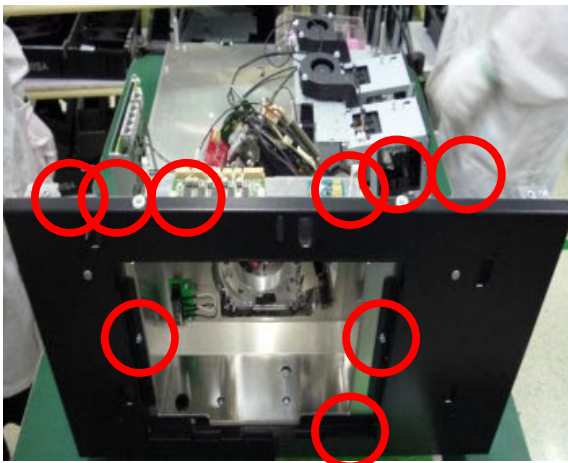
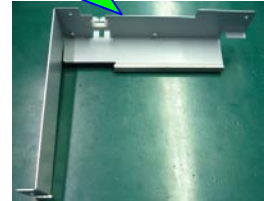
**1-11 L Type Bracket & Front Outside Cover & Security Switch Module**



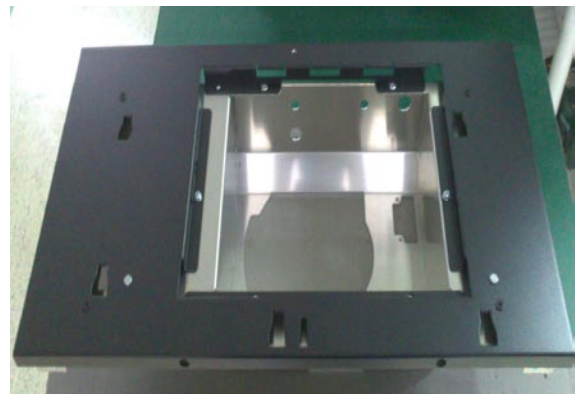
Loosen 2 screws on the L type bracket of Lens Mount. Torque: 7~8 kgf-cm.



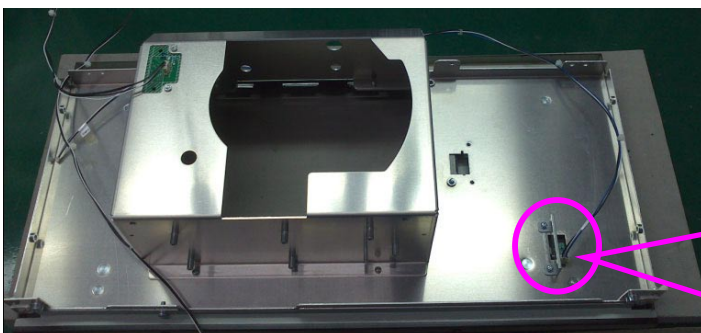
Take the L type bracket off.



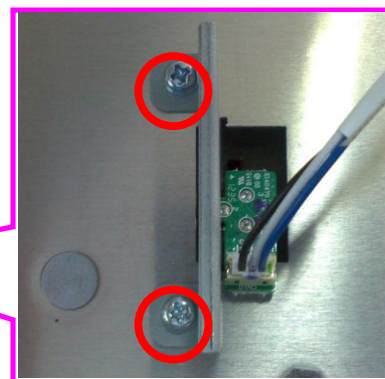
Loosen 9 screws on the front outside cover. Torque: 7~8 kgf-cm.



Take the front outside cover off and put it on the desk.



Loosen 2 screws on the front outside cover to take security switch module off. Torque: 5~6 kgf-cm.



## KEY PART REPLACEMENT (Method of disassembly/Photo taken from life)

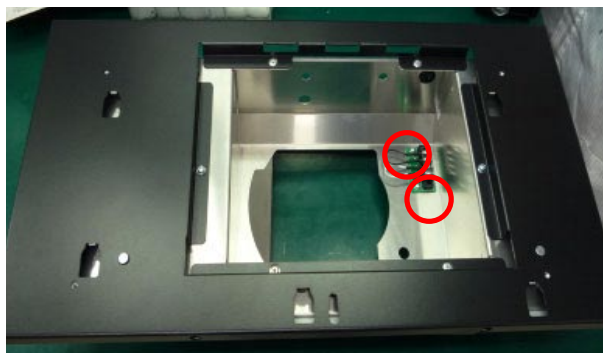
### 1-12 Security Switch & Interlock Board



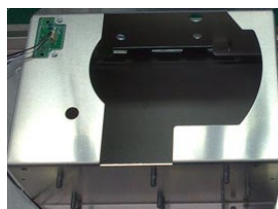
Loosen 1 screw on the security switch module to take it off. Torque: 1.5~2 kgf-cm.



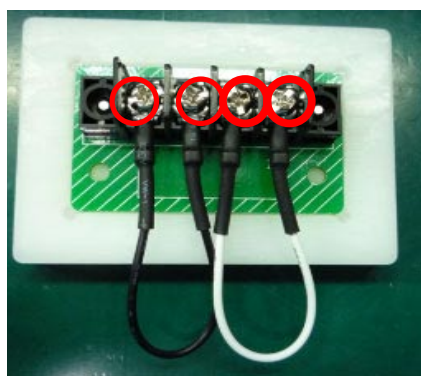
Take security switch off to put on the desk.



Loosen 2 screws on the front outside cover to take interlock board off. Torque: 1.5~2 kgf-cm.



Take interlock board off to put on the desk.



Loosen 4 screws on the interlock board to take it off. Torque: 5~6 kgf-cm.

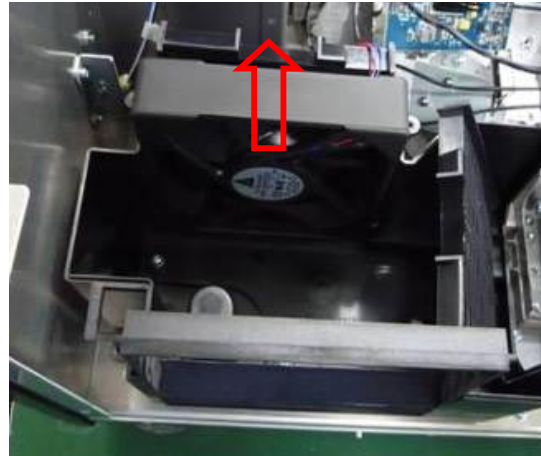


Put the interlock board on the desk.

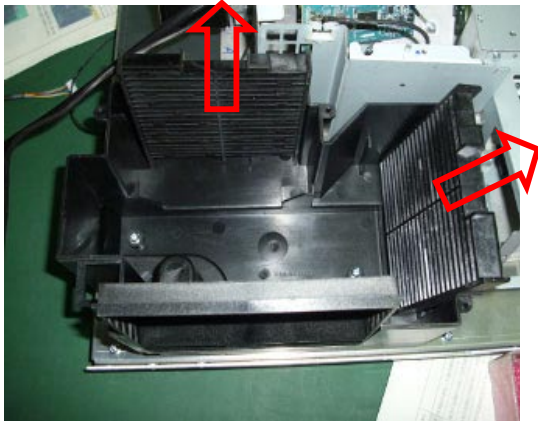
1-13 Fan 6 & Fan 8 & Air Window & Air Flow Guide



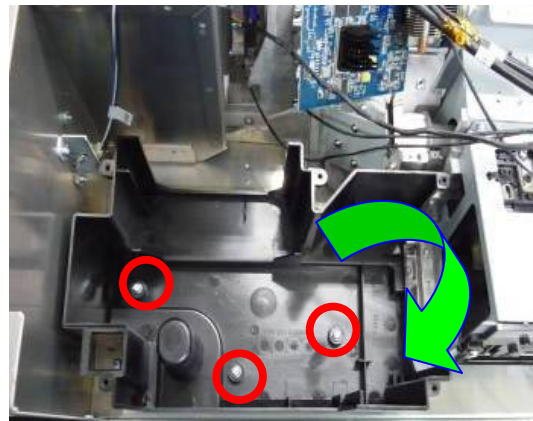
Pull the Fan 8 from air flow guide.



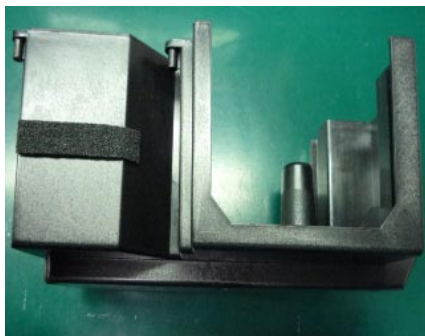
Pull the Fan 6 from air flow guide.



Pull the Fan 8 and Fan 6 air window from air flow guide.



Loosen 3 screws on the air flow guide to take it off. Torque: 7~8 kgf-cm.

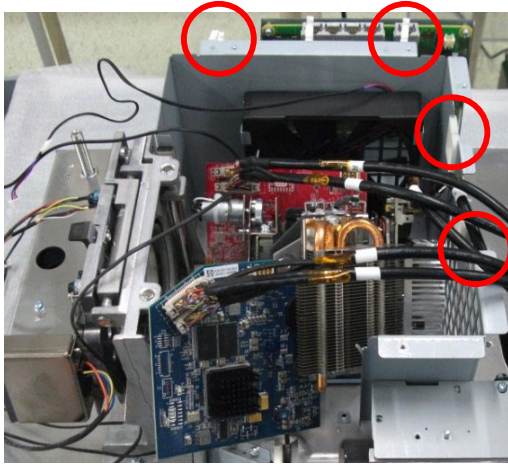


Put the air flow guide on the desk.

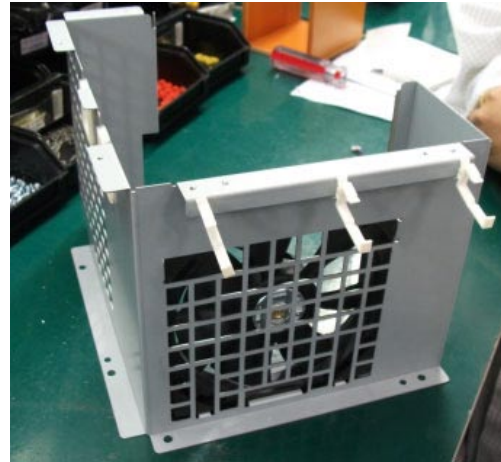


## KEY PART REPLACEMENT (Method of disassembly/Photo taken from life)

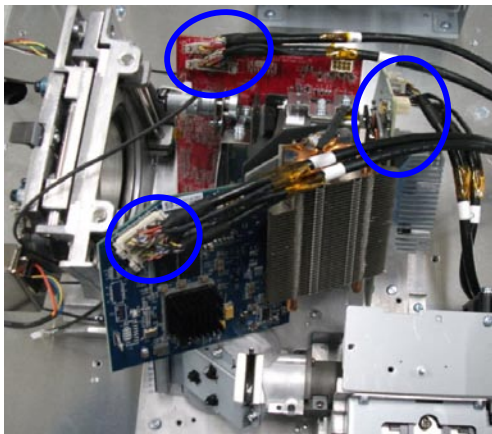
### 1-14 FIP Bracket Shield & R/G/B Signal Connector Module



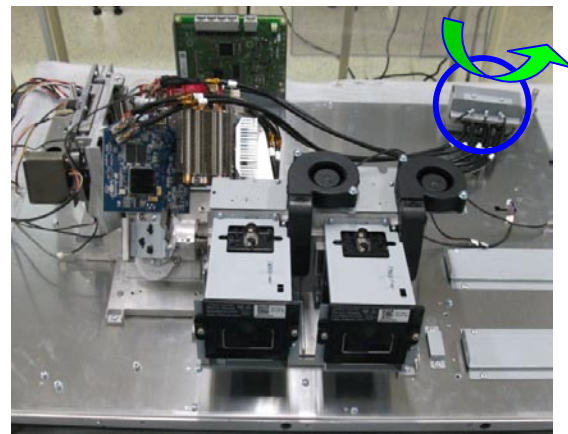
Loosen 4 screws on FIP bracket shield to take it off. Torque: 7~8 kgf-cm



Put FIP bracket shield on the desk.



Unplug R/G/B signal cables from R/G/B formatter board.



Take the R/G/B signal connector module off.

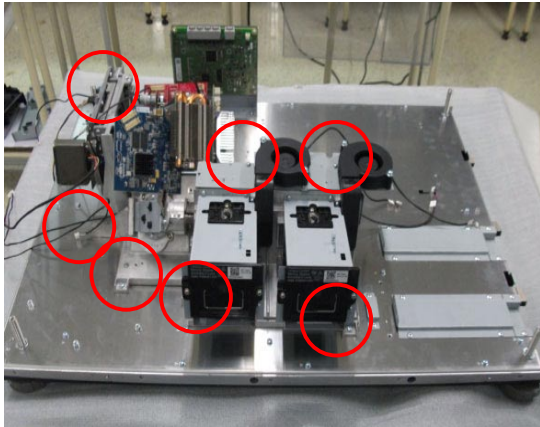


Put R/G/B signal connector module on the desk.

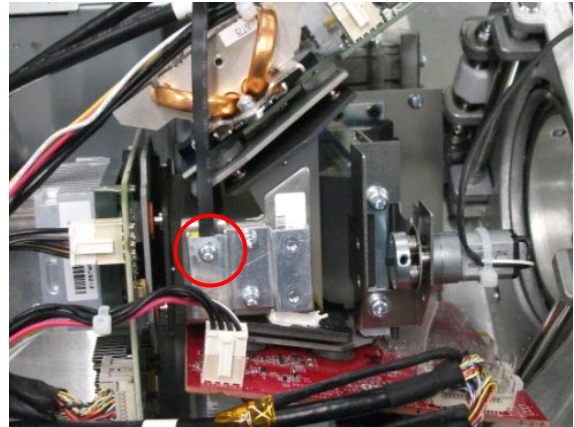


## KEY PART REPLACEMENT (Method of disassembly/Photo taken from life)

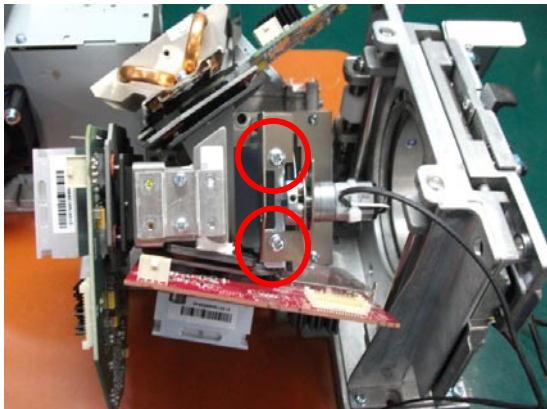
### 1-15 Light Engine & Shutter & Fan 9 / Fan 10 Module & Lamp Module & Lens Mount



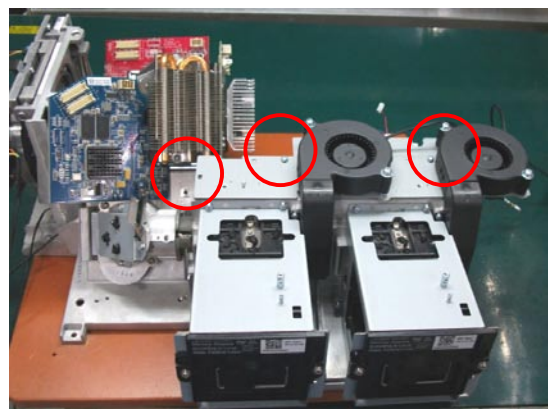
Loosen 7 screws on the bottom of light engine module. Torque: 7~8 kgf-cm



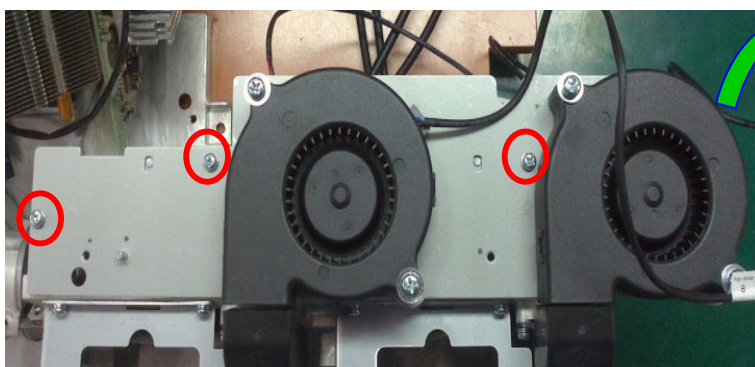
Loosen 1 screw on the FIP to take off the buckle. Torque: 5~6 kgf-cm



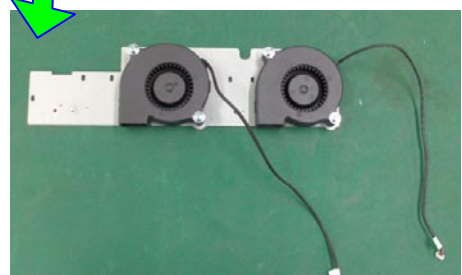
Loosen 2 screws on the FIP to take off the shutter. Torque: 6~7 kgf-cm



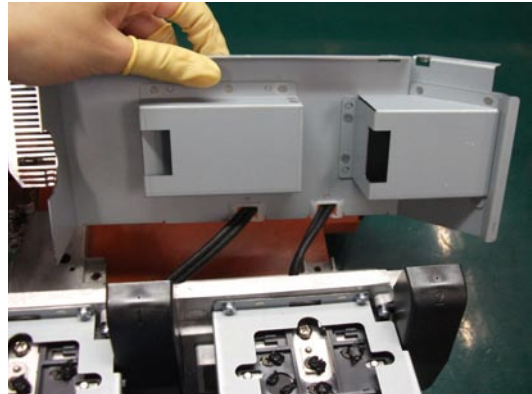
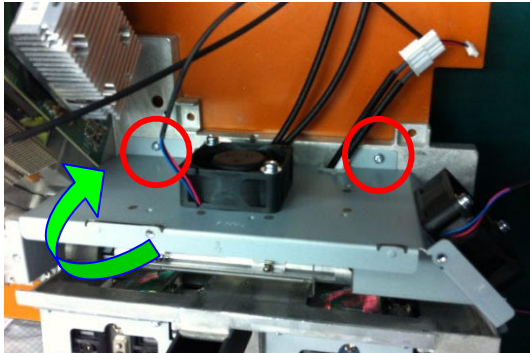
Loosen 3 screws on the Lamp shield to take off the Fan 9 & 10 module. Torque: 5~6 kgf-cm



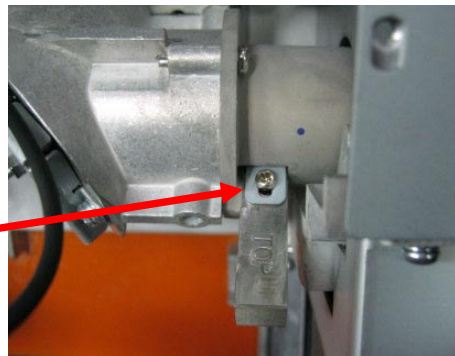
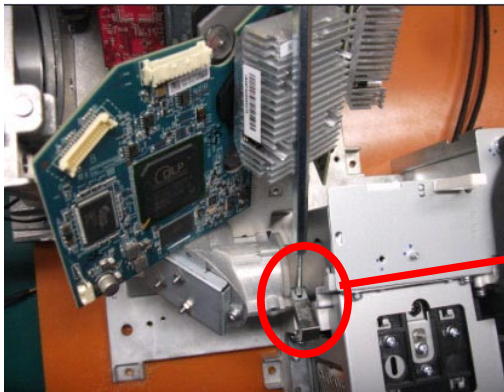
Loosen 3 screws on the Lamp shield to take off the Fan 9 & 10 module. Torque: 5~6 kgf-cm



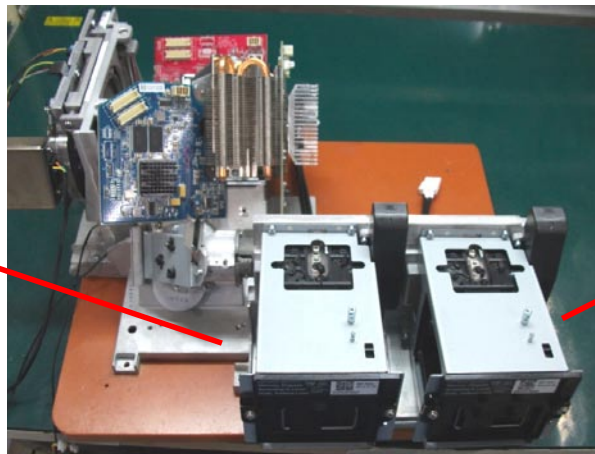
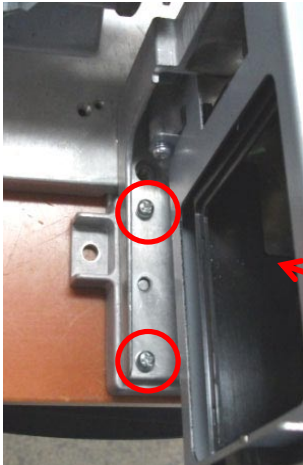
## KEY PART REPLACEMENT (Method of disassembly/Photo taken from life)



Loosen 2 screws on the Fan 4 & 5 module. And, then take off the Fan 4 & 5 module.  
Torque: 5~6 kgf-cm



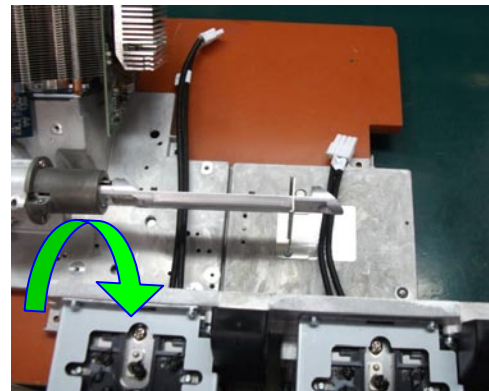
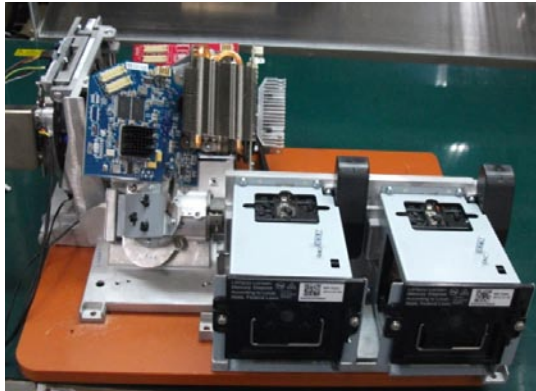
Loosen 1 screw on the FIP lightpipe. Torque: 2~3 kgf-cm.



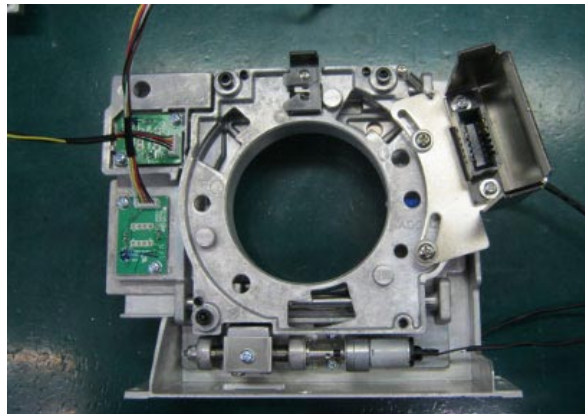
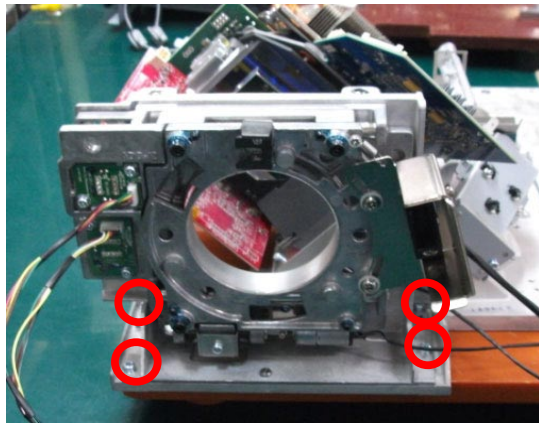
Loosen 4 screws on the Lamp module. Torque: 5~6 kgf-cm



## KEY PART REPLACEMENT (Method of disassembly/Photo taken from life)



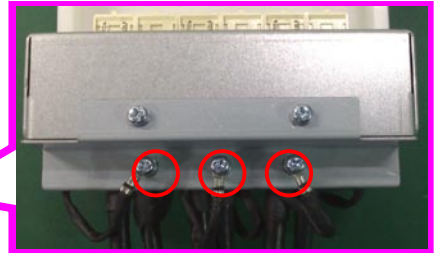
Take off the Lamp module.



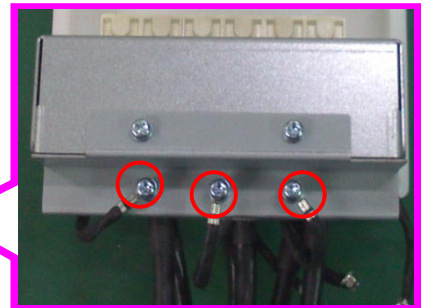
Loosen 4 screws on the Lens Mount to take it off. Torque: 7~8 kgf-cm.

## KEY PART REPLACEMENT (Method of disassembly/Photo taken from life)

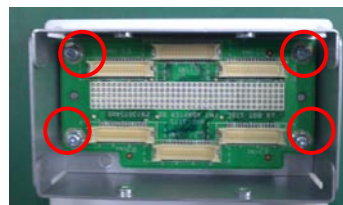
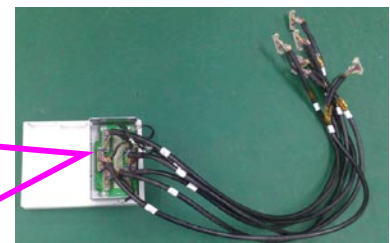
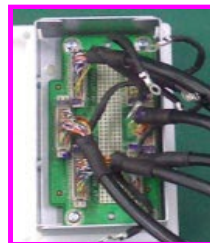
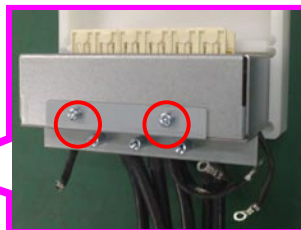
### 1-16 R/G/B Signal Connector Module & FMT Adapter Board



Put R/G/B signal connector module on the desk. Loosen 3 grounding screws on signal connector module, and then release R2/G2/B2 cable. Torque: 5~6 kgf-cm



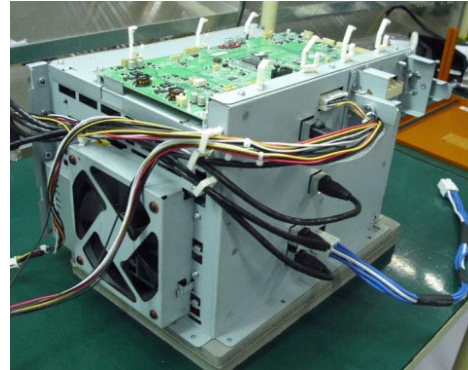
Reverse the R/G/B signal connector module on the desk. Loosen 3 grounding screws on signal connector module, and then release R1/G1/B1 cable. Torque: 5~6 kgf-cm



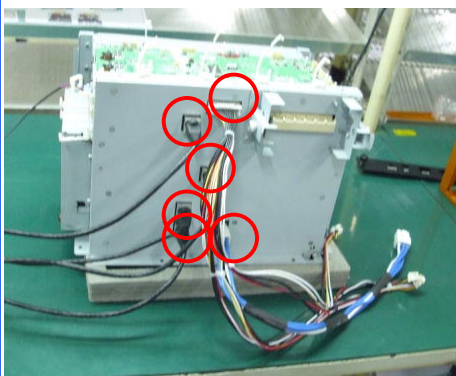
Loosen 2 screws on signal connector module, and then take the shield off. And, unplug 6 pcs signal cables from FMT adapter board. Loosen 4 screws on FMT adapter board and take it off. Torque: 5~6 kgf-cm.

## KEY PART REPLACEMENT (Method of disassembly/Photo taken from life)

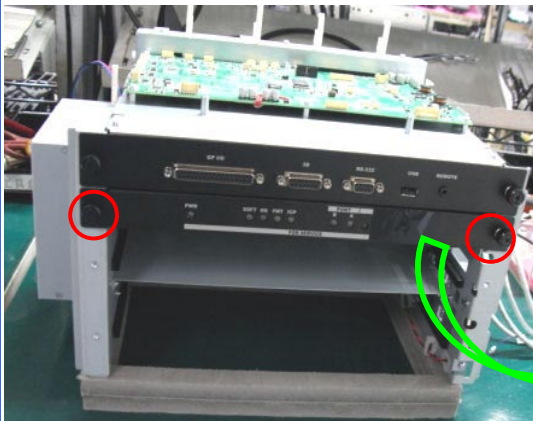
### 1-17 ICP Board



Put control module on the desk to strip down.



Unplug 6 pcs cables from control module. Loosen 2 screws on third level of control module and take it off. Torque: 1.25~1.75 kgf-cm.

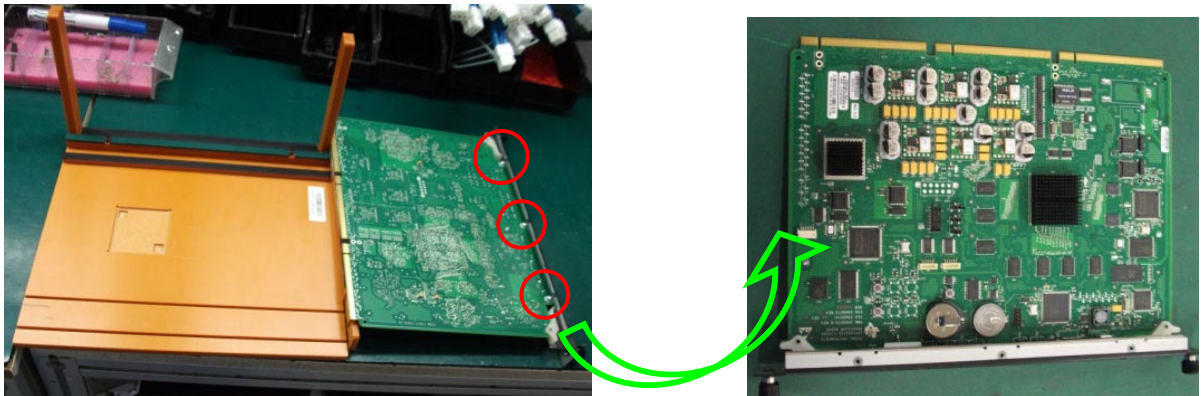


Loosen 2 screws on second level of control module and take it off. Torque: 1.25~1.75 kgf-cm.



## KEY PART REPLACEMENT (Method of disassembly/Photo taken from life)

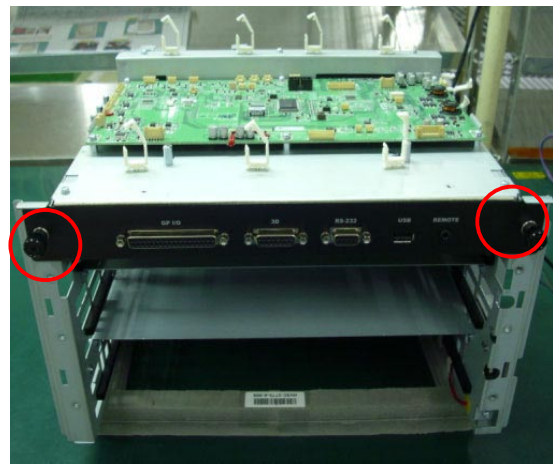
---



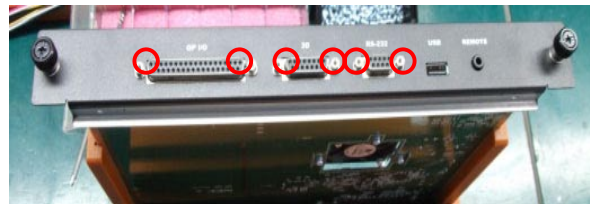
Loosen 3 screws on the ICP board and take it off. Torque: 5~6 kgf-cm.

## KEY PART REPLACEMENT (Method of disassembly/Photo taken from life)

### 1-18 CPU Module



Loosen 2 screws on first level of control module and take it off. Torque: 1.25~1.75 kgf-cm.



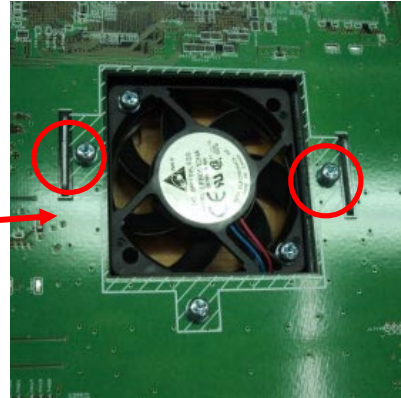
Loosen 6 inner hexagonal screws on the CPU module to take off shield cover. Torque: 5~6 kgf-cm.



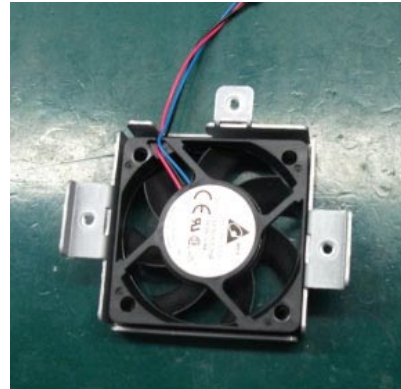
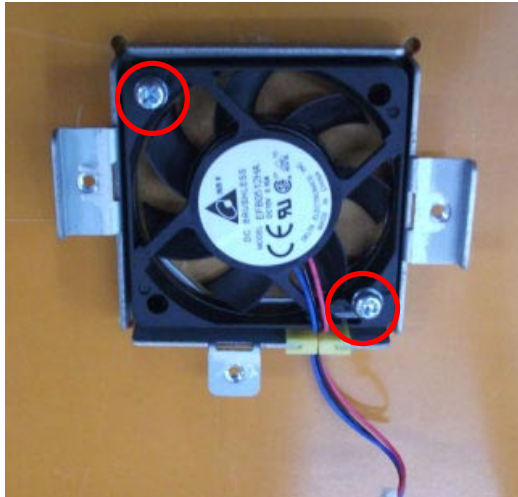
Loosen 3 screws on the CPU board. And, then reverse the CPU board. Torque: 5~6 kgf-cm.

## KEY PART REPLACEMENT (Method of disassembly/Photo taken from life)

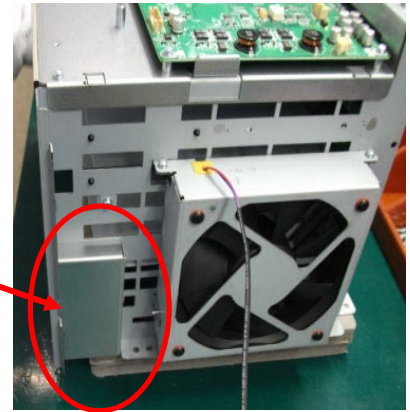
### 1-19 CPU Board & Fan 17 Module



Loosen 3 screws on the CPU board. And, then take the Fan 17 off. Torque: 5~6 kgf-cm.



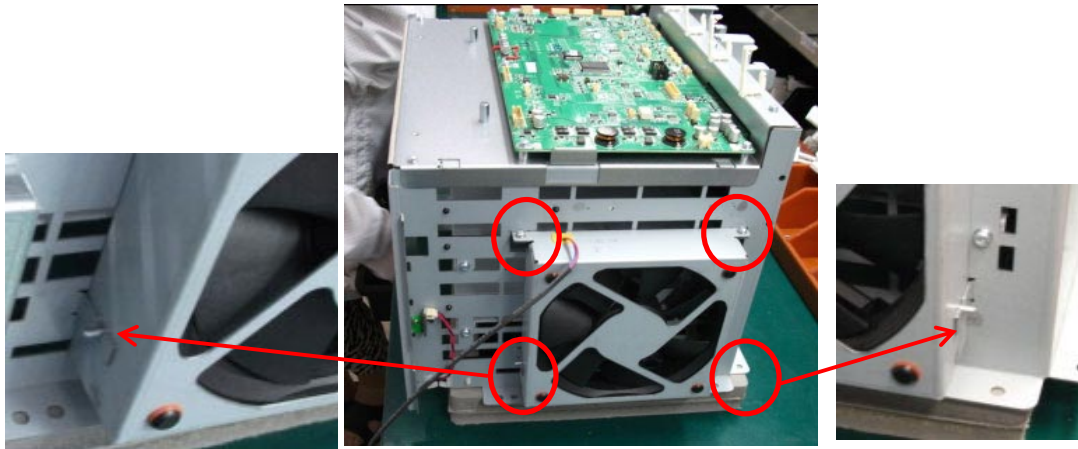
Loosen 2 screws on the Fan 17 module to take Fan 17 off. Torque: 5~6 kgf-cm.



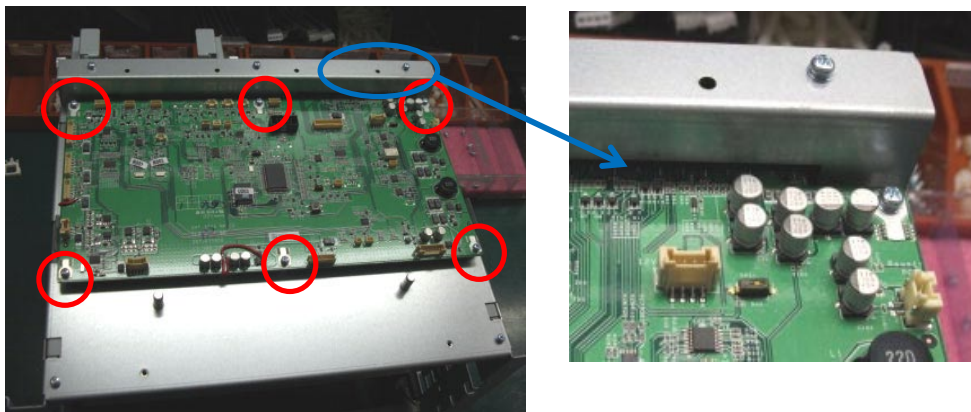
Loosen 1 screw on the control module. And, then release 3 pin hooks to take shield cover off. Torque: 5~6 kgf-cm.



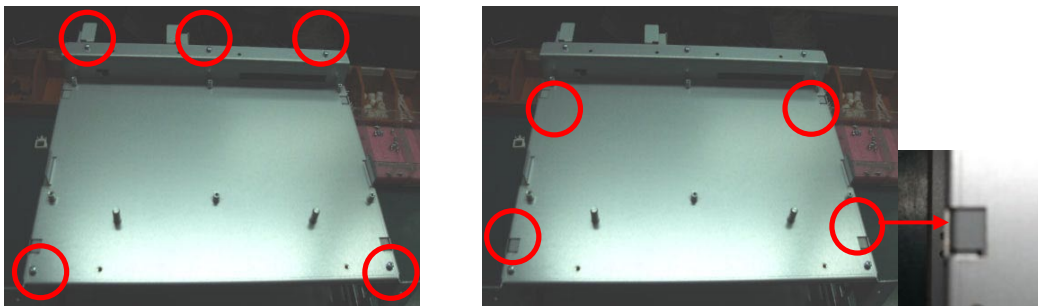
**1-20 Fan 16 Module & Slave UC Board**



Loosen 2 screws on the Fan 16 module and release 2 pin hooks to take off the Fan 16 module. Torque: 5~6 kgf-cm.



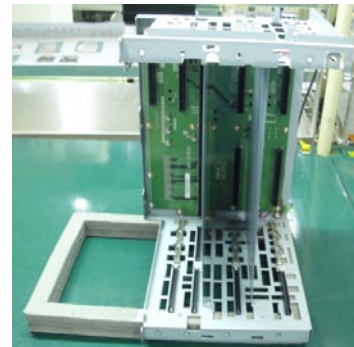
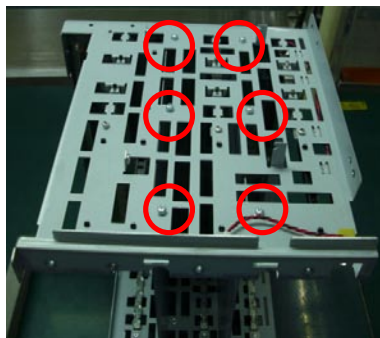
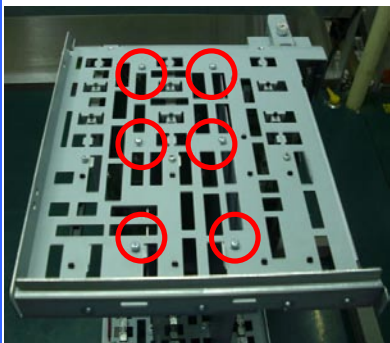
Loosen 6 screws on Slave UC Board. Then, take it off from mother board (Board To Board). Torque: 5~6 kgf-cm



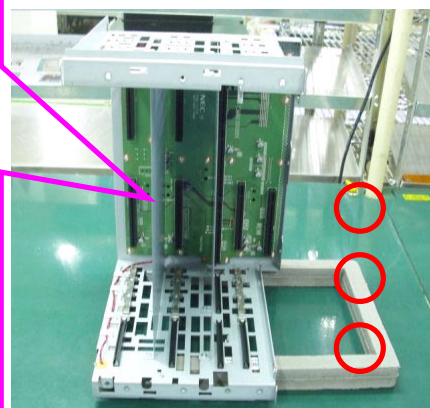
Loosen 5 screws on the top cover of control module and release 4 pin hooks to take it off. Torque: 5~6 kgf-cm

## KEY PART REPLACEMENT (Method of disassembly/Photo taken from life)

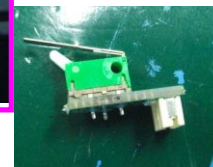
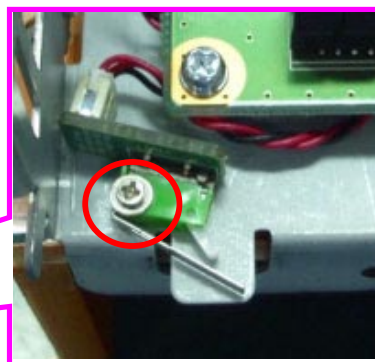
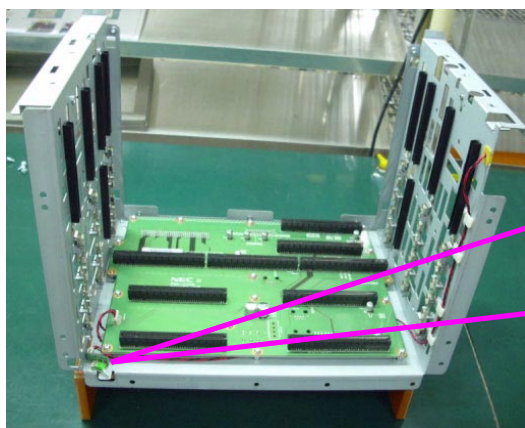
### 1-21 Control Module Plate & Security Switch



Loosen 12 screws on two sides of control module. Then, take off 12 screws from control module.  
Torque: 5~6 kgf-cm

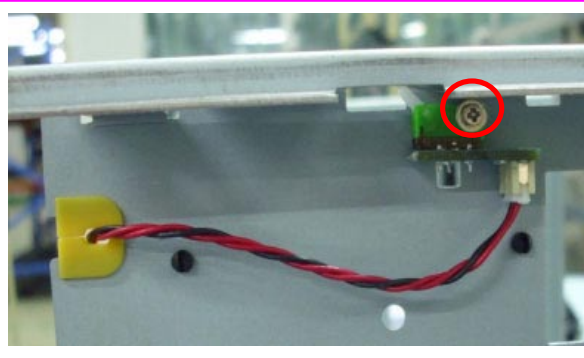
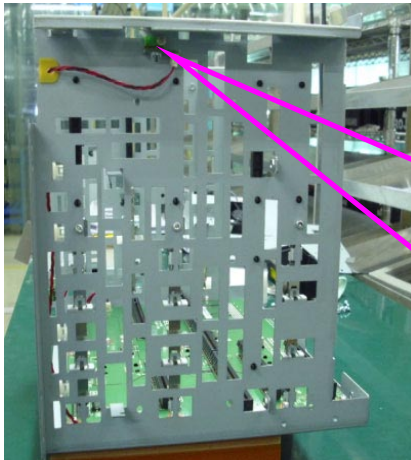


Take off two plates from control module.

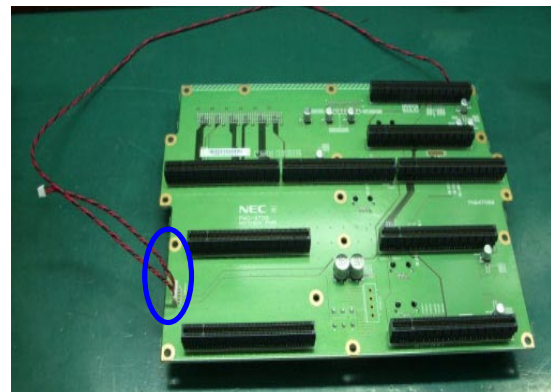


Loosen 1 screw on control module. Then, take off the security switch from control module.  
Torque: 1.5~2 kgf-cm

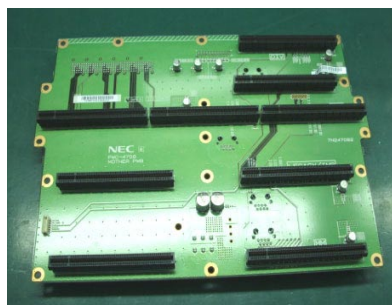
### 1-22 Security Switch & Mother Board



Loosen 1 screw on control module. Then, take off the security switch from control module.  
Torque: 1.5~2 kgf-cm



Loosen 16 screws on mother board. Then, take off the mother board from control module.  
And, then unplug 1 pc connector from mother board. Torque: 5~6 kgf-cm

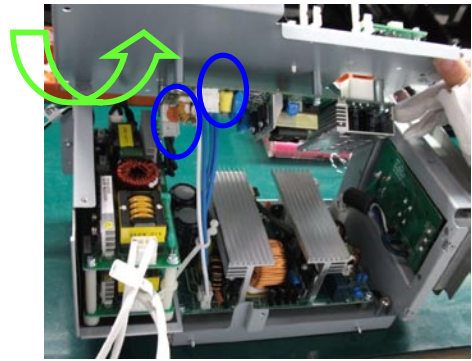
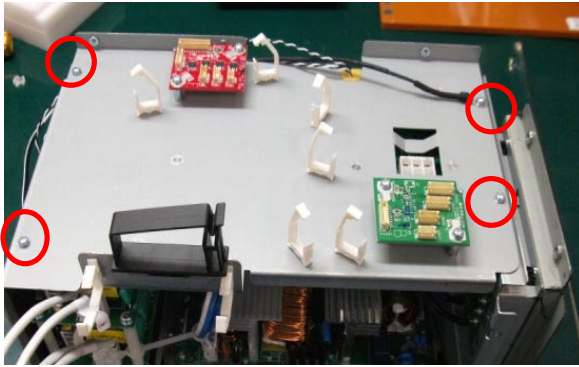


Then, take off mother board.

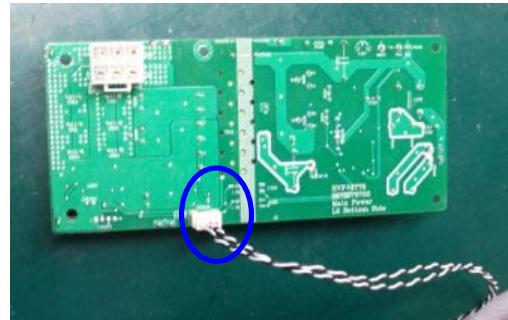
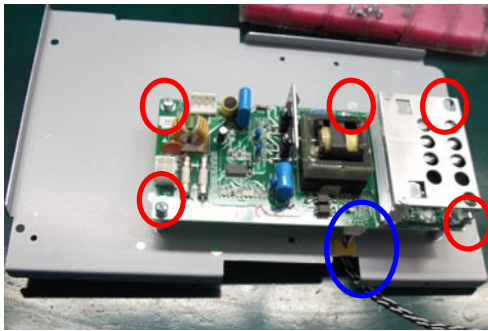


## KEY PART REPLACEMENT (Method of disassembly/Photo taken from life)

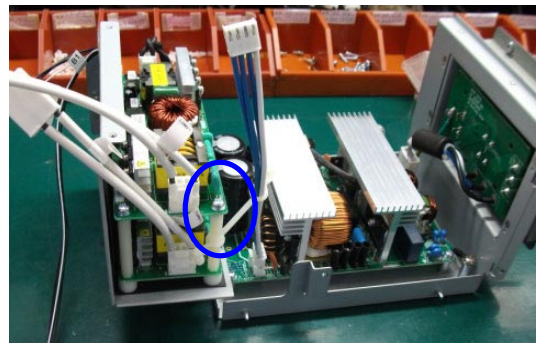
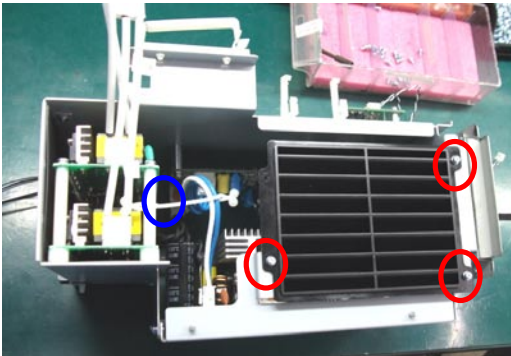
### 1-23 Main Power Board & Air Window



Loosen 4 screws on power module. Then, unplug 2 pcs connectors from main power board to take off the top cover of power module. Torque: 5~6 kgf-cm



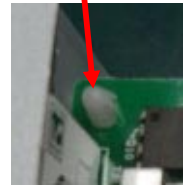
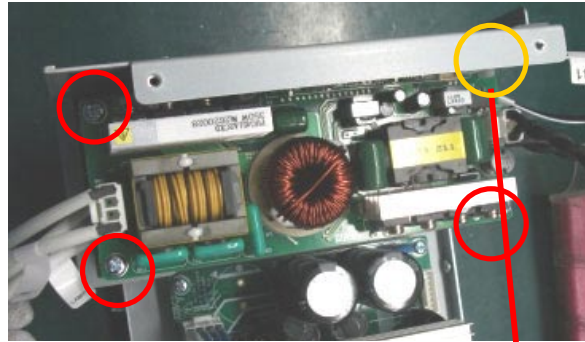
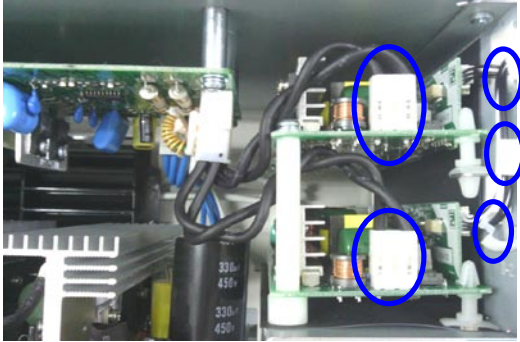
Loosen 5 screws on main power board. Then, take off the main power board. And, then unplug 1 pc connector from main power board. Torque: 5~6 kgf-cm.



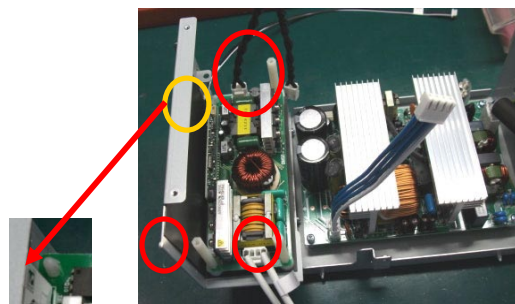
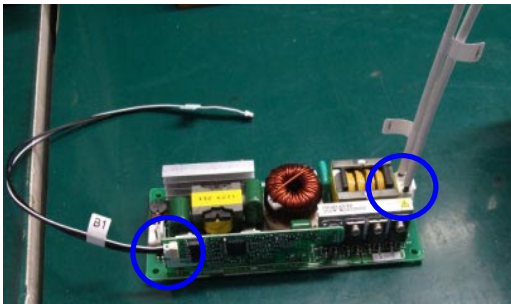
Loosen 3 screws on air window. And, open the 1 buckle. Then, take off air window. Torque: 5~6 kgf-cm.

## KEY PART REPLACEMENT (Method of disassembly/Photo taken from life)

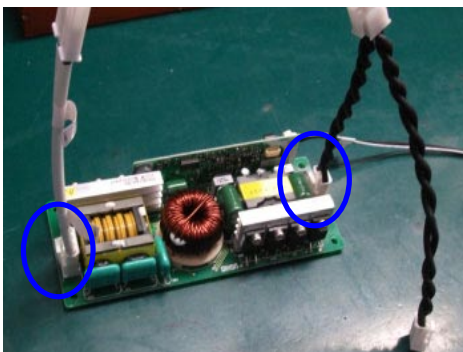
### 1-24 Ballast



Unplug 2 connectors and 3 fasteners from two ballasts. Then, Loosen 3 screws and 1 short pin on top ballast to take off it. Torque: 7~8 kgf-cm.



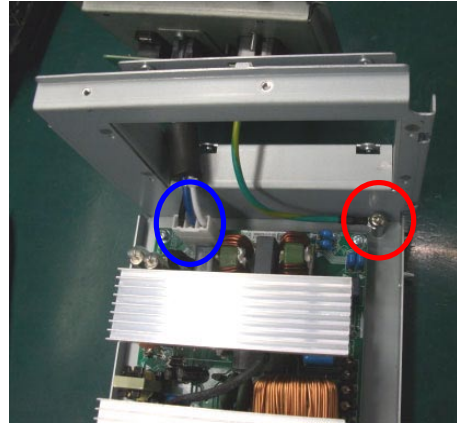
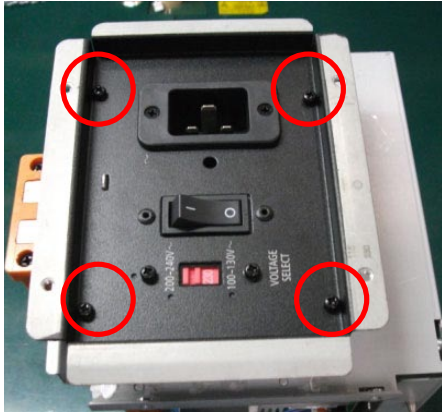
Unplug 2 pcs connectors from top ballast. And, loosen 3 tall plastic pins and 1 short plastic pin bottom ballast. Then, take off it. Torque: 3~4 kgf-cm.



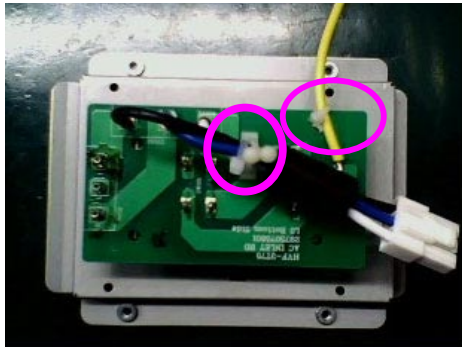
Unplug 2 pcs connectors from bottom ballast.

## KEY PART REPLACEMENT (Method of disassembly/Photo taken from life)

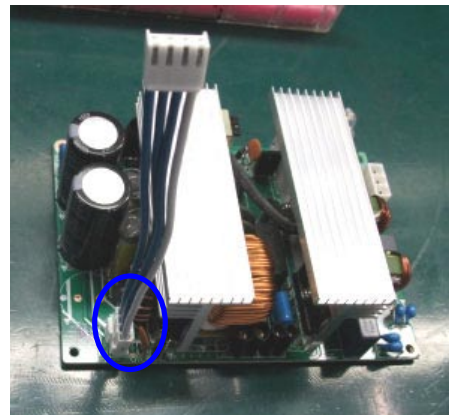
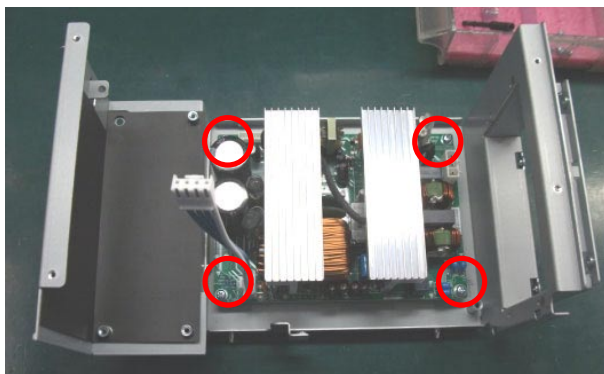
### 1-25 AC Inlet Board & Power Board



Loosen 4 screws on AC inlet board (Torque: 5~6 kgf-cm.). And, unplug 1 pc connector and loosen 1 screw from AC inlet board (Torque: 9~10 kgf-cm.). Then, take off the AC inlet board.



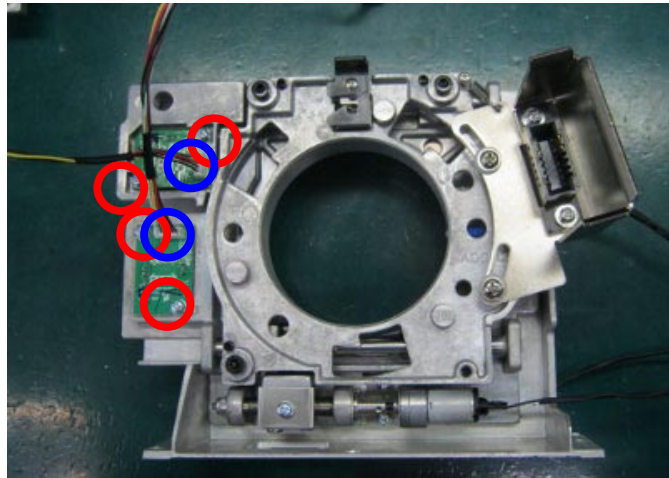
Take off the AC inlet board. Unplug 2 pcs fasteners from AC inlet board.



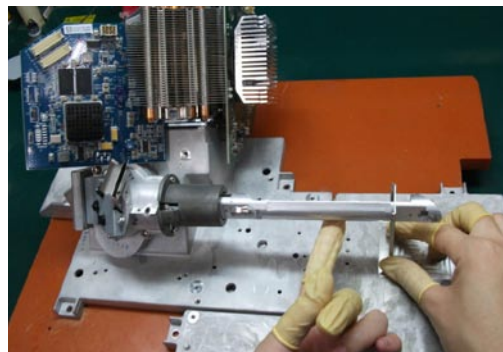
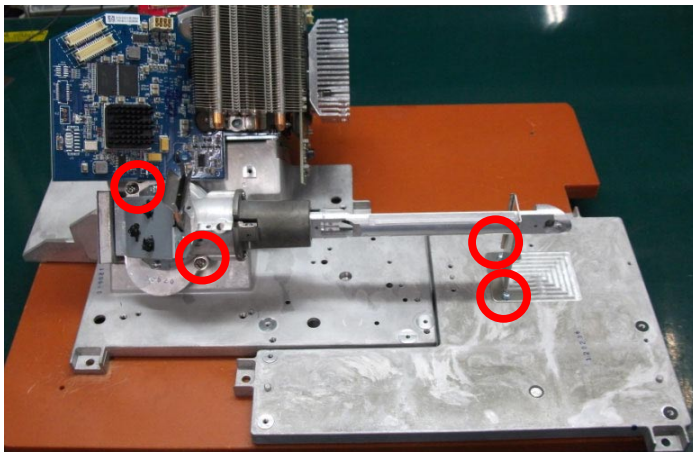
Loosen 4 screws on power board and unplug the connector. And, take power board off on the desk. Torque: 5~6 kgf-cm.



**1-26 Horizontal & Vertical Sensor Board & Lightpipe**



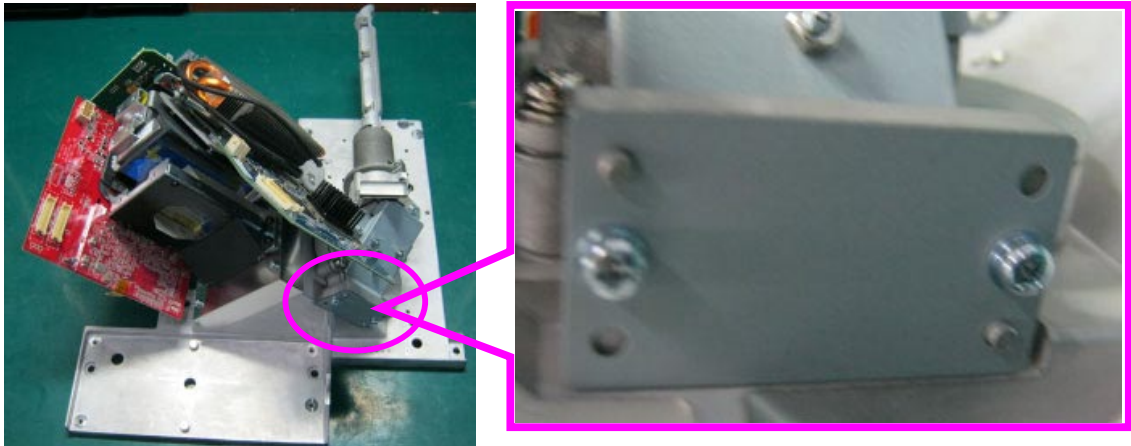
Loosen 4 screws on Horizontal & Vertical sensor board and unplug the 2 pcs connectors. And, take them off. Torque: 5~6 kgf-cm.



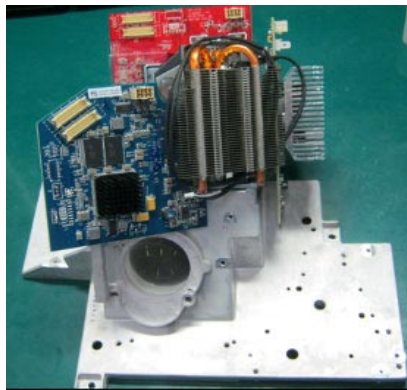
Loosen 2 screws on lightpipe (Torque: 7~8 kgf-cm.). And, loosen 2 screws on lightpipe bracket (Torque: 5~6 kgf-cm.).

## KEY PART REPLACEMENT (Method of disassembly/Photo taken from life)

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Loosen 2 screws on lightpipe (Torque: 5~6 kgf-cm.).

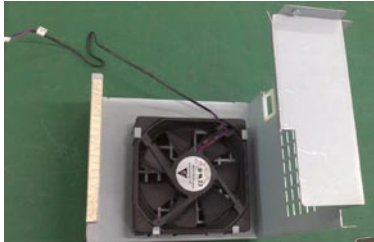


Take lightpipe off.

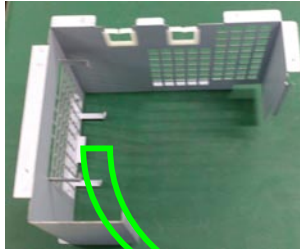


**1-27 Fan 1 & Fan 2**

**1**



**2**



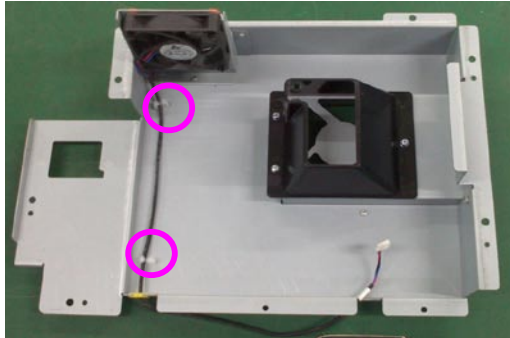
**3**



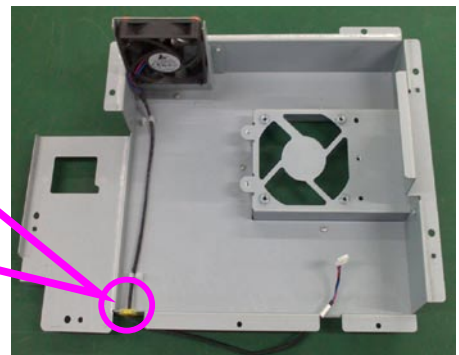
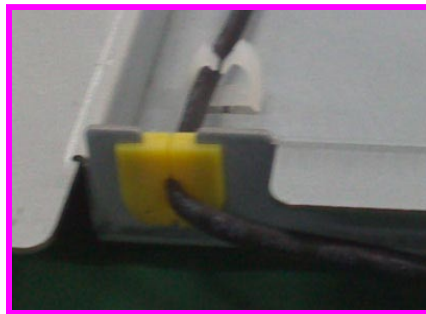
Release Fan1 module from FIP shield fence. Finally, take off the Fan1 from fence.

## KEY PART REPLACEMENT (Method of disassembly/Photo taken from life)

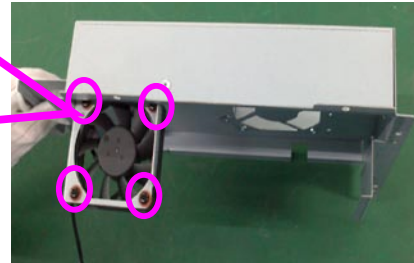
1



2



3



4

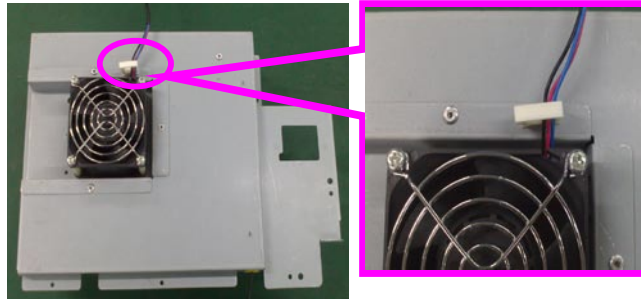


Unplug the 3 pcs fasteners and loosen 4 plastic screws in Fan 2 module, and take off it.

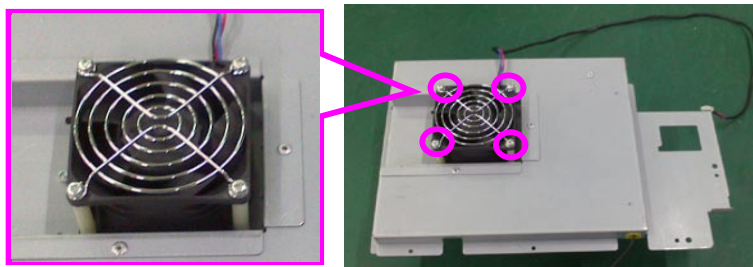
## KEY PART REPLACEMENT (Method of disassembly/Photo taken from life)

### 1-28 Fan 3 & Fan 4 & Fan 5

1

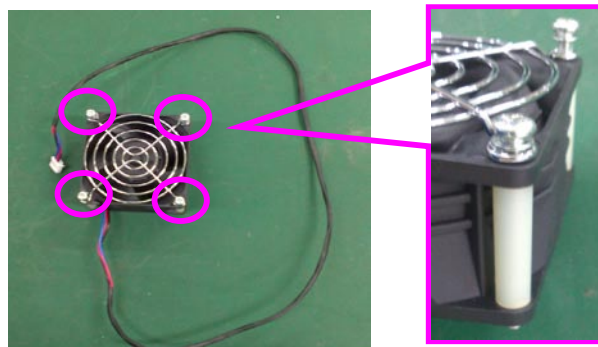


2



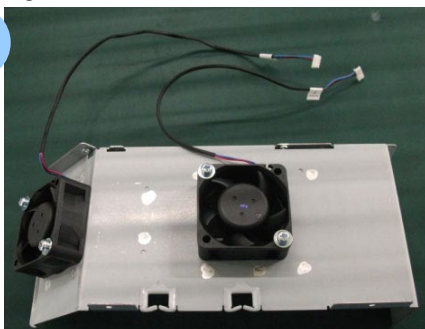
7-8 kgf-cm

3

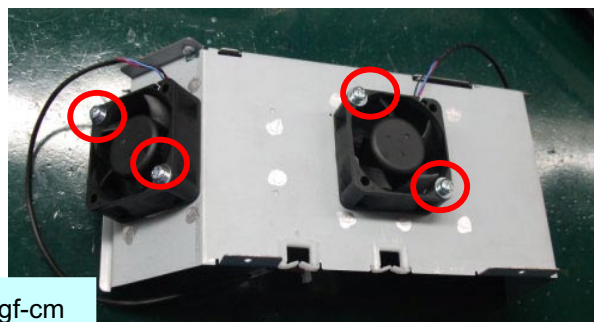


Unplug the fastener and loosen 4 screws in Fan 3 module, and take off it.

1



2



7-8 kgf-cm

Loosen the 4 pcs screws on the Fan 4 & 5 module, and then take Fan 4 & Fan 5 off.

## KEY PART REPLACEMENT (Method of disassembly/Photo taken from life)

### 1-29 Fan 6 & Fan 7 & Fan 8

1



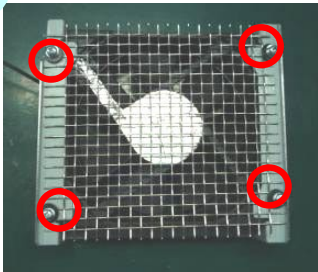
2



Pull the Fan 6 from air flow guide module. Finally, take off the Fan 6.

1

4-5 kgf-cm



2



3



Please loosen 4 screws in the Fan7 module, and then remove mesh. Finally, take the Fan7 off.

1



2



3



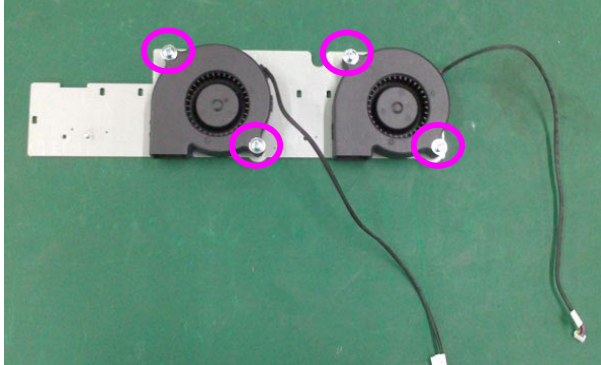
Pull the Fan 8 from air flow guide module. Finally, take off the Fan 8.

## KEY PART REPLACEMENT (Method of disassembly/Photo taken from life)

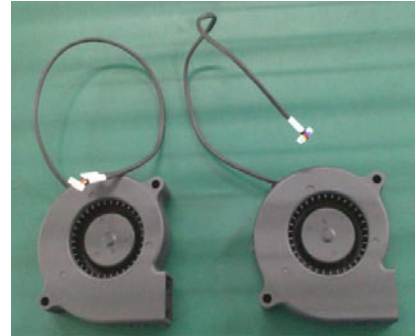
### 1-30 Fan9 & Fan 10 & Fan 11 & Fan 12 & Fan 13 & Fan 14 & Fan 15 & Fan 17

1

7-8 kgf-cm

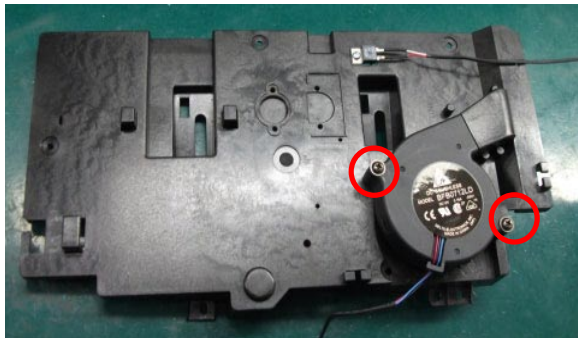


2



Please loosen 4 screws on the Fan 9 &10 module to remove Fan 9 &10.

1



6-8 kgf-cm



Please loosen 2 screws on the Fan11 module to remove Fan11.



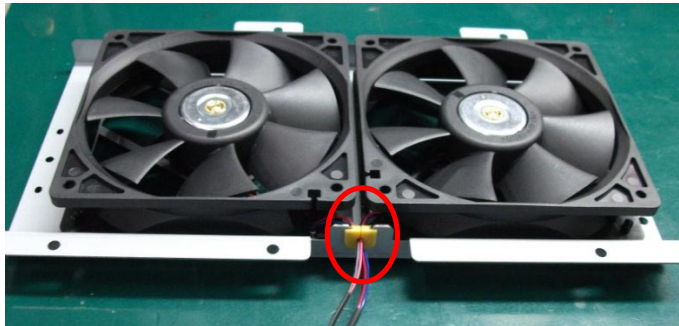
## KEY PART REPLACEMENT (Method of disassembly/Photo taken from life)

1

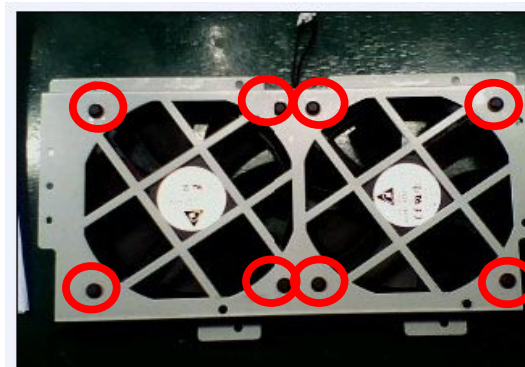


5-6 kgf-cm

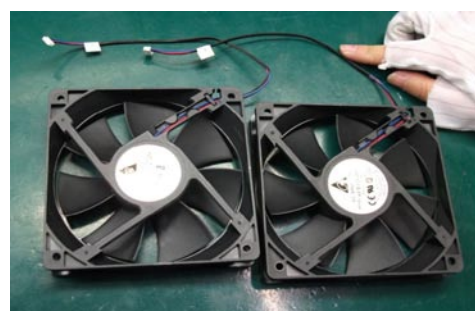
2



3



4



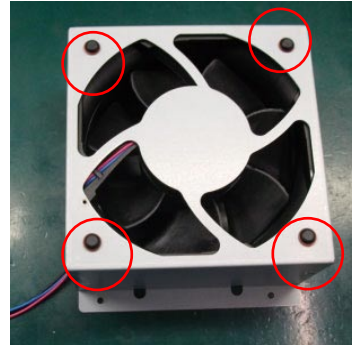
Loosen 8 pcs screws on the Fan 12 &13 module. And, release the wire and pull out 8 plastic screws on the Fan 12 &13 module to take off Fan 12 & 13.

## KEY PART REPLACEMENT (Method of disassembly/Photo taken from life)

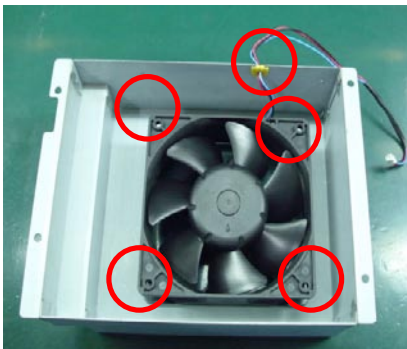
1



2



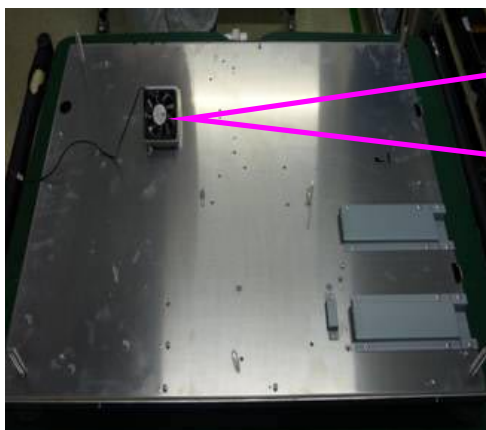
3



4



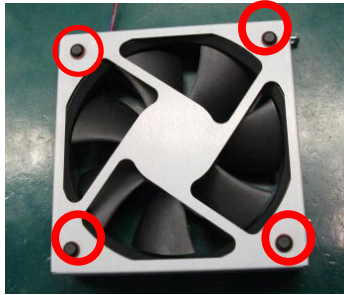
Please put Fan 14 module on the desk. And, loosen 4 plastic screws on the Fan14 module. Then, pull out 4 plastic screws and 1 pc wire to take off the Fan 14.



Loosen 2 screws on the Fan15 module. Then, take off the Fan 15 module. Loosen 4 plastic screws on Fan 15 module to take out the Fan 15.

## KEY PART REPLACEMENT (Method of disassembly/Photo taken from life)

1



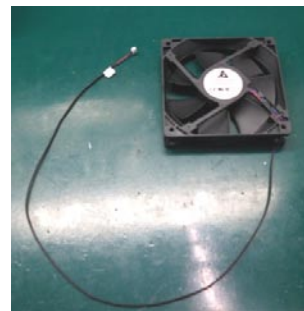
2



3



4



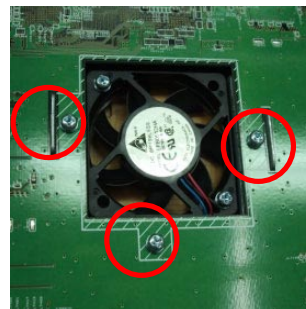
Loosen 4 pcs plastic screws on the Fan 16 module and then take off Fan16 from bracket.

1

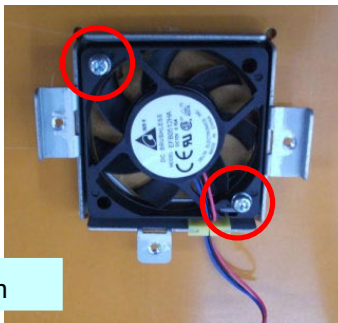


2

5-6 kgf-cm

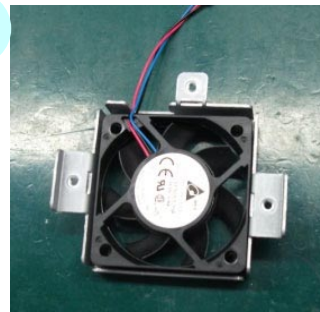


3



5-6 kgf-cm

4



Please loosen 3 screws from CPU board to take off Fan17 module. Then, loosen 2 screws from Fan17 module to take off the Fan17.

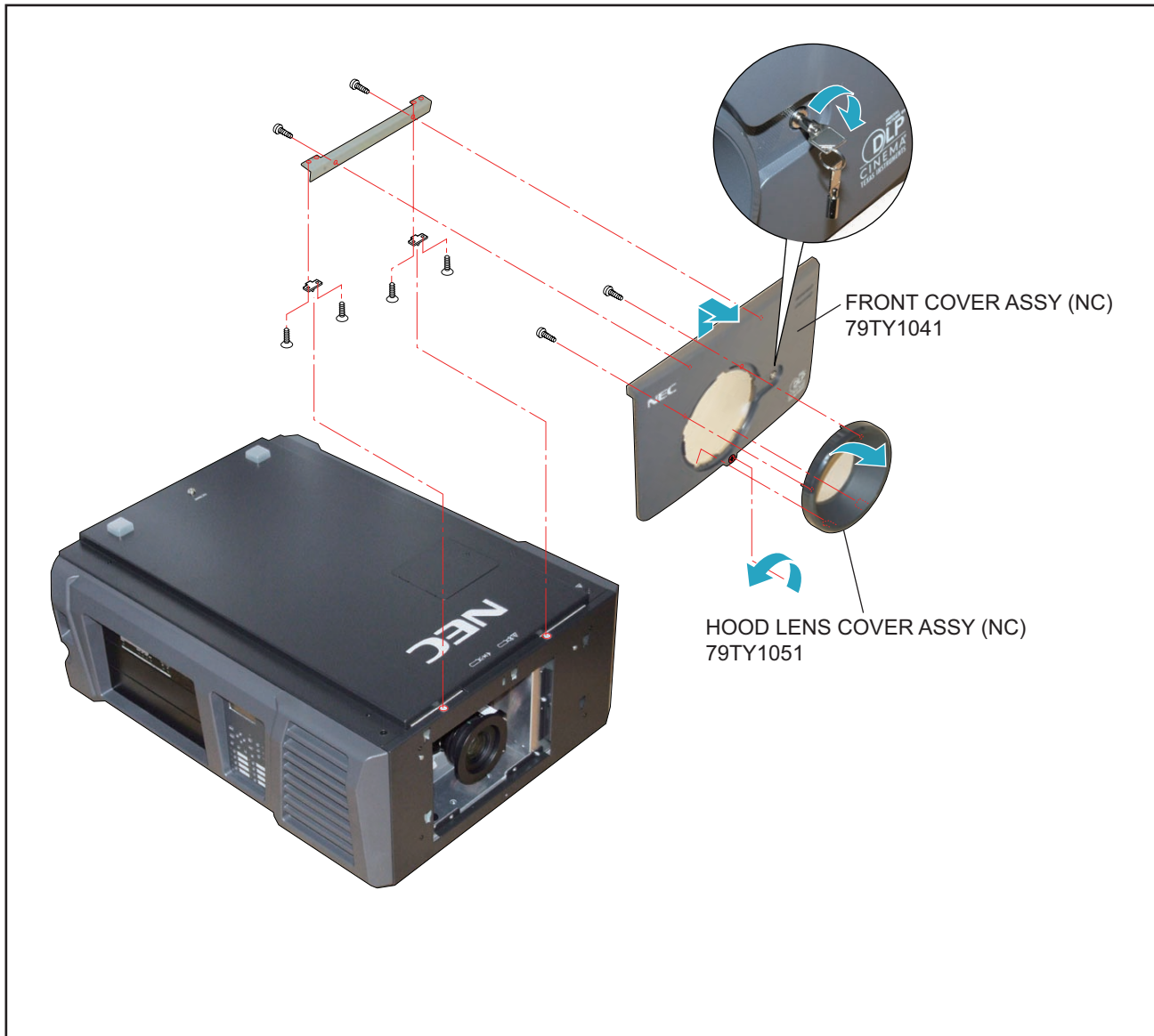


1. Diagonal view of the main unit front



## 2. FRONT COVER ASSY/HOOD LENS COVER ASSY

- (1) Remove the FRONT COVER ASSY after releasing the key lock.
- (2) Rotate and remove the HOOD LENS COVER ASSY.



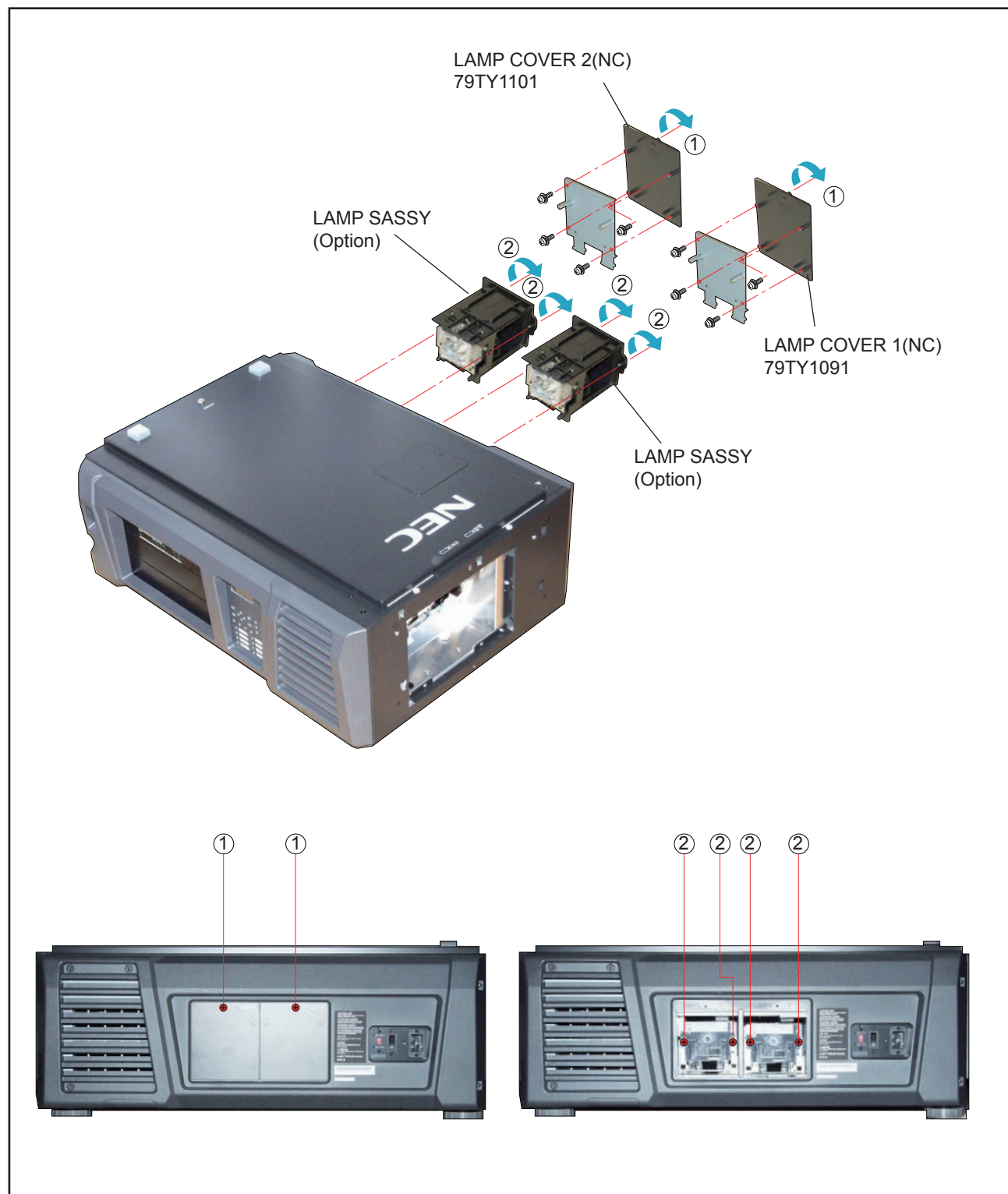
### 3. ZOOM LENS

(1) Press the button and remove the ZOOM LENS.



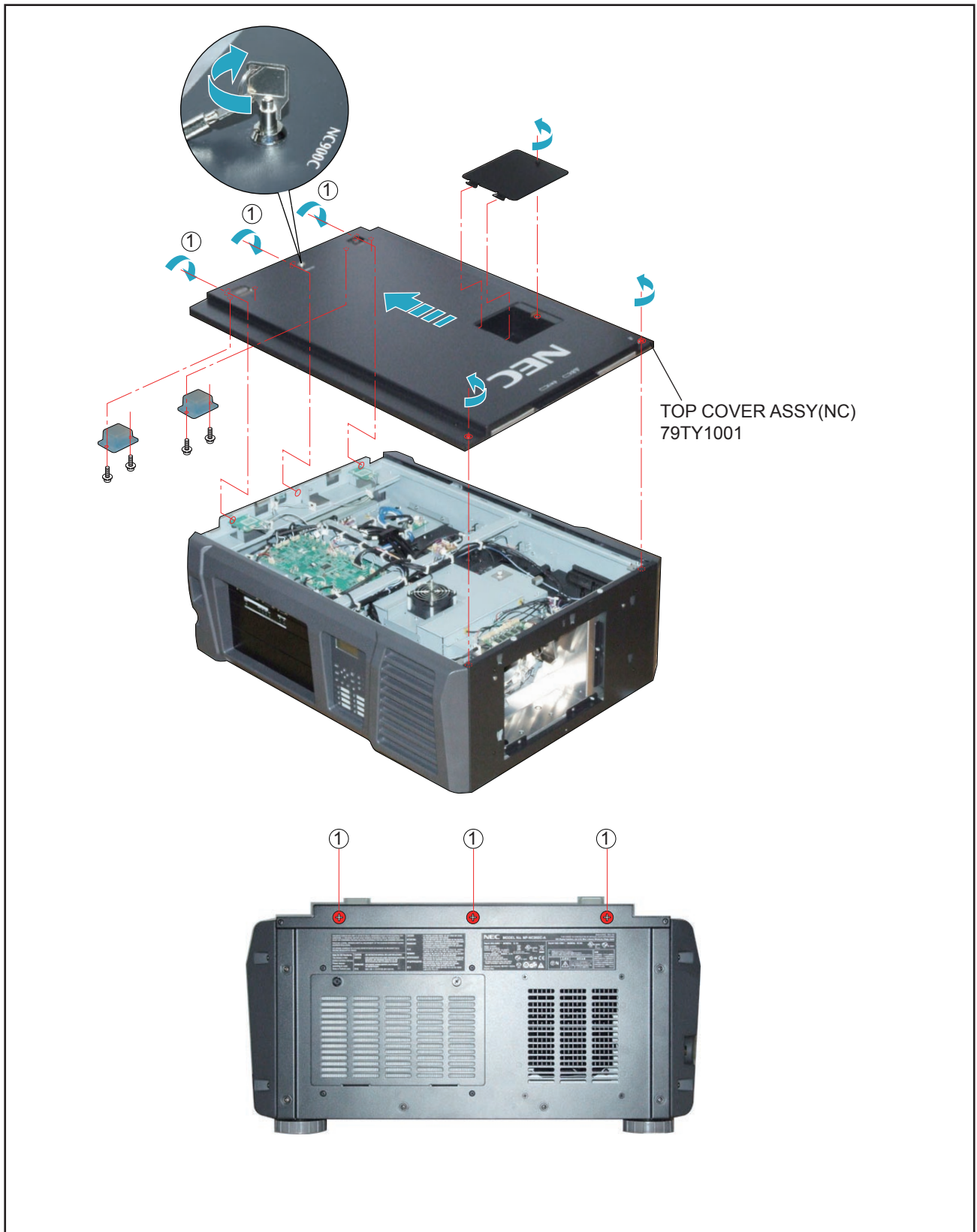
#### 4. LAMP COVER/LAMP SASSY (OPTION)

- (1) Loosen 2 pcs. of screw ① of the LAMP COVER to take it out.
- (2) Loosen 4 pcs. of screw ② of the LAMP SASSY to take it out.



## 5. TOP COVER ASSY

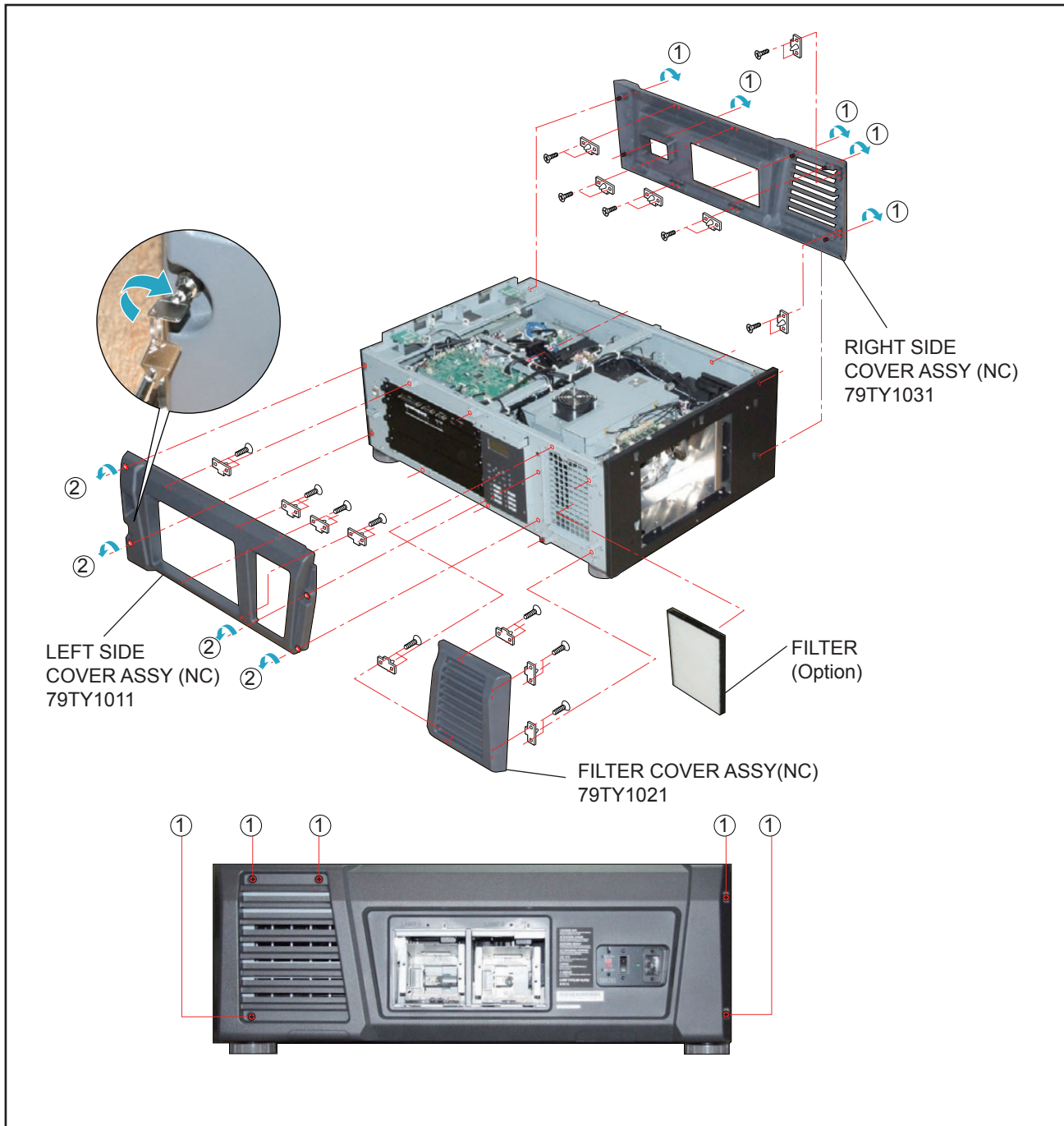
(1) Remove 3 pcs. of screw ① and take out the TOP COVER ASSY.



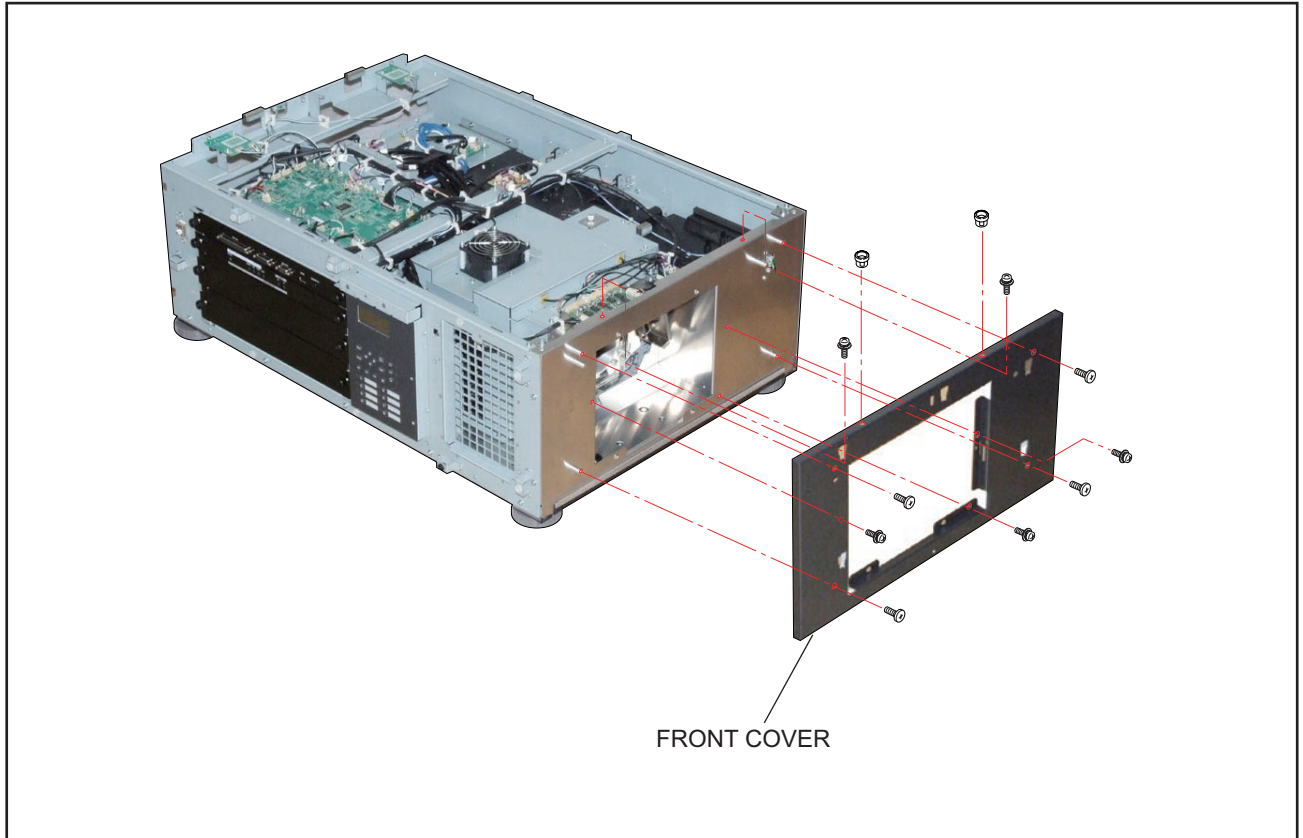


## 6. RIGHT SIDE COVER ASSY/LEFT SIDE COVER ASSY/FILTER COVER ASSY

- (1) Remove 5 pcs. of screw ① to take out the RIGHT SIDE COVER ASSY.
- (2) Remove the FILTER COVER ASSY.
- (3) Remove the LEFT SIDE COVER ASSY after releasing the key lock and removing 4 pcs. of screw ②.

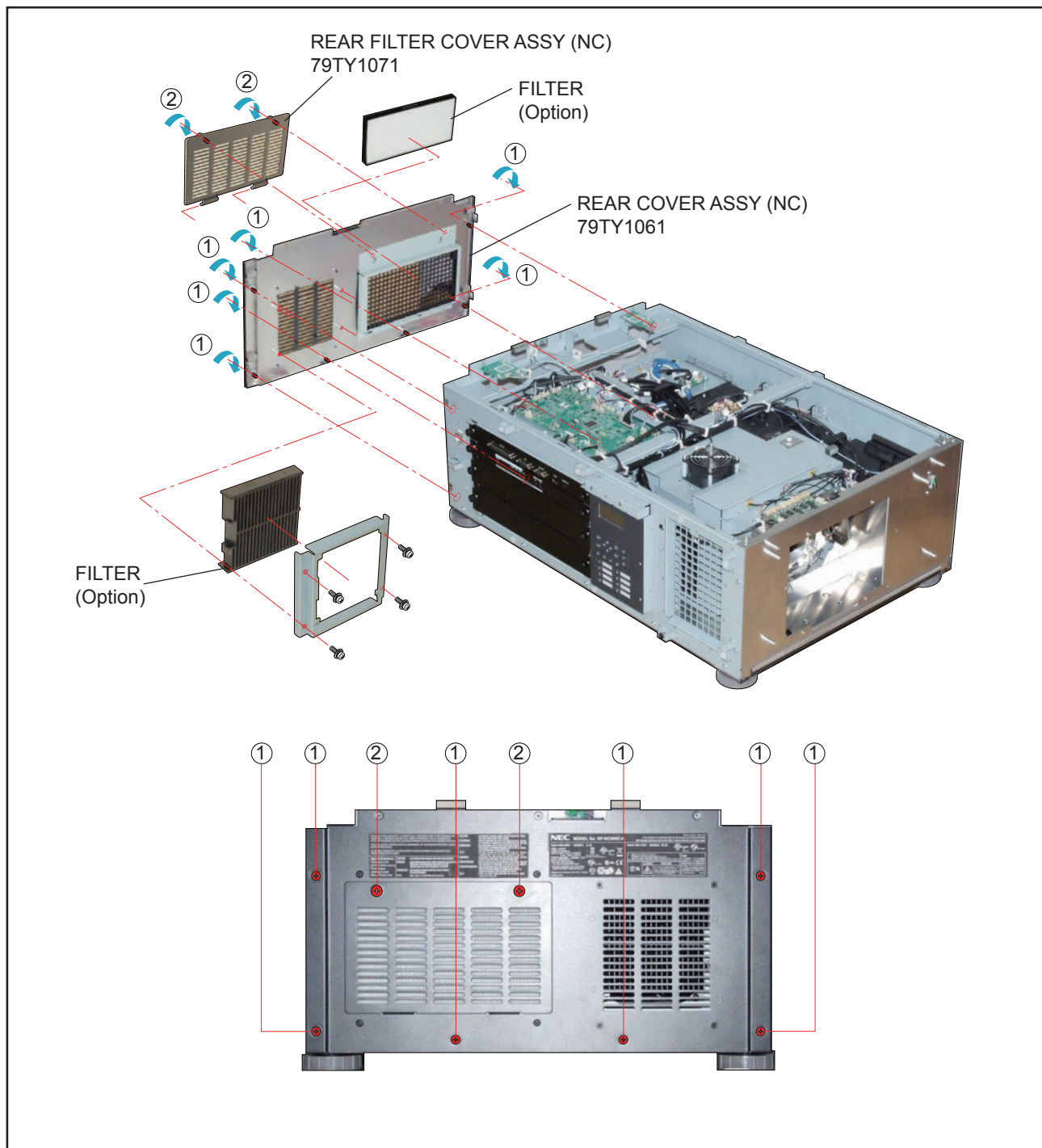


## 7. FRONT COVER



## 8. REAR COVER ASSY/REAR FILTER COVER ASSY

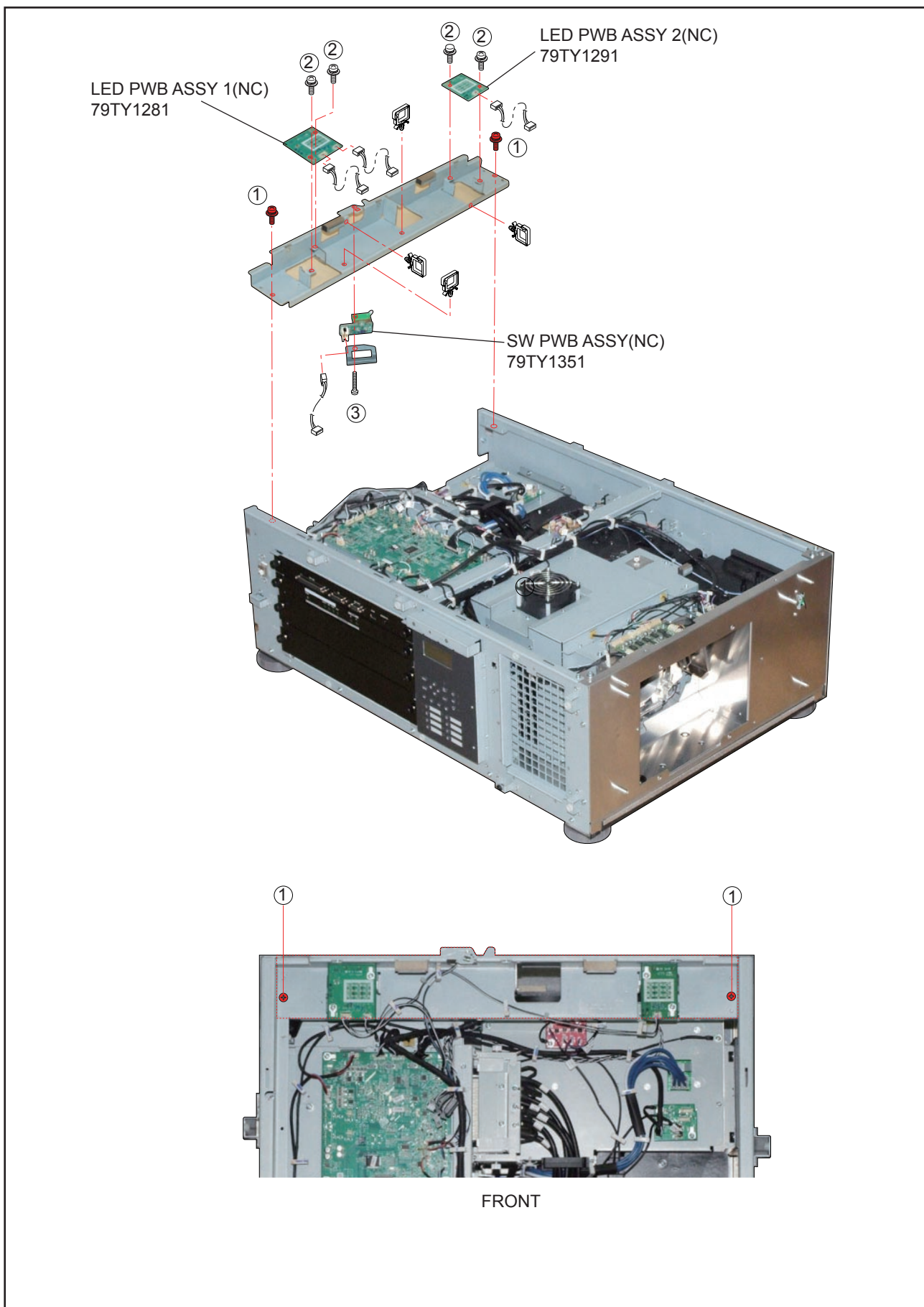
- (1) Remove 6 pcs. of screw ① and take out the REAR COVER ASSY.
- (2) Remove 2 pcs. of screw ② and take out the REAR COVER ASSY.





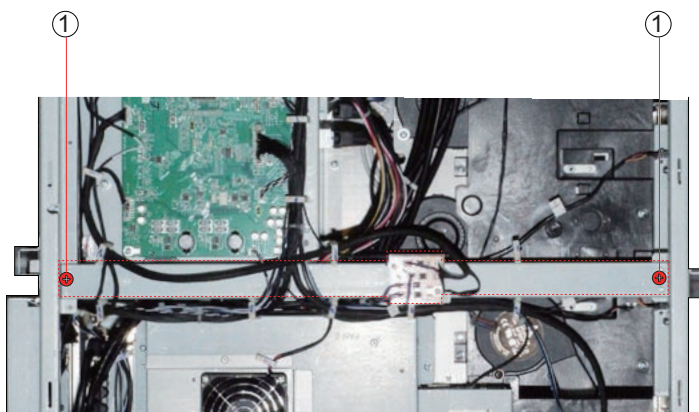
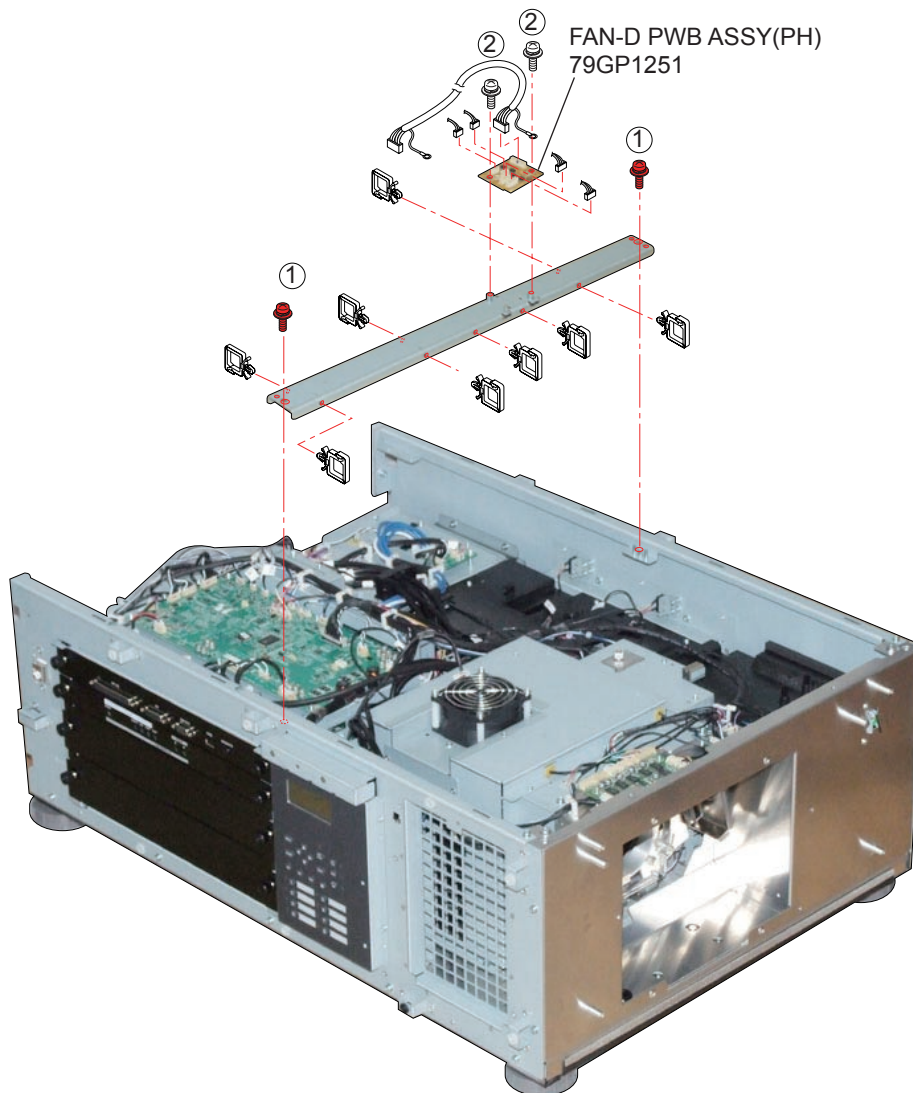
## 9. LED PWB ASSY 1/LED PWB ASSY 2/SW PWB ASSY

- (1) Remove 2 pcs. of screw ① and take out the assemblies.
- (2) Remove 4 pcs. of screw ② and take out the LED PWB ASSY 1/LED PWB ASSY 2.
- (3) Remove 1 pc. of screw ③ and take out the SW PWB ASSY.



## 10. FAN-D PWB ASSY

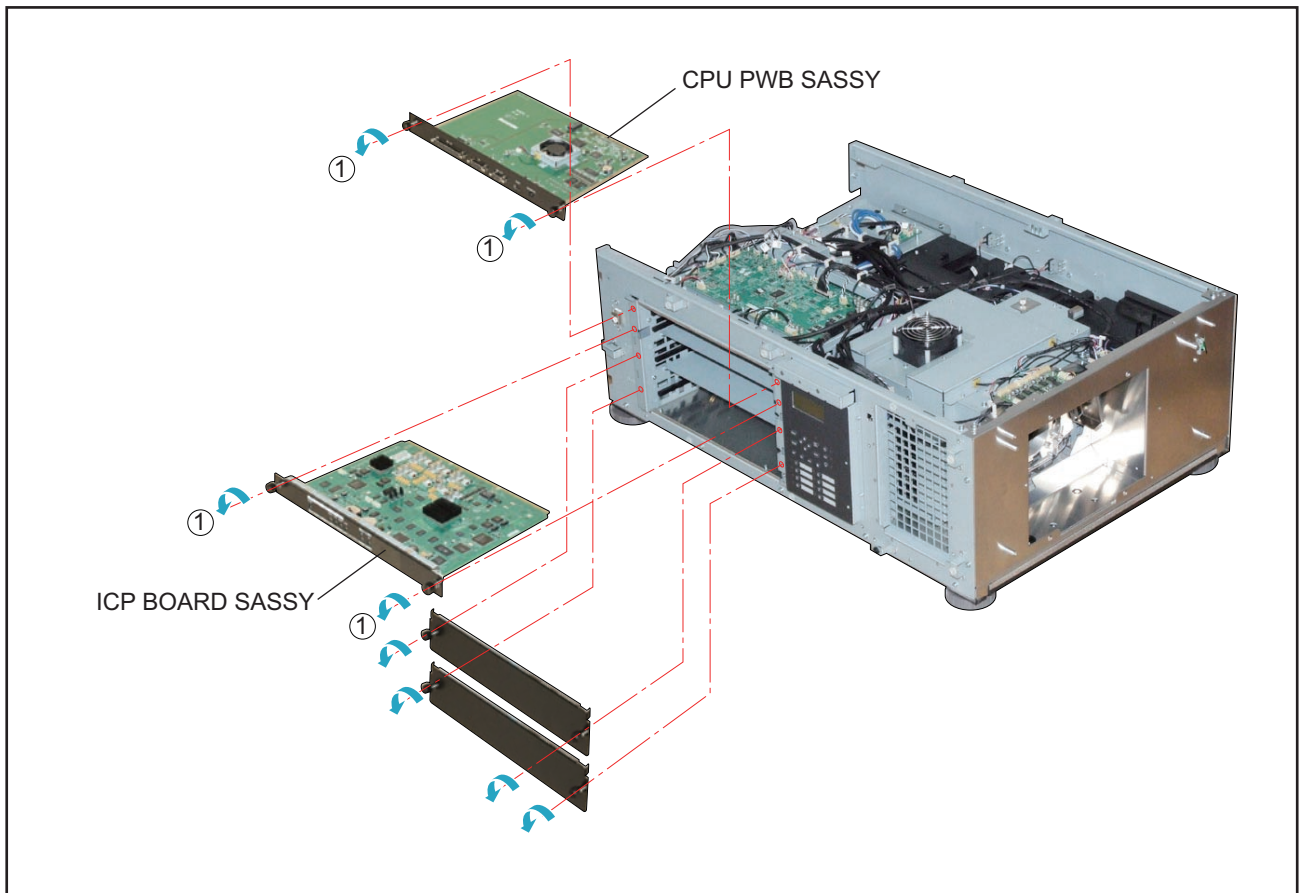
(1) Remove 2 pcs. of screw ② and take out the FAN-D PWB ASSY.



FRONT

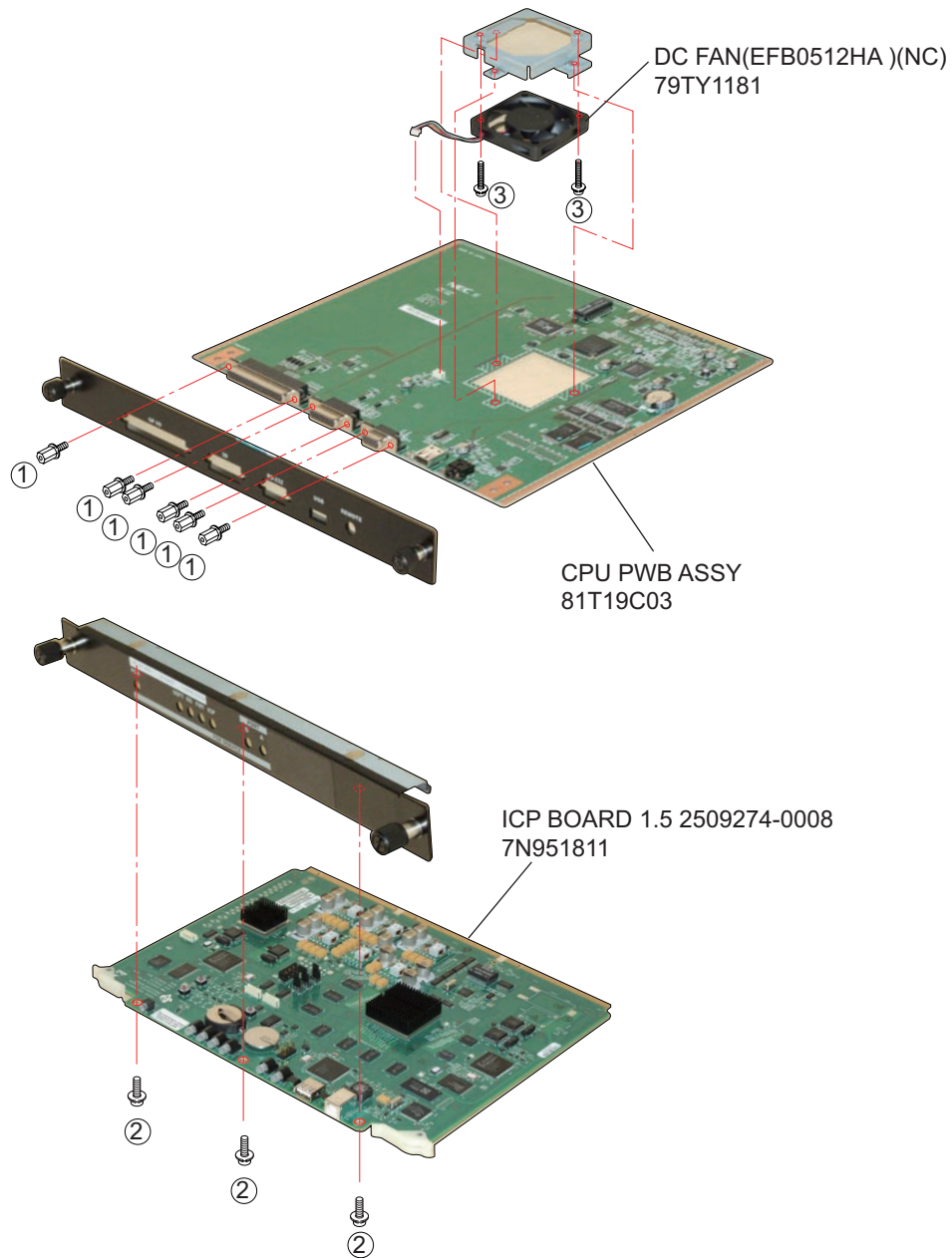
## 11. CPU PWB SASSY/ICP BOARD SASSY

(1) Remove 4 pcs. of screw ① and take out the CPU PWB SASSY/ICP BOARD SASSY.



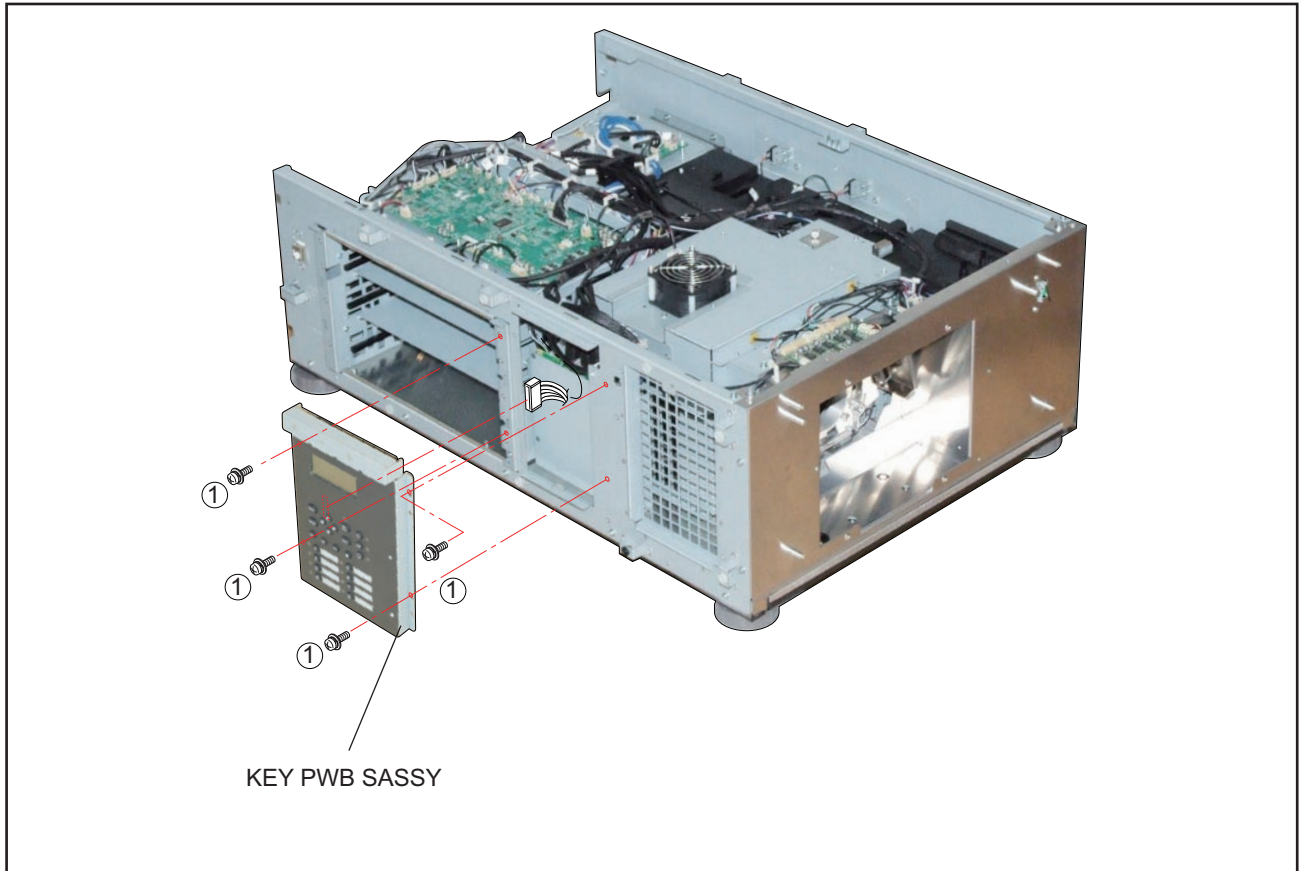
## 12. ICP BOARD/CPU PWB ASSY/DC FAN

- (1) Remove 6 pcs. of screw ① and take out the CPU PWB ASSY.
- (2) Remove 3 pcs. of screw ② and take out the ICP BOARD.
- (3) Remove 2 pcs. of screw ③ and take out the DC FAN.



### 13. KEY PWB SASSY

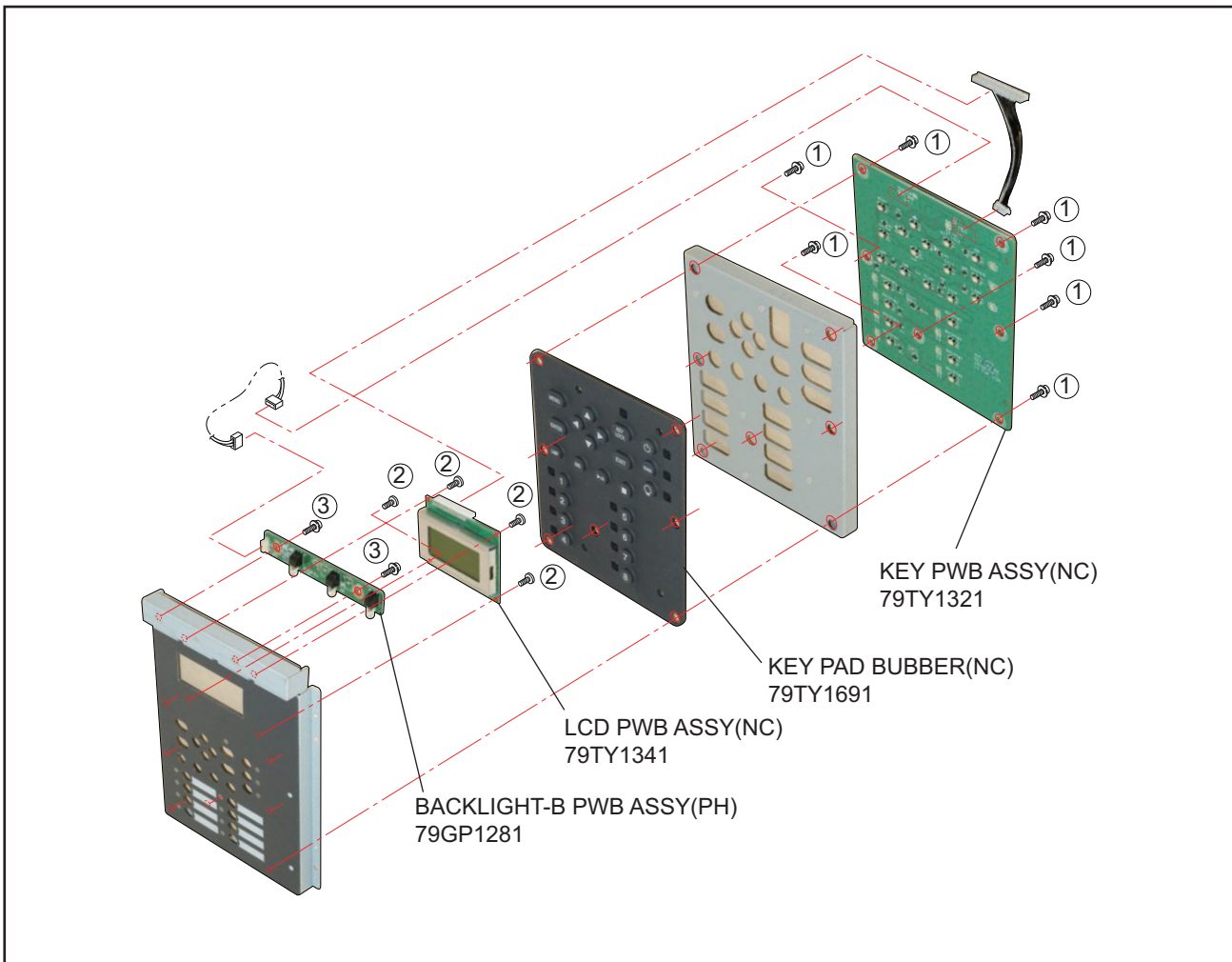
(1) Remove 4 pcs. of screw ① and take out the KEY PWB SASSY.



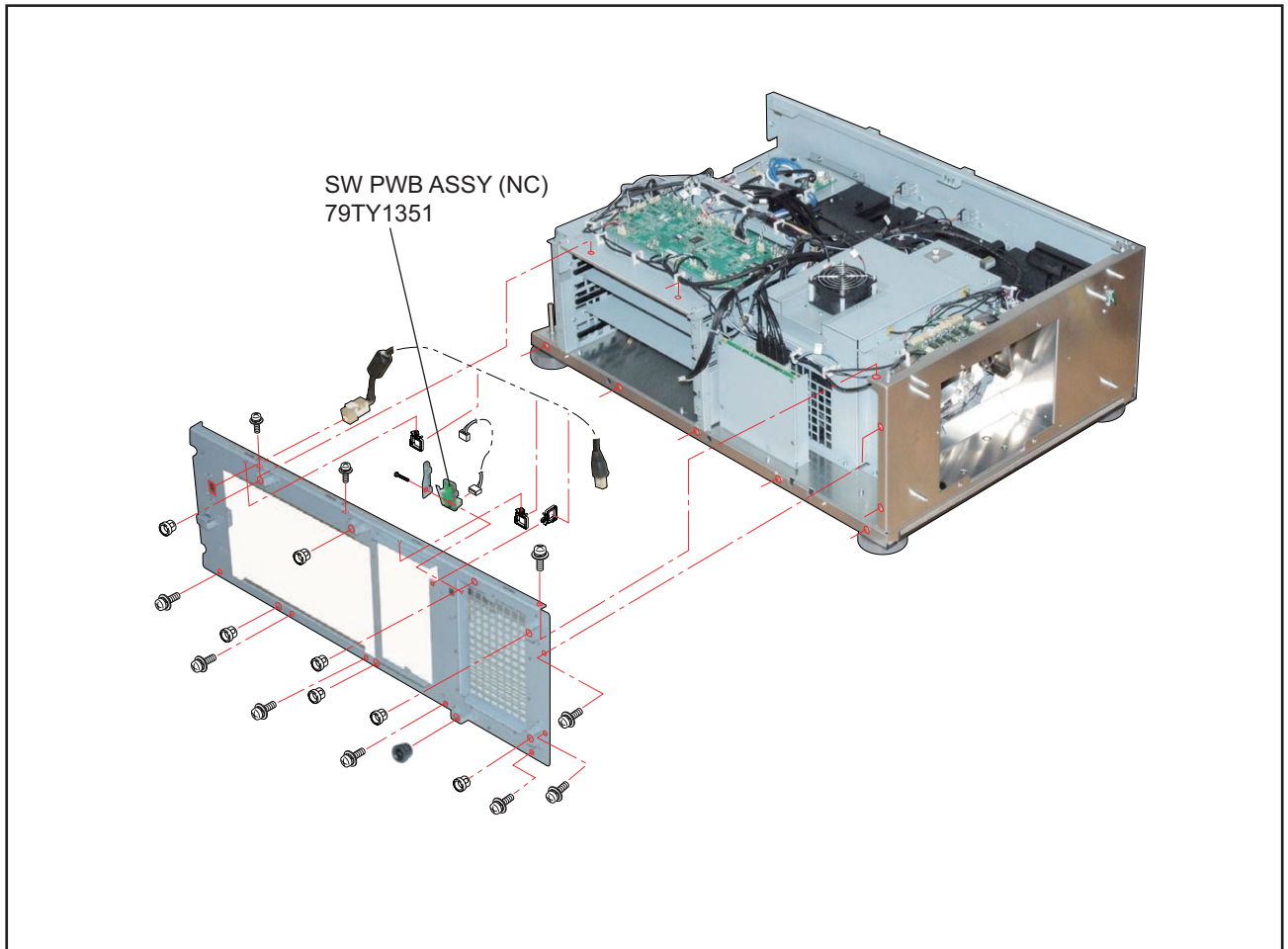


#### 14. KEY PWB ASSY/KEY PAD BUBBER/LCD PWB ASSY/BACKLIGHT-B PWB ASSY

- (1) Remove 7 pcs. of screw ① and take out the KEY PWB ASSY/KEY PAD BUBBER.
- (2) Remove 4 pcs. of screw ② and take out the LCD PWB ASSY.
- (3) Remove 2 pcs. of screw ③ and take out the BACKLIGHT-B PWB ASSY.

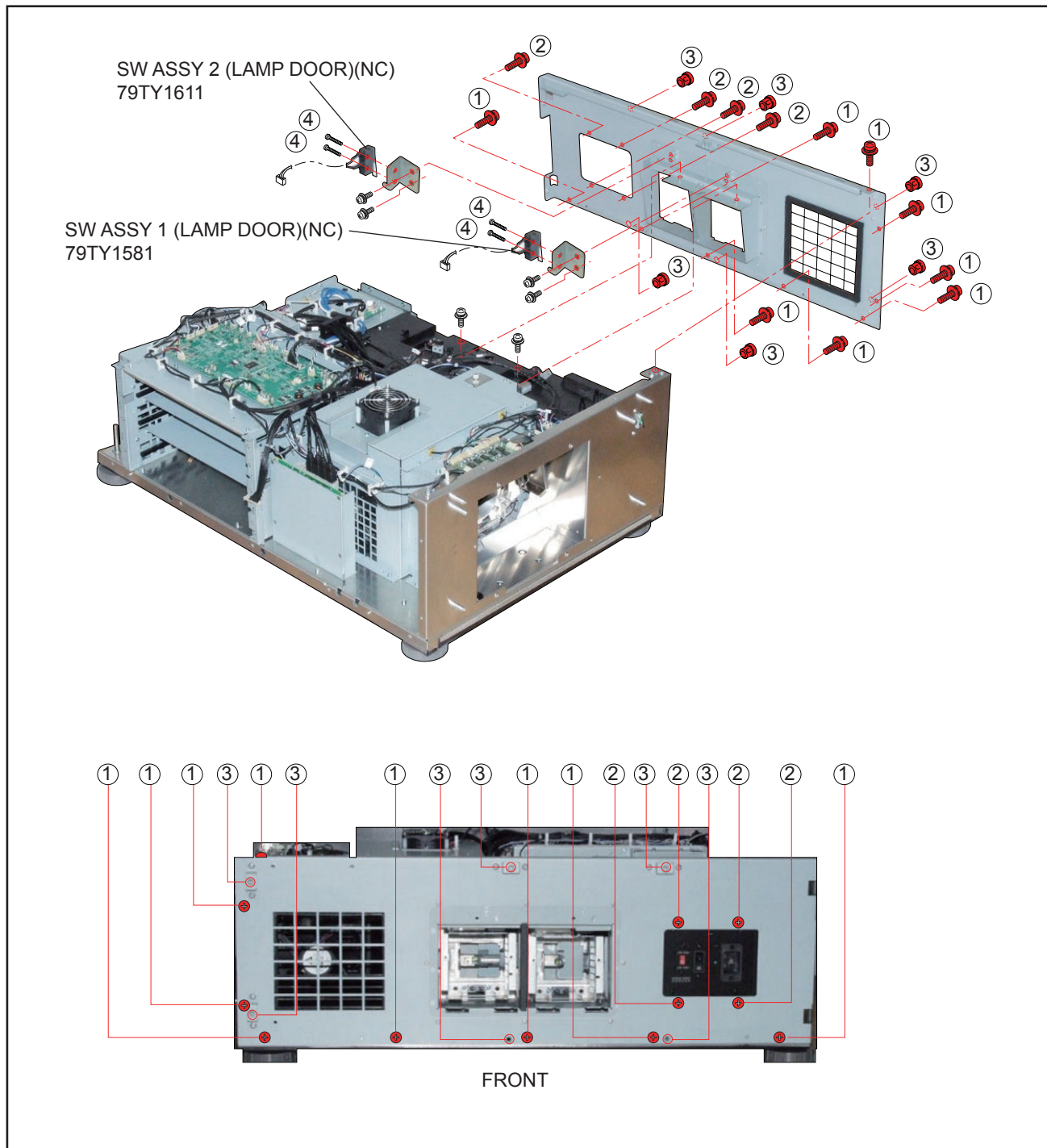


15. LEFT SIDE CHASSIS/SW PWB ASSY (NC)



## 16. SW ASSY 1/SW ASSY 2/RIGHT SIDE CHASSIS

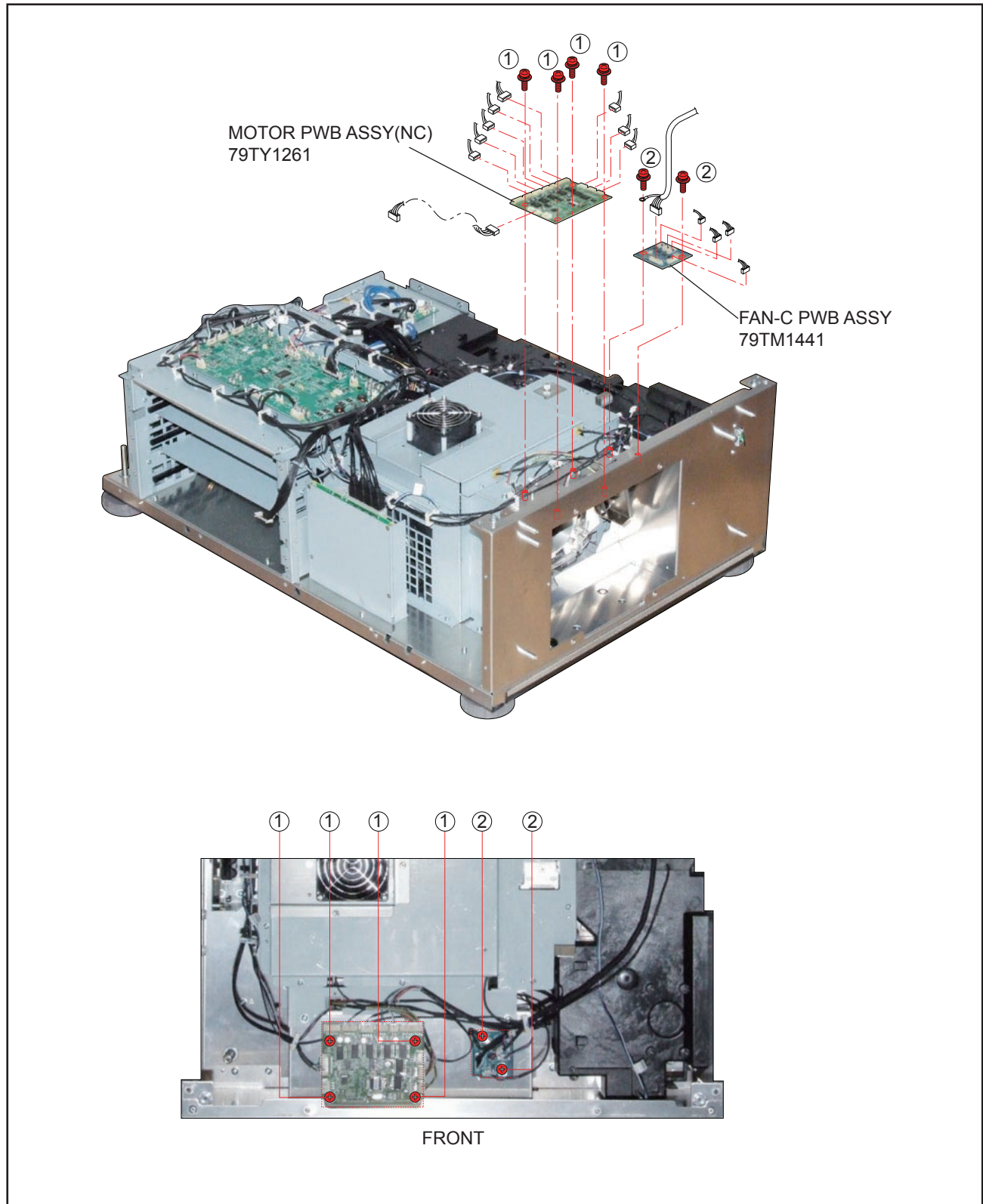
- (1) Remove 8 pcs. of screw ①, 4 pcs. of screw ②, and 6 pcs. of screw ③ to take out the assemblies.
- (2) Remove 4 pcs. of screw ④ and take out the SW ASSY 1/SW ASSY 2.





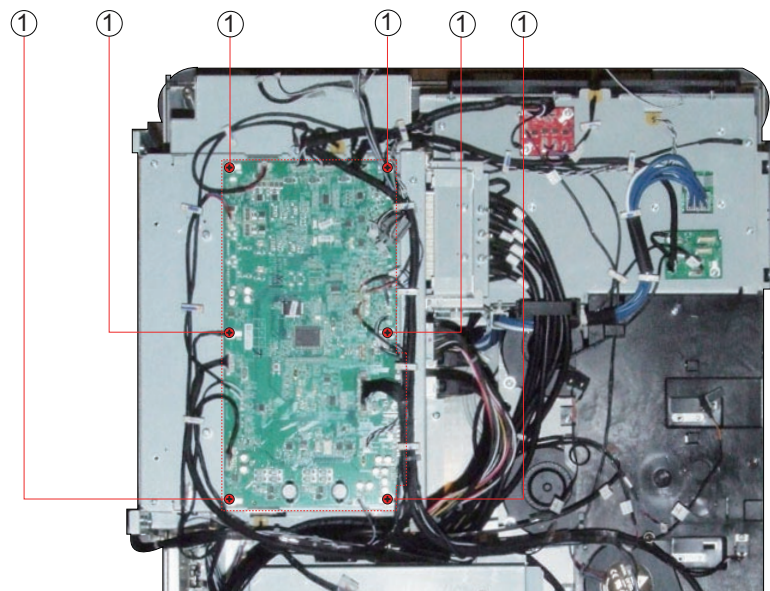
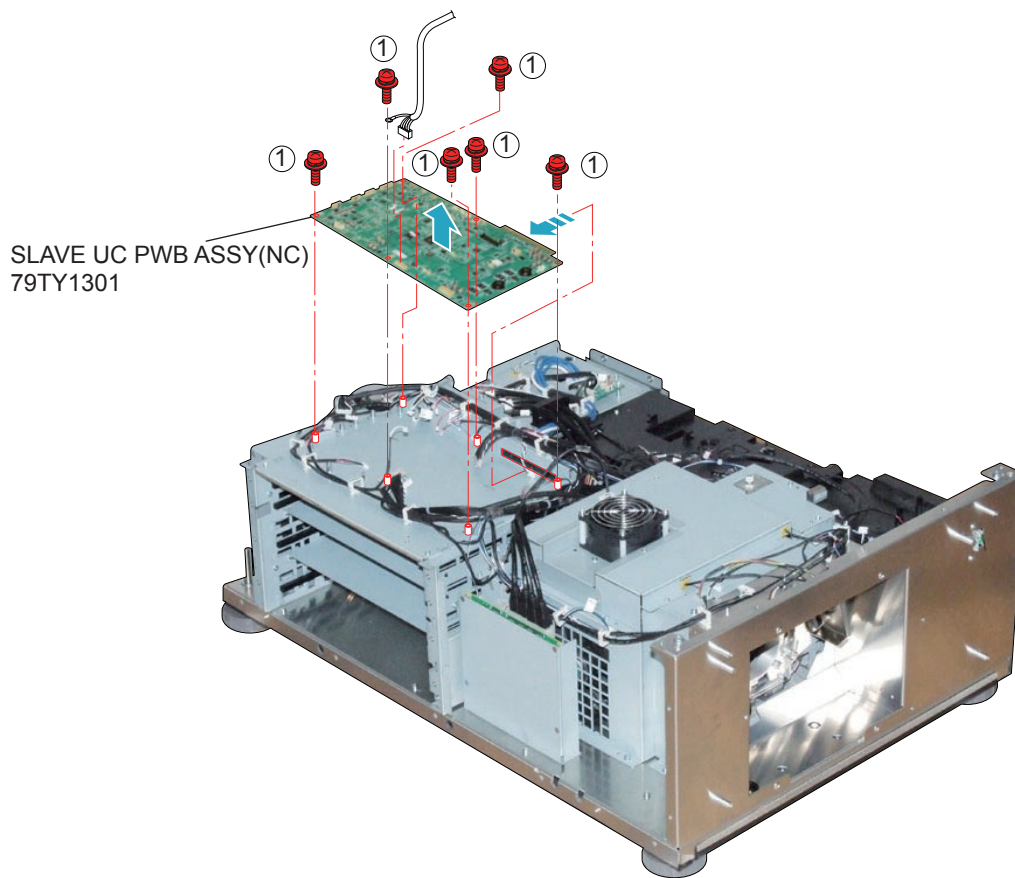
## 17. MOTOR PWB ASSY/FAN-C PWB ASSY

- (1) Remove 4 pcs. of screw ① and take out the MOTOR PWB ASSY.
- (2) Remove 2 pcs. of screw ② and take out the FAN-C PWB ASSY.



## 18. SLAVE UC PWB ASSY

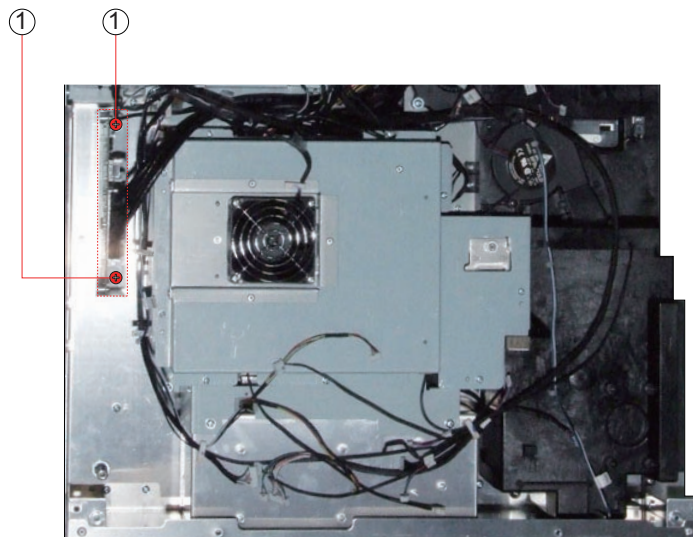
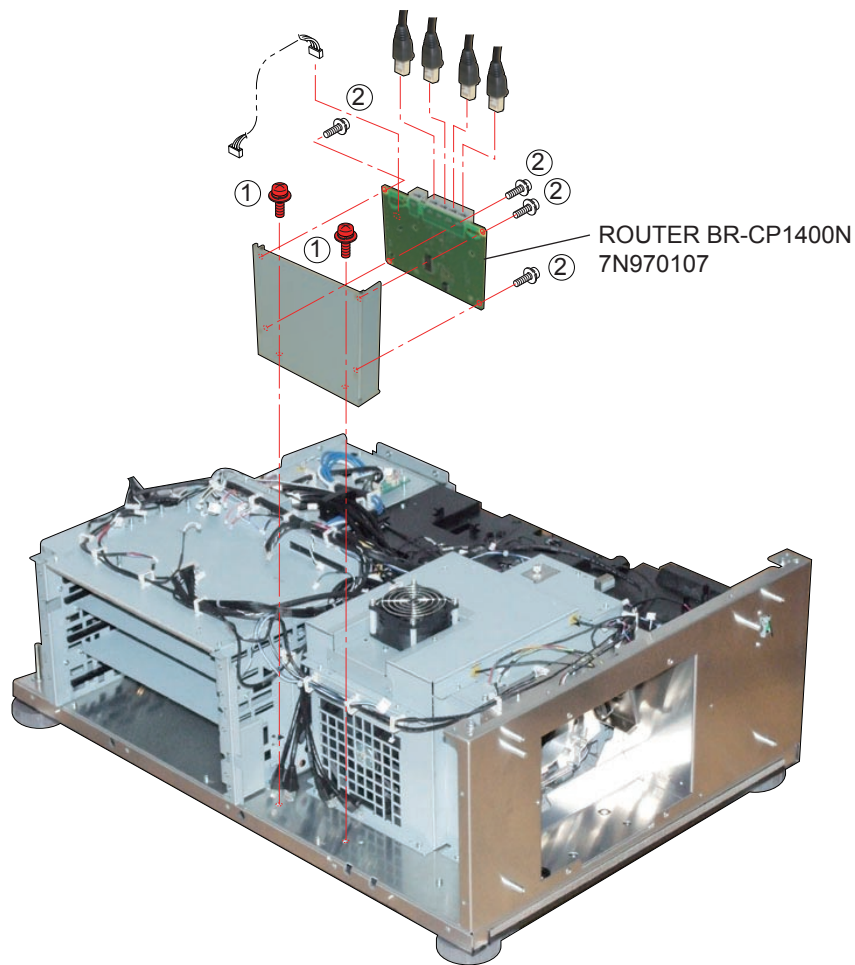
(1) Remove 6 pcs. of screw ① and take out the SLAVE UC PWB ASSY.



FRONT

## 19. ROUTER BR-CP1400N

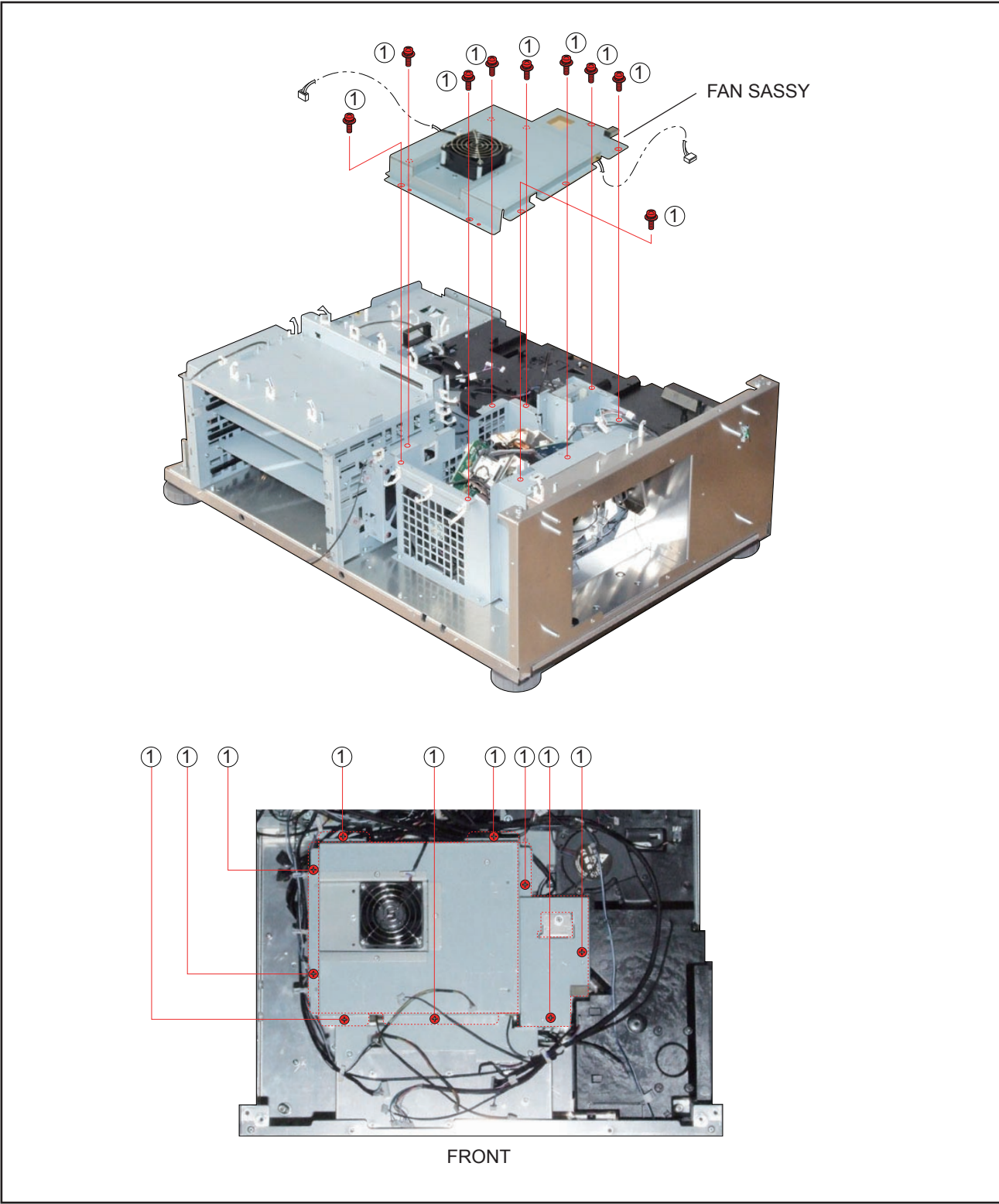
- (1) Remove 2 pcs. of screw ① and take out the assemblies.
- (2) Remove 4 pcs. of screw ② and take out the ROUTER BR-CP1400N.



FRONT

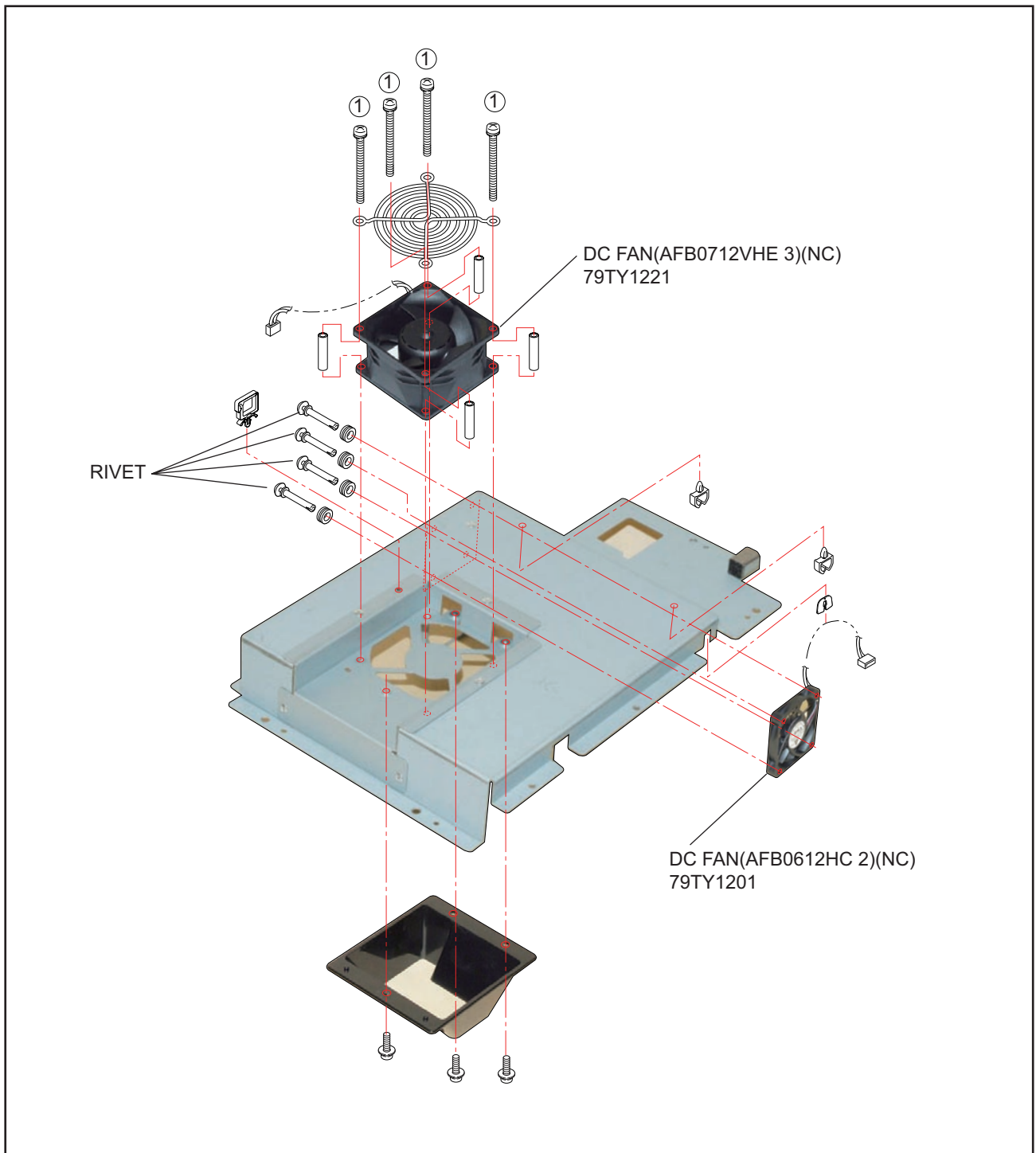


20. FAN SASSY



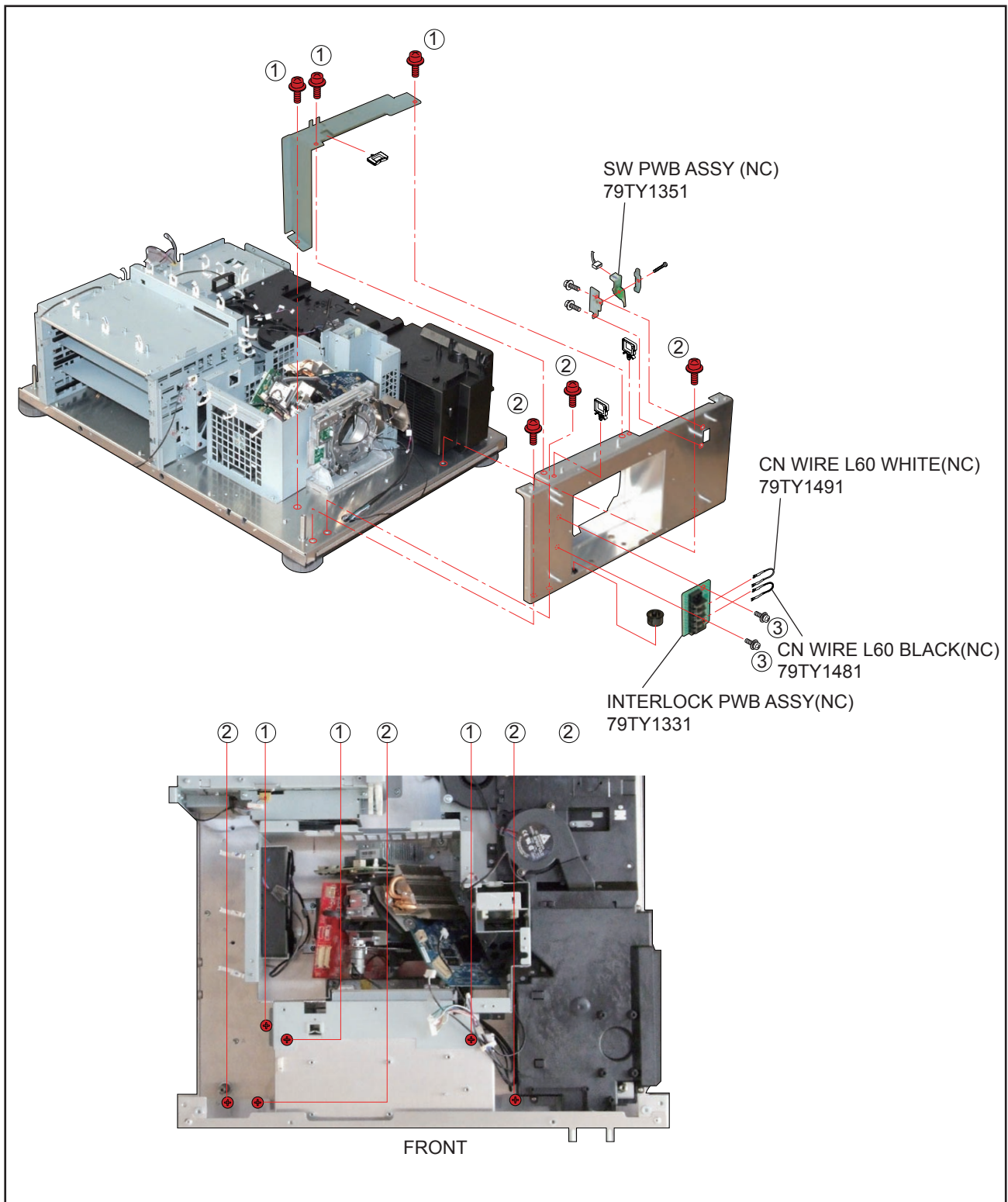
## 21. DC FAN(AFB0712VHE 3)/DC FAN(AFB0612HC 2)

- (1) Remove 4 pcs. of screw ① and take out the DC FAN(AFB0712VHE 3).
- (2) Remove 4 pcs. of Rivet and take out the DC FAN(AFB0612HC 2).



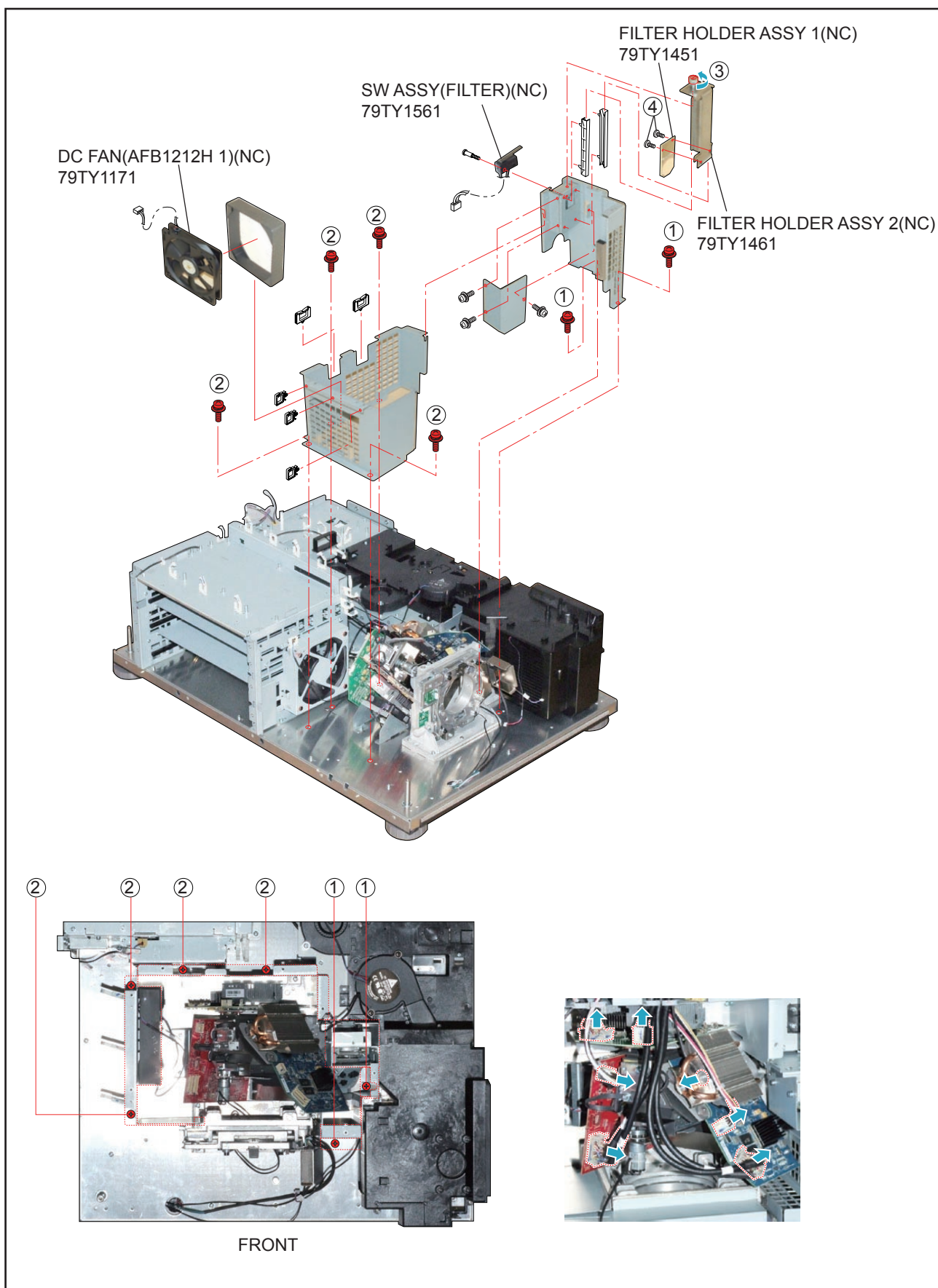
## 22. INTERLOCK PWB ASSY/CN WIRE L60 WHITE/CN WIRE L60 BLACK

- (1) Remove 3 pcs. of screw ① and 3 pcs. of screw ② to take out the assemblies.
- (2) Remove 2 pcs. of screw ③ and take out the INTERLOCK PWB ASSY.



## 23. DC FAN(AFB1212H 1)/SW ASSY/FILTER HOLDER ASSY 1/FILTER HOLDER ASSY 2

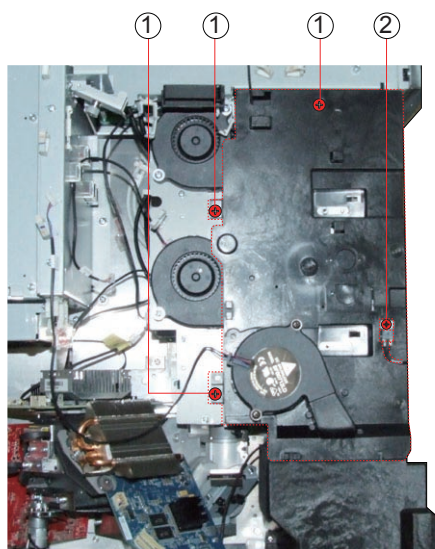
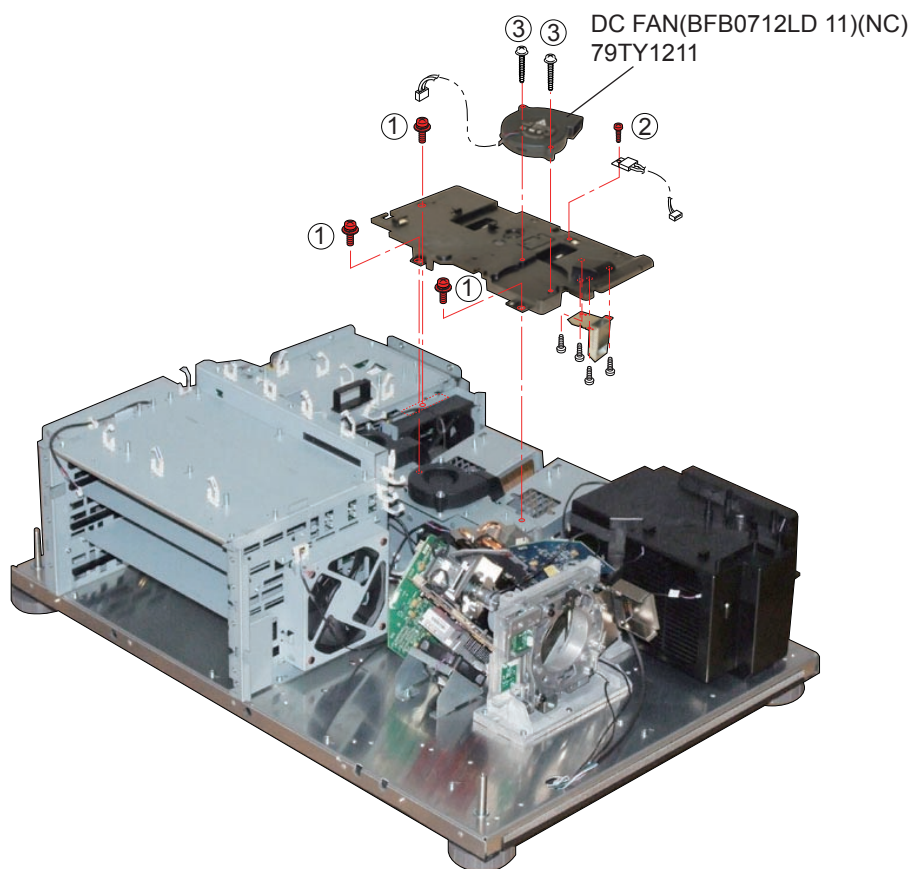
- (1) Remove 2 pcs. of screw ① and 4 pcs. of screw ② to take out the DC FAN(AFB1212H 1).
- (2) Remove 1 pc. of screw ③ and take out the FILTER HOLDER ASSY 1.
- (3) Remove 2 pcs. of screw ④ and take out the FILTER HOLDER ASSY 2.





## 24. DC FAN(BFB0712LD 11)

- (1) Remove 3 pcs. of screw ① and take out the assemblies.
- (2) Remove 2 pcs. of screw ③ and take out the DC FAN(BFB0712LD 11).

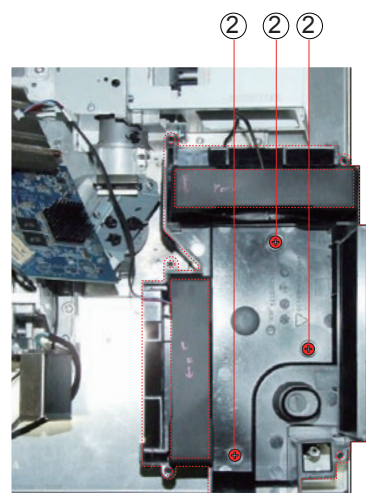
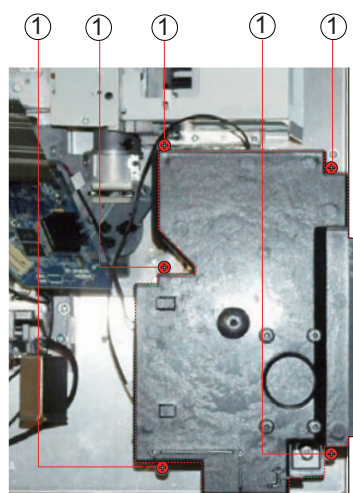
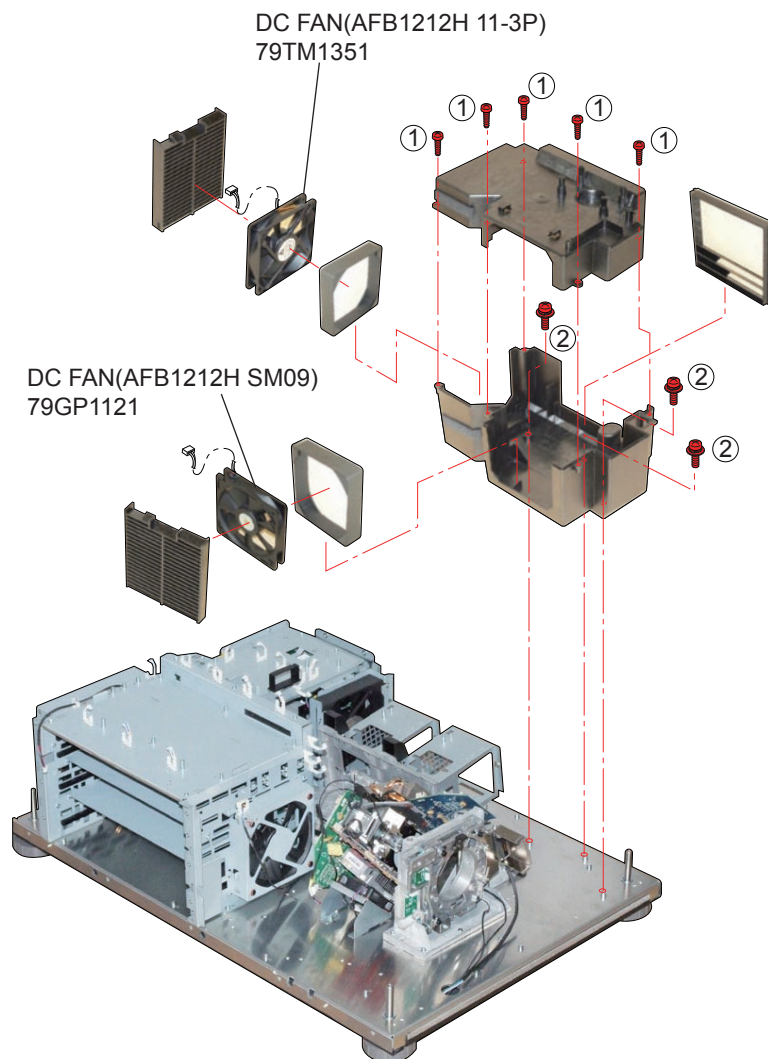


FRONT



## 25. DC FAN(AFB1212H 11-3P)/DC FAN(AFB1212H SM09)

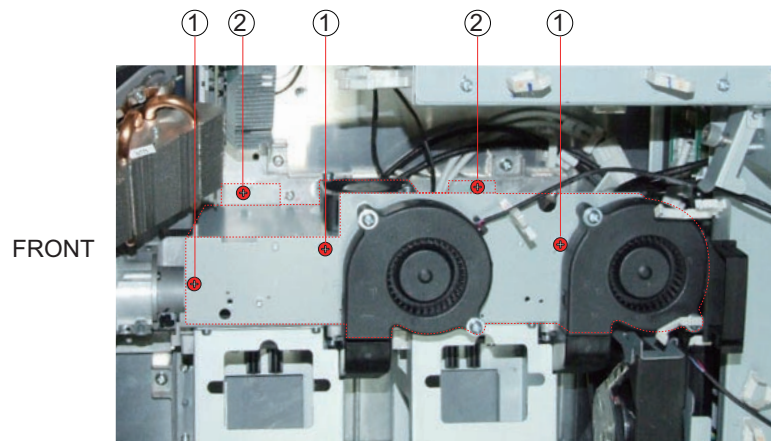
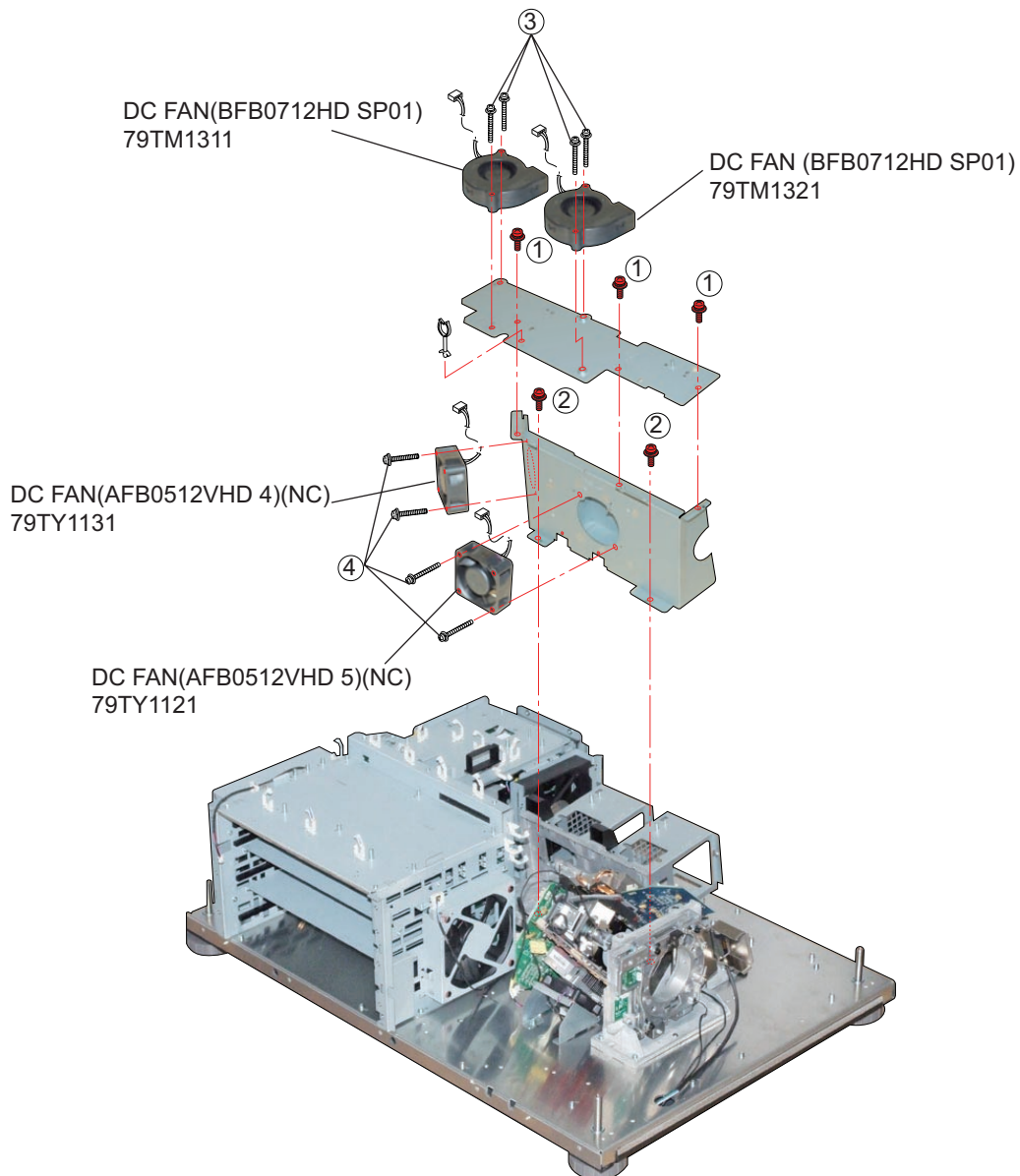
- (1) Remove 5 pcs. of screw ① and 3 pcs. of screw ② to take out the DC FAN(AFB1212H 11-3P)/DC FAN(AFB1212H SM09).



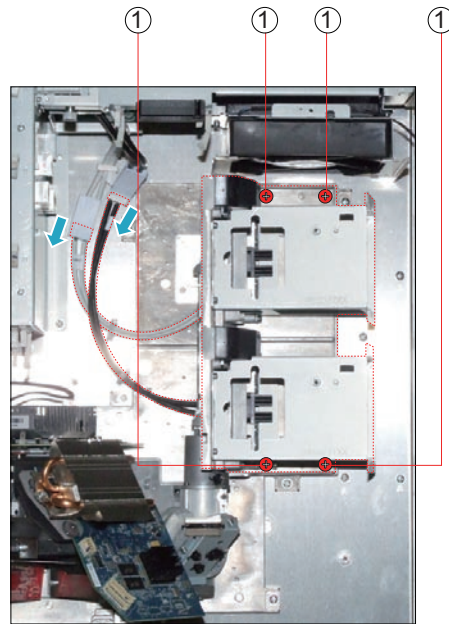
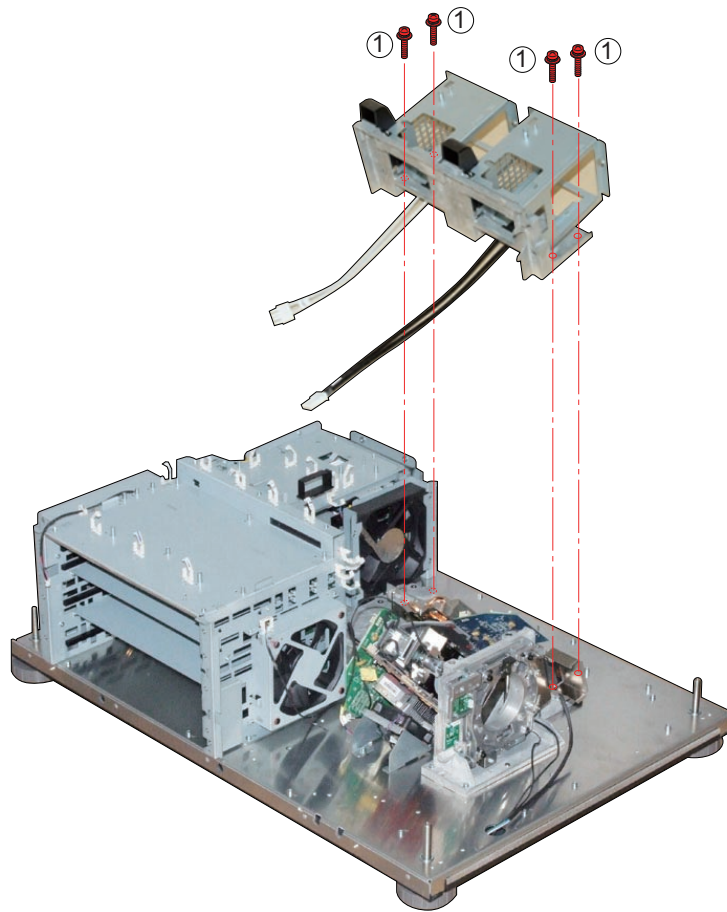
FRONT

## 26. DC FAN(BFB0712HD SP01)/DC FAN (BFB0712HD SP01)

- (1) Remove 3 pcs. of screw ① and 2 pcs. of screw ② to take out the assemblies.
- (2) Remove 4 pcs. of screw ③ and take out the DC FAN(BFB0712HD SP01)/DC FAN (BFB0712HD SP01).
- (3) Remove 4 pcs. of screw ④ and take out the DC FAN(AFB0512VHD 4)(NC)/DC FAN(AFB0512VHD 5)

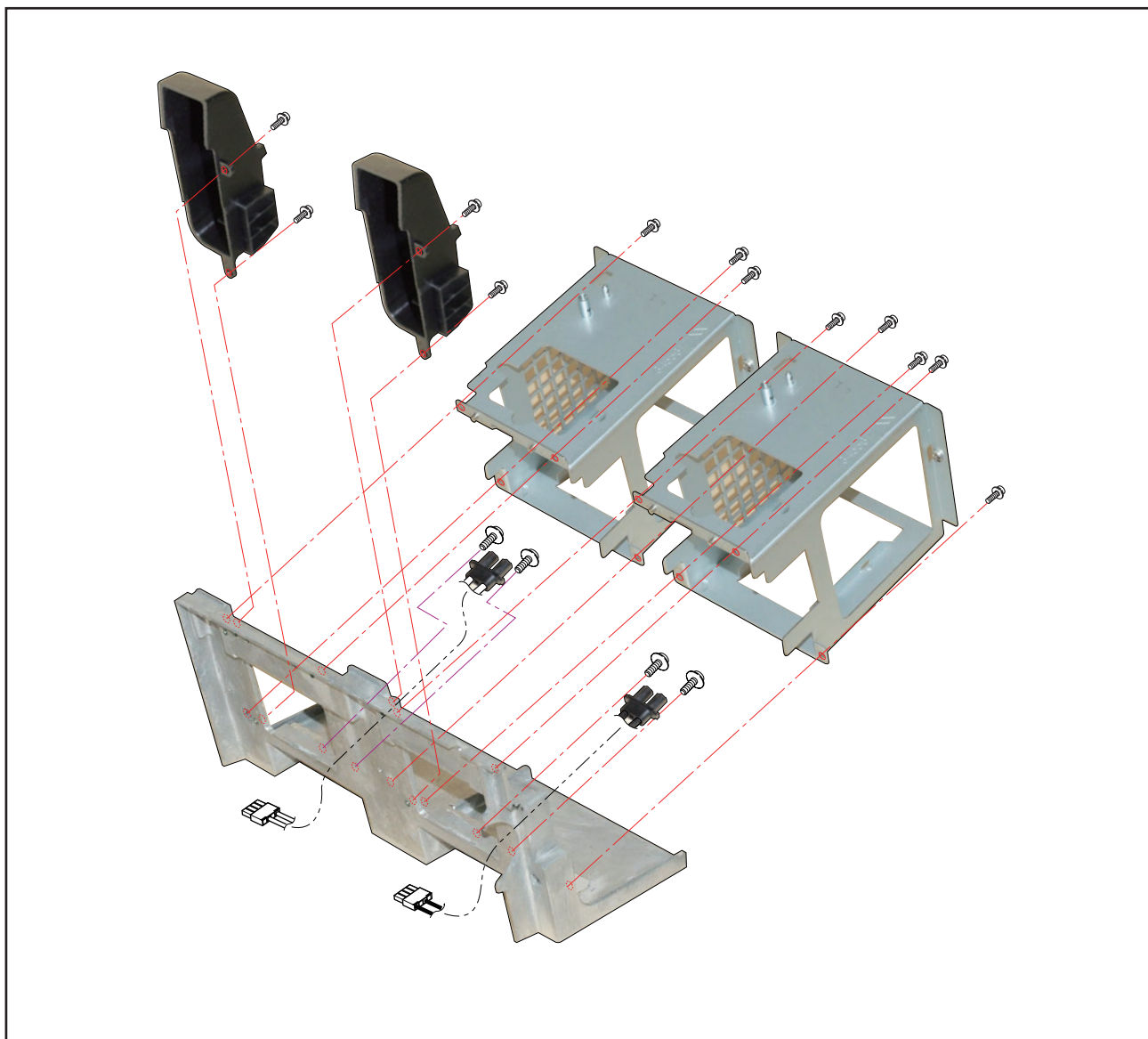


## 27. LAMP BOX



FRONT

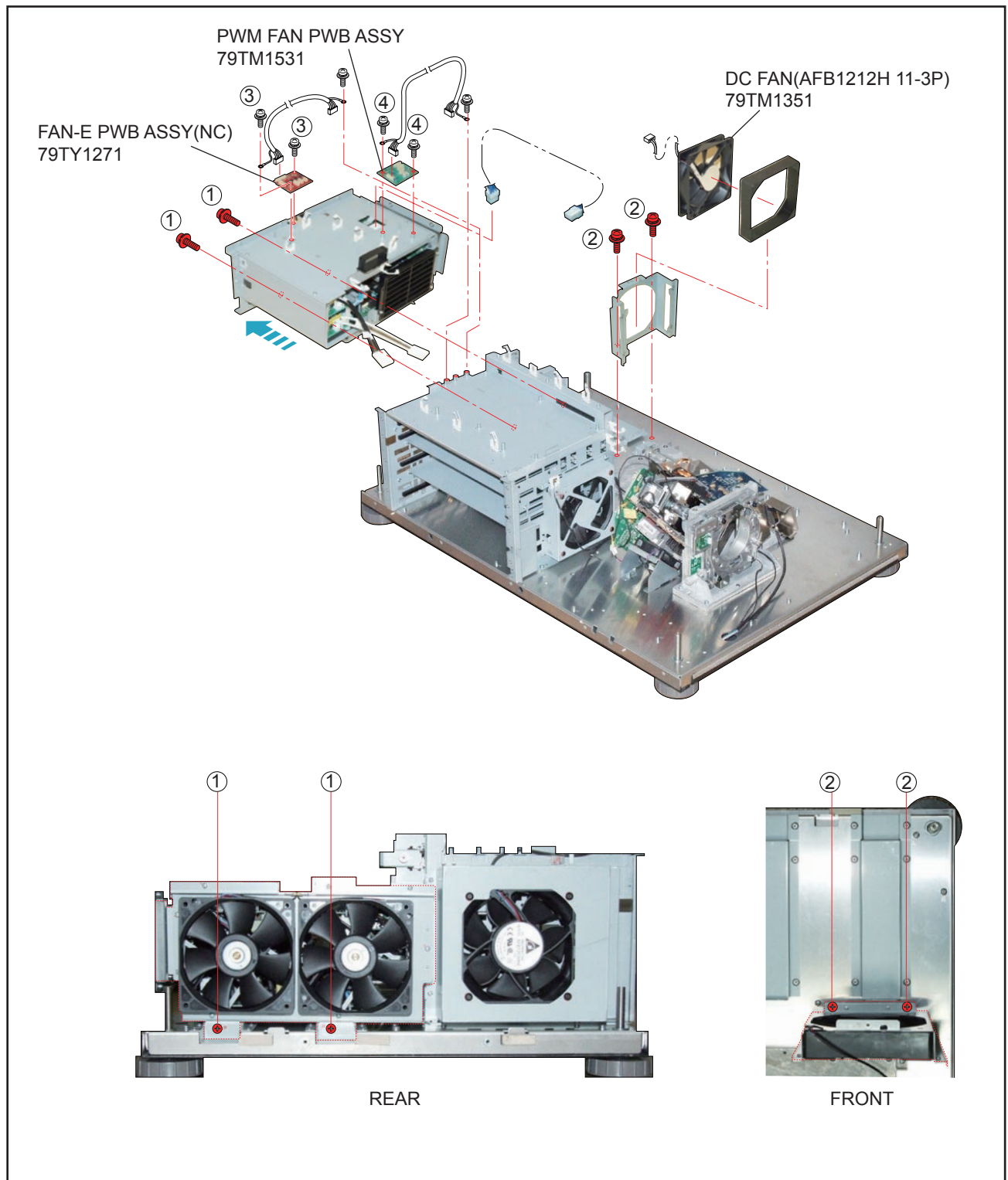
## 28. LAMP BOX





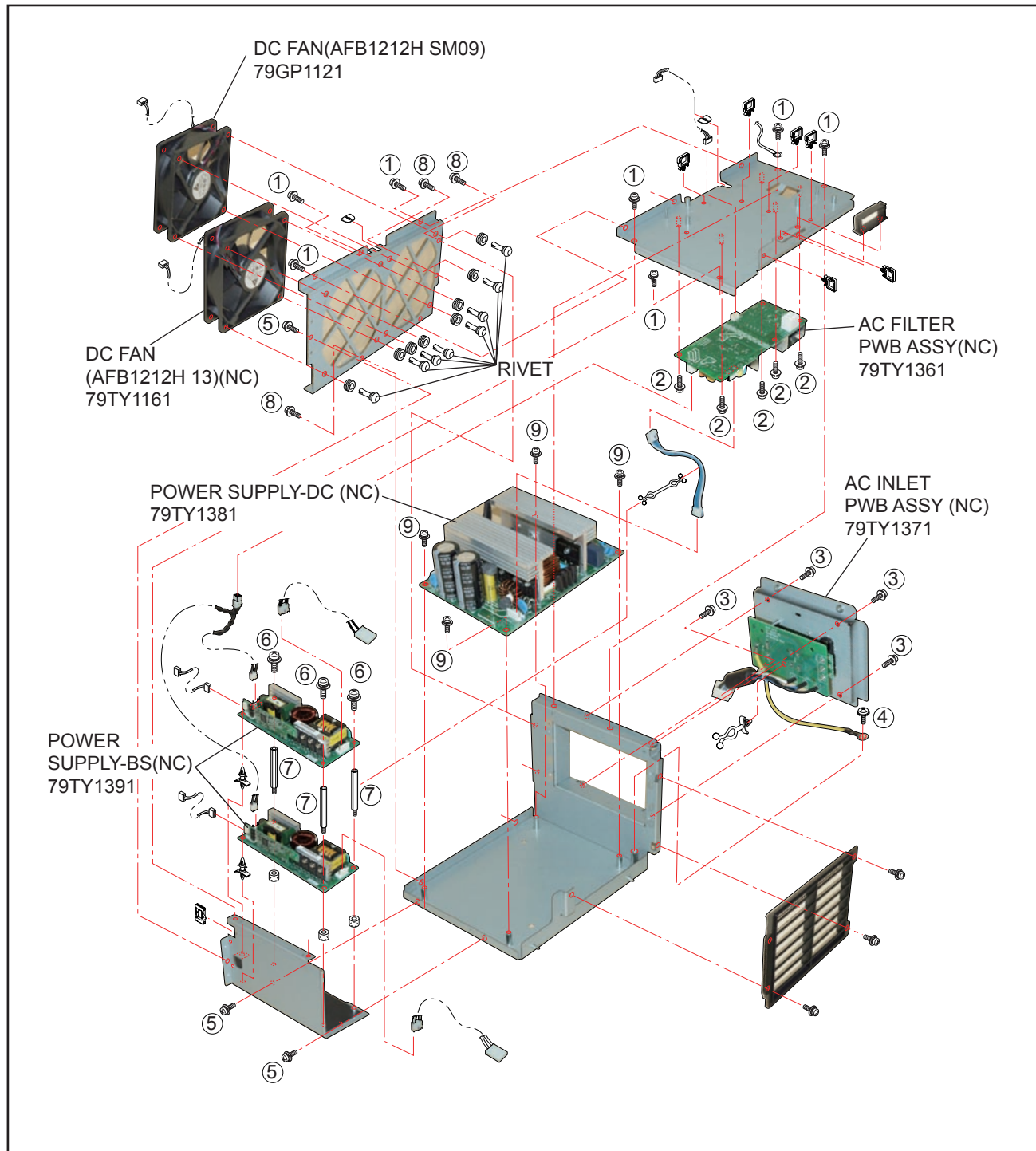
## 29. FAN-E PWB ASSY/PWM FAN PWB ASSY/DC FAN(AFB1212H 11-3P)

- (1) Remove 2 pcs. of screw ① and take out the assemblies.
- (2) Remove 2 pcs. of screw ② and take out the DC FAN(AFB1212H 11-3P).
- (3) Remove 2 pcs. of screw ③ and take out the FAN-E PWB ASSY.
- (4) Remove 2 pcs. of screw ④ and take out the PWM FAN PWB ASSY.



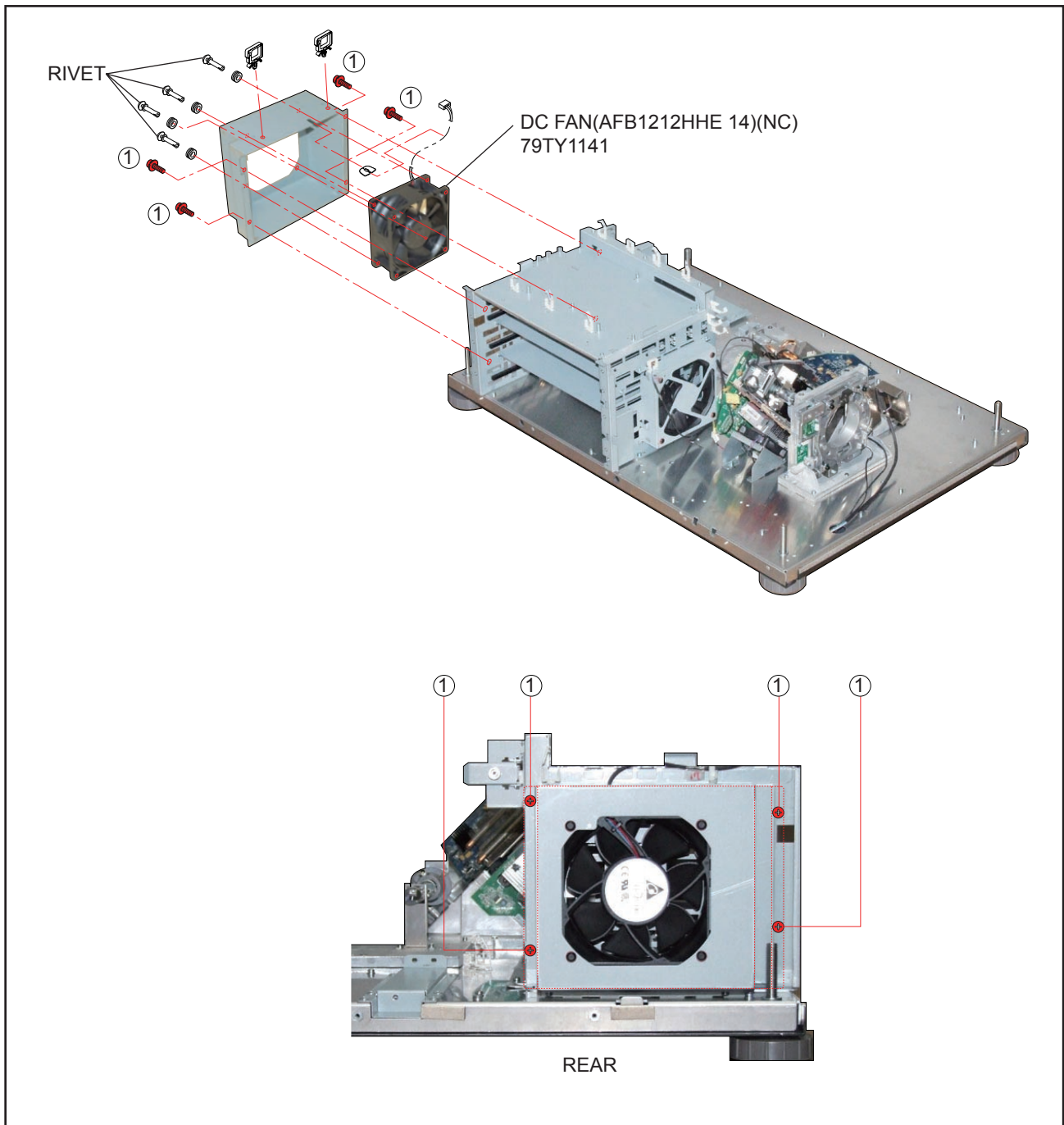
### 30. AC FILTER PWB ASSY/AC INLET PWB ASSY/POWER SUPPLY-BS/DC FAN(AFB1212H SM09)/DC FAN(AFB1212H 13)/POWER SUPPLY-DC

- (1) Remove 7 pcs. of screw ① and take out the assemblies.
- (2) Remove 5 pcs. of screw ② and take out the AC FILTER PWB ASSY.
- (3) Remove 4 pcs. of screw ③ and 1 pc. of screw ④ to take out the assemblies.
- (4) Remove 3 pcs. of screw ⑤ and take out the assemblies.
- (5) Remove 3 pcs. of screw ⑥ and 3 pcs. of screw ⑦ to take out the POWER SUPPLY-BS.
- (6) Remove 4 pcs. of screw ⑧ and take out the assemblies.
- (7) Remove 8 pcs. of Rivet and take out the DC FAN(AFB1212H SM09)/DC FAN(AFB1212H 13).
- (8) Remove 4 pcs. of screw ⑨ and take out the POWER SUPPLY-DC.



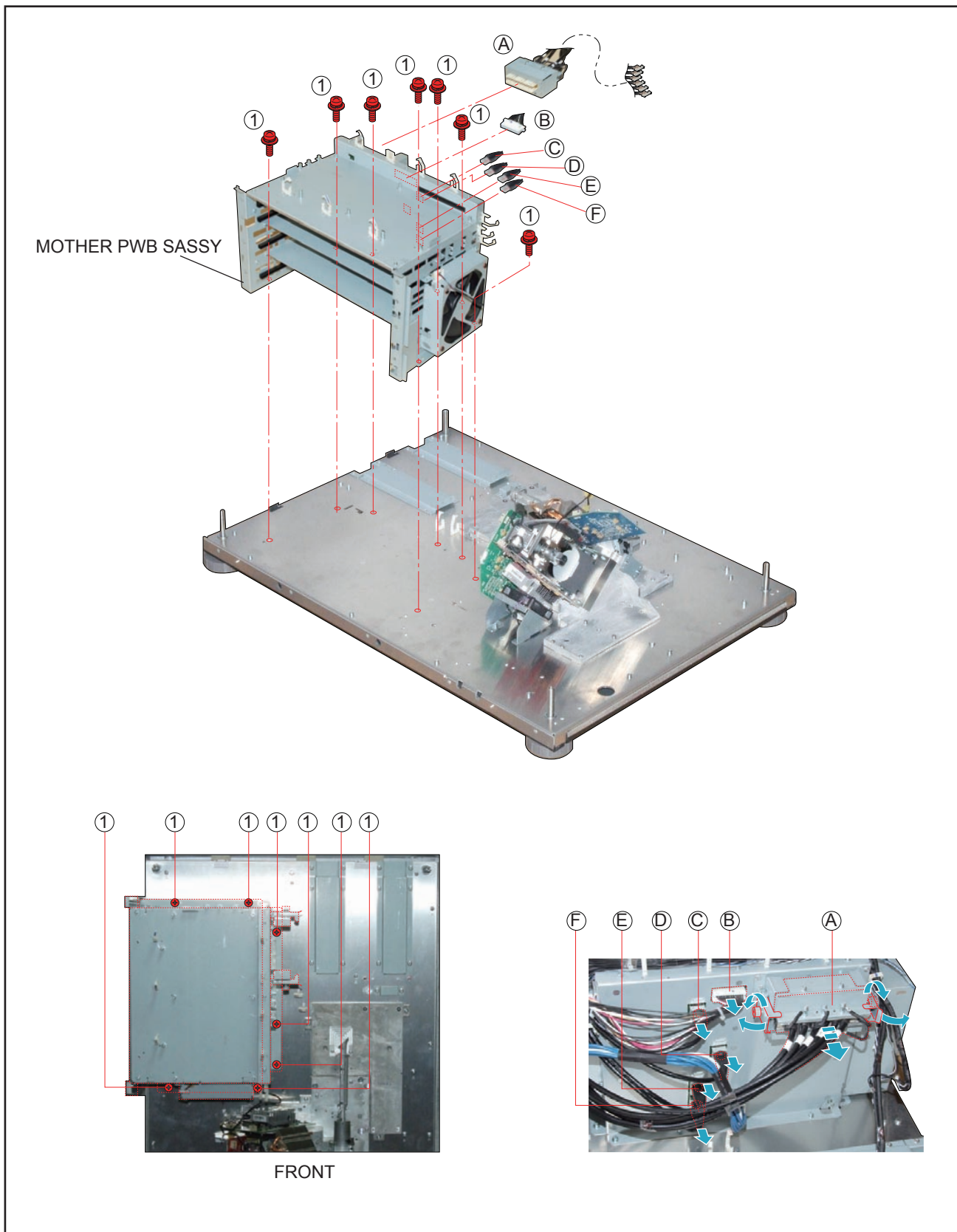
### 31. DC FAN(AFB1212HHE 14)

- (1) Remove 4 pcs. of screw ① and take out the assemblies.
- (2) Remove 4 pcs. of Rivet and take out the DC FAN(AFB1212HHE 14).



### 32. MOTHER PWB SASSY

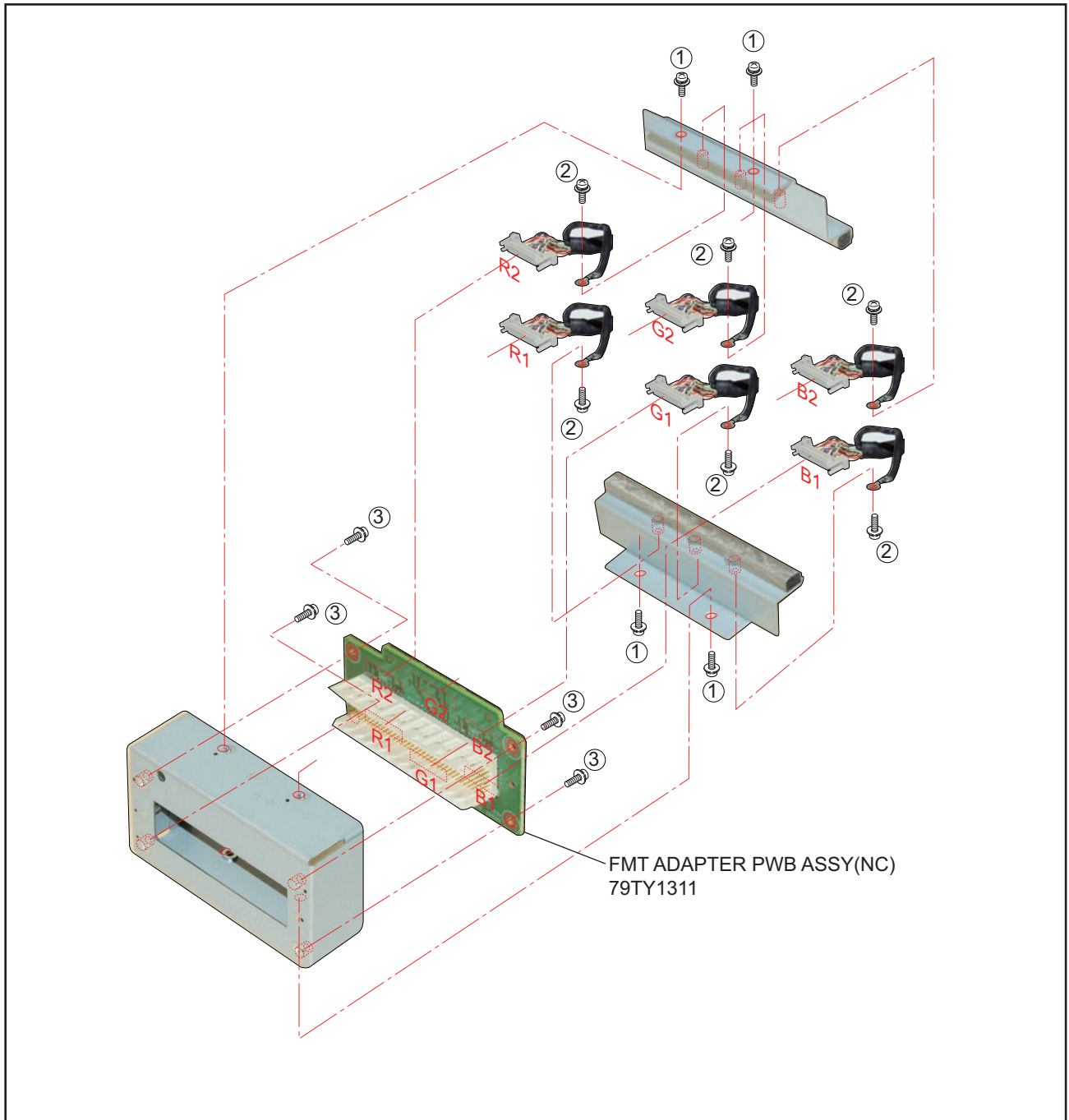
(1) Remove 7 pcs. of screw ① and take out the MOTHER PWB SASSY.





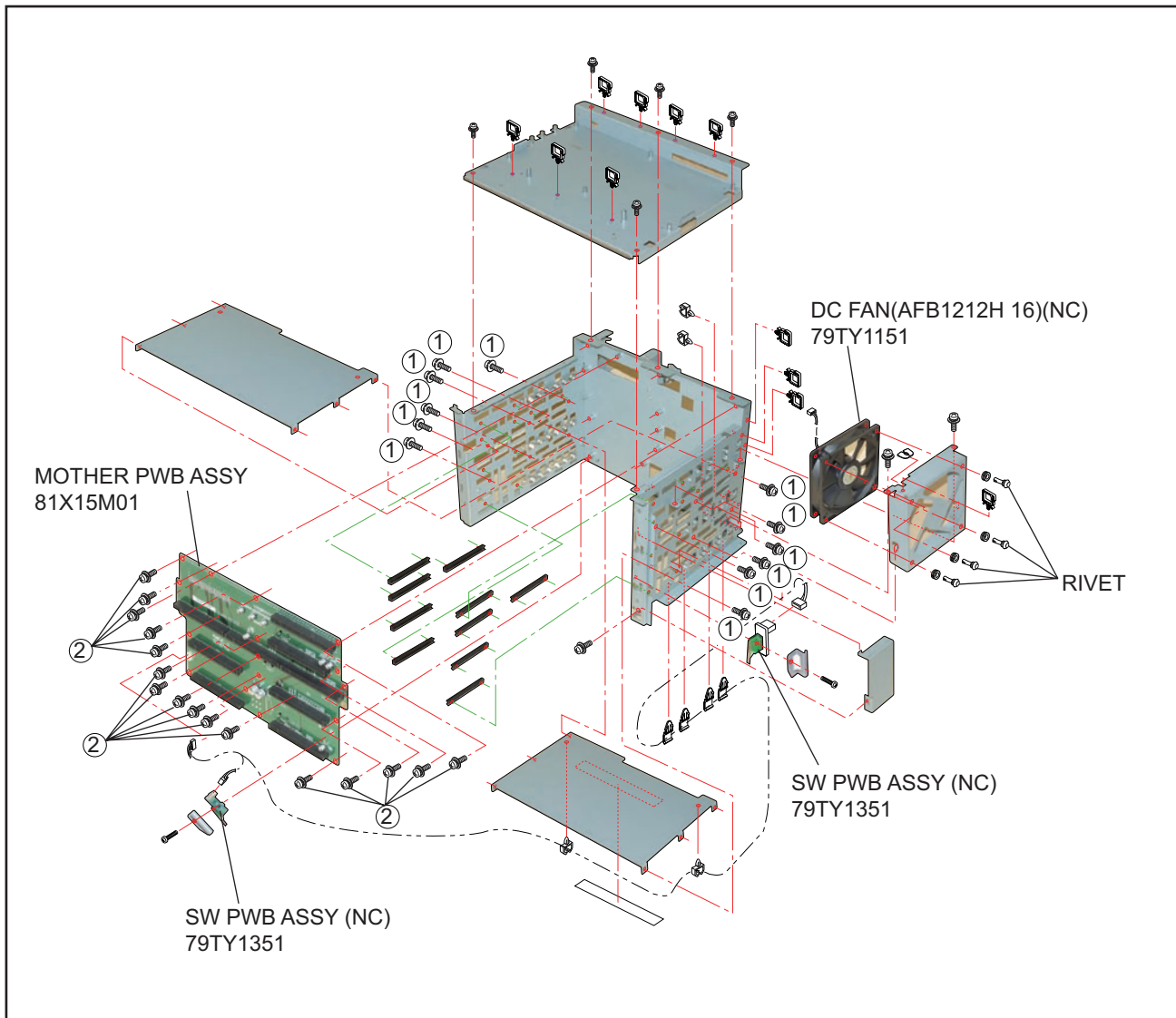
### 33. FMT ADAPTER PWB ASSY

- (1) Remove 4 pcs. of screw ① and 6 pcs. of screw ② to take out the Connectors.
- (2) Remove 4 pcs. of screw ③ and take out the FMT ADAPTER PWB ASSY.



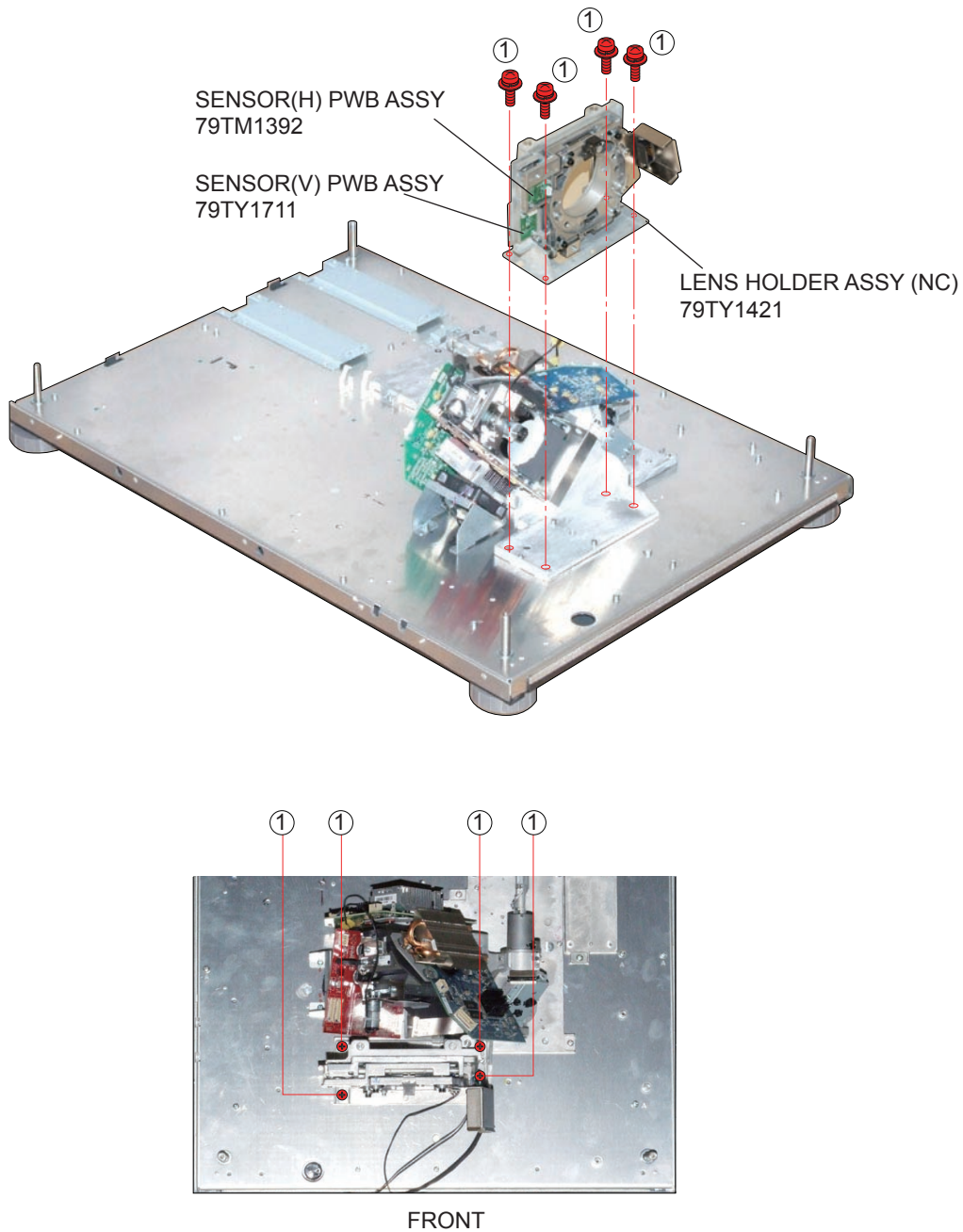
### 34. DC FAN(AFB1212H 16)/MOTHER PWB ASSY

- (1) Remove 4 pcs. of Rivet and take out the DC FAN(AFB1212H 16).
- (2) Remove 12 pcs. of screw ① and take out the Plates.
- (3) Remove 16 pcs. of screw ② and take out the MOTHER PWB ASSY.



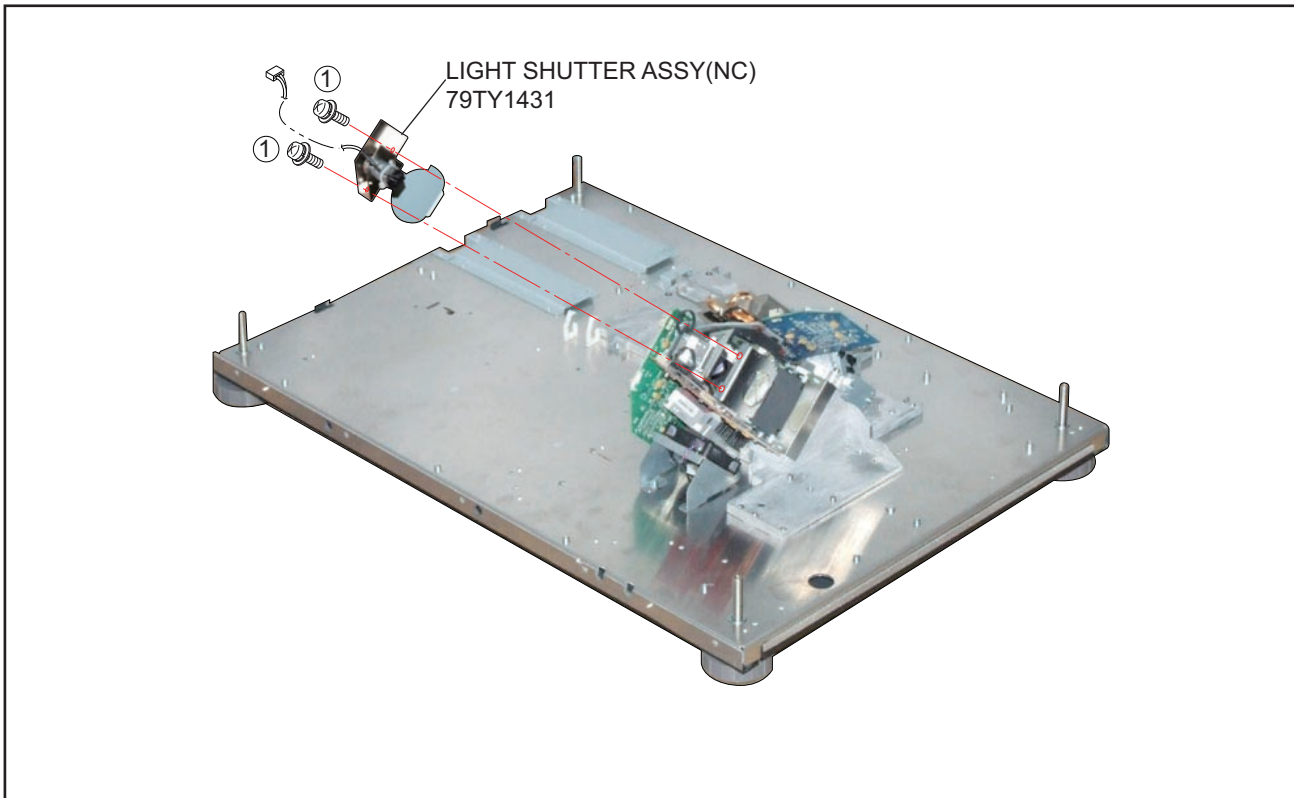
### 35. LENS HOLDER ASSY

(1) Remove 12 pcs. of screw ① and take out the LENS HOLDER ASSY.



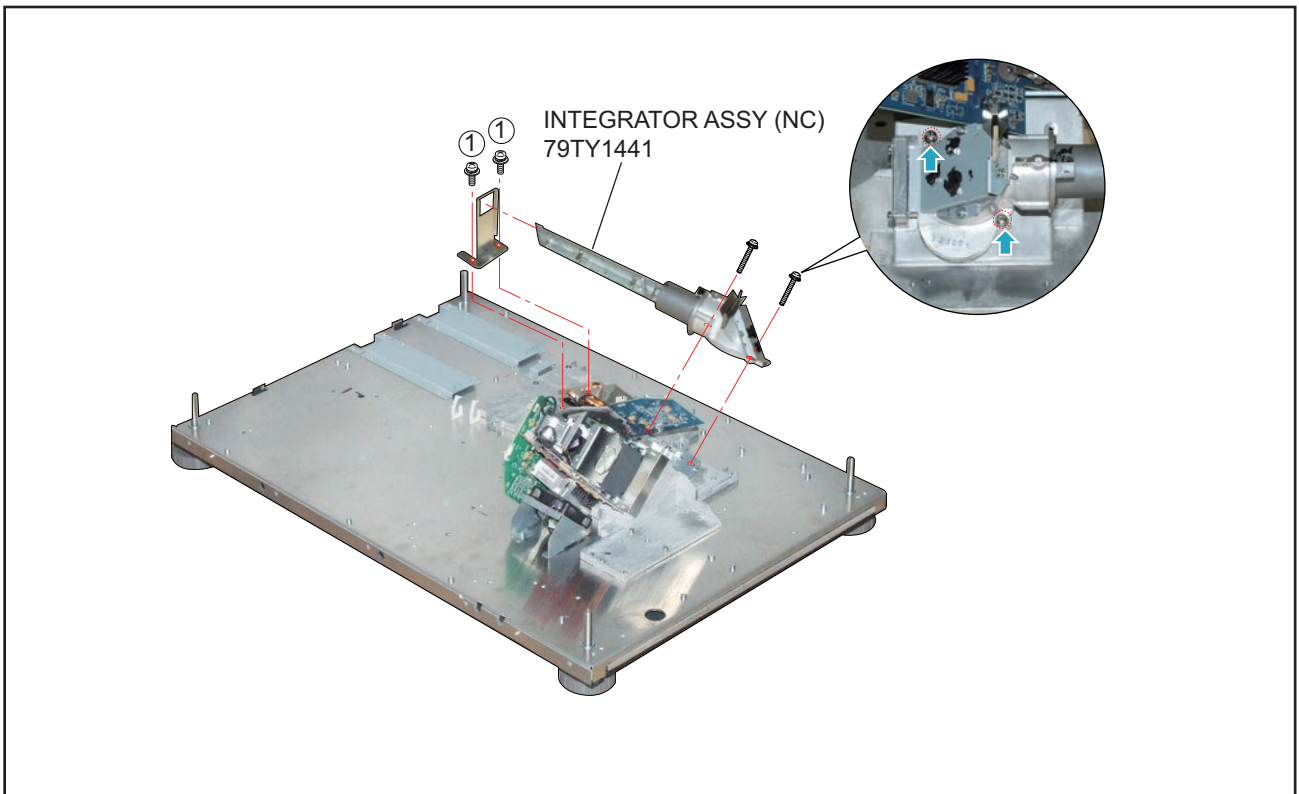
### 36. LIGHT SHUTTER ASSY

(1) Remove 2 pcs. of screw ① and take out the LIGHT SHUTTER ASSY.



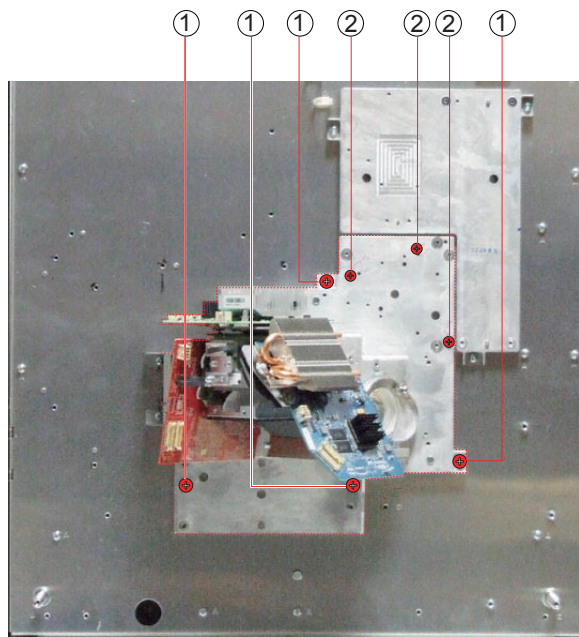
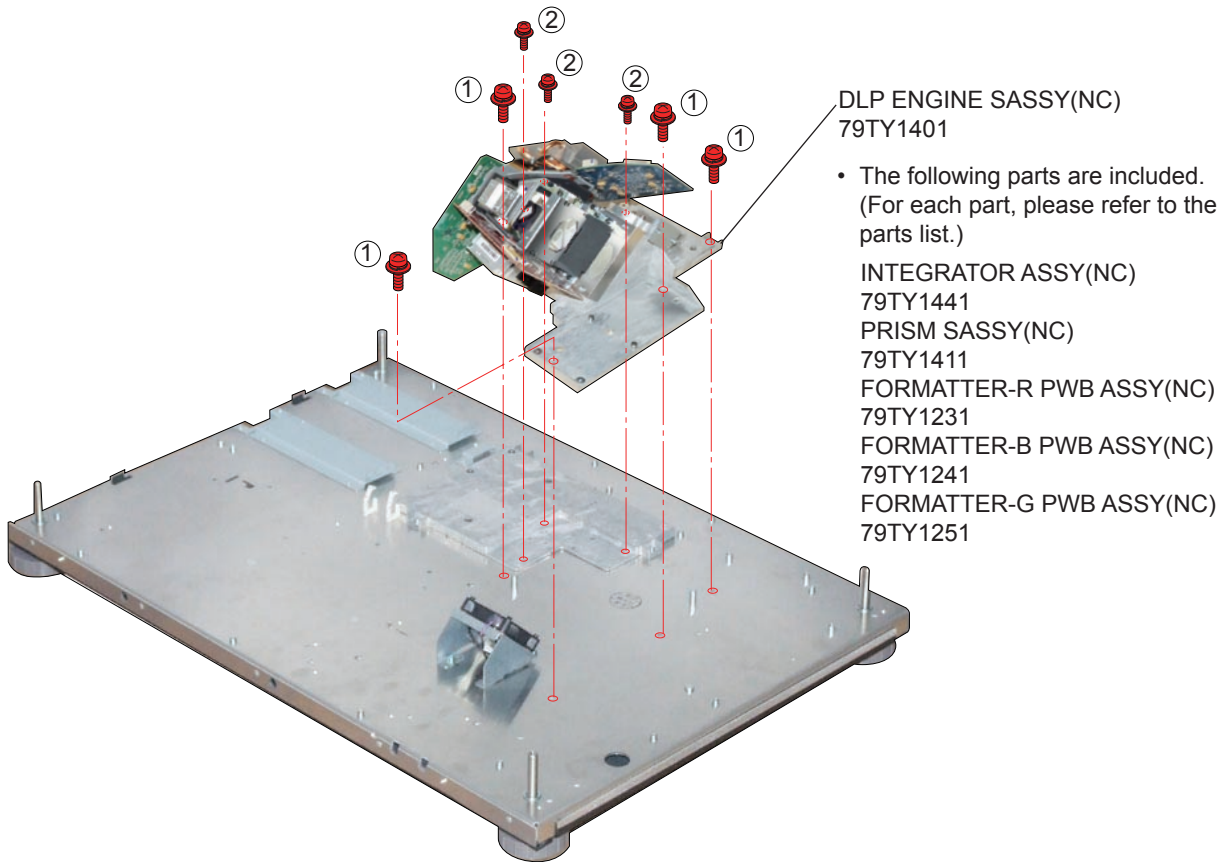
### 37. INTEGRATOR ASSY

(1) Remove 2 pcs. of screw ① and take out the INTEGRATOR ASSY.



### 38. DLP ENGINE SASSY

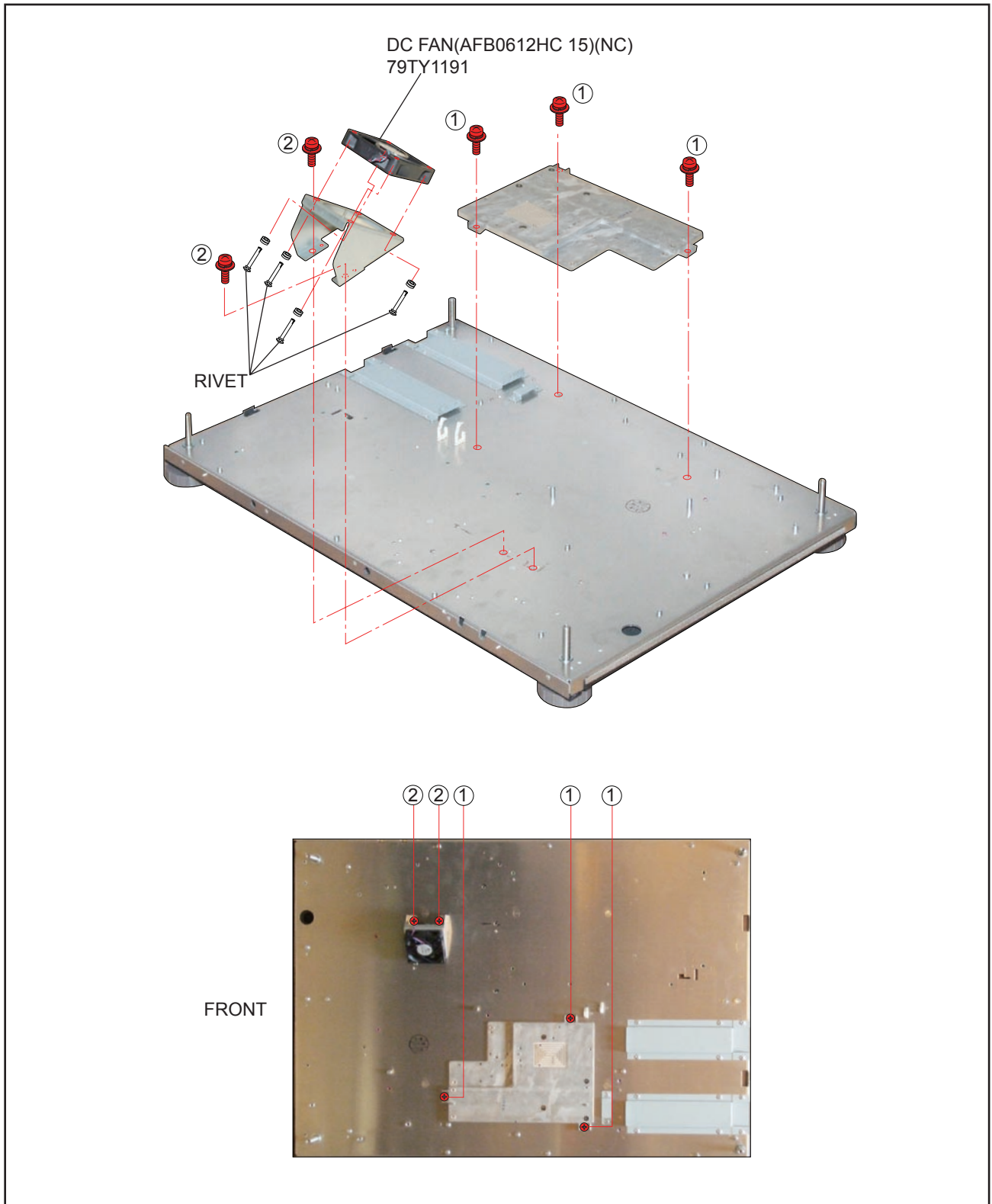
(1) Remove 4 pcs. of screw ① and 3 pcs. of screw ② to take out the DLP ENGINE SASSY.





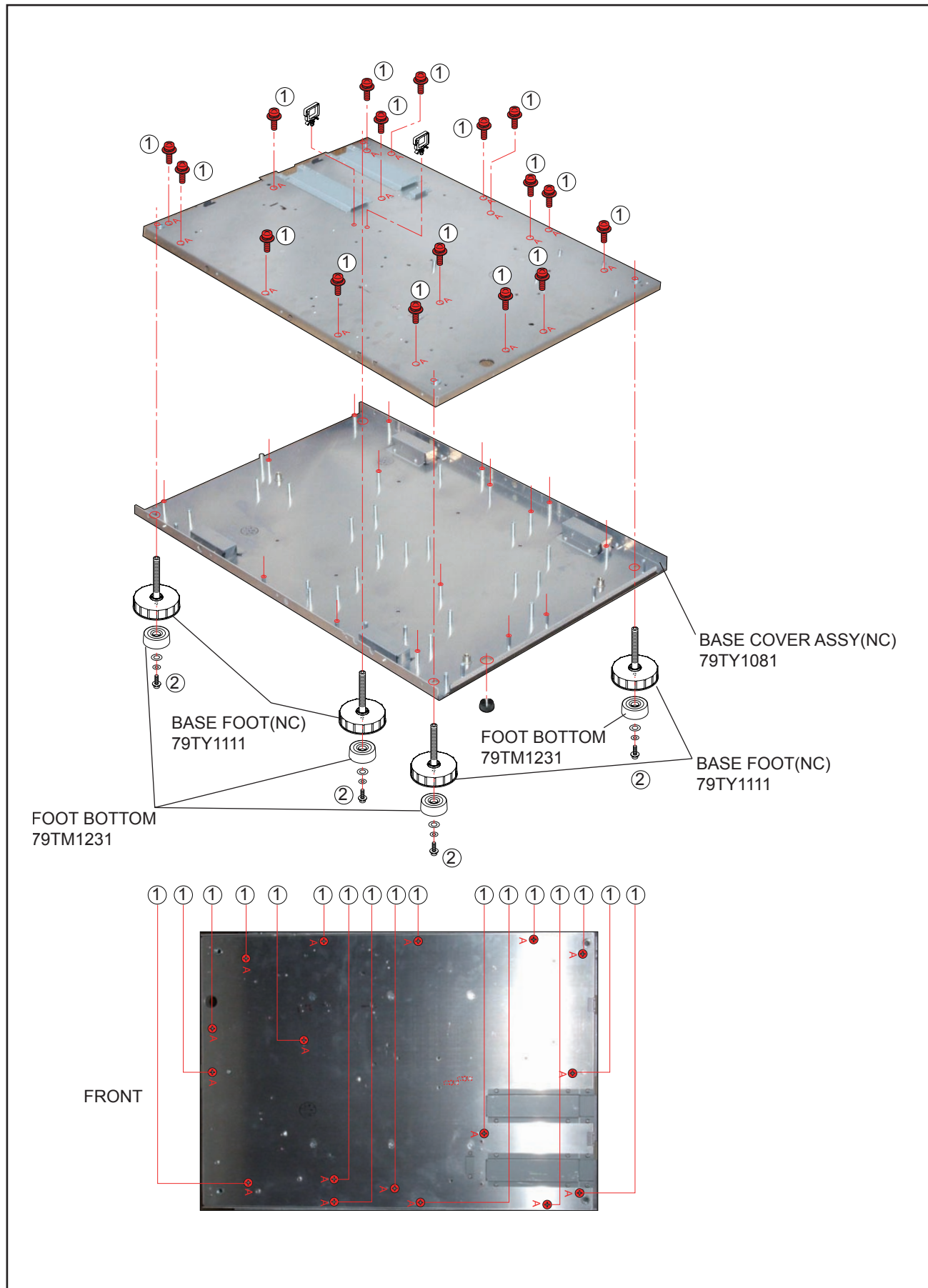
### 39. DC FAN(AFB0612HC 15)

- (1) Remove 2 pcs. of screw ① and take out the assemblies.
- (2) Remove 4 pcs. of Rivet and take out the DC FAN(AFB0612HC 15).



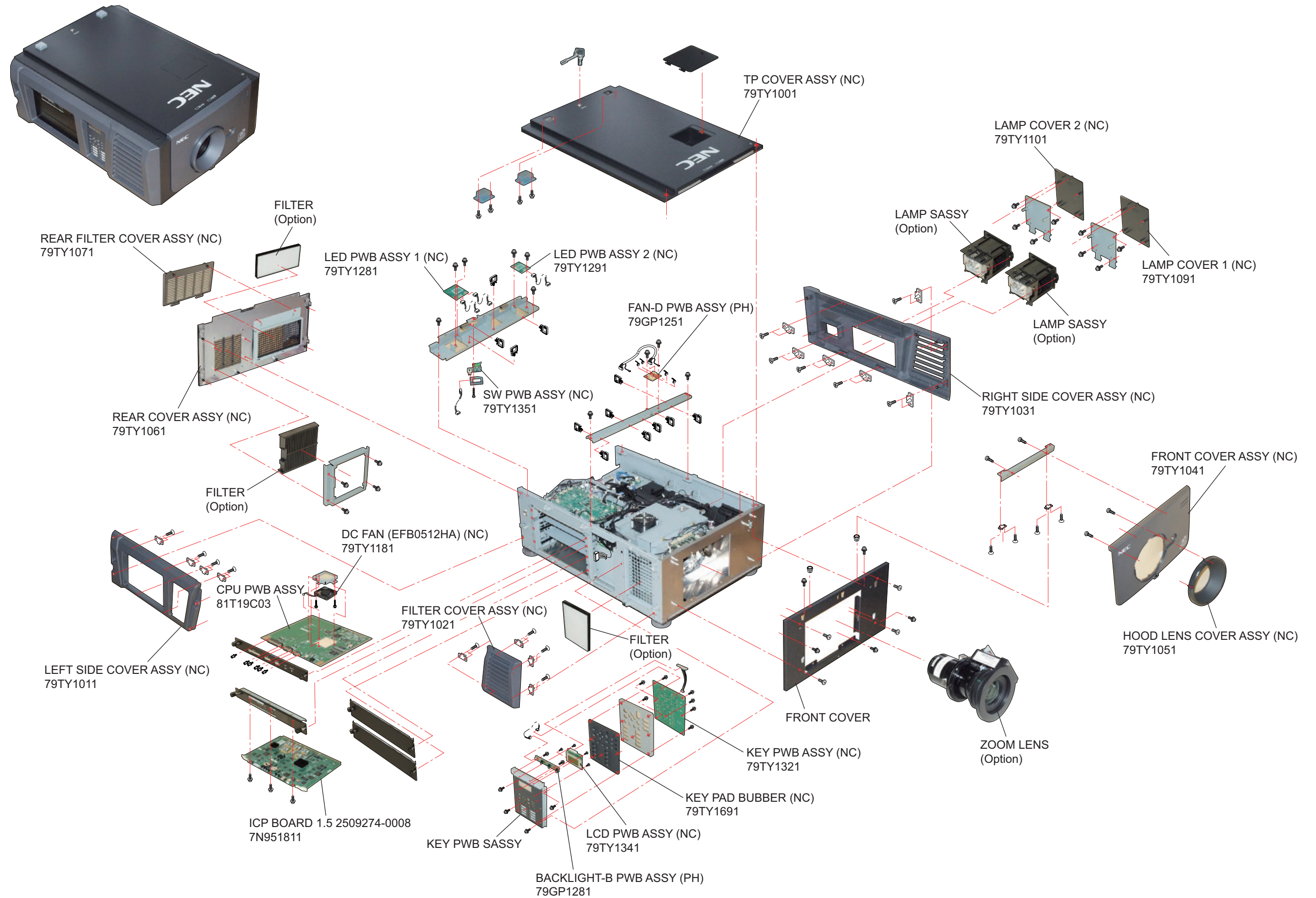
#### 40. BASE COVER ASSY/BASE FOOT/FOOT BOTTOM

- (1) Remove 17 pcs. of screw ① and take out the BASE COVER ASSY.
- (2) Remove 4 pcs. of screw ② and take out the BASE FOOT/FOOT BOTTOM.

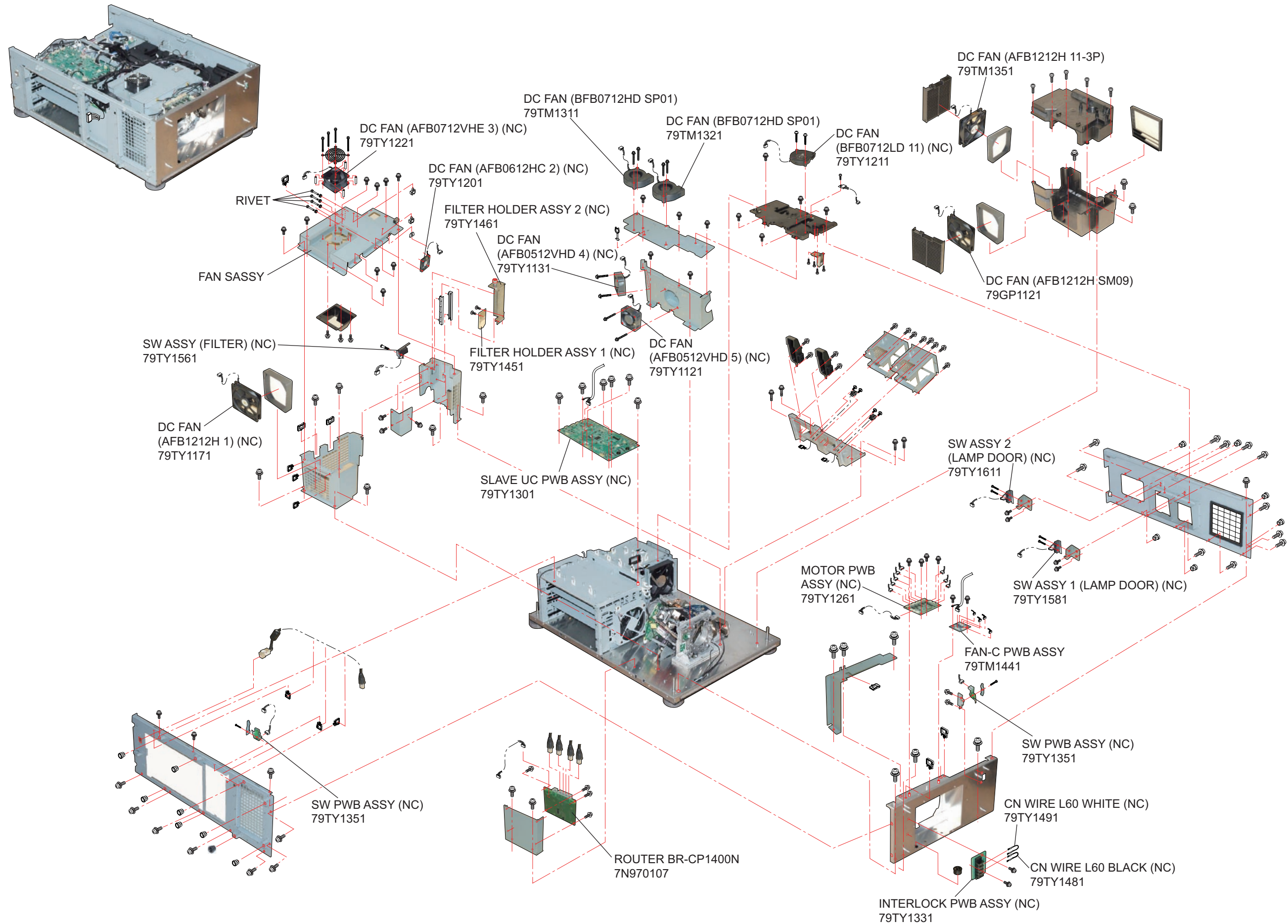




• Main body

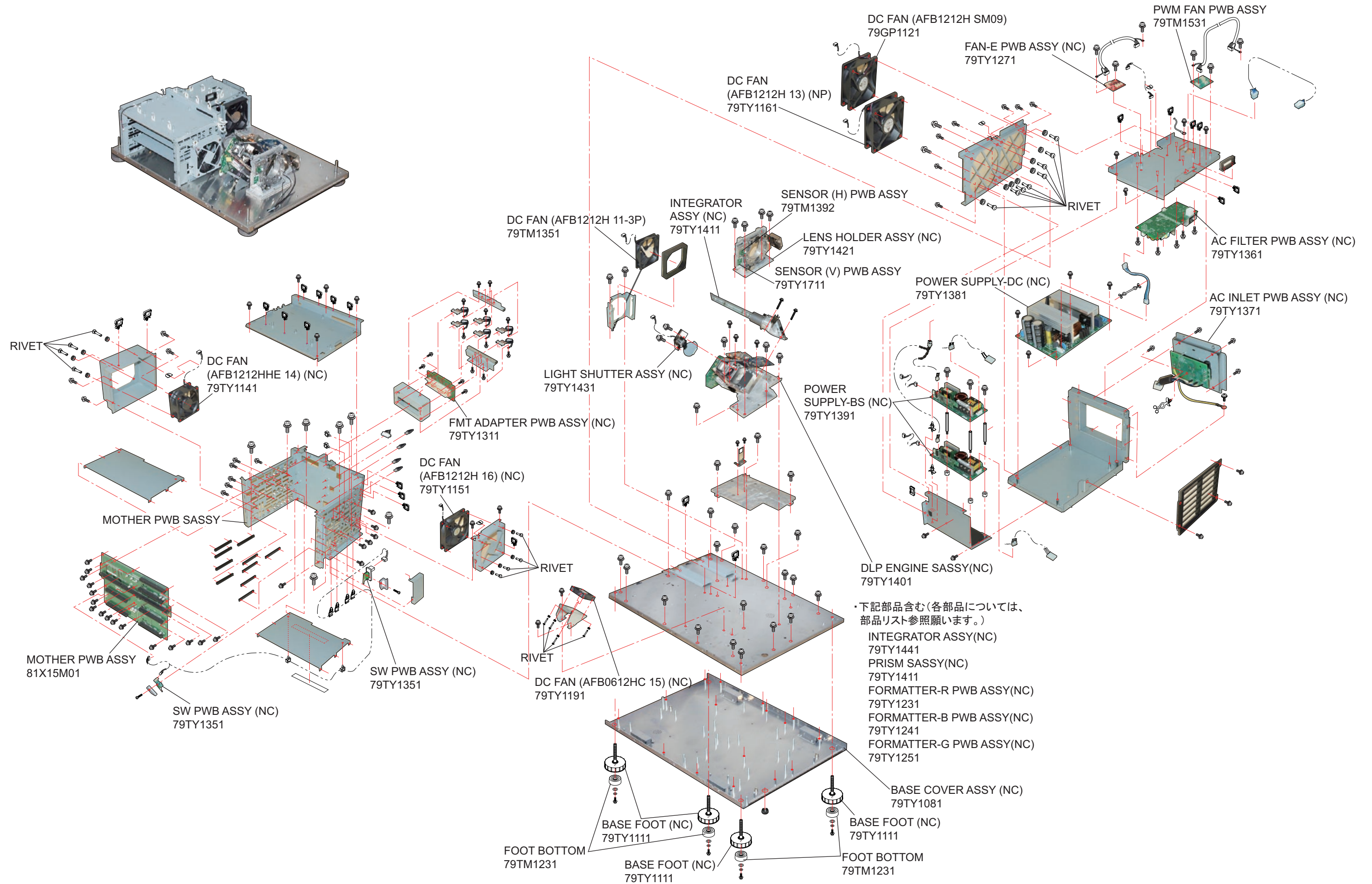


• Main body




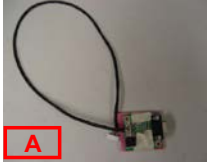
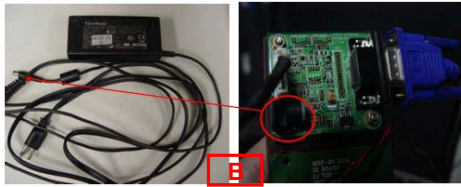

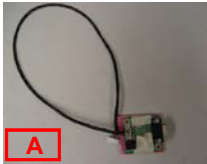
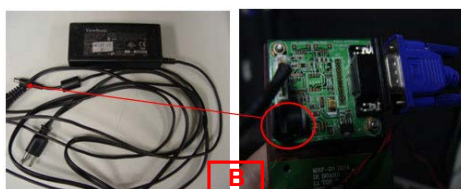



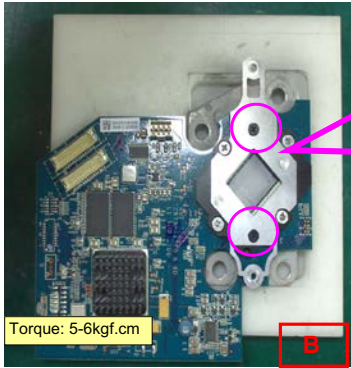
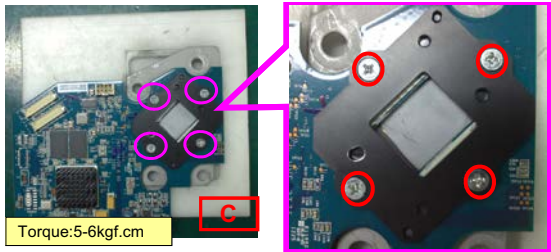



• Engine sassy



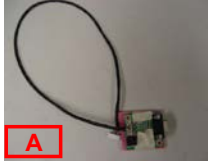









ADJUSTMENT MATRIX

Adjust matrix

ITEM	Service parts			Adjustments after parts replacement Adjustments needed: Yes No adjustments needed: No	Pages of the service manual where the items and contents of the required adjustments are described.	Jigs and software required for adjustments.
	DESCRIPTION	P/N	PARTS PHOTO			
1	SENSOR (H) PWB ASSY	79TM1392		Yes	Please kindly check Service Manual P10-1~P10-7 Motor Board Setting and Adjust	  (1). Motor Board Jig as photo (A) (2). 12V / 1 A_AC Adapter Jig as photo (B)
2	SENSOR (V) PWB ASSY	79TY1711		Yes	Please kindly check Service Manual P10-1~P10-7 Motor Board Setting and Adjust	  (1). Motor Board Jig as photo (A) (2). 12V / 1 A_AC Adapter Jig as photo (B)
3	FORMATTER-B PWB ASSY(NC)	79TY1241		No	Non	    (1). 5mm Cross Torque Screwdriver (2). Loose 2 screws for Heat-Sink 5 kg-f -cm as photo (A) (3). Loose 2 screws for Heat-Sink bracket 5 ~ 6 kg-f-cm as photo (B) (4). Loose Screw 4 screws for DMD bracket 5 ~ 6 kg-f-cm as photo (C)
4	FORMATTER-R PWB ASSY(NC)	79TY1231		No	Non	All Jigs and Torque are the same with B formatter board. Please kindly refer to B formatter board to disassembly and assembly.

# ADJUSTMENT MATRIX



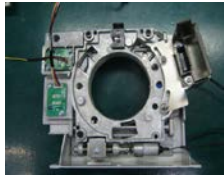
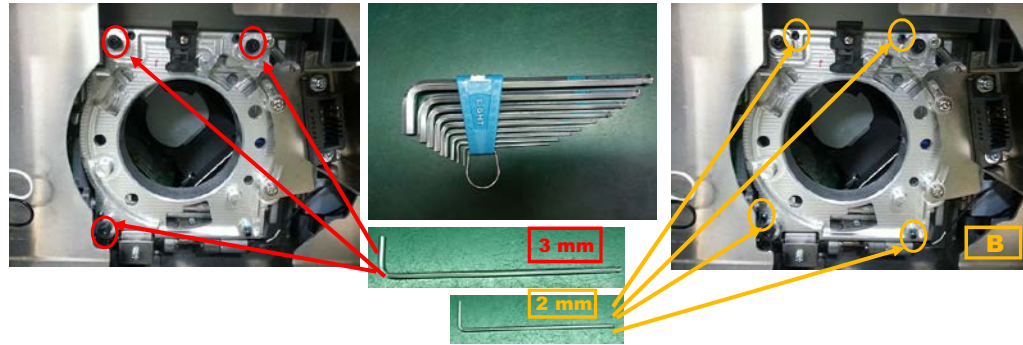





ITEM	Service parts			Adjustments after parts replacement Adjustments needed: Yes No adjustments needed: No	Pages of the service manual where the items and contents of the required adjustments are described.	Jigs and software required for adjustments.
	DESCRIPTION	P/N	PARTS PHOTO			
5	FORMATTER-G PWB ASSY(NC)	79TY1251		No	Non	All Jigs and Torque are the same with B formatter board. Please kindly refer to B formatter board to disassembly and assembly.
6	MOTOR PWB ASSY(NC)	79TY1261		Yes	Please kindly check Service Manual P10-1~P10-7 Motor Board Setting and Adjust	  (1). Motor Board Jig as photo (A) (2). 12V / 1 A_AC Adapter Jig as photo (B)
7	PWM FAN PWB ASSY	79TM1531		No	Non	Non
8	FAN-C PWB ASSY	79TM1441		No	Non	Non
9	FAN-D PWB ASSY(PH)	79GP1251		No	Non	Non
10	FAN-E PWB ASSY(NC)	79TY1271		No	Non	Non
11	LED PWB ASSY 1 (NC)	79TY1281		No	Non	Non
12	LED PWB ASSY2 (NC)	79TY1291		No	Non	Non



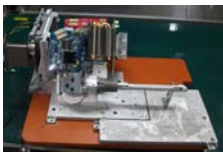

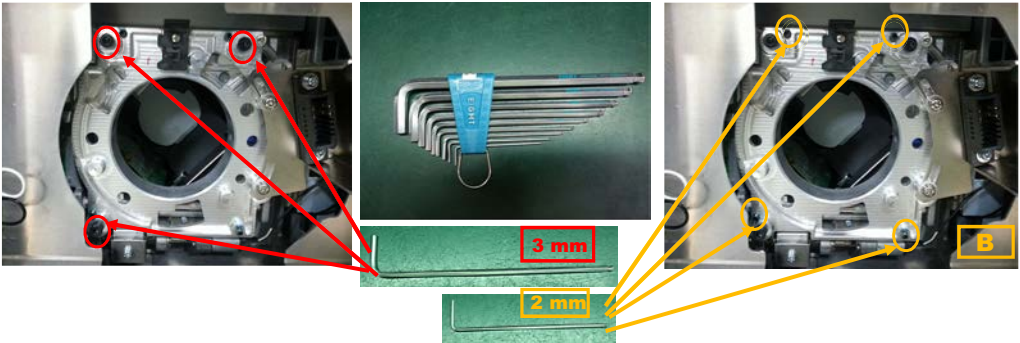
# ADJUSTMENT MATRIX

ITEM	Service parts			Adjustments after parts replacement Adjustments needed: Yes No adjustments needed: No	Pages of the service manual where the items and contents of the required adjustments are described.	Jigs and software required for adjustments.
	DESCRIPTION	P/N	PARTS PHOTO			
13	SLAVE UC PWB ASSY(NC)	79TY1301		No	Non	Non
14	FMT ADAPTER PWB ASSY(NC)	79TY1311		No	Non	Non
15	KEY PWB ASSY (NC)	79TY1321		No	Non	Non
16	INTERLOCK PWB ASSY(NC)	79TY1331		No	Non	Non
17	LCD PWB ASSY (NC)	79TY1341		No	Non	Non
18	SW PWB ASSY (NC)	79TY1351		No	Non	Non
19	AC FILTER PWB ASSY(NC)	79TY1361		No	Non	Non
20	INLET PWB ASSY (NC)	79TY1371		No	Non	Non
21	POWER SUPPLY-DC(NC)	79TY1381		No	Non	Non

# ADJUSTMENT MATRIX

ITEM	Service parts			Adjustments after parts replacement Adjustments needed: Yes No adjustments needed: No	Pages of the service manual where the items and contents of the required adjustments are described.	Jigs and software required for adjustments.
	DESCRIPTION	P/N	PARTS PHOTO			
22	BACKLIGHT-B PWB ASSY(PH)	79GP1281		No	Non	Non
23	POWER SUPPLY-BS(NC)	79TY1391		No	Non	Non
24	LENS HOLDER ASSY(NC)	79TY1421		Yes	Please kindly check Service Manual P10-14~P10-15 Focus Adjust	 <p>(1) 3 mm Inner Hexagon Screwdriver Jig for adjusting Lens Mount as photo (A) (2) 2 mm Inner Hexagon Screwdriver Jig for locking and fixing Lens Mount as photo (B)</p>
25	LIGHT SHUTTER ASSY(NC)	79TY1431				
26	INTEGRATOR ASSY(NC)	79TY1441		Yes	Please kindly check Service Manual P10-8~P10-9 Color Band Adjust	 <p>(1). 3.5 mm Cross Screwdriver Jig for adjusting Illumination as photo (A) (2). 5.5 mm Inner Hexagon Sleeve Screwdriver Jig for adjusting Illumination as photo (B)</p>
27	FILTER HOLDER ASSY 1(NC)	79TY1451		No	Non	Non
28	FILTER HOLDER ASSY 2(NC)	79TY1461		No	Non	Non

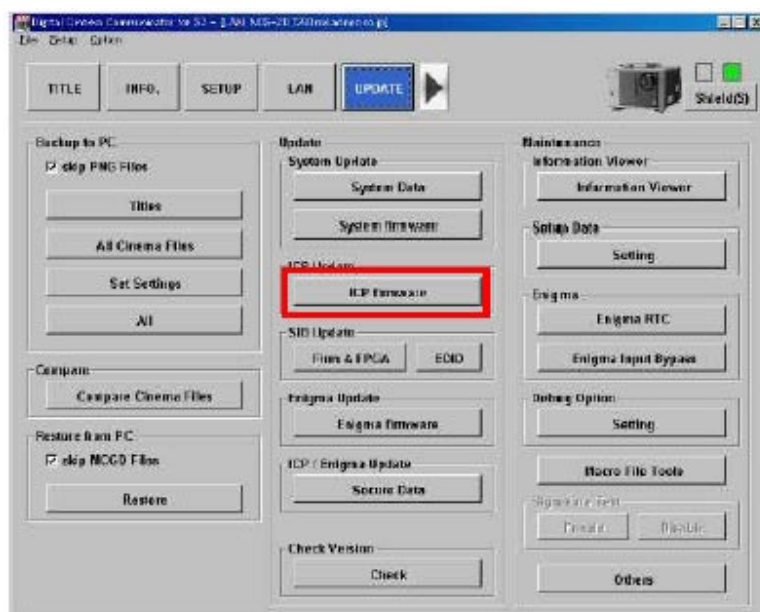
ADJUSTMENT MATRIX

ITEM	Service parts			Adjustments after parts replacement Adjustments needed: Yes No adjustments needed: No	Pages of the service manual where the items and contents of the required adjustments are described.	Jigs and software required for adjustments.
	DESCRIPTION	P/N	PARTS PHOTO			
29	DLP ENGINE SASSY(NC)	79TY1401		No	Non	Non
30	PRISM SASSY (NC)	79TY1411		Yes	<ul style="list-style-type: none"><li>• Please kindly check Service Manual P10-10~P10-13 Color Calibration Adjust</li><li>• Please kindly check Service Manual P10-14~P10-15 Focus Adjust</li></ul>	<div><p>(1) 3 mm Inner Hexagon Screwdriver Jig for adjusting Lens Mount as photo (A) (2) 2 mm Inner Hexagon Screwdriver Jig for locking and fixing Lens Mount as photo (B)</p></div>



## ICP BD Firmware Update

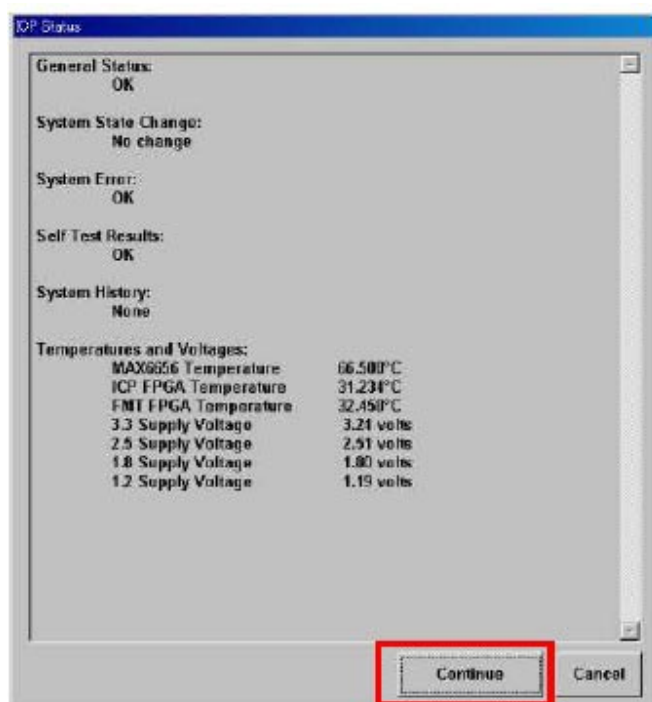
- 1) AC-ON projector.(in standby mode)
- 2) Connect DCC to the projector and enter service mode.
- 3) Go to DCC - [UPDATE] page, click on <ICP firmware>.



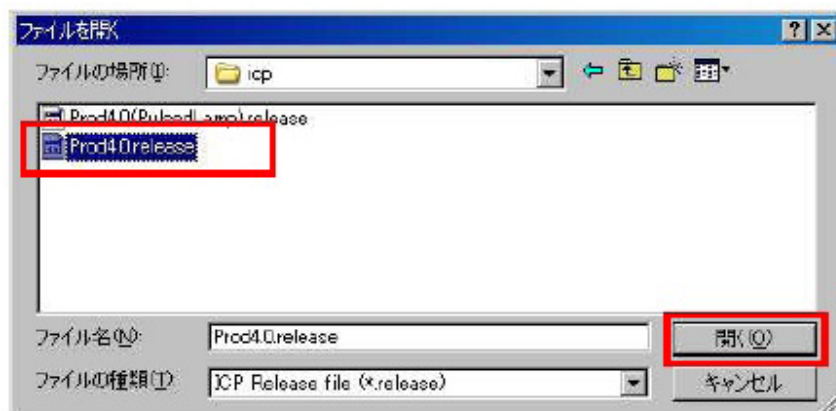
**Caution** For Service Mode (Service Menu), refer to P61 ~ 63 in the Installation Manual.

## PROGRAM SETTING AND SOFTWARE DOWNLOAD

4) If next dialog shows, click on <Continue>.

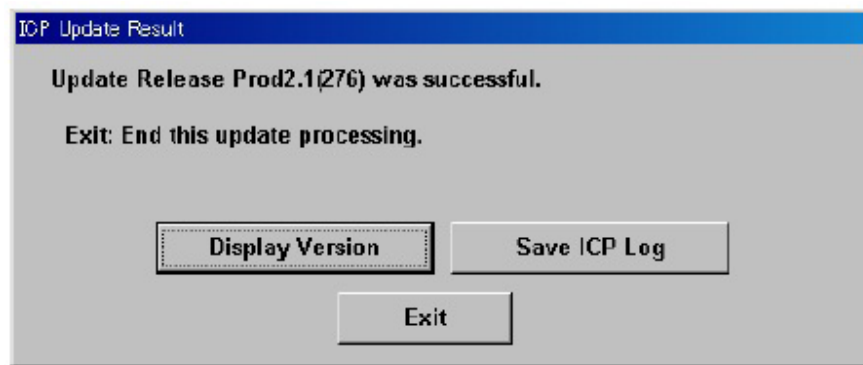


5) Find and select “NC\_YS\_RP0.106.09\_Factory¥icp¥Prod4.0.release”.

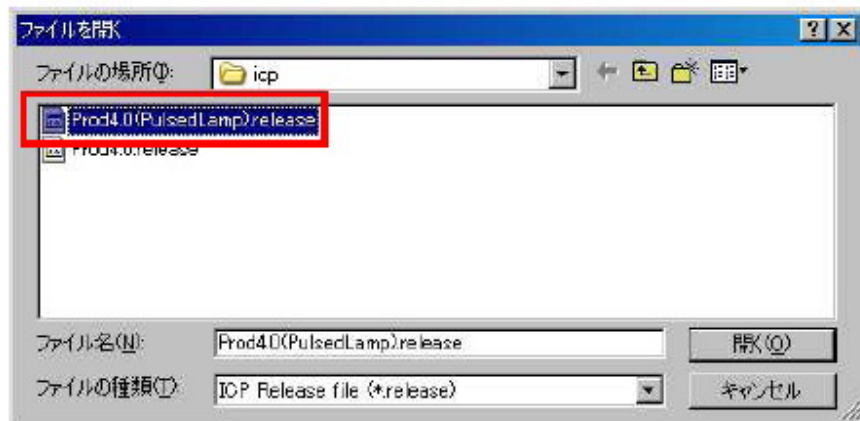


## PROGRAM SETTING AND SOFTWARE DOWNLOAD

- 6) Projector will power up automatically and start to install ICP firmware.
- 7) The next message shows when download success.



- 8) Click on <Exit> and back to 3).  
Then install "NC\_YS\_RP0.106.09\_Factory¥icp¥Prod4.0(PulsedLamp).release".

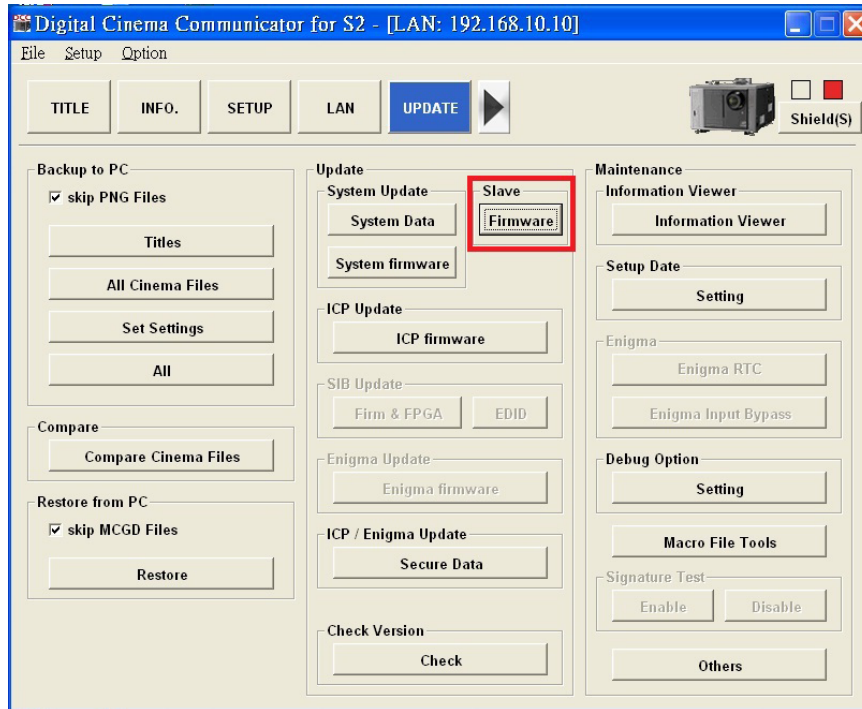


- 9) When completion of download, power off the projector from DCC – START page.

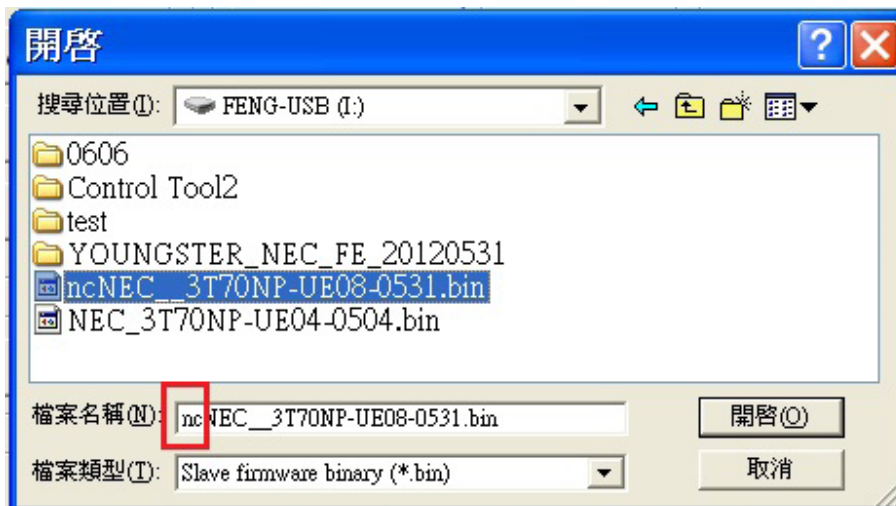
### 1-2. Slave MCU Board Software Download

#### Slave MCU BD Firmware Update

- 1) AC-ON projector.(in standby mode)
- 2) Connect DCC to the projector and enter service mode.
- 3) Go to DCC - [UPDATE] page, click on <Slave firmware>.



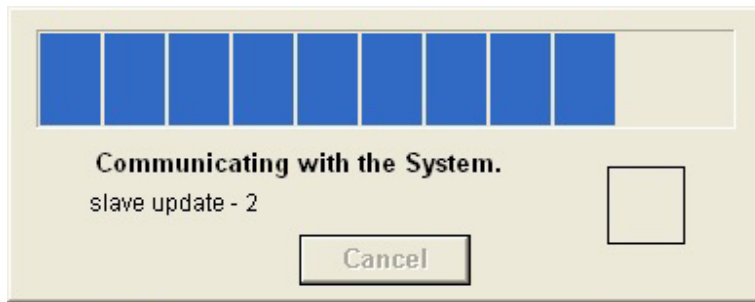
- 4) Find and select "ncNEC\_3T70NP\_UE-8-0531.bin".



## PROGRAM SETTING AND SOFTWARE DOWNLOAD

---

5) Projector start to install Slave MCU firmware.



6) The next message shows when download success.

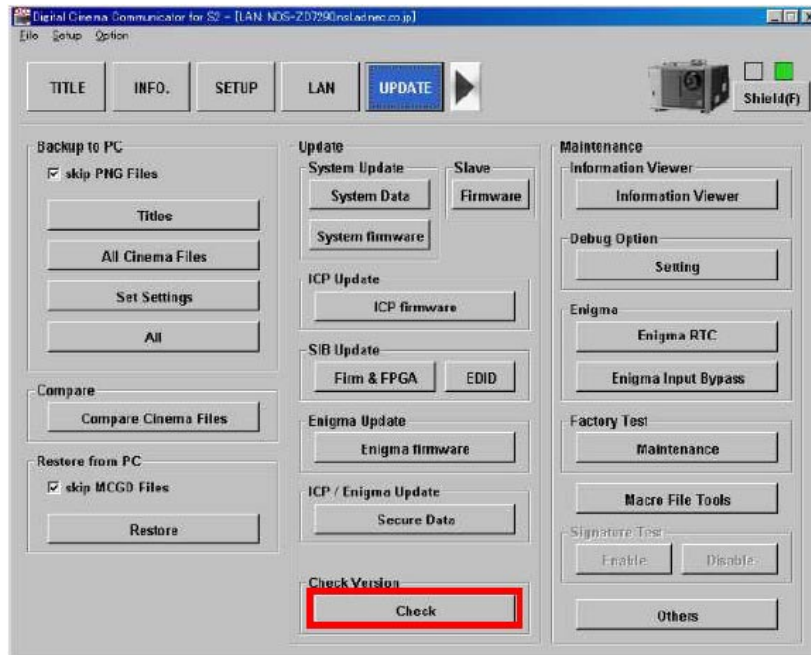


## PROGRAM SETTING AND SOFTWARE DOWNLOAD

### 1-3. Full Auto Software Download

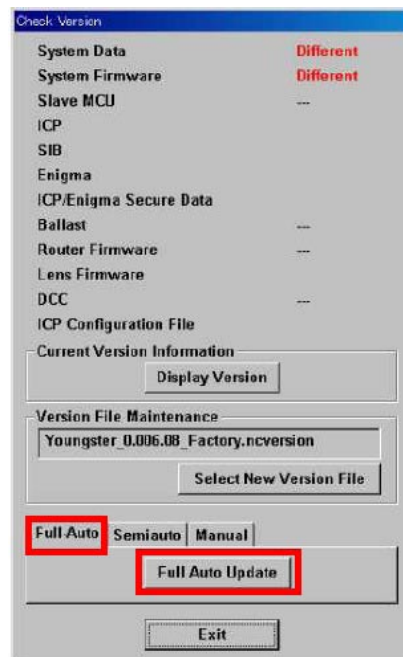
#### Full Auto Firmware Update

- 1) AC-ON projector.(in standby mode)
- 2) Connect DCC to the projector and enter service mode.
- 3) Click the “Check” button in “Check Version” in the DCC-UPDATE menu.



## PROGRAM SETTING AND SOFTWARE DOWNLOAD

- 4) Click the “Full Auto Update” button in the “Full-Auto” tab.



- 5) Find and select the ncrelease file stored in the root folder of Release Package as below.

Release Package:

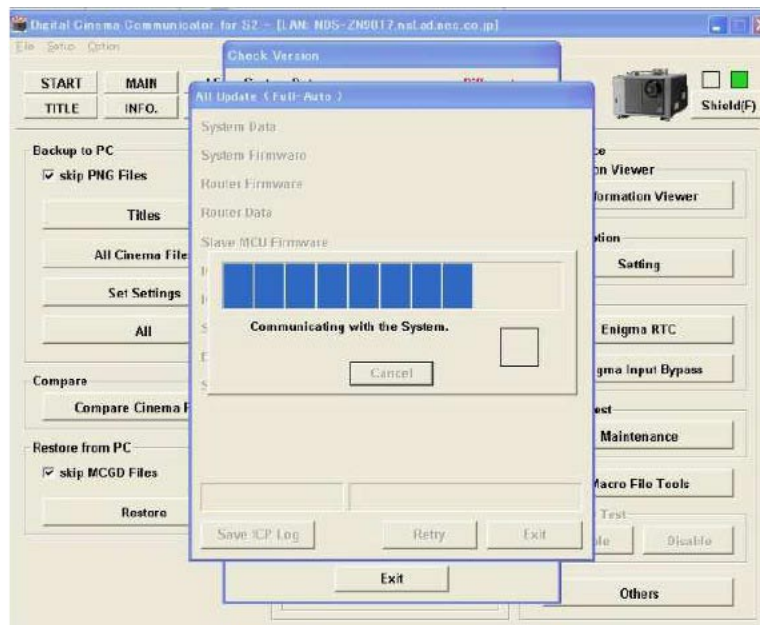
NC\_S2\_RP\_\*.\*\*\*\_Factory

└─ Release\*.\*\*\*\_Factory.ncrelease

\*.\*\*\*: version

## PROGRAM SETTING AND SOFTWARE DOWNLOAD

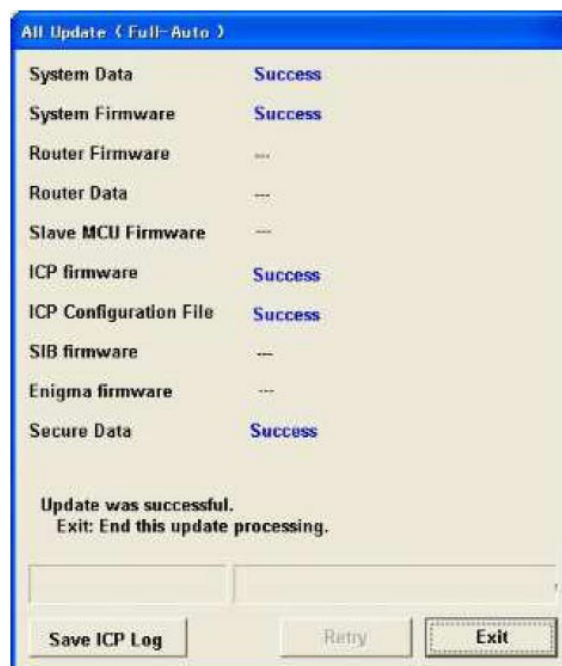
6) A progress bar is displayed and the update begins. The update proceeds automatically.



7) When the update has finished, the All Update screen is displayed.

8) Check the result of the update.

If "Error" is not displayed, the update has completed successfully.



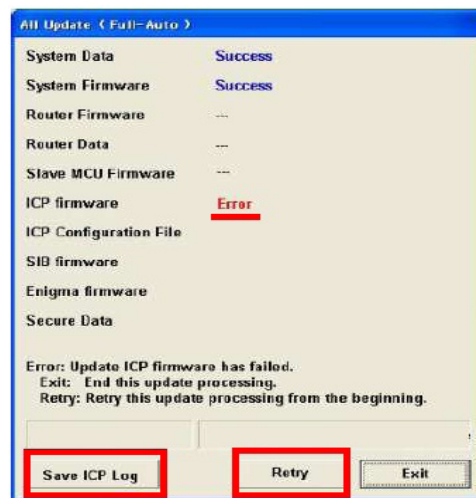
Failure case 1) "Error" is displayed

If the ICP firmware update fails, the "Retry" button is enabled. Click the "Retry" button to execute the update again. If the update fails again, click the "Save ICP Log" button to save the log from when the update was executed.



## PROGRAM SETTING AND SOFTWARE DOWNLOAD

After the log has been saved, click the “Exit” button to cancel the update.  
Next, contact NECDS (and provide them with the log you saved).

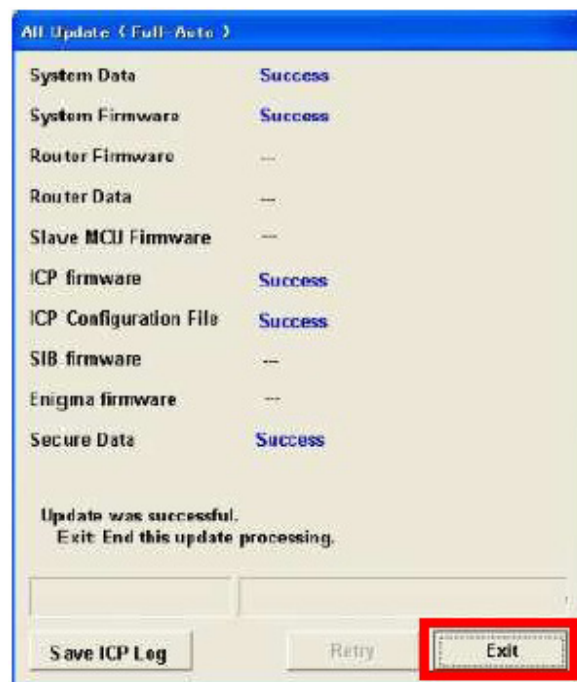


Failure case2) Next message is showing.



Click “OK” to close message, then click “Exit” button in All Update screen. AC-Off the projector when it goes to STBY and replaces ICP board.

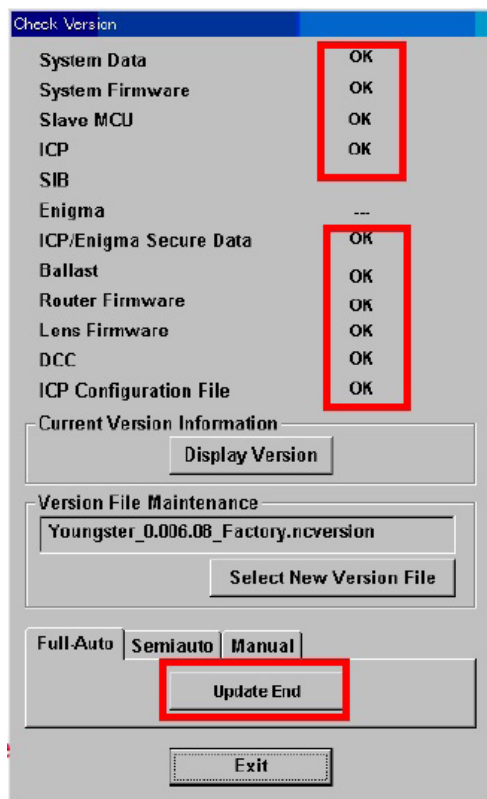
9) Click the “Exit” button in All Update screen to close.



## PROGRAM SETTING AND SOFTWARE DOWNLOAD

10) Check that all of the Check Version results are “OK”, and then click the “Update End” button in the “Full-Auto” tab.

Once the projector enters standby mode, the update is complete.



If “Different” is displayed

Click the “Update End” button in the “Full-Auto” tab. When the projector enters standby mode, return to step 3) and execute the update again.

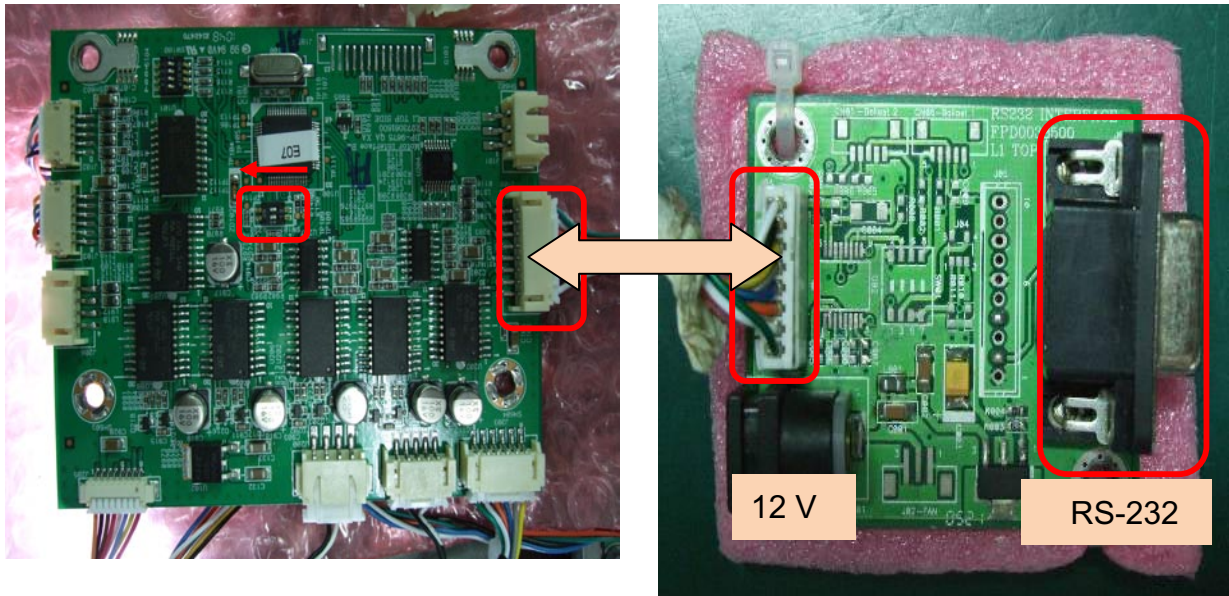
## PROGRAM SETTING AND SOFTWARE DOWNLOAD

### 1-4. Motor Board Software Download

Motor BD Download

A. SW10 switch to on

B. Connect to Jig like follow image and power on projector.



C. Run "Flash Magic"

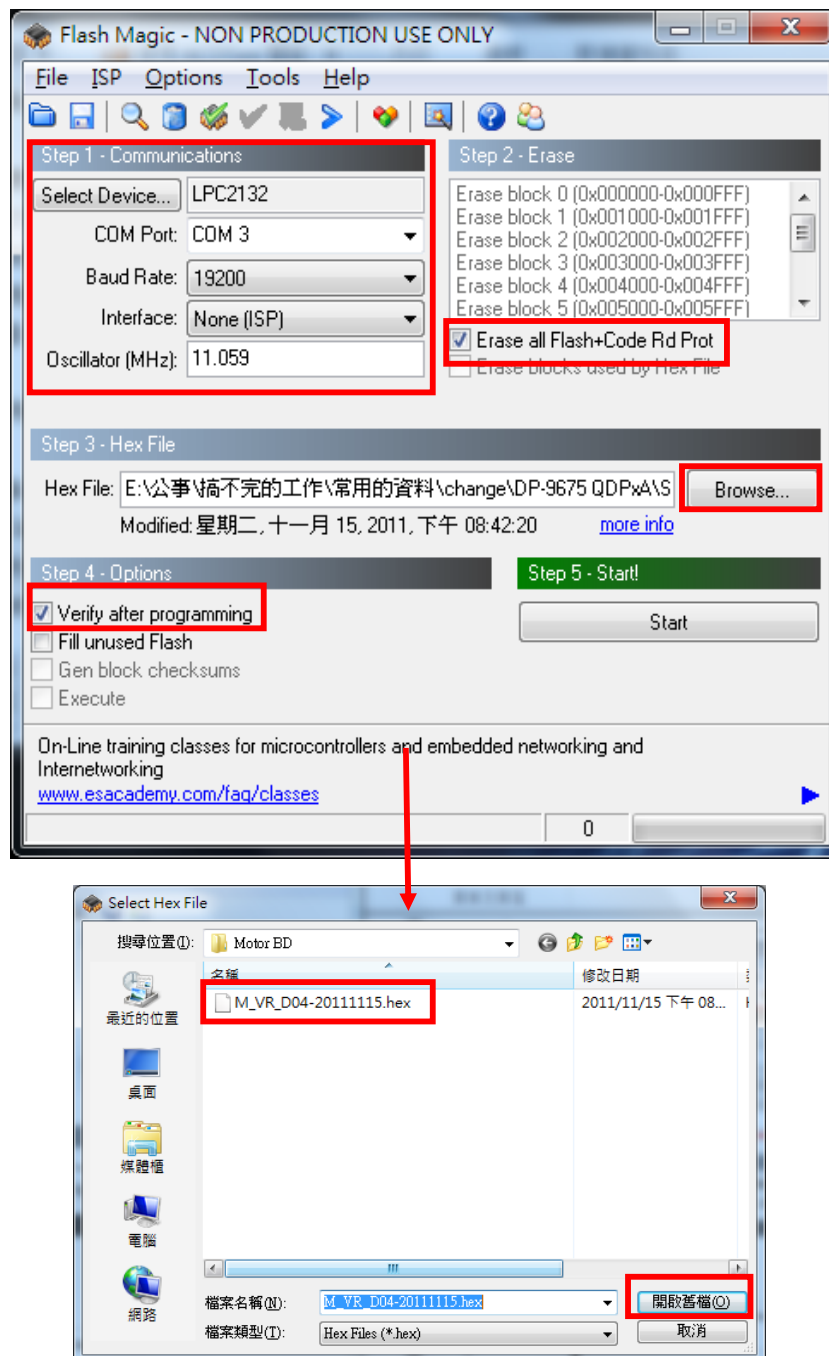
D. Set "Select Device" to LPC2132

E. Set Com port, Baud Rate, Oscillator.

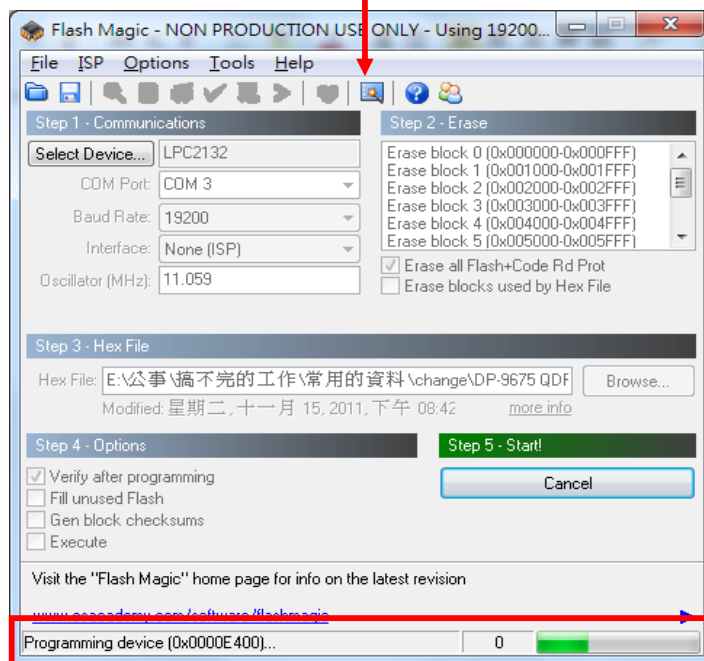
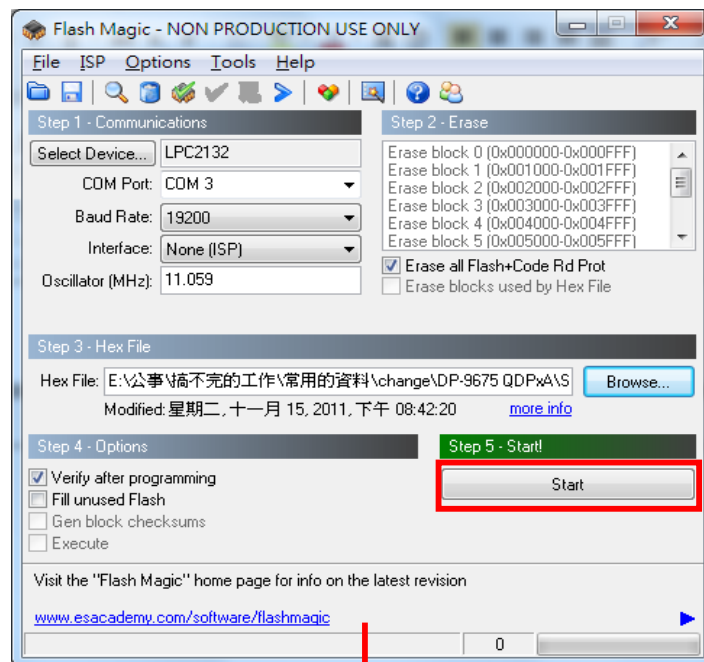
F. Click "Browse to choose file.

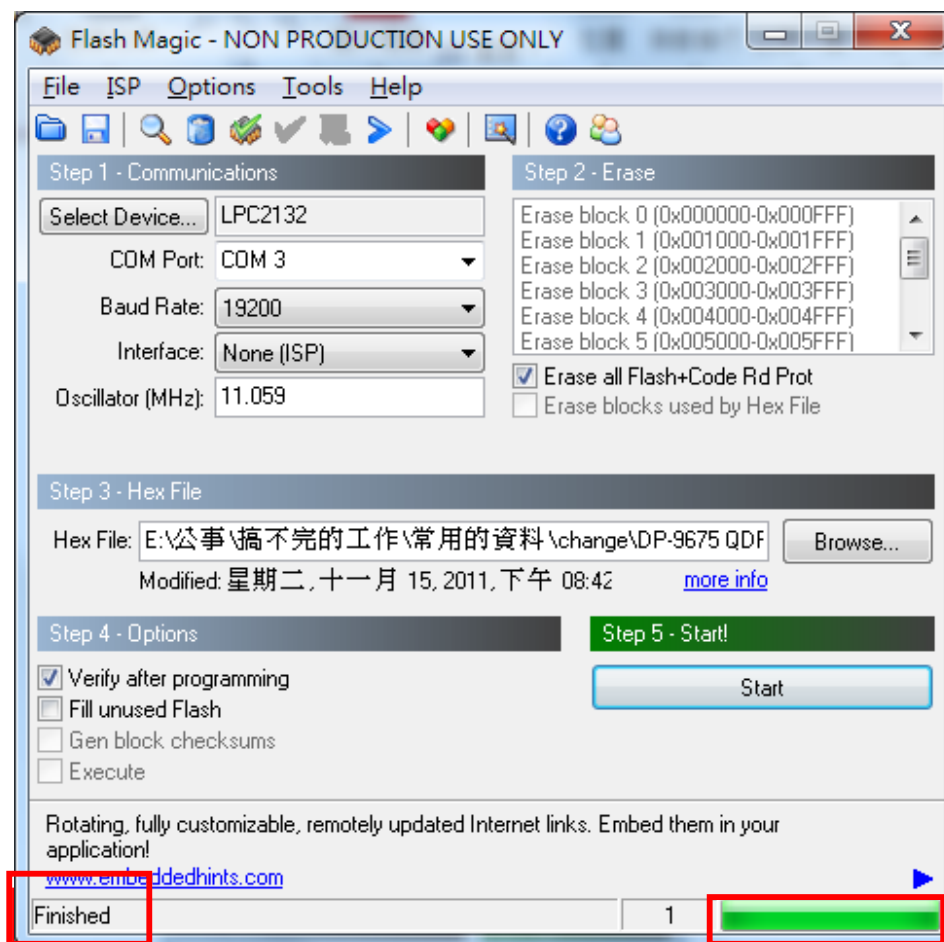
G. Click "Start"

## PROGRAM SETTING AND SOFTWARE DOWNLOAD



## PROGRAM SETTING AND SOFTWARE DOWNLOAD





### 1-5. Ballast Software Download

**Caution)** Normally it is not required.

1. Preparing an application tool software

Download "MPLAB IDE v.8.\*\*" from Microchip web site:

[http://www.microchip.com/stellent/idcplg?IdcService=SS\\_GET\\_PAGE&nodeId=1406&dDocName=en023073](http://www.microchip.com/stellent/idcplg?IdcService=SS_GET_PAGE&nodeId=1406&dDocName=en023073)

While install MPLAB DE. When the message "HI-Tech . . ." is displayed, the program in this message is not installed. (Need to install only MPLAB, need not HI-Tech)

2. Connect to device

(1) ICD3 setting Connect an USB cable and ICD3 and an ICD3 harness (Fig. 0)

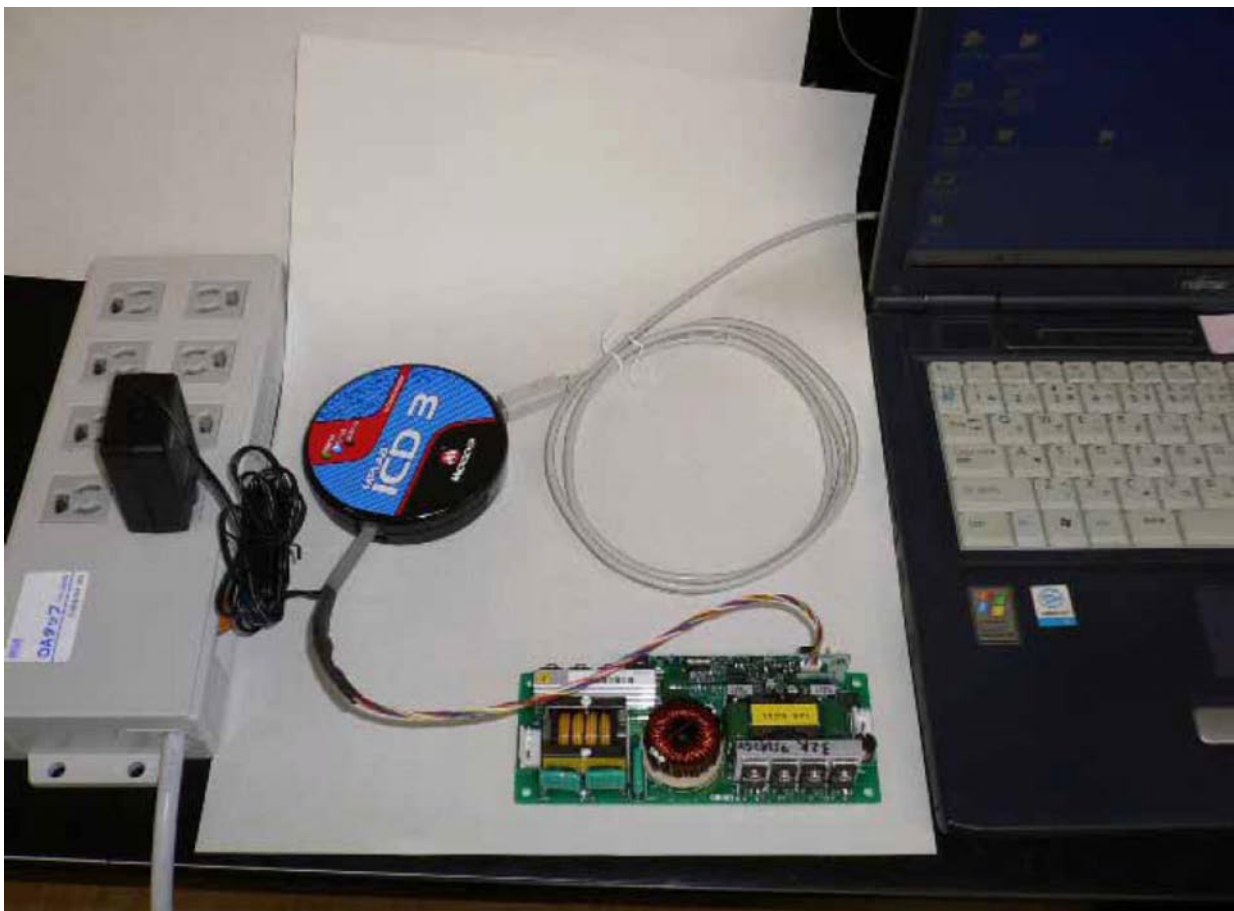


Fig. 0



## PROGRAM SETTING AND SOFTWARE DOWNLOAD

- (2) Connect ICD3 USB cable to Personal computer. Do not connect to lamp driver
- (3) If downloading "new hardware" is requested, follow this instruction. (Fig. 1 in Japanese)

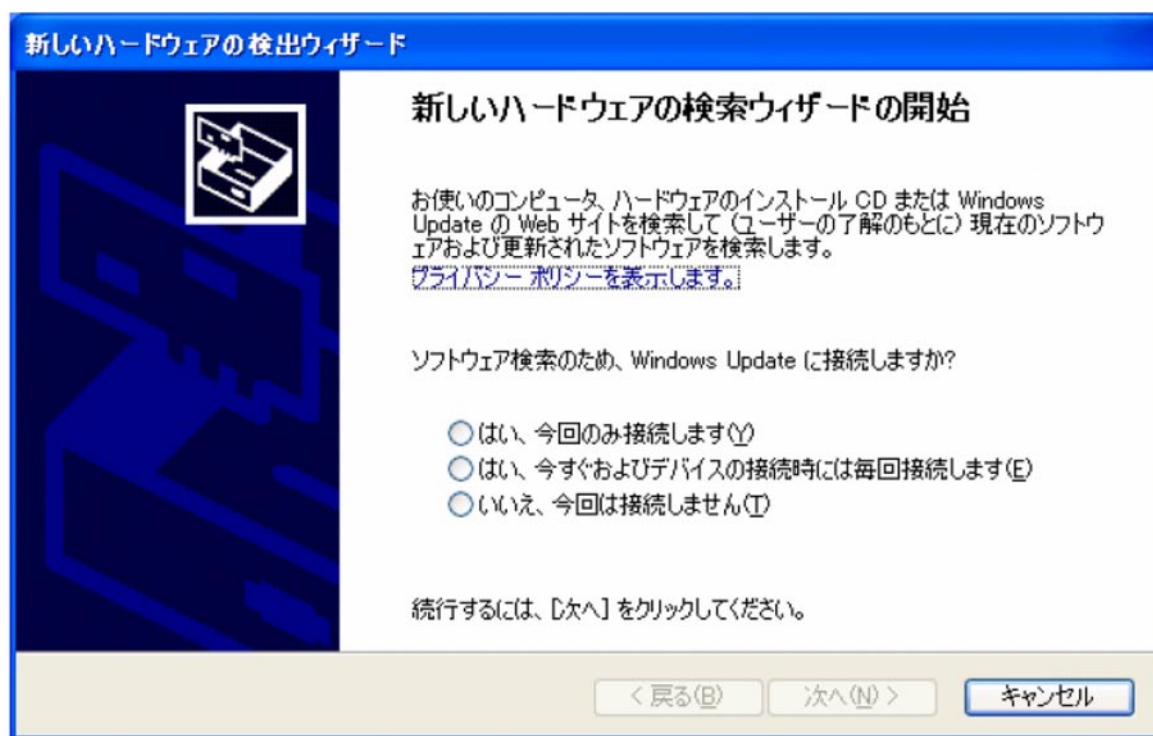


Fig. 1



## PROGRAM SETTING AND SOFTWARE DOWNLOAD

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- (4) Connect ICD3 harness and lamp driver (Fig. 2).

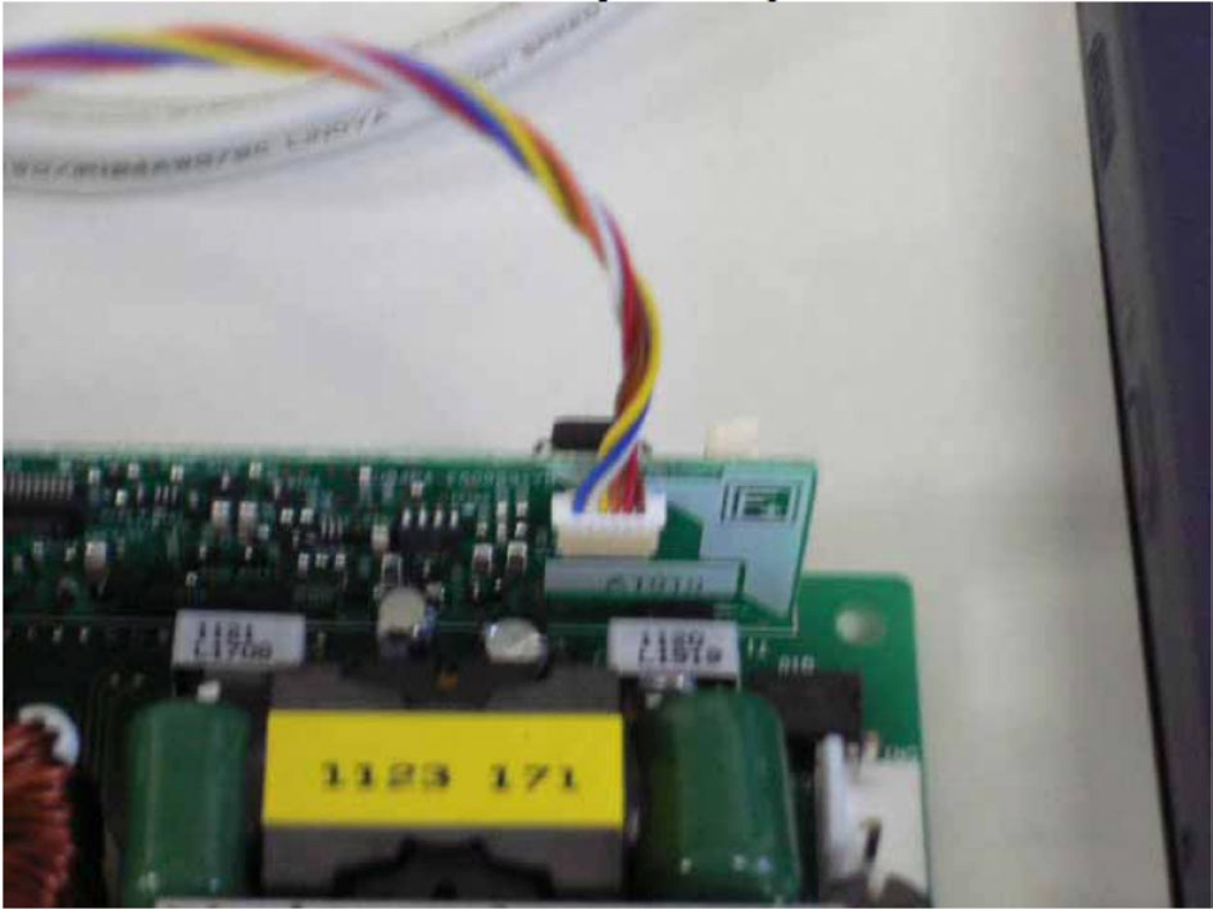


Fig. 2

## PROGRAM SETTING AND SOFTWARE DOWNLOAD

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3. How to program to lamp driver.
  - (1) Supply DC 15V to ICD3 from AC adapter.
  - (2) Start up "MPLAB IDE v.8.\*\*.exe" (Fig. 3)

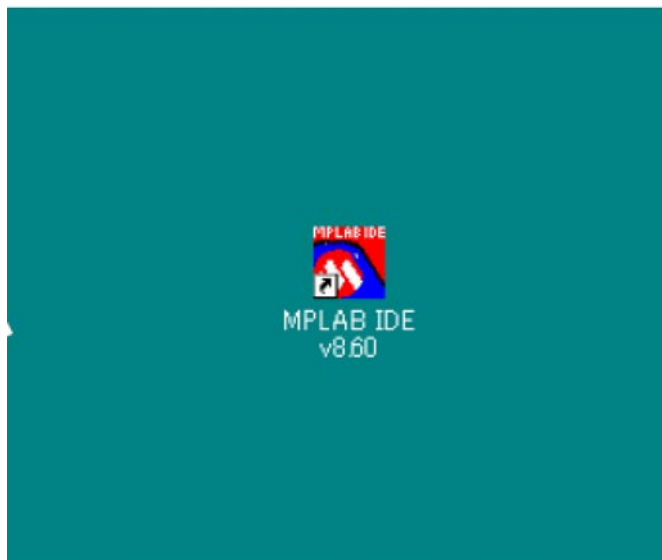


Fig. 3

## PROGRAM SETTING AND SOFTWARE DOWNLOAD

(3) Select "Configure" - - - "Select Devices". dsPIC33FJ32GS606.

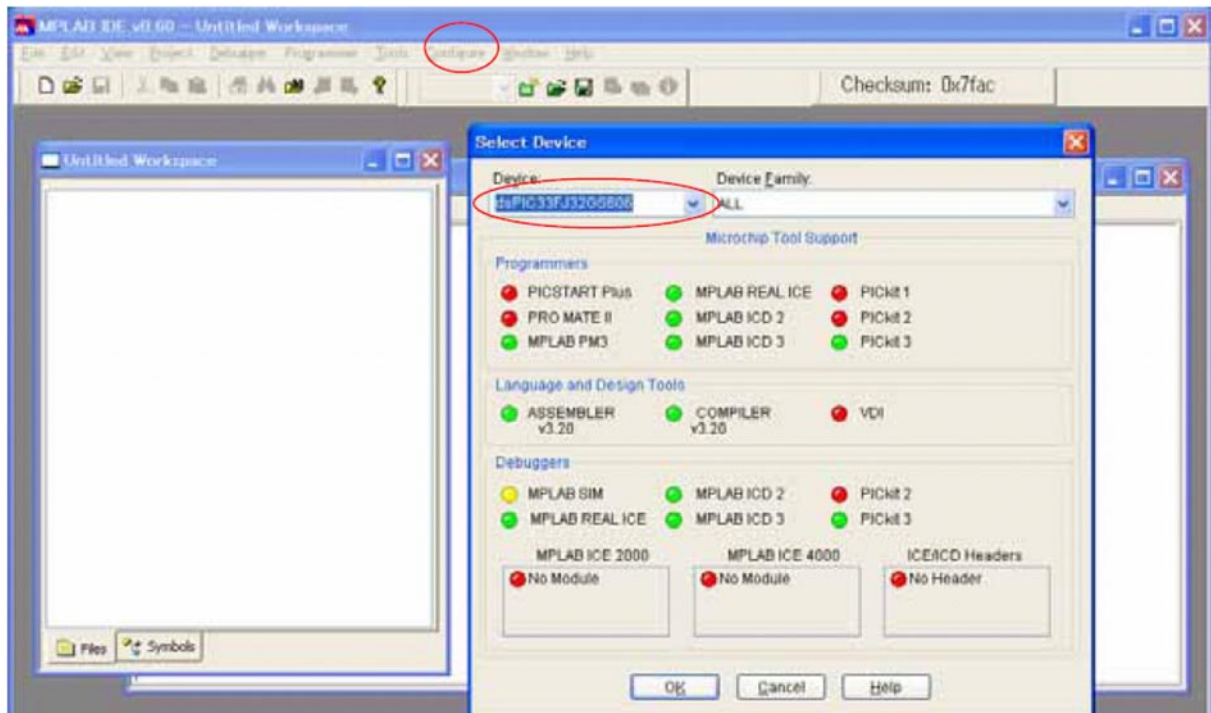


Fig. 4

## PROGRAM SETTING AND SOFTWARE DOWNLOAD

(4) Select "Programmer" - - - "Select Programmer". 2 MPLAB ICD3.

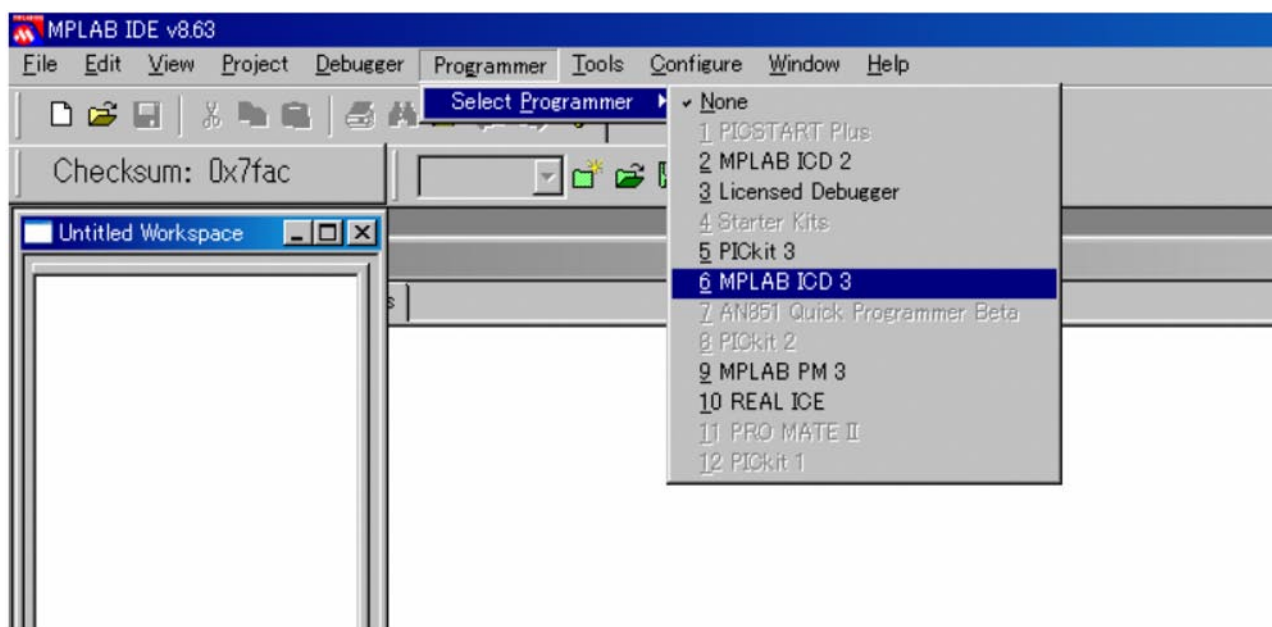


Fig. 5

## PROGRAM SETTING AND SOFTWARE DOWNLOAD

- (5) Select "File" - - - "Import", and select a new driver program. This program is "hex file".

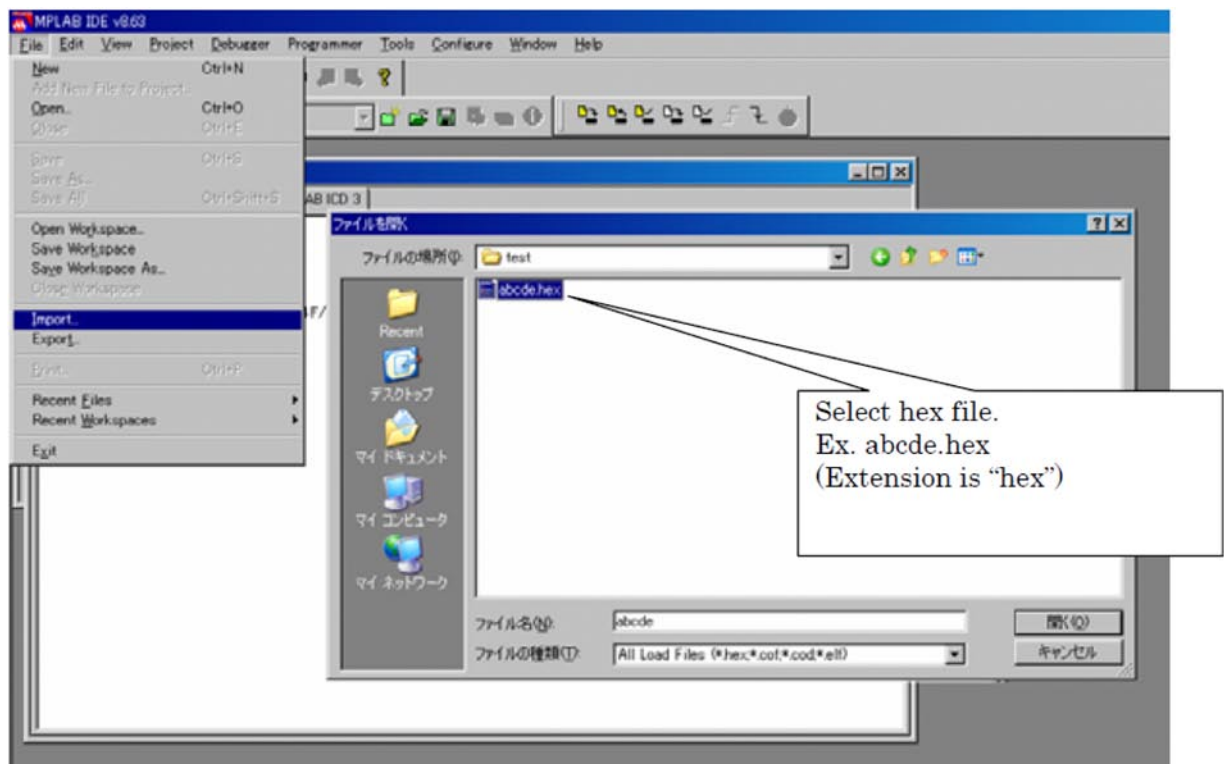


Fig. 6

## PROGRAM SETTING AND SOFTWARE DOWNLOAD

(6) Select "Programmer" - - - "Program", and program a "new driver program" to lamp driver.

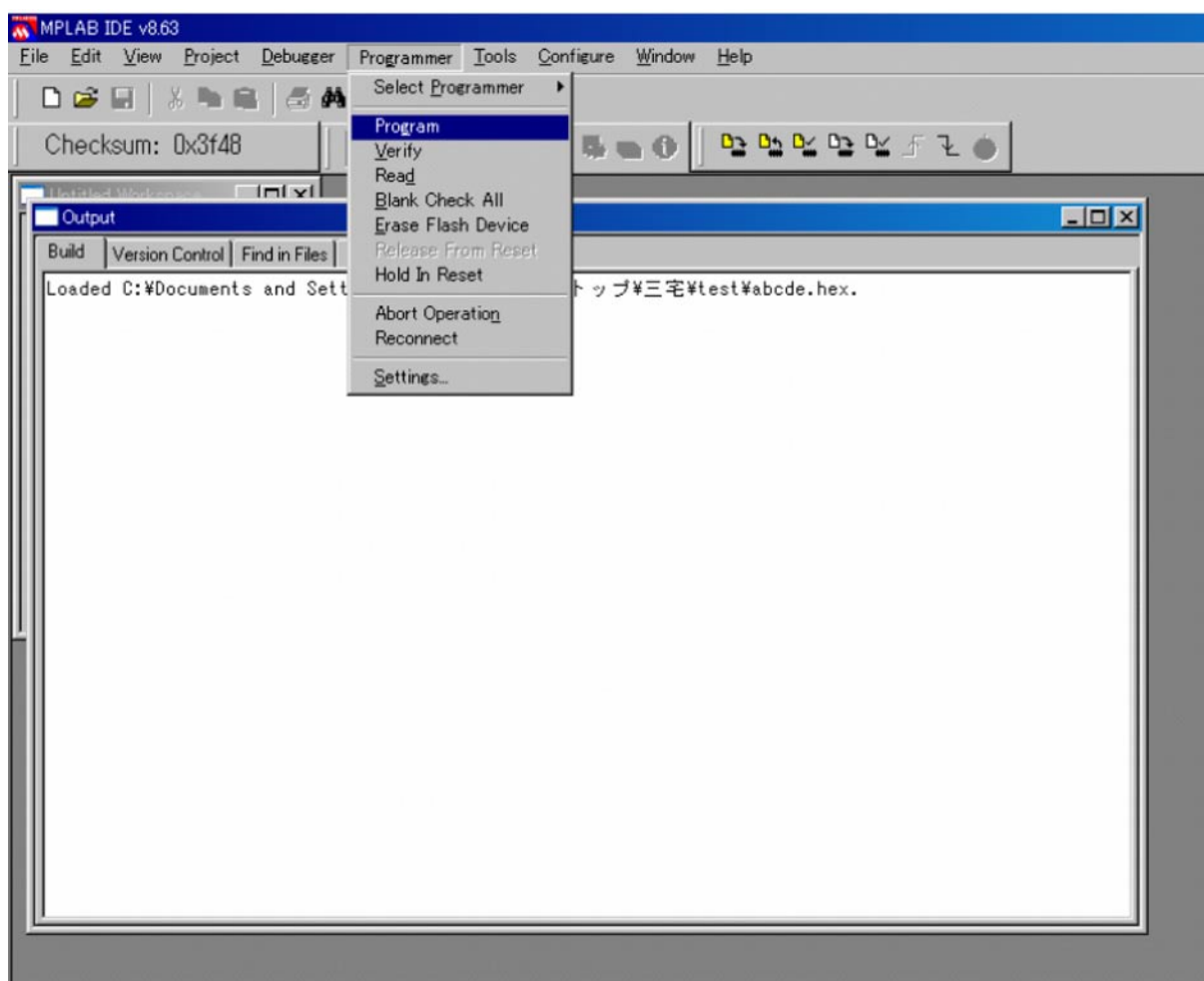
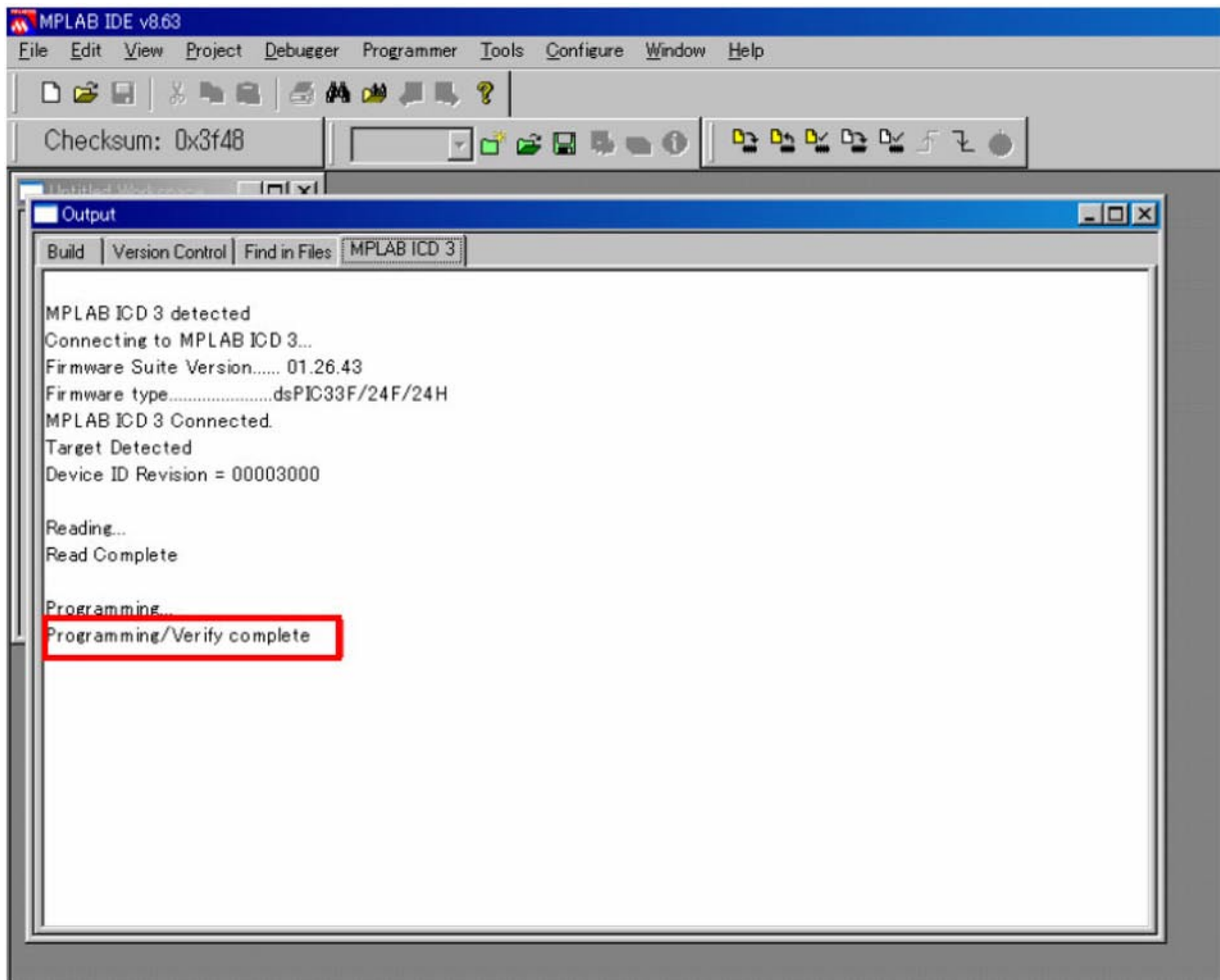


Fig. 7

## PROGRAM SETTING AND SOFTWARE DOWNLOAD

- (7) After 3-(7). If the message "Programming/Verify complete" is displayed, programming a "new driver program" to lamp driver is completed.



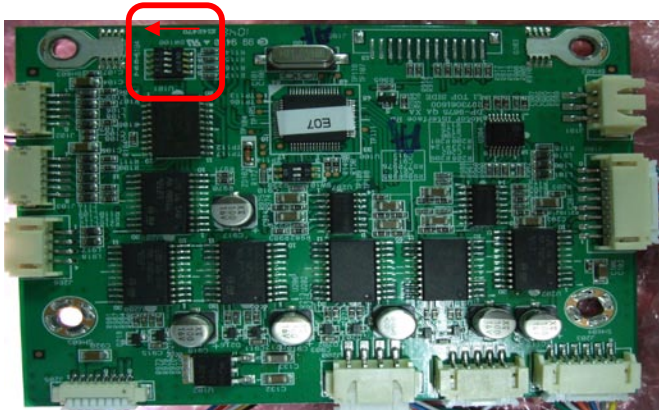
- (8) After the programming, disconnected ICD3 harness from lamp driver.

### 1. SETTING & ADJUSTMENT

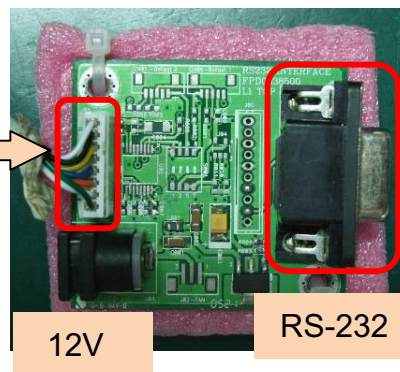
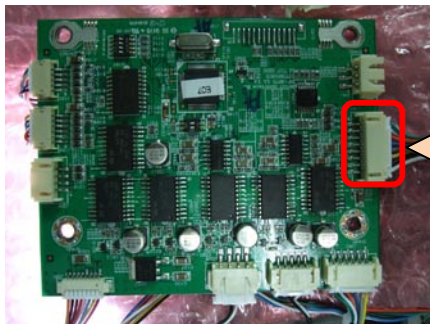
#### 1-1. Motor Board Setting and Adjust

##### A. Base Setting

Check SW100 at off mode



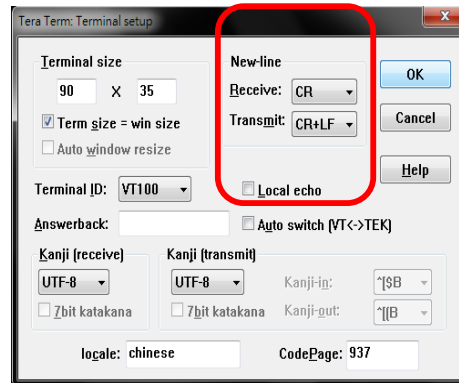
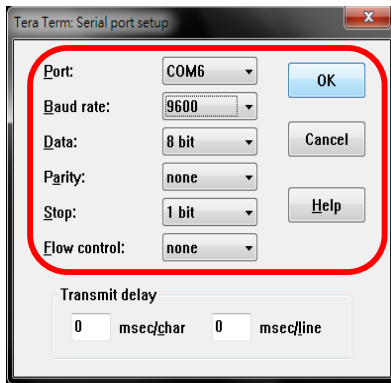
Check Jig assembly



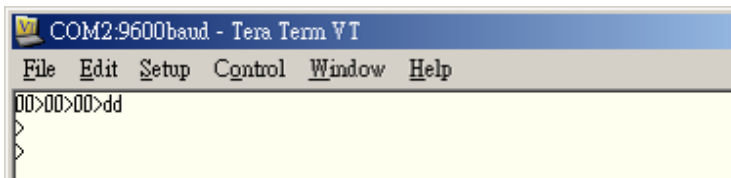


## SETTING & ADJUSTMENT

Run TeraTerm. And, setting.

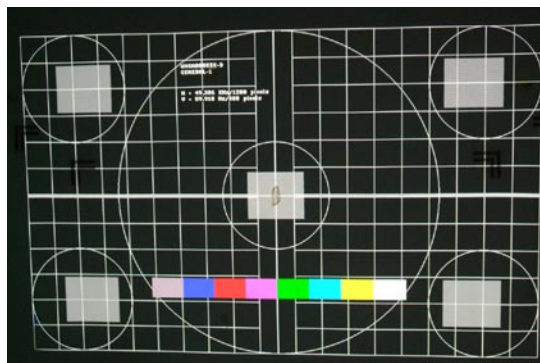


Use “dd” to enter Debug Mode



Use Zoom in & Out to find out Optic Center.(z+ is zoom out, z- is zoom in)

Optical center position wide position to tele position or tele position to wide position the center point need deviation <5pixel

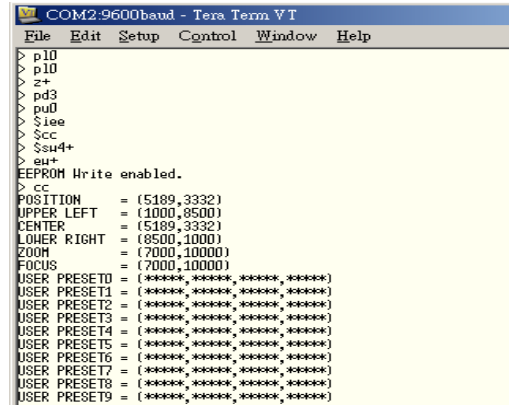


## SETTING & ADJUSTMENT

### B. Lens Setting

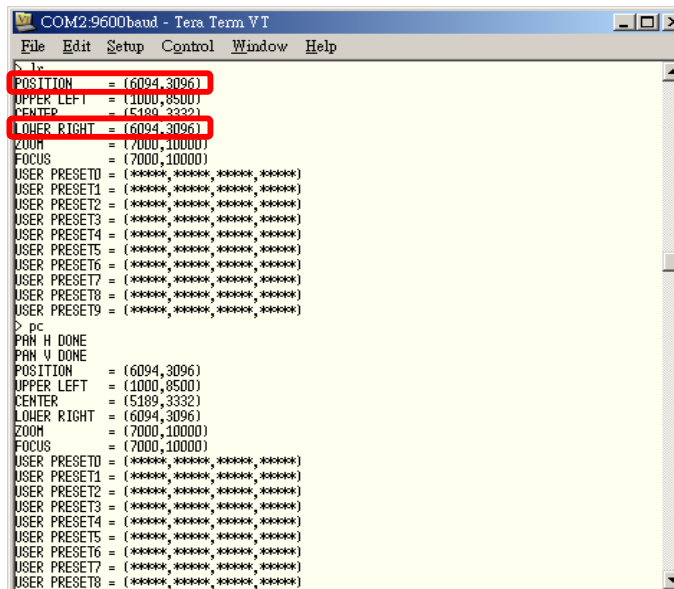
When you find Optic Center, use follow command.

1. \$iee to reset EEPROM.
2. \$cc to set Center.
3. \$sw4+ to enable set corner limit.
4. ew+ to enable to write data to eeprom.
5. In order to make sure to save data, so run "cc" again.



```
COM2:9600baud - Tera Term VT
File Edit Setup Control Window Help
> p10
> p10
> z+
> pd3
> pu0
> $iee
> $cc
> $sw4+
> ew+
EEPROM Write enabled.
> $cc
POSITION = (5189,3332)
UPPER LEFT = (1000,8500)
CENTER = (5189,3332)
LOWER RIGHT = (8500,1000)
ZOOM = (7000,10000)
FOCUS = (7000,10000)
USER PRESET0 = (****,****,****,****)
USER PRESET1 = (****,****,****,****)
USER PRESET2 = (****,****,****,****)
USER PRESET3 = (****,****,****,****)
USER PRESET4 = (****,****,****,****)
USER PRESET5 = (****,****,****,****)
USER PRESET6 = (****,****,****,****)
USER PRESET7 = (****,****,****,****)
USER PRESET8 = (****,****,****,****)
USER PRESET9 = (****,****,****,****)
```

6. Then set lower-right corner. (Use "lr" to set lower-right corner limit)
7. Don't forget to check the limit.
8. Use "pc" to return back optic center.



```
COM2:9600baud - Tera Term VT
File Edit Setup Control Window Help
> $lr
POSITION = (6094,3096)
UPPER LEFT = (1000,8500)
CENTER = (5189,3332)
LOWER RIGHT = (6094,3096)
ZOOM = (7000,10000)
FOCUS = (7000,10000)
USER PRESET0 = (****,****,****,****)
USER PRESET1 = (****,****,****,****)
USER PRESET2 = (****,****,****,****)
USER PRESET3 = (****,****,****,****)
USER PRESET4 = (****,****,****,****)
USER PRESET5 = (****,****,****,****)
USER PRESET6 = (****,****,****,****)
USER PRESET7 = (****,****,****,****)
USER PRESET8 = (****,****,****,****)
USER PRESET9 = (****,****,****,****)
> pc
PAN H DONE
PAN V DONE
POSITION = (6094,3096)
UPPER LEFT = (1000,8500)
CENTER = (5189,3332)
LOWER RIGHT = (6094,3096)
ZOOM = (7000,10000)
FOCUS = (7000,10000)
USER PRESET0 = (****,****,****,****)
USER PRESET1 = (****,****,****,****)
USER PRESET2 = (****,****,****,****)
USER PRESET3 = (****,****,****,****)
USER PRESET4 = (****,****,****,****)
USER PRESET5 = (****,****,****,****)
USER PRESET6 = (****,****,****,****)
USER PRESET7 = (****,****,****,****)
USER PRESET8 = (****,****,****,****)
```

## SETTING & ADJUSTMENT

9. Then set up-left corner. (Use "ul" to set up-left corner limit)
10. Don't forget to check the limit.
11. Use "pc" to return back optic center.

```
COM2:9600baud - Tera Term VT
File Edit Setup Control Window Help
> ul
POSITION = (4255,5491)
UPPER LEFT = (4255,5491)
CENTER = (5189,3332)
LOWER RIGHT = (6094,3096)
ZOOM = (7000,10000)
FOCUS = (7000,10000)
USER PRESET0 = (****,****,****,****)
USER PRESET1 = (****,****,****,****)
USER PRESET2 = (****,****,****,****)
USER PRESET3 = (****,****,****,****)
USER PRESET4 = (****,****,****,****)
USER PRESET5 = (****,****,****,****)
USER PRESET6 = (****,****,****,****)
USER PRESET7 = (****,****,****,****)
USER PRESET8 = (****,****,****,****)
USER PRESET9 = (****,****,****,****)
> pc
Panning RIGHT and DOWN
PAN H DONE
PAN V DONE
POSITION = (6090,3100)
UPPER LEFT = (4255,5491)
CENTER = (5189,3332)
LOWER RIGHT = (6094,3096)
ZOOM = (7000,10000)
FOCUS = (7000,10000)
USER PRESET0 = (****,****,****,****)
USER PRESET1 = (****,****,****,****)
USER PRESET2 = (****,****,****,****)
USER PRESET3 = (****,****,****,****)
USER PRESET4 = (****,****,****,****)
USER PRESET5 = (****,****,****,****)
USER PRESET6 = (****,****,****,****)
USER PRESET7 = (****,****,****,****)
```

12. Return back optic center position deviation need < 10pixel
13. At last use \$sw4- to disable set corner limit.
14. E0 to set Focus & Zoom setting.
15. ew to save all data to eeprom.

```
USER PRESET5 = (****,****,****,****)
USER PRESET6 = (****,****,****,****)
USER PRESET7 = (****,****,****,****)
USER PRESET8 = (****,****,****,****)
USER PRESET9 = (****,****,****,****)
>
> $sw4-
> e0
> ew
```

16. After Setting, unplug 12V Adapter, and plug in again to check data is OK, or not.
17. Setting Limit As Follow:

## SETTING & ADJUSTMENT

Definition of optical offset: Vertical =  $(\text{de-center} / (H/2)) * 100\%$

Horizontal =  $(\text{de-center} / (W/2)) * 100\%$

De-center: distance from image center to DMD center

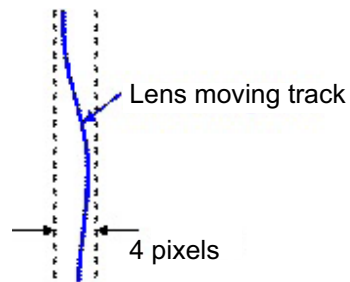
H : DMD height

W : DMD width

	UP	Down	Left	Right
2048X1080	122.6%	105.4%	27.2%	27.2%

Specification: Lens shift (UP)  $\geq 110\%$   
Lens shift (Down)  $\geq 100\%$   
Lens shift (Right)  $\geq 22\%$   
Lens shift (Left)  $\geq 22\%$

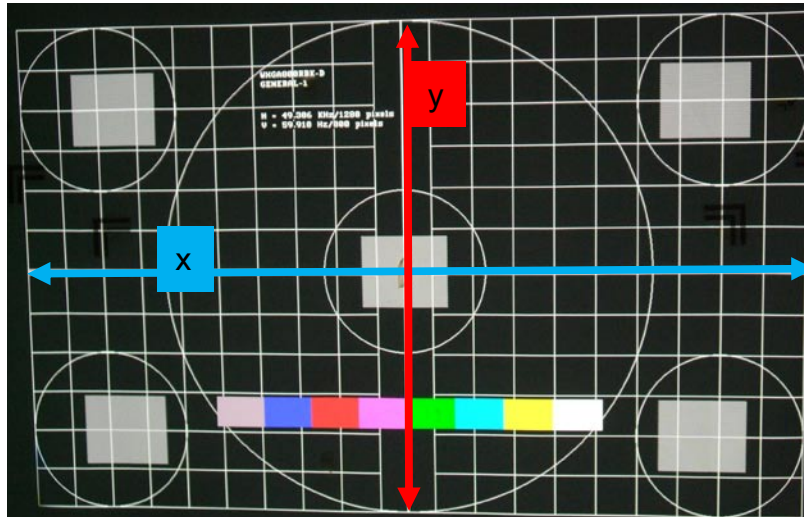
The total range of the unstable track of lens moving should be less than total 4 pixels range shown as below sketch.



## SETTING & ADJUSTMENT

### How To calculation / Setting Lens Shift per cent

IF up limit ranger is "a", then it shift range is  $a/y > 122.6\%$  at WUXGA  
IF down limit ranger is "b", then it shift range is  $b/y > 105.4\%$  at WUXGA  
IF right limit ranger is "c", then it shift range is  $c/x > 27.2\%$  at WUXGA  
IF left limit ranger is "d", then it shift range is  $d/x > 27.2\%$  at WUXGA



### C. Zoom / Focus Calibration

You must setup lens before power in.

If you are first calibration

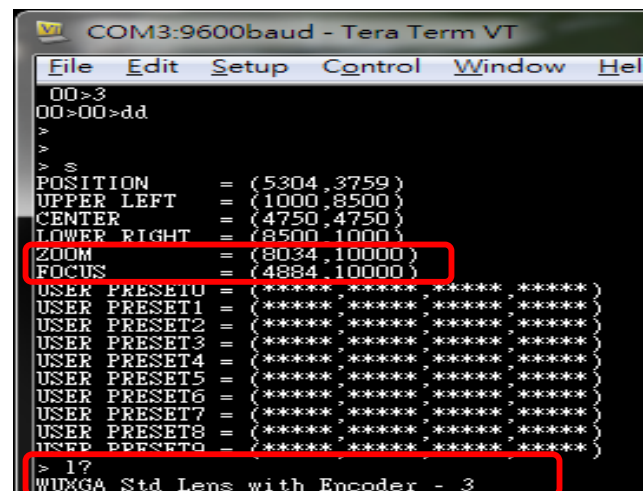
You will see zoom / focus limit is 10000

Then you must check lens type.

Use "I?" to check lens type.

If it is "1", it means the lens not encoder.

So you can't use the lens to calibration.



If check ok, use "zfc" to calibration.

If it is done, you'll see the some value of zoom / focus.

## SETTING & ADJUSTMENT

And you can “s” to check the value is not 10000.

```
>
> s
POSITION      = (5304,3760)
UPPER LEFT    = (1000,8500)
CENTER        = (4750,4750)
LOWER RIGHT   = (8500,1000)
ZOOM          = (8032,10000)
FOCUS         = (4882,10000)
USER PRESET0  = (****,****,****,****)
USER PRESET1  = (****,****,****,****)
USER PRESET2  = (****,****,****,****)
USER PRESET3  = (****,****,****,****)
USER PRESET4  = (****,****,****,****)
USER PRESET5  = (****,****,****,****)
USER PRESET6  = (****,****,****,****)
USER PRESET7  = (****,****,****,****)
USER PRESET8  = (****,****,****,****)
USER PRESET9  = (****,****,****,****)
> l?
WUXGA Std Lens with Encoder - 3
> zfc
ZOOM = 8036
FOCUS = 48980K
>
>
```

```
USER PRESET0 = (****,****,****,****)
> l?
WUXGA Std Lens with Encoder - 3
> zfc
ZOOM = 8036
FOCUS = 48980K
>
> s
POSITION      = (5304,3760)
UPPER LEFT    = (1000,8500)
CENTER        = (4750,4750)
LOWER RIGHT   = (8500,1000)
ZOOM          = (8036,8029)
FOCUS         = (4898,8289)
USER PRESET0  = (****,****,****,****)
USER PRESET1  = (****,****,****,****)
USER PRESET2  = (****,****,****,****)
USER PRESET3  = (****,****,****,****)
USER PRESET4  = (****,****,****,****)
USER PRESET5  = (****,****,****,****)
USER PRESET6  = (****,****,****,****)
USER PRESET7  = (****,****,****,****)
USER PRESET8  = (****,****,****,****)
USER PRESET9  = (****,****,****,****)
>
```

Note:

If you ever run “\$iee”, but not power off.  
Please power off. Then power on again.

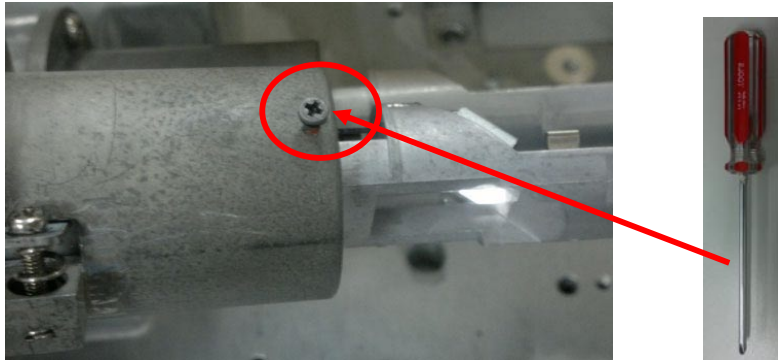
Because when you reset eeprom, myson will send default value to eeprom.  
But the value is not correct.  
So we need restart.

```
> $iee
> s
POSITION      = (5304,3759)
UPPER LEFT    = (1000,8500)
CENTER        = (4750,4750)
LOWER RIGHT   = (8500,1000)
ZOOM          = (7000,10000)
FOCUS         = (7000,10000)
USER PRESET0  = (****,****,****,****)
USER PRESET1  = (****,****,****,****)
USER PRESET2  = (****,****,****,****)
USER PRESET3  = (****,****,****,****)
```

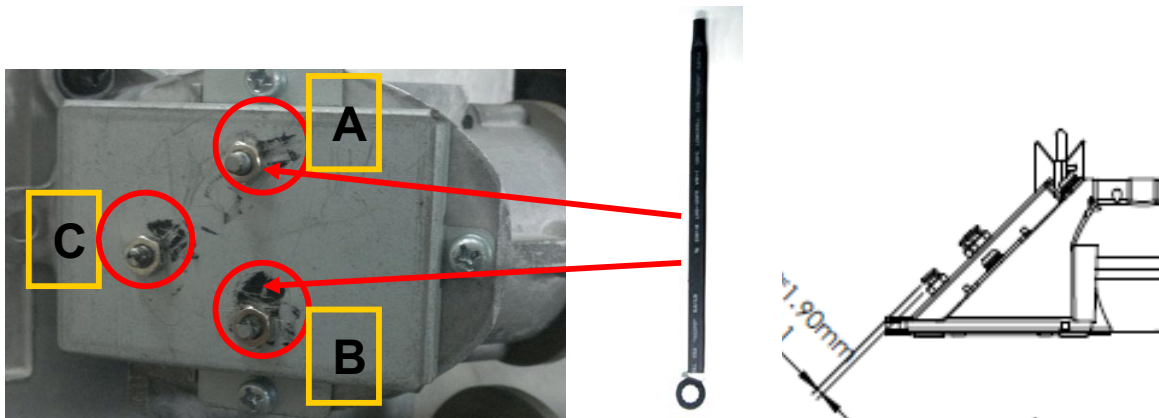
```
COM3:9600baud - Tera Term VT
File Edit Setup Control Window Help
00>3
00>d80>00>00>00>dd
>
> s
POSITION      = (5304,3760)
UPPER LEFT    = (1000,8500)
CENTER        = (4750,4750)
LOWER RIGHT   = (8500,1000)
ZOOM          = (8032,10000)
FOCUS         = (4882,10000)
USER PRESET0  = (****,****,****,****)
USER PRESET1  = (****,****,****,****)
USER PRESET2  = (****,****,****,****)
USER PRESET3  = (****,****,****,****)
USER PRESET4  = (****,****,****,****)
USER PRESET5  = (****,****,****,****)
USER PRESET6  = (****,****,****,****)
USER PRESET7  = (****,****,****,****)
USER PRESET8  = (****,****,****,****)
USER PRESET9  = (****,****,****,****)
```

## SETTING & ADJUSTMENT

### 1-2. Color Band Adjust



Step1. When starting adjusting color band, loosen this screw on the light-pipe with 3.5mm cross screwdriver Jig at first.



Step2-1. Screw nut C is default value (1.9 mm as above drawing). Please don't adjust and touch it.

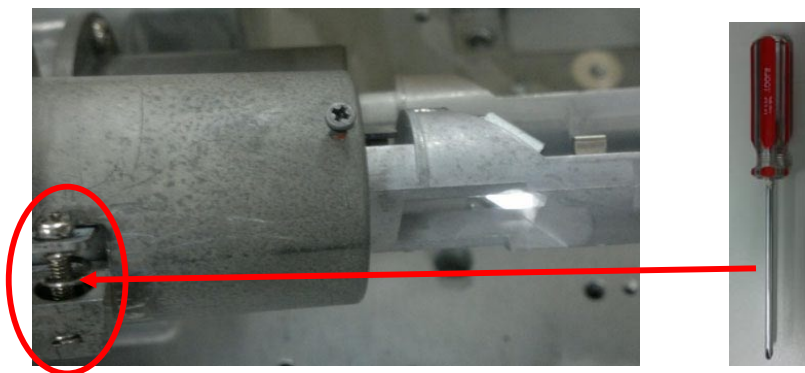
Step2-2. Adjust screw nut A to move the image left and right side on the light-pipe with 5.5mm Inner Hexagon Sleeve Screwdriver Jig.

Step2-3. Adjust screw nut B to move the image up and down side on the light-pipe with 5.5mm Inner Hexagon Sleeve Screwdriver Jig.

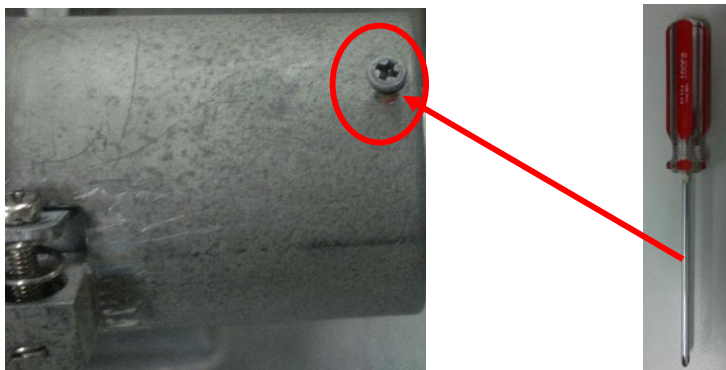


## SETTING & ADJUSTMENT

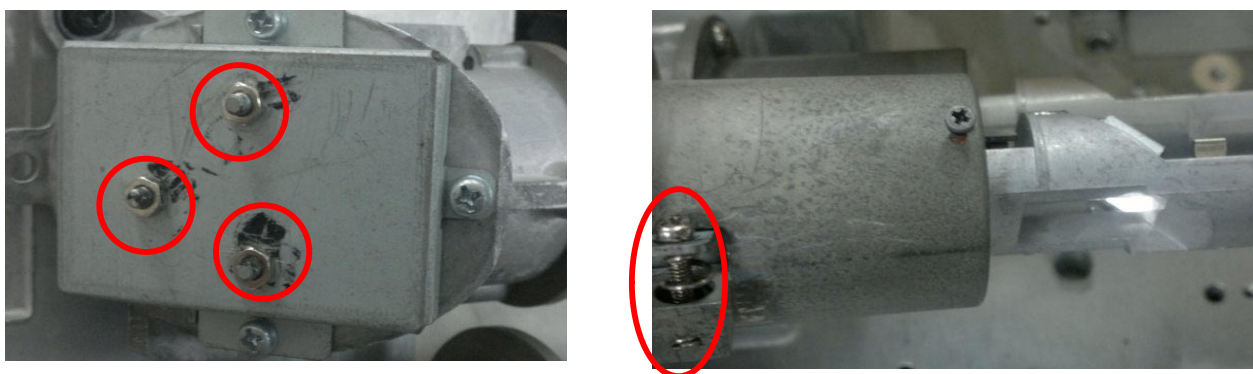
---



Step2-4. When your image is oblique and tilted, please adjust this screw on the light-pipe to rotate the image with 3.5mm cross screwdriver Jig. If your image is straight, please don't adjust and touch it.



Step3. After checking the full-white image around 4 corners without any color band, and then screw up this screw to fix light-pipe by torque 2~2.25 kgf-cm.



Step4. Finally, put TB1401B glue on these four screws to fix it.



### 1-3. Color Calibration Adjust

#### 1. Color Adjustment

\* This adjustment should be carried out after turning on lamp 5 minutes or more.

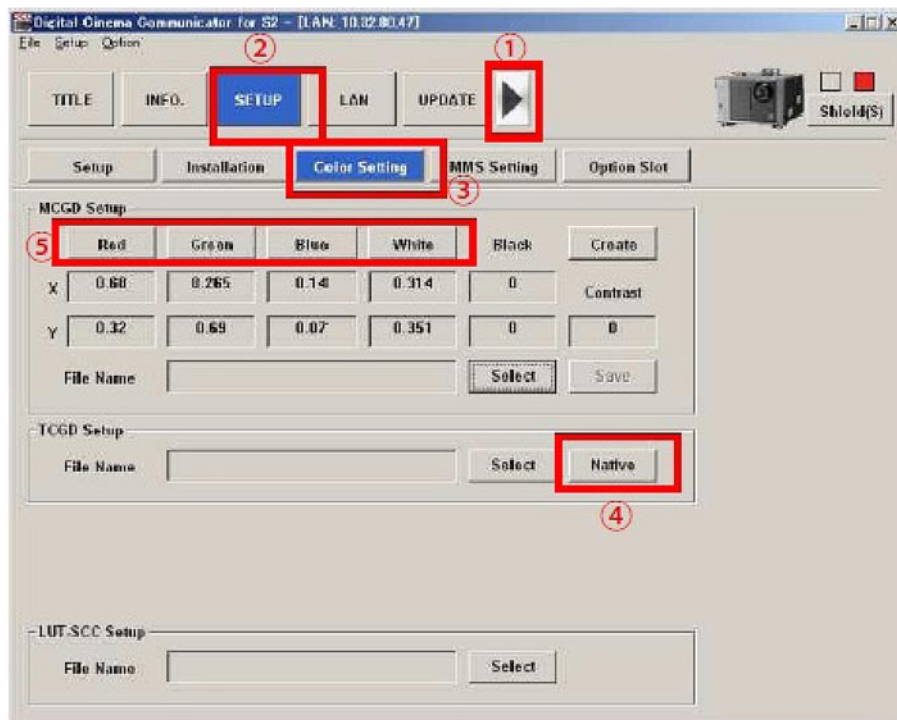
1) "Digital Cinema Communicator" is started.

2) Color Setting

① Press 

② Press **SETUP**

③ Press **Color Setting**



## SETTING & ADJUSTMENT

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### 3) Measurement of Native Color

- ④ Press **Native**
- ⑤ Press **Red** and measure x and y by color meter.
- ⑥ Measure **Green** **Blue** **White** as same way.

\* Measurement point is screen center

### 4) The measurement data should be meet the Native color value.

Native color value

	Red	Green	Blue
x	$\geq 0.670$	$\leq 0.265$	$\leq 0.160$
y	$\leq 0.330$	$\geq 0.690$	$\leq 0.080$

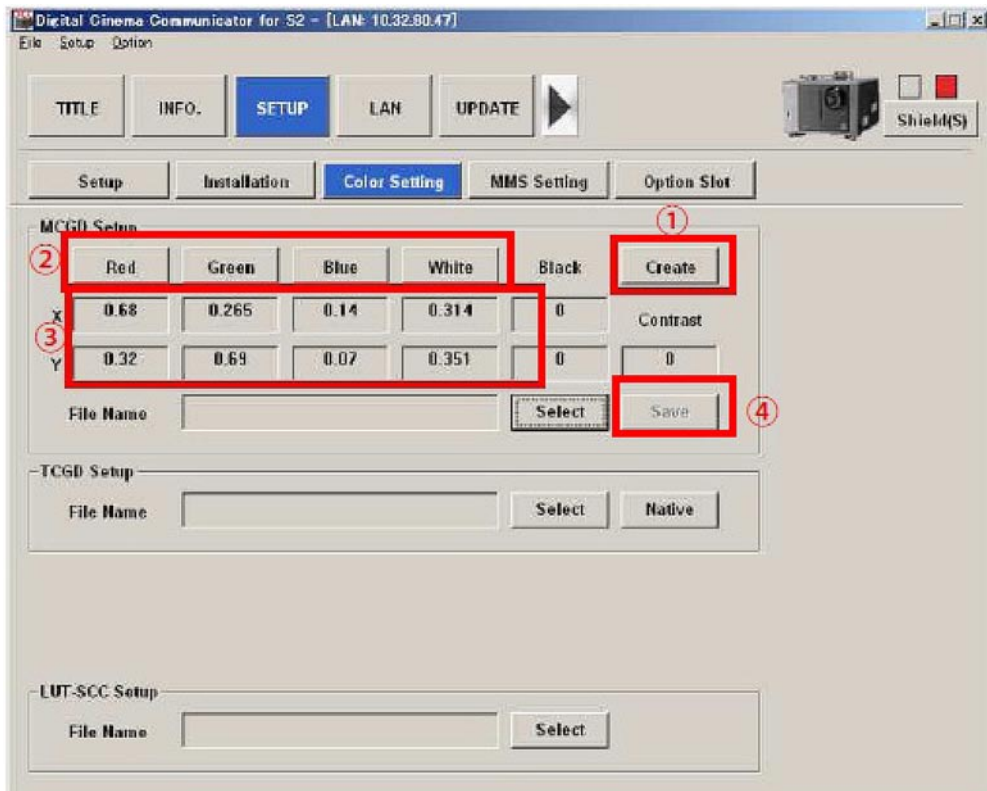
### 5) These data should be recorded.

## SETTING & ADJUSTMENT

### 6) MCGD (Measured Color Gamut Data) data

- ① Press **Create**
- ② Press **Red**
- ③ Input measurement data to Red (x, Y) window.

Input Green, Blue and White data same as Red data.



## SETTING & ADJUSTMENT

- ④ After inputting all color data, Press **Save** to overwrite "M101" file.



\* The measurement point screen center.

- ⑤ Press **Select** in the TCGD Setting Area and select "P7v2 telecine".

Brightness select "P7v2 telecine" file

Color coordinates select "color Verification" file

- ⑥ Press **Select** in the MCGD Setup area and select "M101".

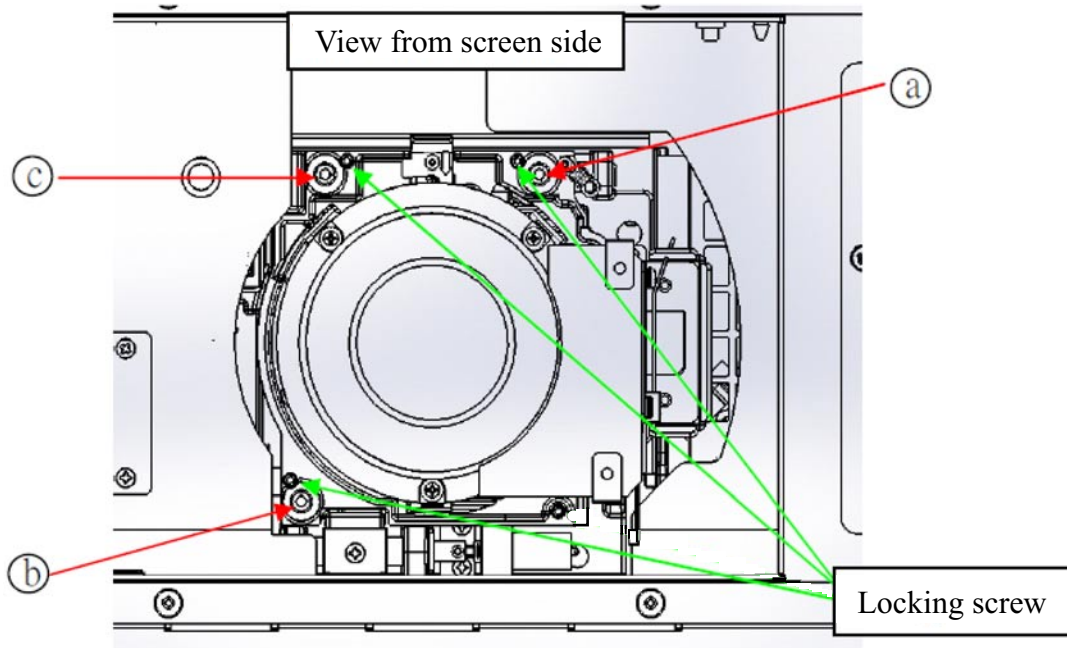


### 1-4. Focus Adjust

#### ■ Procedure for adjusting the focus balance

##### • Structure of lens mount

The three adjustment screws allow the lens to be tilted for uneven screen focus, and three corner screws lock down the adjustment.

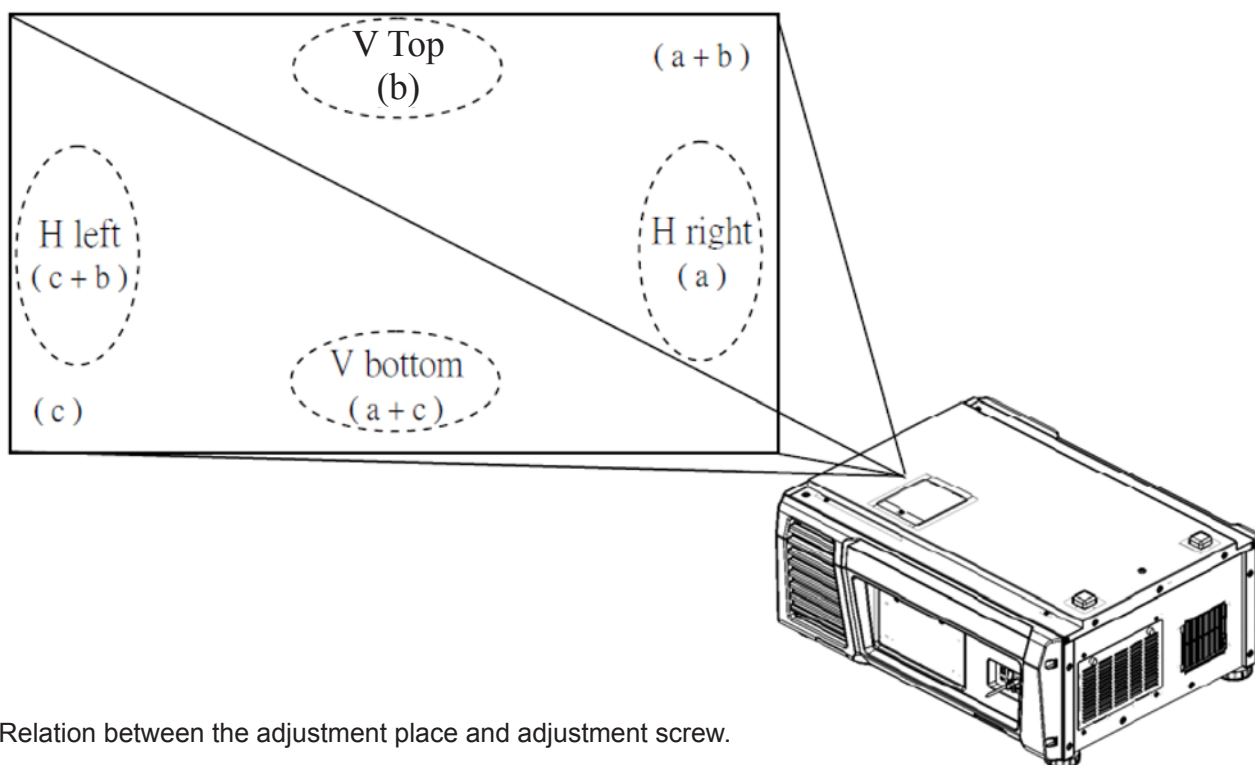


(Adjust the focus adjustment screws (a), (b) and (c) after installing the lens.)

## SETTING & ADJUSTMENT

- **Adjustment procedure**

1. Moving the projector lens position to the optical center position.
2. Display the cross-hatch pattern for focus adjustment.
3. Adjust the lens focus till one or more sides of cross-hatch come into focus.
4. Loosen the locking screws (3pcs), following the indications in the example. The screws (a, b, c) to be adjusted correspond to the out-focus sides of the image.
5. Turn the adjustment screws CW or CCW slightly till the out-of-focus sides are in focus.
6. Readjust the lens shift position if needed. Refocus the image as in step 2 & 3 above.  
Fine adjust the focus evenness as needed. as described in step 5.
7. When adjustment is complete, tighten the locking screws (3pcs).
8. Adjust the image focus.



Relation between the adjustment place and adjustment screw.

## CIRCUIT DESCRIPTION

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### CPU PWB Circuit Operation

The CPU PWB (PWC-4707) is in charge of maintaining the projector functions and the control of major boards.

#### 1. CPU

The S3C2440A-400 (IC7000) is an ARM9 core CPU.

It controls the Reset / Power sequence toward each board, data setting for each device, and the respective functions of the projector.

After the power is ON and the reset condition is canceled by BD4730G (IC7002), the CPU reads out BIOS from the flash memory (IC7008) to start itself up.

After that, the CPU reads the F/W info from the flash memory (IC7009) and starts its behavior based on the data in IC7008.

- Power

The CPU operates on the two types of power supplies specified below.

I/O : 3.3V

Core : 1.3V Stepped down from 3.3V (P3P3V) through the Series Regulator (PQ015YZ01 @IC7001).

- Clock

The SG8002 (X7000) is a 12MHz OSC that is used as a bus clock for the main clock in the CPU and other devices.

- Reset

The BD4730G (IC7002) is used to supervise the main power 3.3V generated in IC7300.

When the 3.3V (P3P3V) line lowers to 3.0V or below, the "low" output is generated and sent to the CPU for resetting.

LED (D7000) is synchronized with this reset status.

Off : CPU Reset

On : CPU Active

- Memory

- Flash memory

MX29LV640EBTI-70G (IC7008): BIOS, data storage

M29W320EB70N6E (IC7009): Firmware storage

- SDRAM

IS42S16160C-7TL(IC7007) is a cash memory.

Synchronized with the bus clock @133MHz.

- Control

External I/O : RS232 (M7002), USB (M7000), Remote control (M7003),

GPIO (M7001), 3D control (M7004)

Projector Ctl : Reset, POWER\_GOOD, POWER\_DOWN, Memory, I2C, UART, SPI

Lamp, LED(Light), MM, etc.

Functions of each I/F

- I2C: EEPROM IC7006 (BR24L32F)

Serial No., cumulative time of projector, lamp, etc., and other data are saved here.

Clock function

The 32.768KHz built-in real-time clock RTC-8564JE (IC7005) is in charge.

A back-up feature is given by the super-capacitor C7036.

- SPI: Light Sensor (via the A/D converter ADCS7476 of DIV)

### 2. ASSIST3

S1L53354 (IC7100) is an ASIC with the functions specified below.

- CPU I/F
- Ethernet Controller I/F
- Lens Mount / Motor Control
- Lamp Power Control
- Fan, Cooler Pump Control
- Control Key Control
- LCD Control
- I2C, UART

(Devices after Ethernet are controlled via the PJDIV PWB.)

Functions of each I/F

I2C : ① 5V I/F

Temperature Sensor (TSENS PWB)  
EEPROM (DIV PWB)  
EEPROM (KEY I/O PWB)  
Control Panel LED Changeover  
Motor Control (for Motor PWB / 3200)

② 3.3V I/F

Fan Control, Supervision  
Buzzer  
Anamo  
Lens Mount Voltage Control  
Light Sensor Reset  
Lamp Door Supervision  
Lamp Temp Supervision  
GPSU Supervision (Fan, voltage)  
Tamper Supervision  
Cooler Pump Supervision

UART

- ① Lamp Power Supply Control (PEDE-A)
- ② Motor Control (Lens Mount)



## CIRCUIT DESCRIPTION

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### 3. LAN

The RTL8100CL (IC7101) is an Ethernet controller with the respective functions of Ethernet MAC, PHY, and Transceiver applicable to 10Mbps, 100Mbps operation.

External projector control and setup are carried out via the LAN.

The CPU functions as a host device and ASSIST3 provides a bridge of CPU bus and PCI bus, and transfers data to the RTL8100CL (IC7101).

The differential data modulated by the RTL8100CL pass through the transformer (T7100) and are sent from the RJ-45 connector (M6003) on the Mother PWB to the outside and other boards via the router.

- Power

The CPU operates on the two types of power supplies specified below.

I/O : 3.3V

Core : 2.5V Stepped down from 3.3V (P3P3V) through the Series Regulator (PQ070XZ01ZP @IC7102).

- PROM

BR93L46RF (IC7103) is a 64\*16-bit EEPROM where the MAX address, ID parameter, etc., are saved.

### 4. External Interface Port

- GPIO M7001 (D-Sub 37pin)

Used for power sequence and signal changeover for the projector.

Input : #5 - #8, #24 - #27

The data level is converted at the photo coupler (IC7205 – 7208) and the input data are entered in the CPU via the buffer (IC7214).

#3, 4, 22, 23 are connected to ICP.

Output : #13 - #18, #32 - #35

The photo coupler (IC7201 – 7204) is driven from the CPU via the buffer (IC7214).

#9, 12, 28, 31 are connected to ICP.

- 3D M7005 (D-Sub 15pin)

3D Control

Level conversion is performed by the SW (IC7215, 7216) and the buffer (IC7213, 7217) under the control from the ICP and CPU.

- RS232 M7002 (D-Sub 9pin)

Used for projector control from external equipment.

Controlled by the CPU via the transceiver (AD3202 IC7218).

Otherwise, the 232C line of the 3D Ctl Port is connected to the CPU via another channel of the same device.

- USB M7000

Controlled by the CPU via the transformer T7101.

LM3525 (IC7110) is the Power SW (+5V) of the USB Port and controlled by the CPU.

This device has a protective circuit. It suspends the supply of power when the output current exceeds 1A.

- Remote control M7003 (Mini Jack)

This connector receives a +5Vp-p signal input from the remote controller through cables.

Waveforms are trimmed by the FET (Q7103, 7104) and the processed signal is fed to the ASSIST3 after level conversion (3.3Vp-p).

The ASSIST3 decodes this signal and the resultant remote control input is sent to the CPU.

IC7102 (PQ070XZ01) supplies the power for remote control drive.

The output from this device is maintained at approximately +4.0V so that +3.3V can be maintained on the remote control side in the case of 16m cable connections.

## 5. H/W Install

## 6. POWER

Refer to the diagram below in regard to the power supply system for the respective devices.

① 12V

② 5V

The main power 3.3V is gained by step-down from 5V through the Series Regulator (PQ070XH02 @ IC7300).

The LED (D7300) is an indicator of this line being in live state.



## CIRCUIT DESCRIPTION

### MOTHER PWB Circuit Operation

The Mother PWB (PWC-4708) is a board intended to make major board connections and relaying for the establishment of the projector functions.

#### 1. Board connections and relaying

Each board is installed in the slot specified below.

The slot is a general-purpose PCIe connector and its board side is of the card edge type.

Inter-board control is carried out through the LAN and each slot is provided with an independent RJ45 connector.

Circuit symbol	PWB	LAN I/F
A1J1/A1J2/A1J3	ICP	M6000
A2J1/A2J2	LEGACY INTERFACE or IMB	M6001
A3J1/A3J2	MMOUT or IMB	M6002
A4J1	CPU	M6003
A5J1	PJDIV	—

\* When multiple circuit symbols are provided, the number of items used applies to a single board (for example: 3 slots occupied for a single piece of ICP).  
A2J2 and A3J2 are the board-attributable slots. All lines OPEN.

#### 2. FSB connections

The FSB is connected among all line ICPs.

##### ① Video, control

The three connectors of M6001, 6002, 6003 are connected with the six twist-pair cables through the repeater board “INTERVENE PWB.”

The INTERVENE PWB is a board intended for the speedy connection and disconnection of cables for maintenance servicing and others.

##### ② Power supply

The 12V, 3.3V, and 2.5V power of the PO6000 is fed to each FSB through branch cables.

The 3.3V and 2.5V power is used for DC/DC converter output relaying on the ICP.

#### 3. POWER

The input power supply of +12V DC is fed to the PO6010 where it is branched and distributed to the respective slots and boards.

#### 4. Outlined bus lines

##### ① Video system

Input A-ch: A3J1 (Mother Board lower-stage input slot) > Mother A1J1 > ICP

Input B-ch: A2J1 (Mother Board upper-stage input slot) > Mother A1J2, A1J1 > ICP

Output: A1J3 (ICP) > PO6001-6003 (FSB\*3)

##### ② Control

A4J1 (CPU) – A5J1 (PJDIV)


A4J1 (CPU) – A1J2 (ICP)

## PART LIST

### SPARE PARTS LIST NP-NC900C-A

ITEM	PART NO.	DESCRIPTION	PHOTO	REMARK
1	79TY1001	TOP COVER ASSY(NC)		
2	79TY1011	LEFT SIDE COVER ASSY(NC)		
3	79TY1021	FILTER COVER ASSY(NC)		
4	79TY1031	RIGHT SIDE COVER ASSY(NC)		
5	79TY1041	FRONT COVER ASSY(NC)		
6	79TY1051	HOOD LENS COVER ASSY(NC)		
7	79TY1061	REAR COVER ASSY(NC)		
8	79TY1071	REAR FILTER COVER ASSY(NC)		
9	79TY1081	BASE COVER ASSY(NC)		
10	79TY1091	LAMP COVER 1(NC)		

## PART LIST

11	79TY1101	LAMP COVER 2(NC)		
12	79TM1231	FOOT BOTTOM		
13	79TY1111	BASE FOOT(NC)		
14	79TY1121	DC FAN(AFB0512VHD 4)(NC)		FAN 4
15	79TY1131	DC FAN(AFB0512VHD 5)(NC)		FAN 5
16	79TM1311	DC FAN(BFB0712HD SP01)		FAN 9
17	79TM1321	DC FAN(BFB0712HD SP01)		FAN 10
18	79TM1351	DC FAN(AFB1212H 3P)		FAN 7 FAN 8
19	79TY1141	DC FAN(AFB1212HHE 14)(NC)		FAN 14
20	79TY1151	DC FAN(AFB1212H 16)(NC)		FAN 16
21	79GP1121	DC FAN(AFB1212H SM09)		FAN 6 FAN 12
22	79TY1161	DC FAN(AFB1212H 13)(NC)		FAN 13
23	79TY1171	DC FAN(AFB1212H 1)(NC)		FAN 1

## PART LIST

24	79TY1181	DC FAN(EFB0512HA )(NC)		ICP FAN
25	79TY1191	DC FAN(AFB0612HC 15)(NC)		FAN 15
26	79TY1201	DC FAN(AFB0612HC 2)(NC)		FAN 2
27	79TY1211	DC FAN(BFB0712LD 11)(NC)		FAN 11
28	79TY1221	DC FAN(AFB0712VHE 3)(NC)		FAN 3
29	79TM1392	SENSOR(H) PWB ASSY		
30	79TY1711	SENSOR(V) PWB ASSY		
31	79TY1231	FORMATTER-R PWB ASSY(NC)		
32	79TY1241	FORMATTER-B PWB ASSY(NC)		
33	79TY1251	FORMATTER-G PWB ASSY(NC)		
34	79TY1261	MOTOR PWB ASSY(NC)		
35	79TM1531	PWM FAN PWB ASSY		
36	79TM1441	FAN-C PWB ASSY		

## PART LIST

37	79GP1251	FAN-D PWB ASSY(PH)		
38	79TY1271	FAN-E PWB ASSY(NC)		
39	79TY1281	LED PWB ASSY 1(NC)		
40	79TY1291	LED PWB ASSY 2(NC)		
41	79TY1301	SLAVE UC PWB ASSY(NC)		
42	79TY1311	FMT ADAPTER PWB ASSY(NC)		
43	79TY1321	KEY PWB ASSY(NC)		
44	79TY1331	INTERLOCK PWB ASSY(NC)		
45	79TY1341	LCD PWB ASSY(NC)		
46	79TY1351	SW PWB ASSY(NC)		
47	79TY1361	AC FILTER PWB ASSY(NC)		PFC_BD
48	79TY1371	AC INLET PWB ASSY(NC)		

## PART LIST












49	79TY1381	POWER SUPPLY-DC(NC)		Power Main_BD
50	7N951811	ICP BOARD1.5 2509274-0008		
51	7N970107	ROUTER BR-CP1400N		
52	81T19C03	CPU PWB ASSY		
53	81X15M01	MOTHER PWB ASSY		
54	79GP1281	BACKLIGHT-B PWB ASSY(PH)		
55	79TY1391	POWER SUPPLY-BS(NC)		Ballast
56	79TY1401	DLP ENGINE SASSY(NC)		
57	79TY1411	PRISM SASSY(NC)		



## PART LIST

58	79TY1421	LENS HOLDER ASSY(NC)		
59	79TY1431	LIGHT SHUTTER ASSY(NC)		
60	79TY1441	INTEGRATOR ASSY(NC)		
61	79TY1451	FILTER HOLDER ASSY 1(NC)		
62	79TY1461	FILTER HOLDER ASSY 2(NC)		
63	79TY1471	CN2P L400(NC)		
64	79TY1481	CN WIRE L60 BLACK(NC)		
65	79TY1491	CN WIRE L60 WHITE(NC)		
66	79TY1501	CN4P L110(NC)		
67	79TY1511	CN8P-24P L420(NC)		
68	79TY1521	CN5P L200(NC)		
69	79TY1531	CN4P L850(NC)		


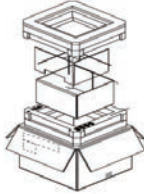

## PART LIST

70	79TY1541	CN2P L270(NC)		
71	79TY1551	CN4P L600(NC)		
72	79TY1561	SW ASSY(FILTER)(NC)		
73	79TY1571	THERMAL STATE ASSY(NC)		
74	79TY1581	SW ASSY 1 (LAMP DOOR)(NC)		
75	79TY1591	THERMAL STATE(AIR IN)(NC)		
76	79TY1601	THERMAL STATE(DMD)(NC)		
77	79TY1611	SW ASSY 2 (LAMP DOOR)(NC)		
78	79TY1621	SPACER(REAR TOP)(NC)		
79	79TY1631	SPACER(FRONT TOP)(NC)		
80	79TY1641	SPACER(BOTTOM)(NC)		

## PART LIST

81	79TY1651	SHEET(2400*1000)(NC)		
82	79TY1661	PE BAG(1300*750)(NC)		
83	79TY1681	CARTON BOX(INSIDE)(NC)		
84	79TY1691	KEY PAD BUBBER(NC)		
85	79GPJ001	T HANDLE		JIG
86	9NYJIG55	SOCKET WRENCH(5.5MM)		JIG
87	79TY1701	DOOR KEY(NC)		
88	79TY1721	FIP SIGNAL CABLE(NC)		
89	79TY1731	SLOT COVER(NC)		

## PART LIST





90	79TY1741	CAP(SPONGE)(NC)		
91	79TYP001	PRISM CARTON BOX		
92	79TYP011	PRISM BASE(NC)		

## PART LIST

### SPARE PARTS LIST NP-NC900C-A+

ITEM	PART NO.	DESCRIPTION	PHOTO	REMARK
1	79TY1001	TOP COVER ASSY(NC)		
2	79TY1011	LEFT SIDE COVER ASSY(NC)		
3	79TY1021	FILTER COVER ASSY(NC)		
4	79TY1031	RIGHT SIDE COVER ASSY(NC)		
5	79TY1041	FRONT COVER ASSY(NC)		
6	79TY1051	HOOD LENS COVER ASSY(NC)		
7	79TY1061	REAR COVER ASSY(NC)		
8	79TY1071	REAR FILTER COVER ASSY(NC)		
9	79TY1081	BASE COVER ASSY(NC)		
10	79TY1091	LAMP COVER 1(NC)		

## PART LIST

11	79TY1101	LAMP COVER 2(NC)		
12	79TM1231	FOOT BOTTOM		
13	79TY1111	BASE FOOT(NC)		
14	79TY1121	DC FAN(AFB0512VHD 4)(NC)		FAN 4
15	79TY1131	DC FAN(AFB0512VHD 5)(NC)		FAN 5
16	79TM1311	DC FAN(BFB0712HD SP01)		FAN 9
17	79TM1321	DC FAN(BFB0712HD SP01)		FAN 10
18	79TM1351	DC FAN(AFB1212H 3P)		FAN 7 FAN 8
19	79TY1141	DC FAN(AFB1212HHE 14)(NC)		FAN 14
20	79TY1151	DC FAN(AFB1212H 16)(NC)		FAN 16
21	79GP1121	DC FAN(AFB1212H SM09)		FAN 6 FAN 12
22	79TY1161	DC FAN(AFB1212H 13)(NC)		FAN 13
23	79TY1171	DC FAN(AFB1212H 1)(NC)		FAN 1

## PART LIST

24	79TY1181	DC FAN(EFB0512HA )(NC)		ICP FAN
25	79TY1191	DC FAN(AFB0612HC 15)(NC)		FAN 15
26	79TY1201	DC FAN(AFB0612HC 2)(NC)		FAN 2
27	79TY1211	DC FAN(BFB0712LD 11)(NC)		FAN 11
28	79TY1221	DC FAN(AFB0712VHE 3)(NC)		FAN 3
29	79TM1392	SENSOR(H) PWB ASSY		
30	79TY1711	SENSOR(V) PWB ASSY		
31	79TY1231	FORMATTER-R PWB ASSY(NC)		
32	79TY1241	FORMATTER-B PWB ASSY(NC)		
33	79TY1251	FORMATTER-G PWB ASSY(NC)		
34	79TY1261	MOTOR PWB ASSY(NC)		
35	79TM1531	PWM FAN PWB ASSY		
36	79TM1441	FAN-C PWB ASSY		

## PART LIST

37	79GP1251	FAN-D PWB ASSY(PH)		
38	79TY1271	FAN-E PWB ASSY(NC)		
39	79TY1281	LED PWB ASSY 1(NC)		
40	79TY1291	LED PWB ASSY 2(NC)		
41	79TY1301	SLAVE UC PWB ASSY(NC)		
42	79TY1311	FMT ADAPTER PWB ASSY(NC)		
43	79TY1321	KEY PWB ASSY(NC)		
44	79TY1331	INTERLOCK PWB ASSY(NC)		
45	79TY1341	LCD PWB ASSY(NC)		
46	79TY1351	SW PWB ASSY(NC)		
47	79TY1361	AC FILTER PWB ASSY(NC)		PFC_BD
48	79TY1371	AC INLET PWB ASSY(NC)		














## PART LIST

49	79TY1381	POWER SUPPLY-DC(NC)		Power Main_BD
50	7N951811	ICP BOARD1.5 2509274-0008		
51	7N970107	ROUTER BR-CP1400N		
52	81T19C03	CPU PWB ASSY		
53	81X15M01	MOTHER PWB ASSY		
54	79GP1281	BACKLIGHT-B PWB ASSY(PH)		
55	79TY1391	POWER SUPPLY-BS(NC)		Ballast
56	79TY1401	DLP ENGINE SASSY(NC)		
57	79TY1411	PRISM SASSY(NC)		

## PART LIST

58	79TY1421	LENS HOLDER ASSY(NC)		
59	79TY1431	LIGHT SHUTTER ASSY(NC)		
60	79TY1441	INTEGRATOR ASSY(NC)		
61	79TY1451	FILTER HOLDER ASSY 1(NC)		
62	79TY1461	FILTER HOLDER ASSY 2(NC)		
63	79TY1471	CN2P L400(NC)		
64	79TY1481	CN WIRE L60 BLACK(NC)		
65	79TY1491	CN WIRE L60 WHITE(NC)		
66	79TY1501	CN4P L110(NC)		
67	79TY1511	CN8P-24P L420(NC)		
68	79TY1521	CN5P L200(NC)		
69	79TY1531	CN4P L850(NC)		

## PART LIST

70	79TY1541	CN2P L270(NC)		
71	79TY1551	CN4P L600(NC)		
72	79TY1561	SW ASSY(FILTER)(NC)		
73	79TY1571	THERMAL STATE ASSY(NC)		
74	79TY1581	SW ASSY 1 (LAMP DOOR)(NC)		
75	79TY1591	THERMAL STATE(AIR IN)(NC)		
76	79TY1601	THERMAL STATE(DMD)(NC)		
77	79TY1611	SW ASSY 2 (LAMP DOOR)(NC)		
78	79TY1621	SPACER(REAR TOP)(NC)		
79	79TY1631	SPACER(FRONT TOP)(NC)		
80	79TY1641	SPACER(BOTTOM)(NC)		

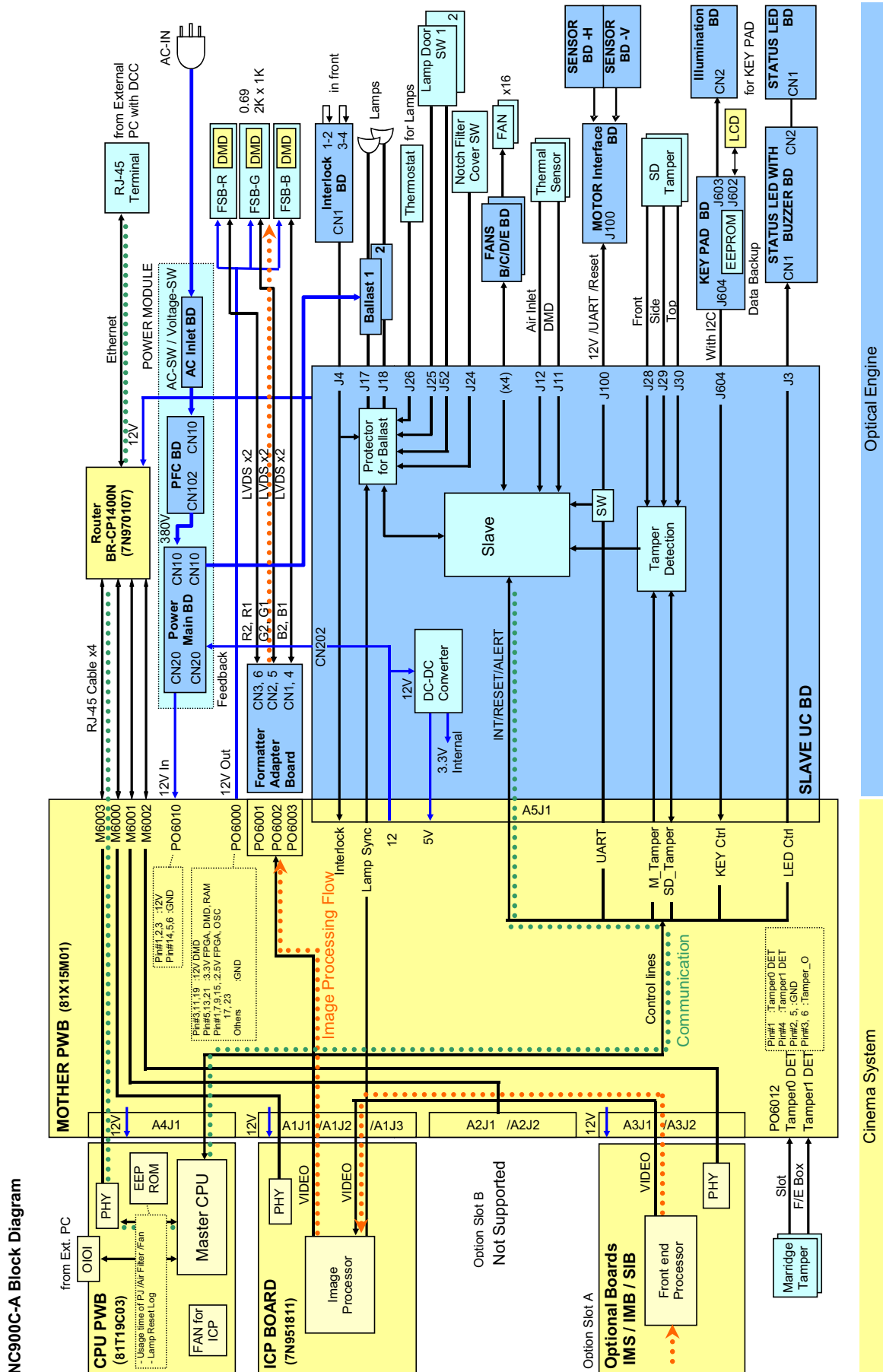
## PART LIST

81	79TY1651	SHEET(2400*1000)(NC)		
82	79TY1661	PE BAG(1300*750)(NC)		
83	79TY1681	CARTON BOX(INSIDE)(NC)		
84	79TY1671	CARTON BOX(OUTSIDE)(NC)		
85	79TM1111	POWER CORD STOPPER		
86	79TM1051	POWER CORD(C)		
87	79TY1691	KEY PAD BUBBER(NC)		
88	79GPJ001	T HANDLE		JIG
89	9NYJIG55	SOCKET WRENCH(5.5MM)		JIG
90	79TY1701	DOOR KEY(NC)		

## PART LIST

91	79TY1721	FIP SIGNAL CABLE(NC)		
92	79TY1731	SLOT COVER(NC)		
93	79TY1741	CAP(SPONGE)(NC)		
94	79TYP001	PRISM CARTON BOX		
95	79TYP011	PRISM BASE(NC)		

## 1. Block Diagram



**NEC**