NEC

DLP Cinema™ Projector

Installation Manual

NEC Viewtechnology, Ltd.

Introduction

DLP Cinema™ Projector Installation and Adjustment NEC Viewtechnology, Ltd. Manual (This document) describes the procedures to install, adjust and maintain the projector 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.

*This document consists of five sections as follows:

- NC2500S : This section explains about NC2500S projector.
- Touch Panel : This section explains about the touch panel controller (NC-TP6401).
- MMS : This section explains about the multimedia switcher (MM2000B).
- NC1500C : This section explains about NC1500C projector. [T.B.D]
- NC800C : This section explains about NC800C projector. [T.B.D]

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NC2500S

Touch Panel

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NC1500C

[T.B.D]

NC800C

[T.B.D]

DLP Cinema™ Projector Installation manual

NC2500S

WARNING

TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE. ALSO DO NOT USE THIS UNIT'S POLARIZED PLUG WITH AN EXTENSION CORD RECEPTACLE OR OTHER OUTLETS, UNLESS THE PRONGS CAN BE FULLY INSERTED. REFRAIN FROM OPENING THE CABINET AS THERE ARE HIGH-VOLTAGE COMPONENTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

CAUTION

RISK OF ELECTRIC SHOCK DO NOT OPEN

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.

Precautions: Please read this prior to setup to use your **NC2500S** safely. To use this projector safely, always observe the following precautions when setting up the projector and lamp power supply. There is the possibility of serious accidents that can lead to death or serious injuries if the projector is handled improperly because these precautions were ignored. Handle this projector only after you completely understand these precautions.

DOC compliance Notice

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

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.

Warning

Lamp power supply setup conditions

- The location where you setup the lamp power supply should have plenty of space in front of the air inlet and air outlet to prevent the inside of that unit from becoming excessively hot. Ensure that air can flow inside the unit to allow the inside to be cooled. As a guide, there should be at least 20 cm of free space in front of the air inlet and at least 50 cm in front of the air outlet.
- Particularly, if storing the lamp power supply in a rack or case, see section "Lamp power supply unit installation conditions" to ensure that there is plenty of opening area on the portions facing the lamp power supply air inlet and air outlet. Also, a duct structure should be configured to lead to the air outlet on the rack or case so that the exhaust air from the lamp power supply can be discharged. This is to ensure that the air does not circulate only inside the rack or case.

Always connect to a ground prior to connecting to the AC power supply.

- A very high, leaked current will flow to the projector and lamp power supply frame. Therefore, always connect to a ground prior to connecting to the AC power supply.

Connecting the lamp power supply and AC power supply

- AC power from the building's AC 3 phase power facility supplied to the lamp power supplied should be connected via a breaker having a maximum rating of 40A.
- The cable connecting the building's AC 3 phase power facility and lamp power supply should have a core wire thicker than 8AWG and the core wire material should be copper.
- The connector for connecting the lamp power supply and AC power supply should be UL and CSA certified. It should be correctly mounted as described in this manual.

Connect the projector to exhaust equipment.

- Use a duct, etc., to connect the projector's air outlet to exhaust equipment that can handle flow amounts of at least 16 m^3/min. See section "Exhaust equipment specifications" in this manual to mount it correctly.

Installation

1. 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.

2. Do not place the projector in direct sunlight, near heaters or heat radiating appliances.
3. Exposure to direct sunlight, smoke or steam could harm internal components.
4. Handle your projector carefully. Dropping or jarring your projector could damage internal components.
5. To carry the projector, a minimum of five persons are required.
   Do not hold the lens part and the three anamorphic lens shafts with your hand. Otherwise the projector may tumble or drop, causing personal injury.
6. Do not place heavy objects on top of the projector.
7. If you wish to have the projector installed on the ceiling:
   a Do not attempt to install the projector yourself.
   b The projector must be installed by qualified technicians in order to ensure proper operation and reduce the risk of bodily injury.
   c In addition, the ceiling must be strong enough to support the projector and the installation must be in accordance with any local building codes.

d Please consult your dealer for more information. Do not attempt to stack projectors on the ceiling.

Power Supply

1. The projector is so designed that it operates with the power supply voltage described below.
   - Projection Head:
     0.95kW AC200-240V 50/60Hz
     Single-phase
   - Lamp Power Supply Unit:
     8.0kW 28A AC200-230V 50/60Hz
     Three-phase (Star connection),
     8.0kW 16A AC380-415V 50/60Hz
     Three-phase (Star connection)

   Ensure that your power supply fits this requirement before attempting to use your projector.
2. Consult your dealer for installing the power cord to the projector. DO NOT install the power cord by yourself. Doing so may cause a fire or electric shock.
3. Handle the power cord carefully and avoid excessive bending. Do not place any heavy objects on the power cord. A damaged cord can cause electric shock or fire.
4. If the projector will not be used for an extended period of time, shut down AC power.
5. Placing the power cord 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.
6. Do not touch the projector during a thunder storm. Doing so can cause electrical shock or fire.

Cleaning

1. Shut down AC power to the projection head and the lamp power supply unit before cleaning.
2. Clean the cabinet periodically with a damp 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.

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 8 inches (20cm) of space between your projector and a wall. Allow at least 20 inches (50 cm) of space between the ventilation outlet of the lamp power supply unit and an object. Connect the projector exhaust outlet with the exhaust equipment having a capacity of $16m^3$/min or more.
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. Do not place any liquids on top of your projector. Refer servicing to qualified service personnel if liquid has been spilled.
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. Do not cover the lens with the supplied lens cap or equivalent while the projector is on. Doing so can lead to melting of the cap and possibly burning your hands due to the heat emitted from the light output.
6. When using a LAN cable: For safety, do not connect to the connector for peripheral device wiring that might have excessive Voltage.

CAUTION: High Pressure Lamp May Explode if Improperly Handled. Refer Servicing to Qualified Service Personnel.

Lamp Caution: Please read before operation

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 "Lamp Warning". When you see this message please contact your dealer for a replacement. 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 Xenon 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.

WARNING:

1. Do not look into the lens while the projector is on. Serious damage to your eyes could result.
2. When main body is damaged, cooling fluids may come out of internal part. DO NOT touch and drink the cooling fluid. When the cooling fluids are swallowed or contacted with your eyes, please consult with doctors immediately.

CAUTION

Never unplug the projection head power plug from the outlet or disconnect the breaker connected to the AC power cord of the lamp power supply unit under the following conditions. Doing so can cause damage to the projector:

- While projecting image
- While cooling after the lamp has been turned off. (The POWER indicator blinks in orange while the fan is rotating, and the LCD screen is displaying "cooling...").

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 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.

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1.

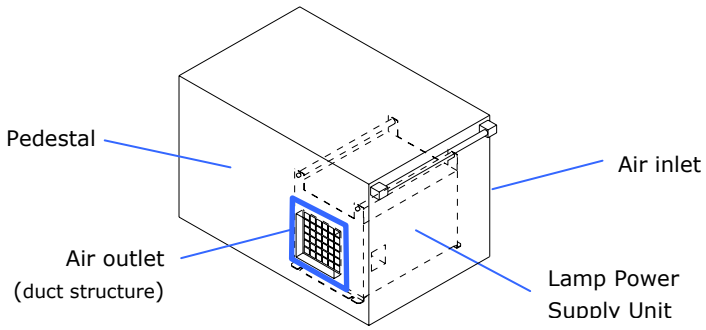
Before Setting Up Your Projector

1.1 Lamp power supply unit installation conditions

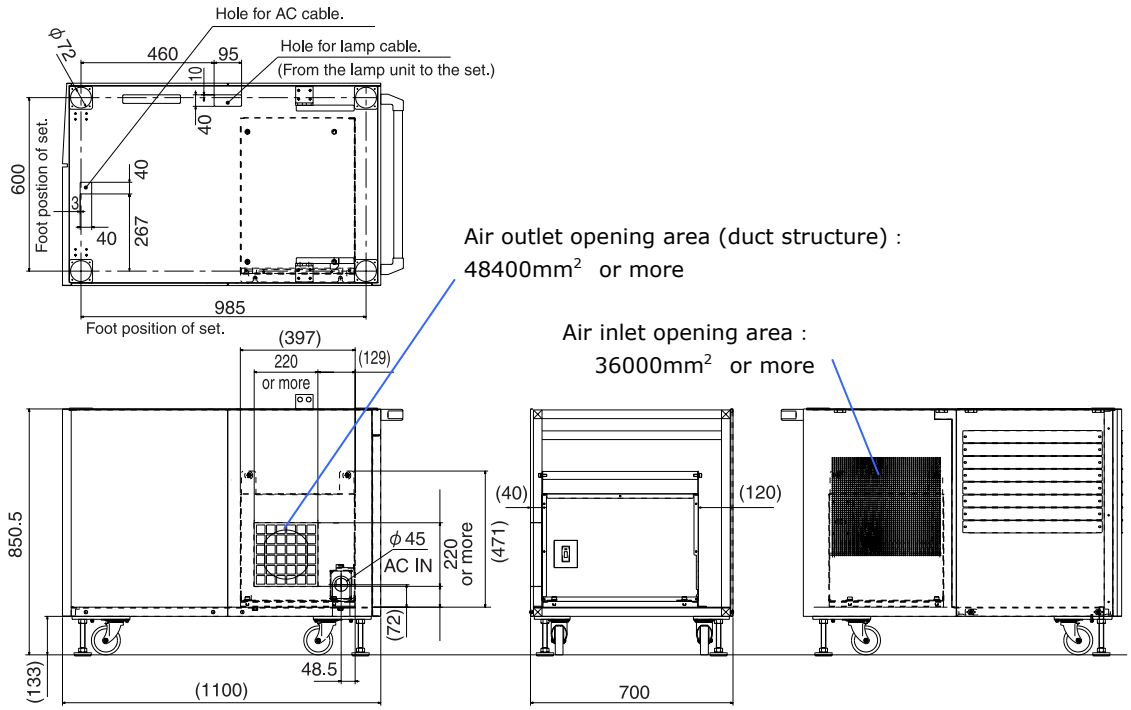
The location where you install the lamp power supply unit must have a plenty of space in front of the air inlet and air outlet to prevent the inside of that unit from becoming excessively hot. Ensure that air can flow inside the unit to allow the inside to be cooled. Be careful of the following points when setting up the lamp power supply unit.

When the lamp power supply unit is not stored in a rack or case:	Lay out the lamp power supply unit so that a sufficient space is assured around it. - Space in front of the air inlet (guide): 20 cm at least - Space in front of the air outlet (guide): 50cm at least
When the lamp power supply unit is stored in a rack or case:	Ensure a plenty of case opening area on the portions facing the air inlet and the air outlet of the lamp power supply unit. - Air inlet opening area: 36000 mm^2 at least - Air outlet opening area: 48400 mm^2 at least, duct structure
	A duct structure should be configured to lead to the air outlet on the rack or case so that the exhaust from the lamp power supply unit can be exhausted. This is to ensure that the air does not circulate only inside the rack or case.
	Lay out the rack or case storing the lamp power supply unit so that a sufficient space is assured around them. - Space in front of the air inlet (guide): 20 cm at least - Space in front of the air outlet (guide): 50cm at least

Shown below is an example where the lamp power supply unit is installed to the pedestal (NC-PD01).



Example where the lamp power supply unit is installed to the Pedestal (NC-PD01)



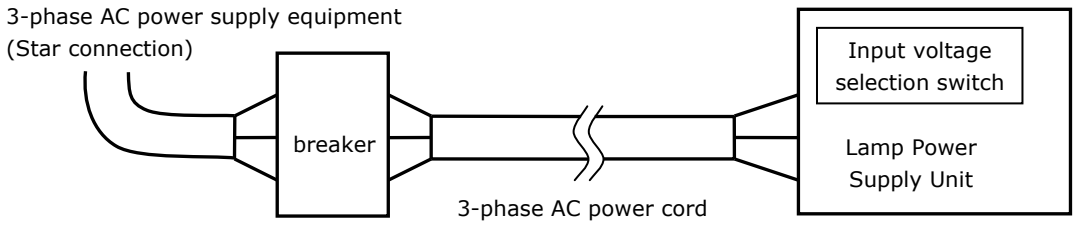
Unit ; mm

For installation procedure, refer to "2.2.1 Mounting a lamp power supply unit to the pedestal" (Page A-20).

1.2 Power supply construction specifications

Make sure to observe the contents described in this section.

* Entrust a specialist to carry out the power supply work from the power supply equipment of the building to the place of projector installation.



3-phase AC power supply equipment

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

200 Vac to 230 V	AC 3 phase power of 50/60 Hz or
380 Vac to 415 V	AC 3 phase power of 50/60 Hz

- 3-phase AC power should be supplied from the power supply equipment with star connection to the lamp power supply unit.

Note that it is not necessary to connect neutral lines in this machine

Breaker

- Connect the AC power supply from the 3-phase power supply equipment of the building to the lamp power supply unit via a breaker. Determine the breaker capacity depending on the voltage of the AC power supply used.

The breaker capacity will be as follows depending on the power supply voltage.

AC power supply voltage used	Breaker current capacity
200V-230V	40A or more
380V-415V	20A or more

3-phase AC power supply cord

- Use a cord having a thickness of 8AWG or 6AWG and with a core wire made of copper.
- Use a round type UL-listed solderless terminal for the section connected to the lamp power supply unit.

In addition, when clamping this terminal with the cable, use an UL listed tool.

- Cut the outer coating of the power cable for 300 mm from the solderless terminal section to have separated wires.

Input voltage selection switch

- Set the input voltage selection switch for the lamp power supply corresponding to the voltage of the AC power supply used. Set it as follows:

AC power supply voltage used	Switch setting
200V-230V	200V
380V-415V	400V

Mounting terminals

The specifications of the cable mounting terminals of the lamp power supply unit are as follows:

Power terminal (Gray)

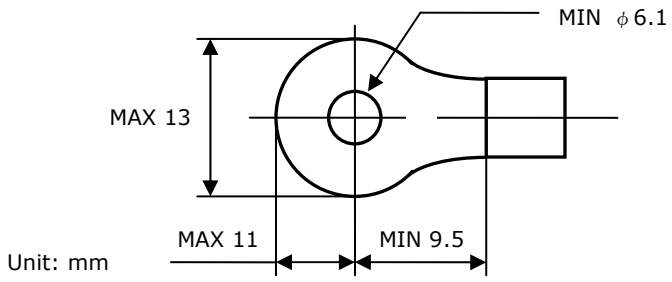
	JIS	IEC/EN	UL	CSA
Complying wire (using solderless terminal)	14mm^2	14mm^2	AWG6 or AWG8	AWG6 or AWG8
Terminal screw	M6x15			
Tightening torque	2.5 ~ 3.5Nm			

Grounding terminal (Green/yellow)

	JIS	IEC/EN	UL	CSA
Complying wire (using solderless terminal)	14mm^2	14mm^2	AWG6 or AWG8	AWG6 or AWG8
Terminal screw	M6x15			
Tightening torque	2.5 ~ 3.5Nm			

Solderless terminal

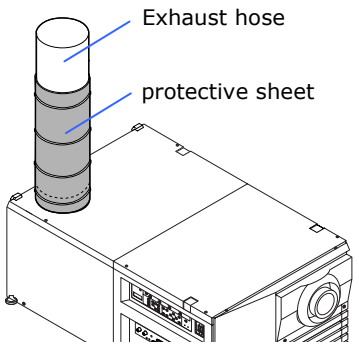
Size of the solderless terminal compatible with the AC power cable mounting section of the lamp power supply unit is as follows:



1.3 Exhaust equipment specifications

It is necessary to connect the air outlet of the projector to the exhaust equipment. The accessory protective sheet should also be mounted because the area around the air outlet can become very hot. For Exhaust equipment Installation, see "2.7. Mounting the exhaust equipment" (Page A-35).

Exhaust	16m^3/min. or more
Air outlet size (external diameter)	about 200mm



1.4 Selecting Primary/Anamorphic Lenses for Your Projector

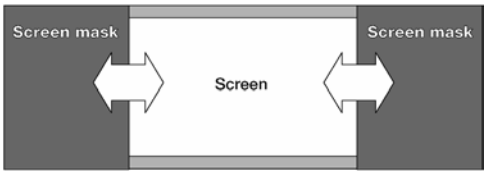
This section provides guideline information on how to select a screen size and projector mounting position appropriate for your presentation purposes and about selection of types of lenses as well. Select primary/anamorphic lenses for your projector according to the environment in which it is installed.
Note that all descriptions given in this manual suppose that the angle of projection is zero degree. Therefore, you need to calculate the projector tilt/pan angle so that it can be minimized during projection when you project slides downward or from a side.

1.4.1 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 lenses because types of primary/anamorphic lenses to be used on the projector and its settings depend upon the type of screen mask you use.

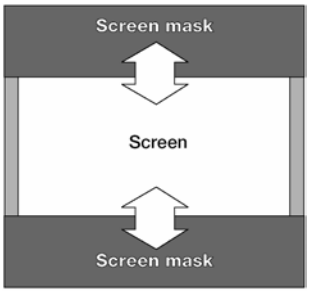
Horizontal moving screen mask

Screen masks move horizontally to adjust the screen.



Vertical moving screen mask

Screen masks move vertically to adjust the screen.



1.4.2 Selection of Anamorphic Lens

An anamorphic lens is required when you use a wide screen for projection. Because a different type of anamorphic lens should be used according to the type of projector and screen, determine an appropriate anamorphic lens in consultation with the end user, considering its application purpose. See the table below for available anamorphic lenses.

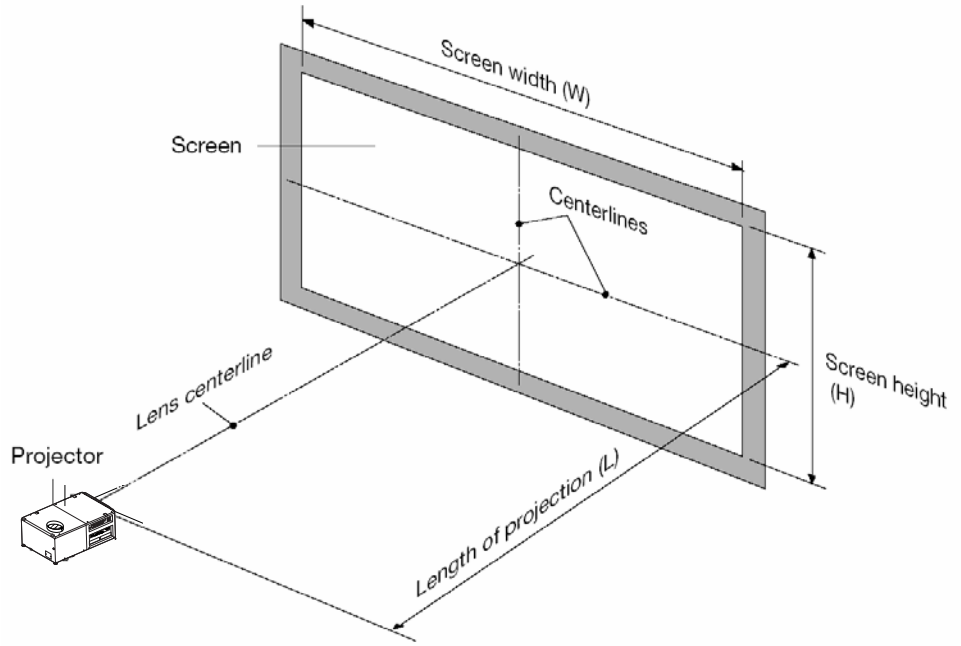
Available Anamorphic Lenses

Screen mask type	Screen Type	Anamorphic lens	Remarks
Horizontal moving	SCOPE	×1.25	
	VISTA	—	
	HDTV	—	
Vertical moving	SCOPE	×1.25 or None	No anamorphic lens should be used if the zooming power of the primary lens is insufficient.
	VISTA	—	
	HDTV	—	

Memo

- Some settings for screen presentation may be required when vertical moving screen masks.

1.4.3 Selection of Primary Lens

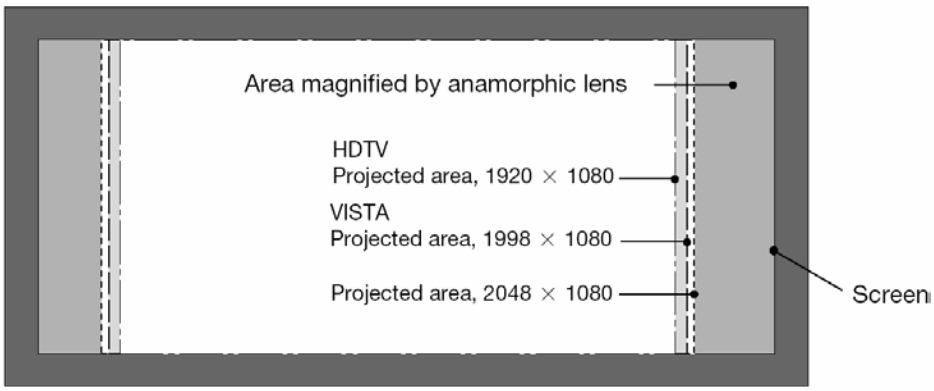


Option lenses

MODEL	Magnifying
L2K-14ZM	1.45 - 1.8
L2K-18ZM	1.8 - 2.4
L2K-22ZM	2.2 - 3.0
L2K-30ZM	3.0 - 4.3

Projected Images

The anamorphic lens works to magnify projected images horizontally when you use a wide screen for projection (SCOPE).



How to Calculate the Magnification of Primary Lens

SCOPE projection:

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

Use 1x for anamorphic lens magnification if this lens is not in use.

VISTA/HDTV projection:

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

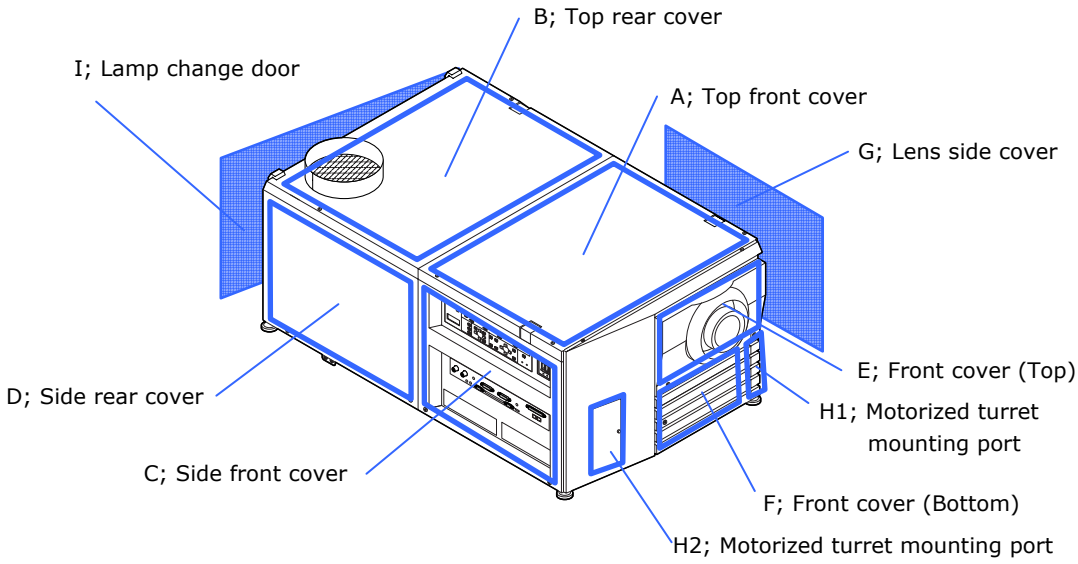
* Number of pixels per horizontal line: 1998 for VISTA; 1920 for HDTV

* Select a lens that meets the magnification requirement for both SCOPE and VISTA/HDTV screen types.

1.5 Removing the projector covers

You can remove covers of the projector by opening hexagonal fasteners.
As shown below, a projector has 9 covers:

Name of the cover



Remarks for cover mounting and removal

- You cannot remove the top rear cover (B) without removing the top front cover (A) first.
- To the top rear cover (B), the cables for rear status indicator are connected. When removing the top rear cover, it is necessary to remove the cables for rear status indicator, too. Refer to "1.5.1. Top rear cover removal procedure (Page.A-17)" for the procedure.
- When mounting the top front cover (A) and the top rear cover (B), connect the cables for rear status indicator and then mount the top rear cover (B) first. Refer to "1.5.2. Top cover mounting procedure (Page.A-18)" for the procedure.

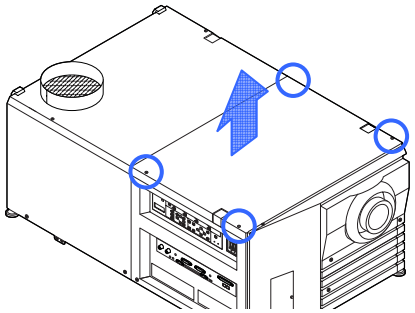
The table below shows the covers which need to be removed at each step.

Step	Covers (*:the covers which need to be removed at each step)								
	A	B	C	D	E	F	G	H1	H2
Connecting the Lamp power cord	*	*		*					
Connecting the Lamp control cable						*			
Connecting the AC power cord						*			
Connecting the Touch Panel (optional)	*	*							
Mounting the Primary lens					*				
Mounting the Turret								*	*
Mounting the Small iris							*		
Mounting the MMS (optional)	*		*						
Mounting the Exhaust equipment									

1.5.1 Top rear cover removal procedure

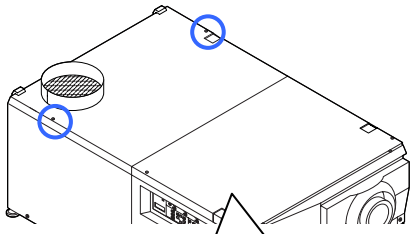
[1] Remove the top front cover of the projector.

Remove the hexagonal fasteners at the top (at 4 places) and remove the front (lens side) cover.



[2] Open the top rear cover of the projector and place it on the top of the projector once.

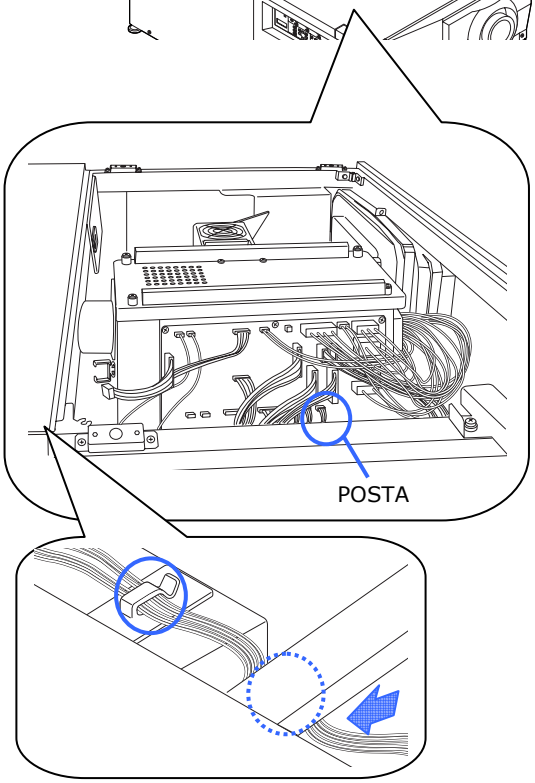
Remove the hexagonal fasteners (2 places) on the top.



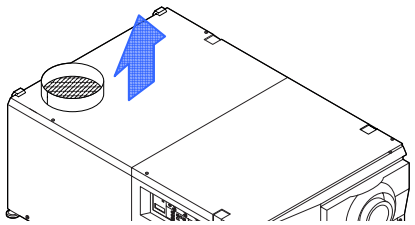
[3] Remove the cables for rear status indicator.

To the top rear cover, the cables from rear status indicators are connected (2 places). Before removing the cover, remove the cables as follows:

<1> Remove the cables from the board (Connector name: POSTA).
<2> Lift up the cover for about 5 cm.
<3> Remove the cables from the clamp in front of you.



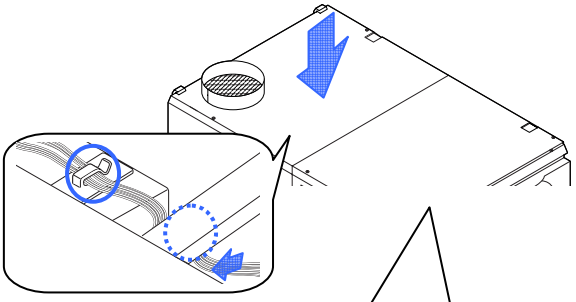
[4] Remove the top rear cover.



1.5.2 Top cover mounting procedure

[1] Place the top rear cover of the projector once on the top of the projector.

Place it at a position where the cables from rear status indicators can be connected.

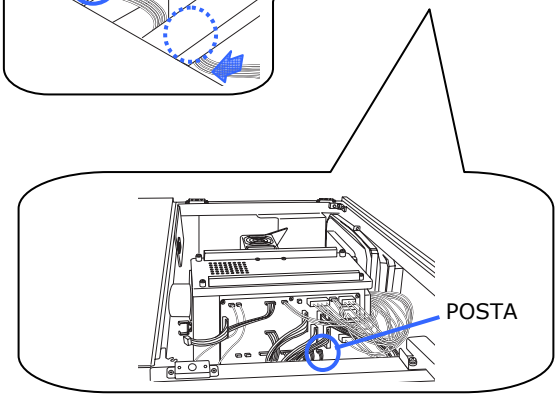


[2] Connect the cables for rear status indicator.

Before mounting the top rear cover, it is necessary to connect the cables.

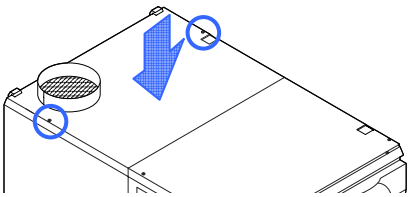
<1> Pass the cables through the clamp of the projector.

<2> Connect the cables to the connector of the board (Connector name: POSTA).



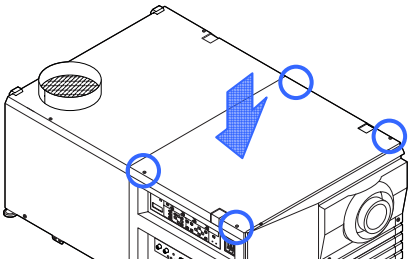
[3] Mount the top front cover of the projector.

Mount the top rear cover using the hexagonal fasteners at the top (2 places).



[4] Mount the top rear cover.

Mount the top front cover using the hexagonal fasteners at the top (4 places).



1.5.3 Side cover removal & mounting

Side cover removal procedure

Remove the side covers (side front cover, side rear cover and lens side cover) by removing the hexagonal fasteners (2 places) at the bottom of covers and pulling down the covers.

Side cover mounting procedure

Insert the covers to the top of the cover mounting positions and mount them using hexagonal fasteners (2 places) at the bottom of covers.

2.

Setting Up Your Projector

2.1 Setup procedure

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

-Step1
Projector installation (See page A-20)
-Step2
Connecting the power cord (See page A-22)
-STEP3
Mounting the primary lens (See page A-29)
- STEP4
Mounting the anamorphic lens motorized turret (See page A-31)
- STEP5
Installation of Small Iris (Information for Service Personnel) (See page A-33)
- STEP6
Mounting Exhaust equipment (See page A-35)
- STEP7
Mounting the lamp bulb (See page A-35)
- STEP8
Mount the following optional parts as required.
Install a touch panel (See "Touch Panel Section").
Install a multimedia switcher (See "MM2000B Section")

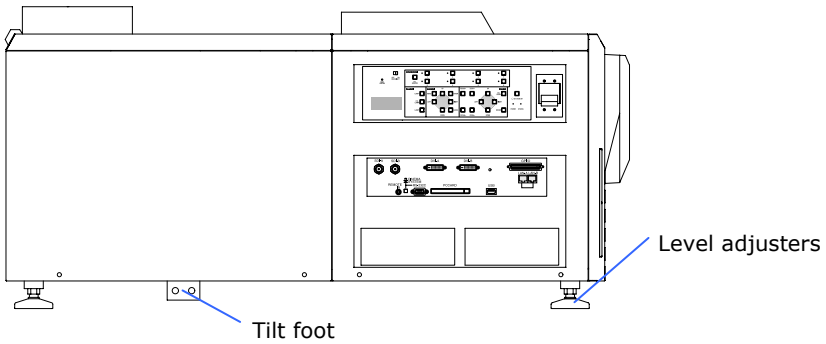
2.2 Projector installation

Move the projector to the projection position and install it corresponding to the screen and projection conditions.
By mounting an exclusive pedestal (NC-PD01 separately sold) and tilt feet, you can adjust the tilting angle. For adjustment of the tilting angle, refer to the pedestal (NC-PD01) manual.
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 10mm at the maximum (Rotate it counterclockwise for extension).

Memo

- If you use the pedestal (NC-PD01), the projector is fixed to the pedestal. In this case, correct the inclination to the right or left of the projector using the level adjusters on the pedestal side.

⚠ Caution	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.

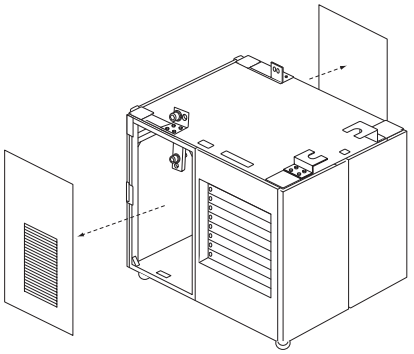


2.2.1 Mounting a lamp power supply unit to the pedestal

This section describes the procedure to mount the lamp power supply unit to the pedestal (NC-PD01). If you do not use an installation base, proceed to "2-3. Connecting the power cord" (Page A-22).
Execute the work below with referring to the NC-PD01 installation manual.

[1] Remove the covers at the back and side back of the pedestal.

[2] Remove two M10x20 screws fastening the bottom of the back on the pedestal.

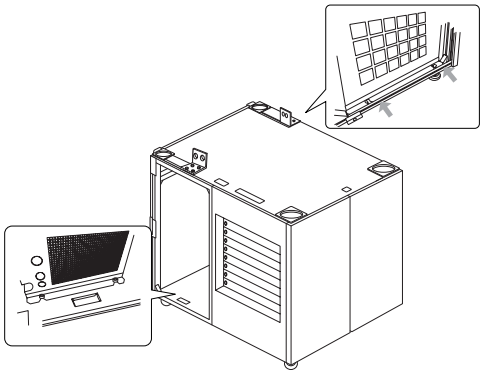


[3] Put the lamp power supply unit into the back of the pedestal.

This work should be executed by two or more workers.

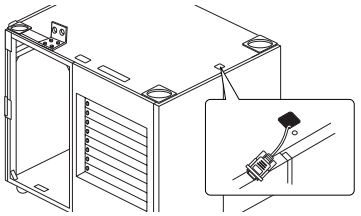
[4] Fix the lamp power supply unit.

Fix the lamp power supply unit using the screws removed at Step 2 with aligning it with the guide on the bottom plate of the pedestal.



[5] Connect the exclusive interface cable to the lamp power supply unit.

Remove the cover at the front side of the pedestal. Pass the exclusive interface cable through the hole of the pedestal partition, put it toward the front side and pull it out of the hole at the top on the front side of the pedestal.



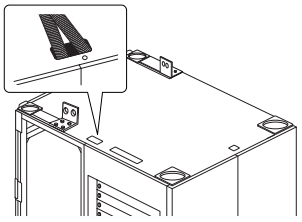
[6] Connect the exclusive interface cable to the projector.

For connection procedure, refer to 2-3-3.

Bundle any excessive cables in connection of exclusive interface cable at the back of the pedestal.

[7] Connect the lamp power cable to the projector.

For connection procedure, refer to 2-3-3.



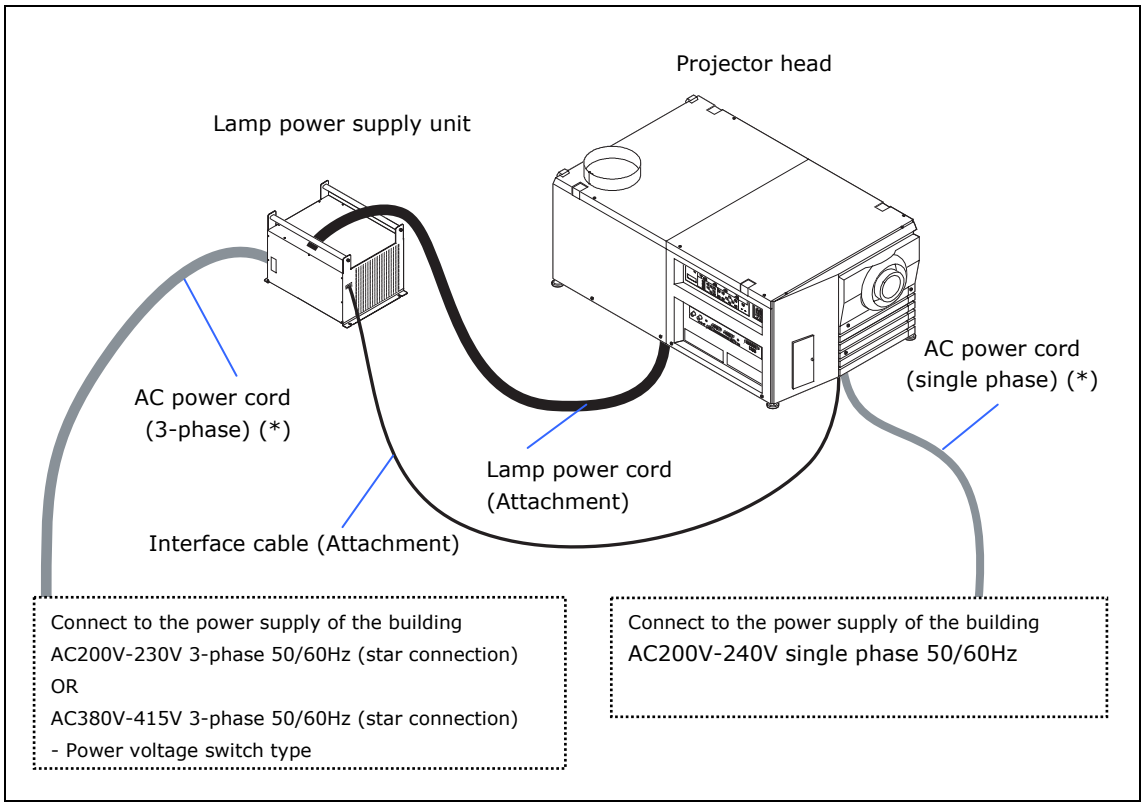
2.3 Connecting the power cord

Connect the power cords of the lamp power supply unit and the projector.

⚠ Warning	• Carefully read the contents described in this section before connection and connect the cords 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 cords, check that the main power switches of the projector and the lamp power supply unit are turned off. Implement the connection with AC power shut off. • Entrust a specialist to carry out the power supply work from the power supply equipment of the building to the place of projector installation.

Schematic diagram of connection



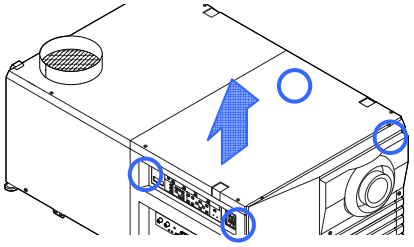
(*) The AC power cord is not attached as an accessory.
Consult with your dealer/distributor for the cord.

2.3.1 Removing the covers of the projector and LPSU

To connect the power cord, remove the covers of the projector and the lamp power supply unit (LPSU).

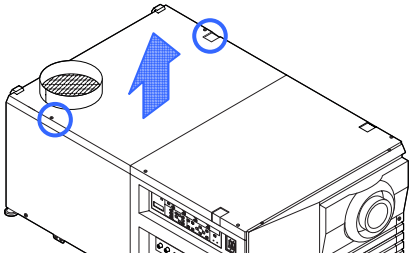
[1] Remove the top front cover of the projector.

Remove the hexagonal fasteners at the top (at 4 places) and remove the front (lens side) cover.



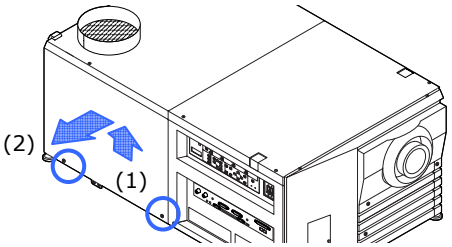
[2] Remove the top rear cover of the projector.

Remove the hexagonal fasteners (2 places) at the top. Before removing the top rear cover, it is necessary to remove the cables of the rear status indicator. For details, refer to "1.5.1. Top rear cover removal procedure" (page A-17).



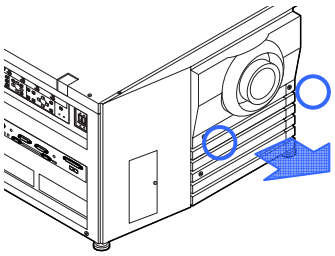
[3] Remove the side front cover of the projector.

Remove the hexagonal fasteners (2 places) on the side and remove the cover with lifting it a little.



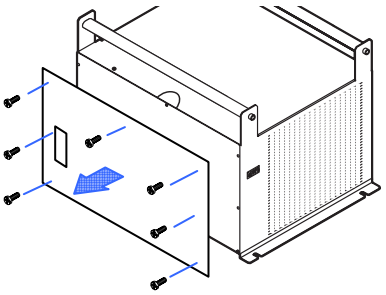
[4] Remove the front cover (bottom) of the projector.

Remove the hexagonal fasteners (2 places).



[5] Remove the cover of the lamp power supply unit.

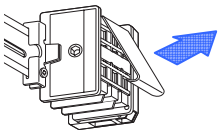
Cover mounting screws are used at 7 places.



2.3.2 Connecting the 3-phase AC power cord to the LPSU

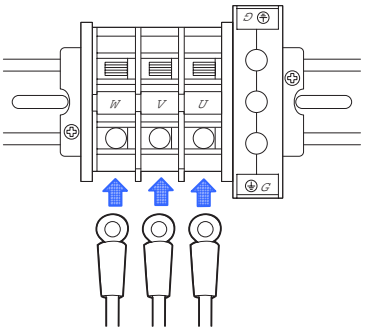
Entrust a specialist to carry out the AC power supply work from the power supply equipment of the building to the place of projector installation.
This document describes the connection procedure for the lamp power supply unit (LPSU) assuming that the AC power supply construction has been completed.

[1] Remove the terminal cover at the top of the AC power supply connecting terminal of the lamp power supply unit.

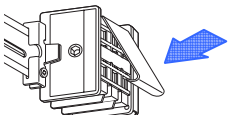


[2] Insert three live wires of the AC power cord into the connection terminal and fix them with screws.

Insert the solderless terminal into the fixing hole of the connecting terminal and tighten the screw with a Phillips-head type screwdriver.
If the neutral phase is wired from the power supply equipment, wrap the cable end with insulation tape or the like so that it does not contact the live section. It is not necessary to connect the neutral phase because this phase is not used in this machine.

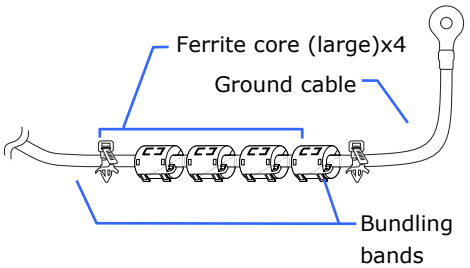


[3] Mount the terminal cover to the AC power supply connection terminal.

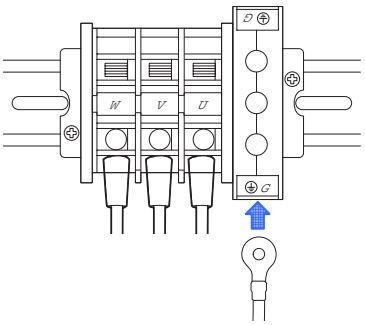


[4] Mount 4 pieces of ferrite core (large) attached to the projector to the grounding cable.

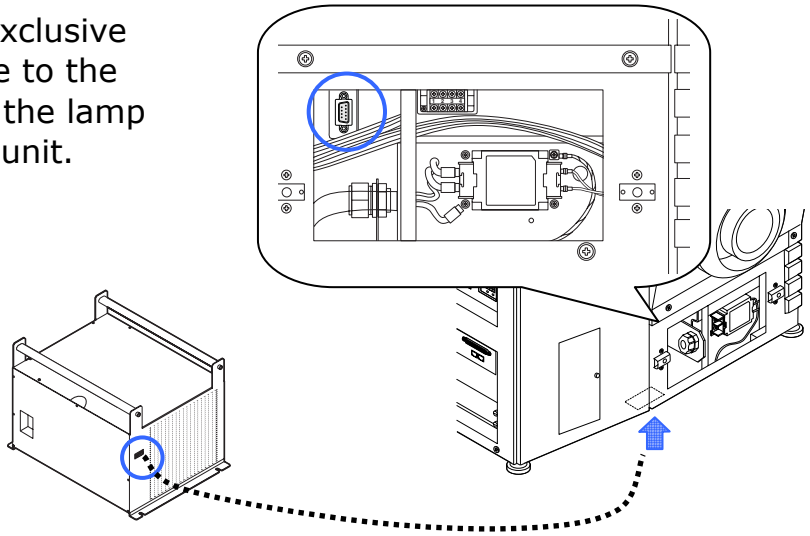
Mount them to the end near the lamp power supply unit of the grounding cable. In addition, fix the grounding cable to the lamp power supply unit with bundling bands at right and left ends of the ferrite core.



[5] Insert the grounding cable into the connection terminal and fix it with screws.



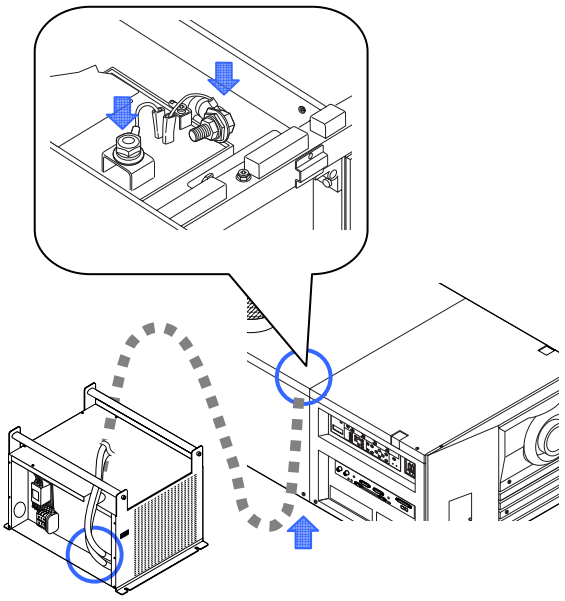
[6] Connect the exclusive interface cable to the projector and the lamp power supply unit.



[7] Connect the lamp power supply cord to the LPSU and the projector.

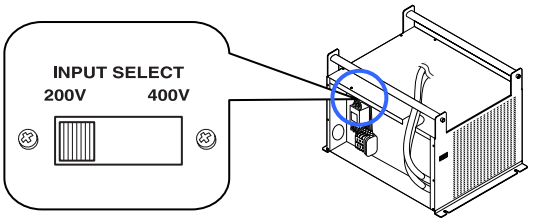
Connect the lamp power supply cord attached to the igniter of the projector. Connect the + end of the cord to the + terminal of the igniter and – end to the – terminal of the igniter.

In case the pedestal (NC-PD01) is used, the cord inlets (cord inlets on installation base side and on the projector side) may be shifted depending on the tilting angle. Pay attention to the wiring.



[8] Check the setting of the input power selection switch.

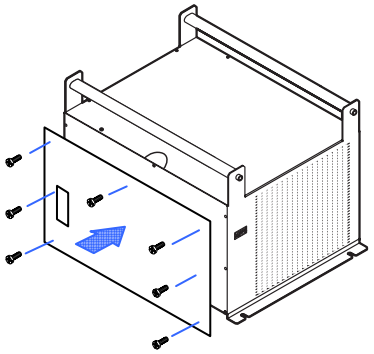
Check that the switch is properly set to the voltage of the AC power supply used.



Caution	• Make sure to check that the input power supply selection switch of the lamp power supply unit is set properly. Improper setting would cause a failure of the lamp power supply unit.

[9] Mount the cover of the lamp power supply unit .

Cover mounting screws are used at 7 places.

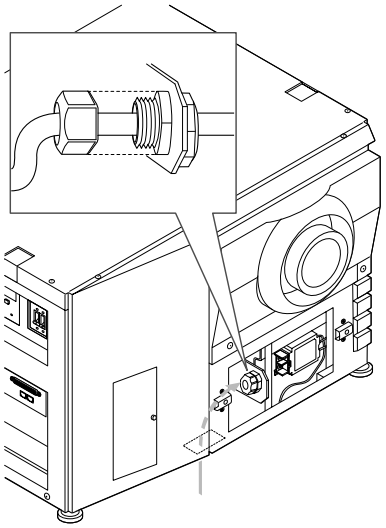


This completes the connection of the lamp power supply cord. Next, connect the power supply cord of the projector (here, keep the covers of the projector removed).

2.3.3 Connecting the power cord of the projector

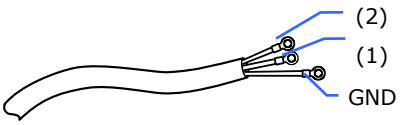
[1] Insert the power cord (1 ϕ) of the projector main unit into the power cord inlet.

Any power cord (single-phase) for the main unit is not attached as accessory. Use a cord suitable to the user environment.

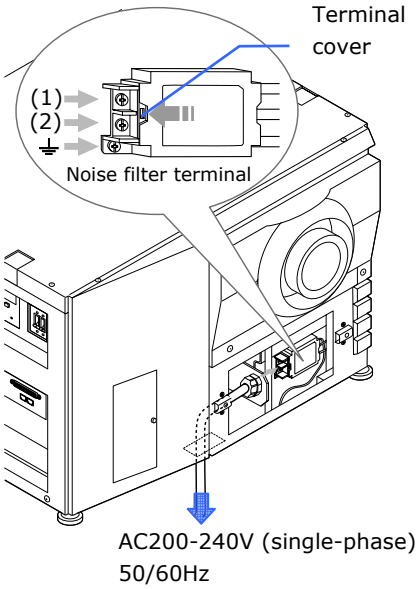


[2] Connect the main unit power cord (1 ϕ) to the noise filter terminal.

Any power cord (1 ϕ) for the main unit is not attached as accessory. Use a cord suitable to the user environment.



(1) Japan; black, Euro/USA; Brown
(2) Japan; White, Euro/USA; Blue
GND; Green/Yellow



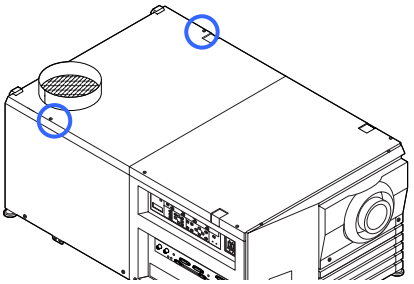
Upon connection completion, close the terminal cover of the noise filter terminal.

Memo

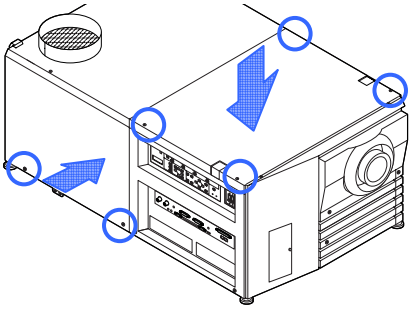
- Mount the touch panel controller (separately sold), before mounting the cover of the projector head. Refer to "touch panel" section about a procedure.

[3] Mount the top rear cover of the projector.

Mount the hexagonal fasteners (2 places) at the top. Before mounting the top rear cover, it is necessary to connect the cables of the rear status indicator. For details, refer to "1.5.2. Top cover mounting procedure" (page A-18).



[4] Mount the top front cover and the side rear cover of the projector.



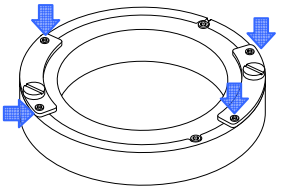
This completes the connection of the power cord. Next, mount a primary lens (Keep the front cover (bottom) of the projector removed here).

2.4 Mounting the primary lens

Mount the attached lens holder (NC-PH01) before mounting the primary lens to the projector.

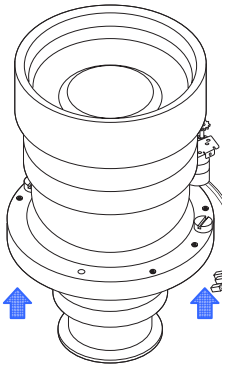
[1] Remove the lens holder mounting screws (4 pieces).

The lens holder is separated into two parts.



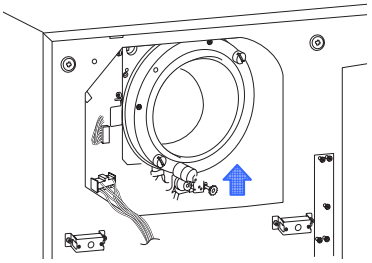
[2] Mount the lower part of the lens holder along the lens insertion guide.

[3] Mount the lens holder insertion guide (slit) according to the lens insertion guide notch.



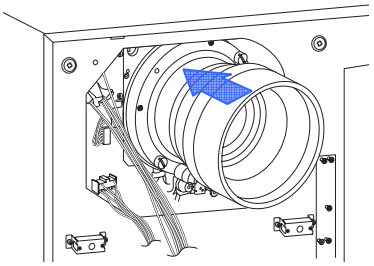
[4] Mount the upper part of the lens holder and fix it with mounting screws (4 screws).

[5] Remove the front cover (top) of the projector.



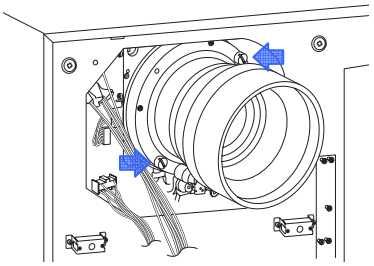
[6] Hold the primary lens unit with its guide notch faced upward and insert it into the projector until it cannot go further.

Insert the holder into the fixing hole of the lens ring and mount it with rotating it clockwise.

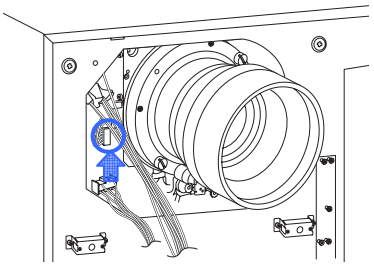


[7] Tighten the fixing screws (2 screws) for the lens holder.

The lens is fixed.

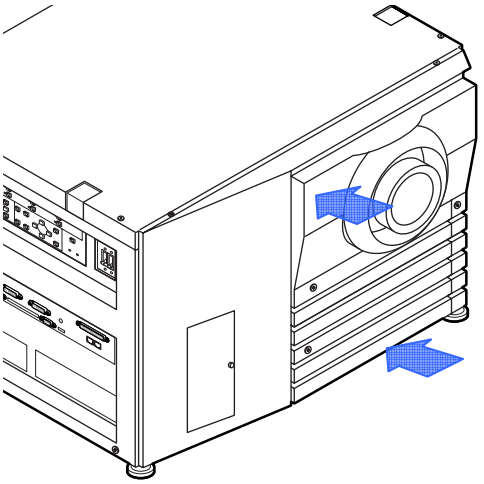


[8] Connect the control signal cable.



[9] Mount the front covers (top and bottom) of the projector.

Mount the sponge attached to the lens after screen ratio adjustment.

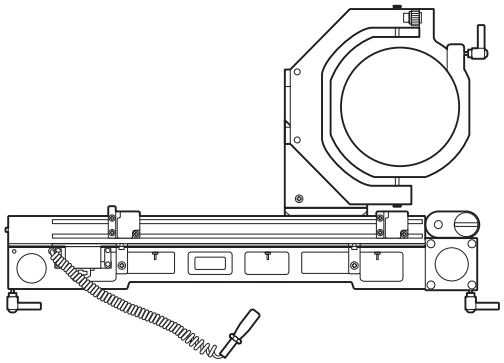


2.5 Mounting the anamorphic lens motorized turret

Use an optional anamorphic lens for projection of cinemascope size.
Anamorphic lens motorized turret (separately sold: NC-AT01) is required for mounting of the anamorphic lens.

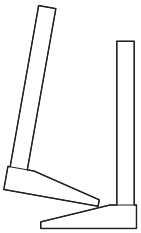
2.5.1 List of accessories attached to turret

- Lens carriage 1peice



- Cross balance 1peice

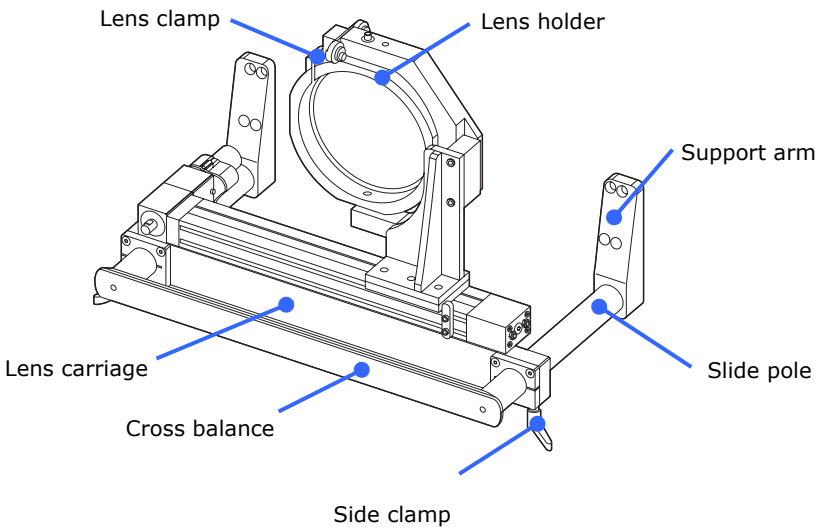
- Slide pole 2pieces



- Slide pole fixing screw 4pieces

- Cross balance fixing screw 2pieces

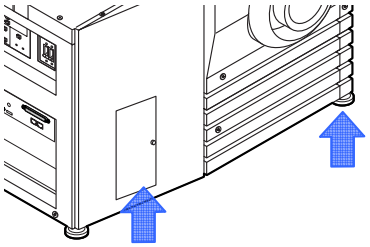
2.5.2 Descriptions of the parts in turret



2.5.3 Mount the turret

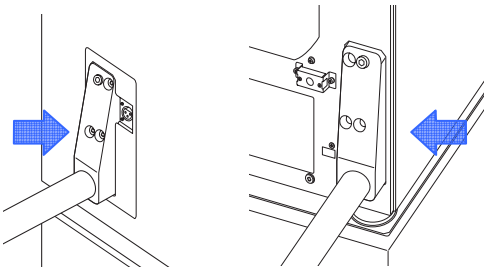
[1] Remove the anamorphic lens mounting covers (2 places) of the projector.

You will find fixing holes on the right and left of the front cover (bottom). On the opposite side of the lens, you will see a socket for the control cable.



[2] Mount the slide poles for the anamorphic lens motorized turret.

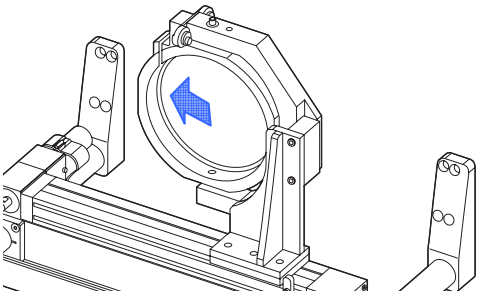
As shown in the figure, fix the slide poles with two screws using two of four screw holes. In addition, arrange the slide poles on the right and left so that they are horizontal.



[3] Mount the lens carriage.

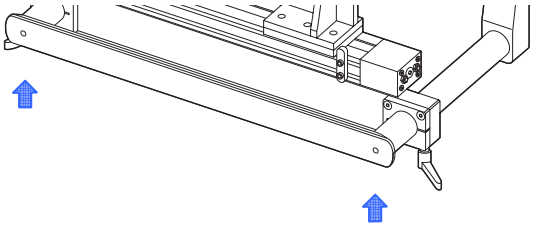
Move the lens holder to the opposite side of the primary lens before mounting the lens carriage to the slide poles.

Insert the lens carriage to a position where the slide poles get out of the carriage. Pay attention so that the lens holder does not contact the primary lens. It may damage the lens.



[4] Mount the cross balance.

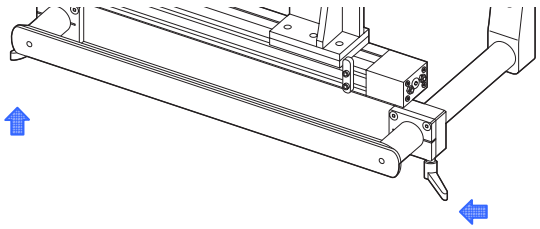
Mount a cross balance with screws (2 screws).



[5] Fix the slide clamp.

Until the primary lens adjustment is completed, fix the slide clamp at a position where the lens holder does not contact the primary lens.

Connect the control cable in the screen ratio adjustment of the anamorphic lens.



This completes the mounting of the anamorphic lens motorized turret. Mount the anamorphic lens after completion of the primary lens adjustment.

2.6 Installation of Small Iris (Information for Service Personnel)

If it is requested by the customer to reduce the projector's lamp luminance because it is too bright even when set to the minimum level, you may reduce it as follows. This operation will also improve the contrast ratio.

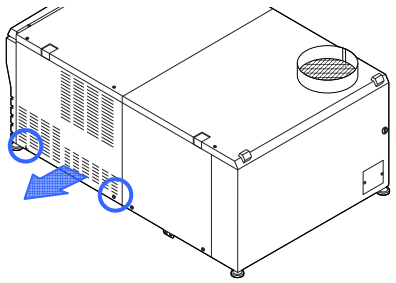
Preparatory operation:

- Make sure that the main power switch of the customer's projector is turned off.
- Get the supplied small iris ready. (Included in the standard set of accessories)

Installation step

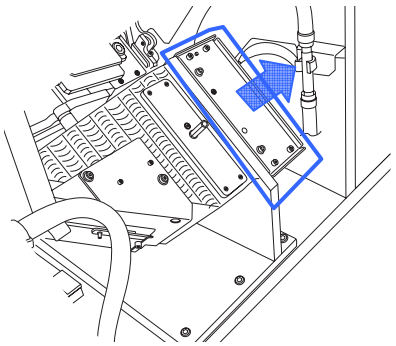
[1] Remove the lens side cover.

Remove the hexagonal fasteners (2 places) on the side and remove the cover with lifting it a little.



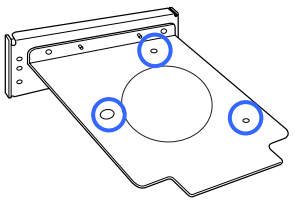
[2] Remove the iris plate of the engine block.

Untighten the four clamping screws to remove the iris plate.



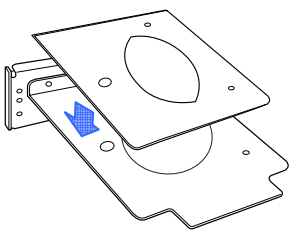
[3] Remove the iris screws.

Iris plate is provided with a default iris. Remove 3 screws from the iris.



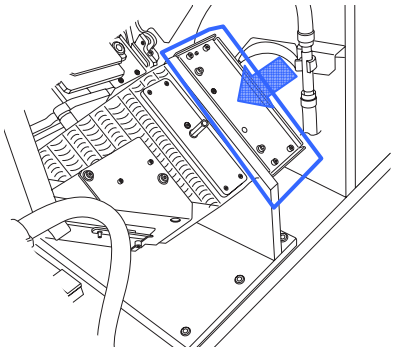
[4] Mount the small iris.

Use 3 screws you have removed at Step [3] to mount the small iris among accessories with overlapping it over the iris.

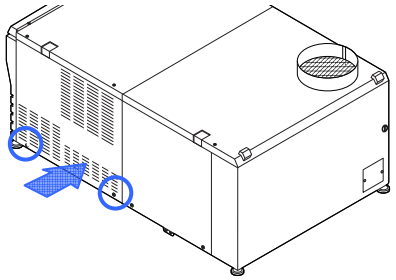


[5] Remount the iris plate now attached with the small iris to the engine block.

Use 4 screws you have removed at Step 2 to mount the iris plate.



[6] Mount the lens side cover to the projector.

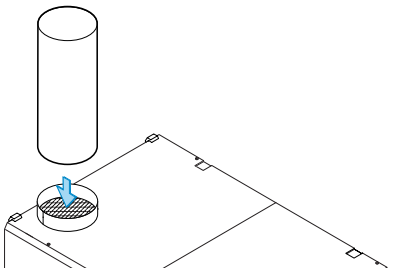


2.7 Mounting the exhaust equipment

It is necessary to connect the air outlet of the projector to the exhaust equipment. The accessory protective sheet should also be mounted because the area around the air outlet can become very hot.

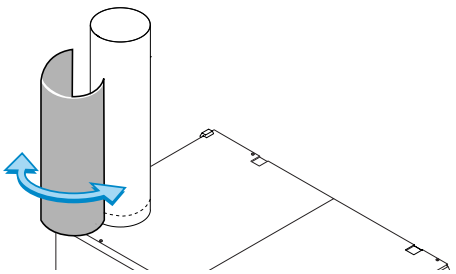
[1] Mount an exhaust hose to the air outlet.

Mount the hose for connection to the exhaust equipment to the air outlet.

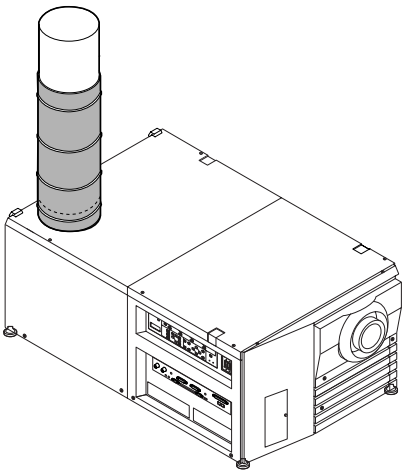


[2] Wrap the protective sheet around the exhaust hose.

Wrap the protective sheet to cover the connection of the air outlet and hose.



[3] Use the accessory protective sheet bands (4 bands) to fasten the protective sheet.



2.8 Mounting the lamp bulb

Mount the lamp bulb to the projector here.
Ask a service personnel to mount the lamp bulb.

⚠ Caution	• It is concerned that the lamp bulb would burst under shock or vibration. Make sure to move the projector to the installation position before mounting the bulb. In addition, make sure to remove the lamp bulb before moving the projector to another place.

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 on37 (See page A-**Error! Bookmark not defined.**)
- STEP2
Setting the projector projection method (See page A-38)
- STEP3
Adjusting the primary lens (See page A-39)
Display the test pattern to adjust the screen size, screen ratio and focus.
- STEP4
Mounting and adjusting the anamorphic (See page A-41)
- STEP5
Connecting the image input (See page A-44)
- STEP6
Connecting the various control terminal (See page A-45)

Steps 1 to 6 complete the adjustment and connection of the projector. Next, set up the projector from the touch panel. Refer to the "Touch Panel Section" for the procedure.

3.2 Turning your projector on

The power to this projector is separated to the power to the projector head and power to the lamp. To project an image, it is necessary for both power supplies to be on.

Note

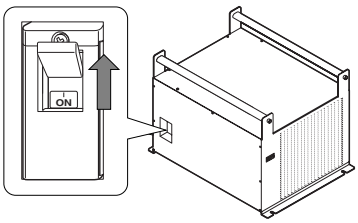
- While your projector is on, be sure to have the lens cap removed from the lens. Otherwise, the lens cap may get deformed due to a heat buildup.
- In the following instances, the power to your projector cannot be turned on even if you press the POWER button.
  - When the inside temperature is abnormally 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: Supply AC power to the projector head and to the lamp power supply unit.

[1] Remove the lens cap.

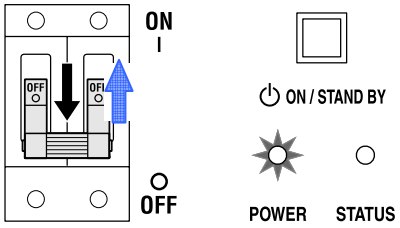
[2] Turn the main power switch on the lamp power supply unit to on.

The lamp power unit fan will begin rotating.



[3] Turn the main power switch on the side of your projector head to on.

A buzzer will ring on the projector. The POWER indicator and rear STATUS indicator light up orange (standby state)

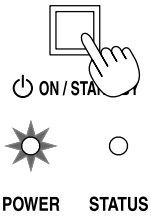


[4] Press the POWER button on the control panel of your projector three seconds or longer.

Your projector is turn on, and the screen glows light about 30 seconds later. The POWER indicator of the projector lights up green.

When controlling with the remote control, press the POWER ON button three seconds or longer.

When the power to the projector head turns on, an error will occur (lamp power error: LPSU Fail) if the power to the lamp power supply unit is OFF. Turn the power on to the lamp power supply unit prior to turning on the power to the projector head.



3.3 Setting the projector projection method

When the projector is shipped from the factory, the projection method is set to the front mode (projection from the front of the screen with the projector installed on the pedestal).
It is necessary to use the remote controller for change of the projection method. Refer to the operation manual for remote controller operation

[1] Press the "TEST" button while holding down the "CTL" button on the remote control panel.

The Passcode input screen appears on the LC display located on the projector's side panel.

[2] Enter your passcode* using the numeric character keys of the remote control.

After authentication of your passcode, the Configuration menu will become active.

* Contact your dealer for your specific passcode.

[3] Use the arrow buttons "< / >" to select "Configuration".

[4] Use the arrow buttons "< / >" to select "Installation".

[5] Check that "Image Orient" is selected and press the ▼ button.

If "Image Orient" is not selected, press the < / > buttons to select it

[6] Press the "< / >" buttons to select the projection method (Image Orientation).

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.

[7] Press the "ENTER" button. several times

An (*) will be put on the selected projection method (Image Orientation).

[8] Press the "EXIT" button several times.

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

3.4 Adjusting the primary lens

Display the test pattern and adjust the screen size, focus and screen position with the primary lens.

3.4.1 Display the test pattern

[1] Press the MENU button of the remote controller.
"TITLE SELECT" is displayed on the LCD screen at the projector side.

[2] Press ▼ button.

[3] Press the < / > buttons to select "TEST PATTERN".

[4] Press the < / > buttons to select "Cross Hatch".

[5] Press ▼ button.

[6] Press "ENTER" button.
An (*) will be put on the selected test pattern.

3.4.2 Adjusting the screen ratio

Adjust the screen ratio of the primary lens here. Adjust the screen ratio of the anamorphic lens after adjusting the primary lens screen ratio and mounting the anamorphic lens (See A-41).
When an anamorphic lens is used, distortions will be produced on the projection screen. To prevent the image from being cut off due to these distortions, the image size should be made larger than the screen size beforehand.
To minimize potential distortions of the anamorphic lens, it is recommended that the lens shift not be used as much as you can and that projection be kept at lens center.

Memo

- How to Call the Lens Center
  [1] Press the "MENU" button on the remote control panel.
  "Title SELECT" appears on the projector's LC display.
  [2] the Configuration menu using the arrow buttons "< / >".
  [3] Press the "▼" button.
  [4] Select "Installation" using the "＜/＞" buttons.
  [5] Press the "▼" button.
  [6 Select "Lens Center" using the "＜/＞" buttons.
  [7] Press the "▼" button.
  [8] When "Move" appears on the display, press the "ENTER" button.
  The lens will begin to move.

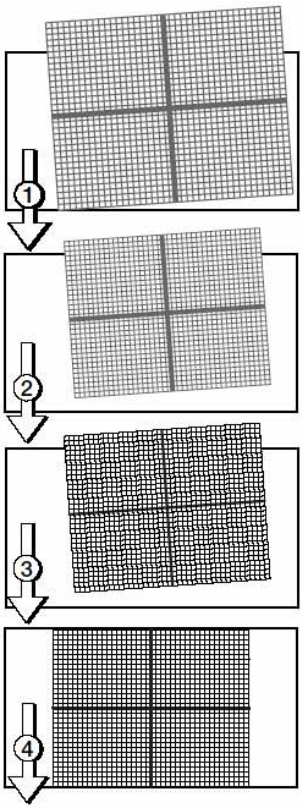
[1] Press the "ZOOM+-" buttons on the remote control panel or of the projector to roughly adjust the screen size so that the screen height and the image height are the same.

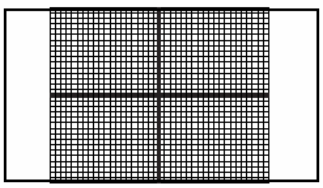
[2] Press the "FOCUS+-" buttons of the remote control or the projector to roughly adjust the focus.

[3] Adjust the surface on which the projector is set up and the tilt foot 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 "ZOOM+-" 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 "FOCUS+-" buttons either of the remote control or the projector.





Note

- If you use the lens memory for adjustment of the focus, first move the ▼ key (Focus Down) almost to the limit and then make adjustments so that you can finish the adjustment on the ▲ (Focus Up) side.

3.5 Mounting and adjusting the anamorphic

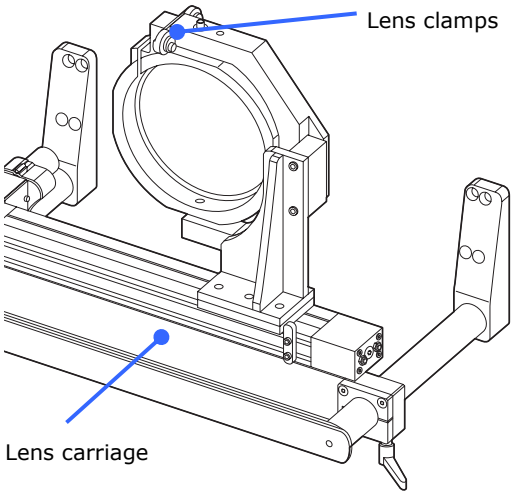
Mount the anamorphic lens to the anamorphic lens, adjust the anamorphic lens position.

3.5.1 Mounting the anamorphic

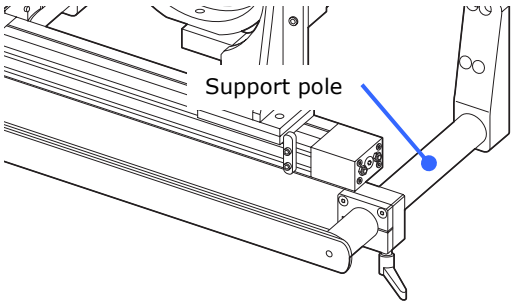
Mount the anamorphic lens to the anamorphic lens motorized turret mounted in 2-5.

[1] Loosen the lens clamps (2 places) and slide the lens carriage on the slide poles.

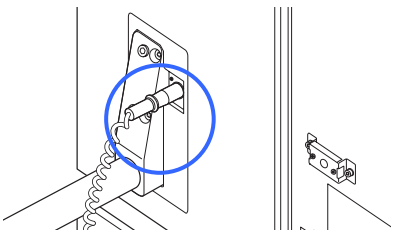
Adjust the lens carriage position.



[2] Mount the cross balance to the end of the support pole.



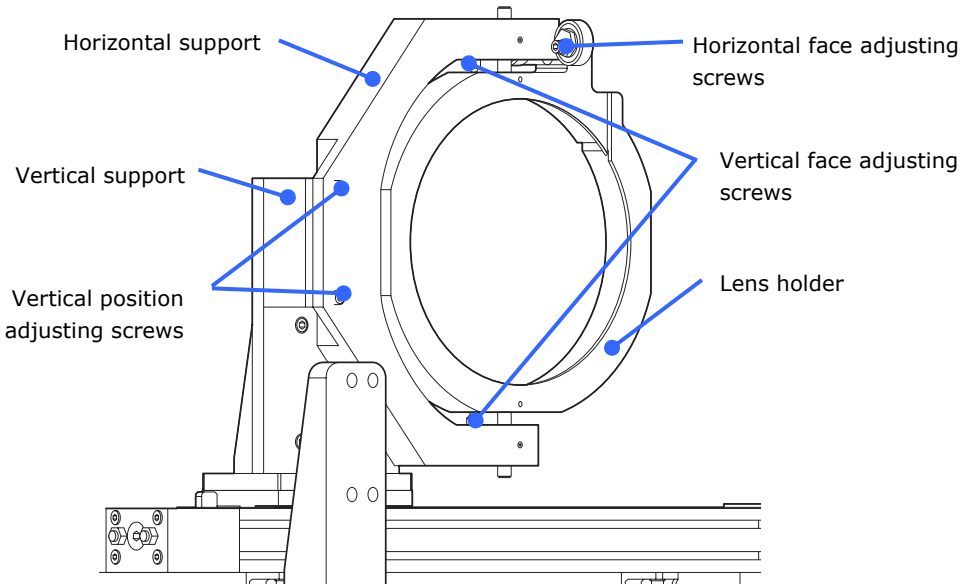
[3] Connect the control cable for the anamorphic lens motorized turret.



[4] Mount the anamorphic lens to the lens holder and loosely fix it with lens clamp screws (2 places).

3.5.2 Adjusting the anamorphic lens position

Adjust the anamorphic lens position so that it becomes parallel with the primary lens in horizontal and vertical directions. In addition, rotate the lens to adjust it so that the enlarged projection screen becomes horizontal.



[1] Adjust the vertical face.

Use the vertical face adjusting screws (2 places) to adjust the face so that it contacts with the vertical support.

[2] Adjust the horizontal face.

Loosen the horizontal face adjusting lock screws and rotate two bearings so that both of them contact the horizontal support.

[3] Adjust the vertical position.

Use the vertical position adjusting screws (2 places) to adjust the position so that both screws are connected with the lens holder.

[4] Adjust the horizontal position.

Use two micro switches at the ends of the lens carriage to move the lens to the position nearest to the projector. When the lens moves to the predetermined position, the bracket at the center determines the horizontal position of the lens. Adjust the position of the micro switch bracket at the center.

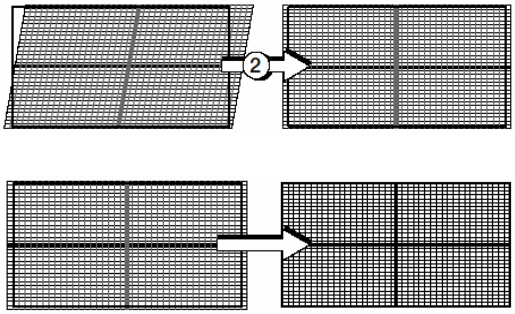
3.5.3 Adjusting the anamorphic lens inclination

[1] Rotate the lens to set the projection screen horizontally and vertically.

Loosen the lens clamp and rotate the lens in the lens holder so that the vertical and horizontal lines at the center of the projection screen become horizontal and vertical respectively.

Loosen the lens clamp after the adjustment and check that the projection image is substantially at the center of the anamorphic lens and that the 4 corners are not rejected within the anamorphic lens.

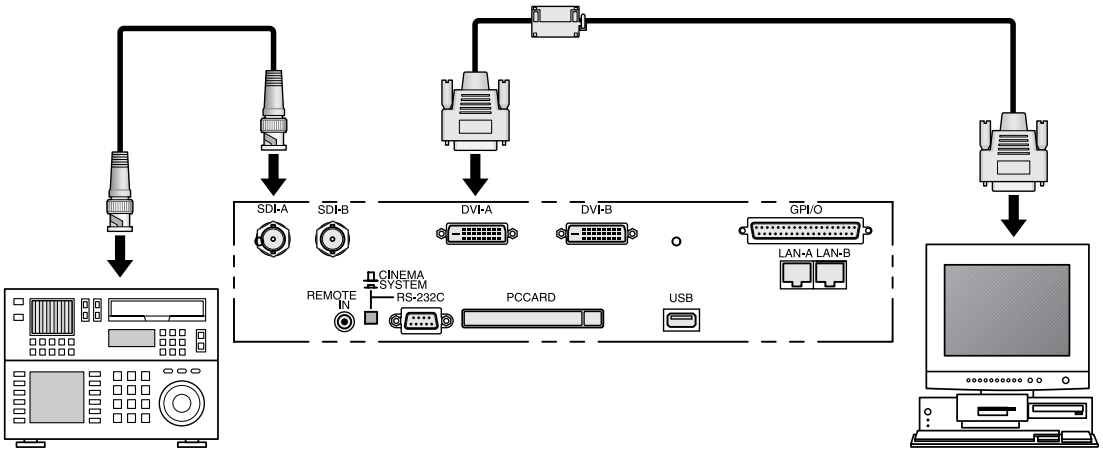
If rejected, repeat Steps [1] to [4] for adjustment.



3.6 Connecting the image input

Your projector has four image input terminals, namely, the HDSDI A input terminal, the HDSDI B input terminal, the DVI-D A input terminal, and the DVI-D B input terminal.

HDSDI A/B input terminal (SDI A/SDI B)	Inputs serial digital images from a Video Server or Video source.
DVI-D A/B input terminal (DVI A/DVI B)	Inputs digital RGB signals from a PC.



Information for Reducing Radiation of Electromagnetic Waves

To reduce unnecessary radiation of electromagnetic waves, use the supplied ferrite clamp core.

Mounting the ferrite clamp core

[1] Open the accessory ferrite clamp core and attach it to the DVI-D signal cable.

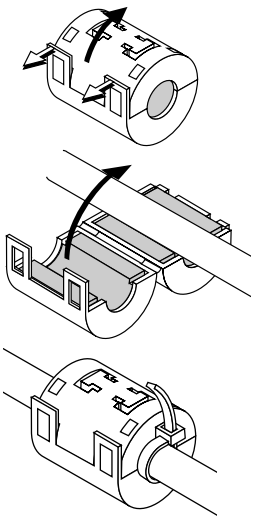
When doing so, attach this as close as possible to the end that goes to the projector.

* Push the catch to open the ferrite clamp core.

[2] Close the ferrite clamp core tightly.

[3] Fix the supplied band to the signal cable as a stopper.

* Pull the end of the band to tighten it. Cut off the surplus of the band.



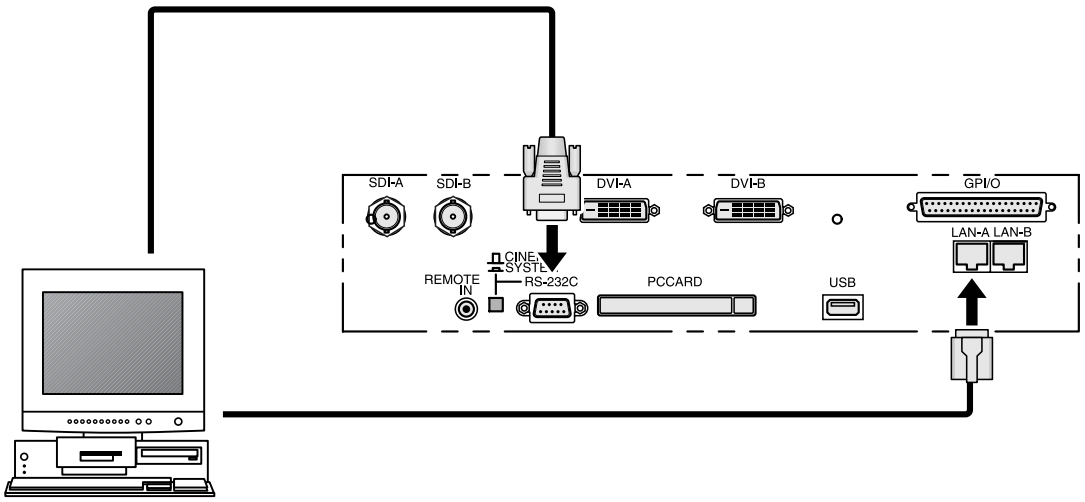
Note

- Be sure to use the ferrite clamp core at the end of the DVI-D signal cable.

3.7 Connecting the various control terminal

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

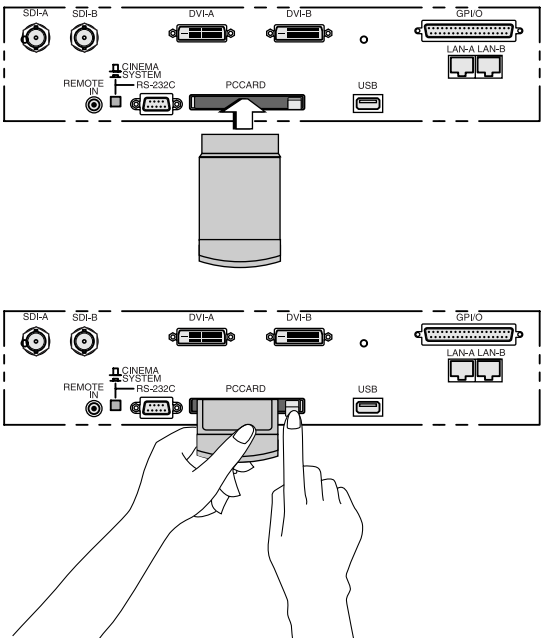
PC control terminal (PC CONTROL)	Use this terminal when controlling the projector in serial connection from a PC.
Ethernet port (LAN-A/LAN-B)	Use this port when controlling the projector in LAN connection from a PC.

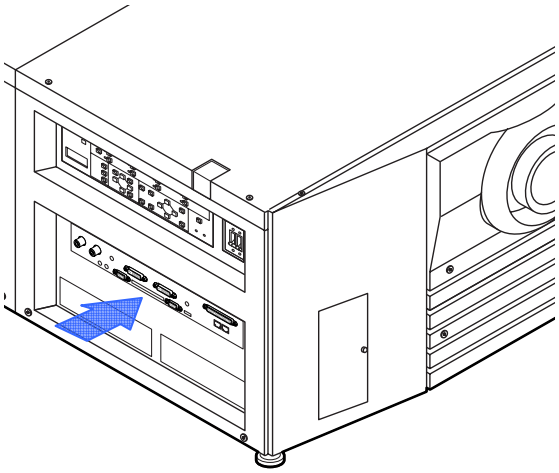


This completes the adjustment and connection of the projector. Next, set up the projector from the touch panel. Refer to the "Touch Panel Section" for the procedure.

3.8 Controlling Your Projector Using a Wireless LAN Card

When using a wireless LAN to control the projector, please insert a wireless LAN card (available separately) into the Connection terminal PC Card slot located at the projector side.





Note

- Although the built-in Ethernet ports (LAN-A/LAN-B) cannot be used to control your projector Model iS10 when a wireless LAN card is set, you can access the "NC2500S" through these ports even when a wireless LAN card is set.
- Be sure to set or remove your wireless LAN card only when the power to your projector is off. Insertion or removal of a wireless LAN card when power to your projector is on may result in a destruction of the wireless LAN card.

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 operation manual.

4.1 List of menu

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

Main menu	Submenu		Description	Ref. page
Title Select	"Title Memory name"		Selects the title of the signal to be projected.	A-49
	TEST Pattern		Selects the test pattern to be projected.	A-49
Configuration	Lamp Setup	Adjust	Adjusts lamp brightness.	A-50
		Feedback	Sets the lamp brightness constant mode that uses a brightness sensor.	
	(Setup)	Douser Mode	Selects whether to use the douser (screen mute) when switching signals.	A-50
		Turret	Controls the turret mounted with an anamorphic lens.	
		Ext. MMS Link	Sets whether to connect an external multi-media switcher (MMS).	
		Panel Key Lock	Locks the buttons on the projector's control panel so that they cannot be operated.	
		GPIO Port	Selects the target of GPIO port control.	
		FactoryDefault	Returns the settings to their default values (only macro keys and titles, or all settings).	
	(Installation)	Image Orient	Selects the projection method (front/rear).	A-52
		Lens Center	Moves the lens shift position to the center.	
		MMS Select	Selects the multi-media switcher (MMS) to connect.	
		Baudrate	Sets the PC control connector (RS-232C) data transmission speed (bps).	
		Date/Time	Sets the date and time on the projector.	
		New Bulb	Resets the lamp bulb usage time and selects or edits new entries (only when the projector is in standby mode).	

		Bulb Warning	Sets the lamp bulb warning time (only when the projector is in standby mode).	
		New Lamp House	Resets the lamp house usage time, and makes settings or selects modes (only when the projector is in standby mode).	
		Bulb Alignment	Sets the lamp bulb alignment.	
	(Memory)	Lamp	Saves the current lamp setting.	A-56
		Lens	Saves the current lens setting.	
(Title Setup)	Macro Key	Macro Key No.1-8	Sets the titles to be assigned to the macro keys of 1 to 8.	A-57
Information	Lamp	Output	Displays the lamp output setting.	A-58
		Bulb Type [A]	Displays the registered name and the maximum/minimum current setting of the currently used lamp bulb.	
		Bulb Type [W]	Displays the registered name and the lamp rated output (kW) of the currently used lamp bulb.	
		Bulb Type [H]	Displays the registered name and the lamp bulb warning time (Bulb Warning Time) setting of the currently used lamp bulb.	
	Macro Key	Macro Key No.1-8	Displays the titles assigned to the macro keys of 1 to 8.	A-59
	Usage		Displays the usage times of the projector, lamp bulb, lamp house and bulb warning.	A-59
	Error Code		Displays the currently occurring error.	A-59
	Version	System	Displays the version of the projector head. (BIOS, Firmware, Data, and Serial No.)	A-60
		MMS (Built-in)	Displays the version of the built-in multi-media switcher (MMS). (BIOS, Firmware, Data, FPGA, and Serial No.)	A-61
	IP Address	System	Displays the SYSTEM IP address.	A-61
		Cinema	Displays the CINEMA IP address.	
		System (Unwire)	Display the IP address for wireless LAN (when wireless LAN card is inserted).	
	MMS Status		Displays the status information of the connected multi-media switcher (MMS).	A-61

4.1.1 When you use the service personnel menu

To use the menu for service personnel, you need to input the pass code from the remote controller. Contact your dealer/distributor for the pass code.

[1] Press the TEST button while holding down the CTL button of the remote controller.

The pass code input screen will be displayed on the LCD screen at the projector's control panel.

[2] Enter your pass code (See Note) using the numeric character keys of the remote controller.

After authentication of your pass code, the service personnel menu will become active.

4.2 Title Select

4.2.1 Title select (Title Memory)

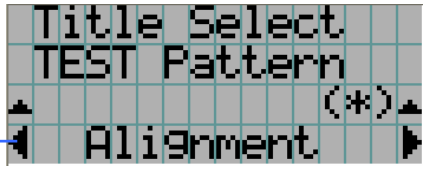
Select the title of the signal to be projected.
You can register up to 99 titles. You can also assign registered titles to the macro keys 1 to 8 on the projector's control panel and call them up directly using those buttons.

← 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.

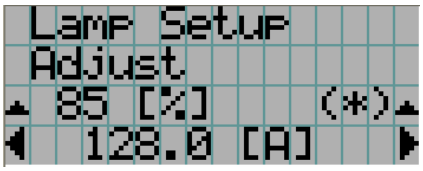
OFF, Alignment, Cross Hatch, Convergence, Red, Green, Blue, White, Black, 50% White[IRF], H-Ramp, Logo

4.3 Configuration

4.3.1 Lamp Setup

Adjust

Adjusts the lamp output (brightness). Control the current at 0.1A increments.



← Displays the lamp output (%) with regard to the setting.

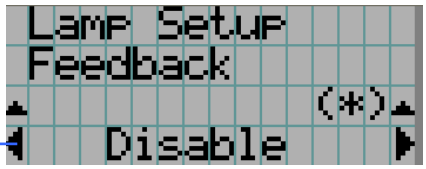
← Adjusts the lamp brightness.

Note

- Lamp output below 70% will cause an error. Arrange the setting so that the lamp output becomes 70% at least.

Feedback

Sets the lamp brightness constant mode that uses a brightness sensor.



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

← Displays the setting.

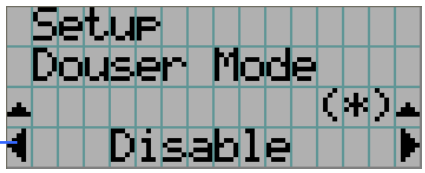
Disable	Disables the lamp brightness constant mode.
Enable	Enables the lamp brightness constant mode.

4.3.2 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 A-**Error! Bookmark not defined.**).

Douser Mode

The douser function will be activated when signals are switched. Request your dealer/distributor to perform the setting.



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

← Displays the setting

Disable	Disables the douser mode.
Enable	Enables the douser mode.

Turret

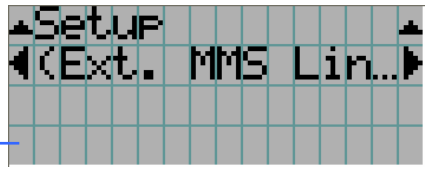
Controls the turret on which the anamorphic lens is mounted.

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

Manual	Manually control the turret. - Without Anomo: Disables anamorphic lens. - With Anamo: Enables anamorphic lens.
Auto	The anamorphic lens selected at Title switches automatically when the title is switched. - Disable : Lens switching does not take place in conjunction with the title. - Enable : Lens switching takes place in conjunction with the title.
Ref.Select	Specify whether to enable or disable the anamorphic lens for the selected title. - Without Anomo: Disables anamorphic lens. - With Anamo: Enables anamorphic lens.

Ext. MMS Link

Connect an external multimedia switcher (MMS) to control the input signal. If an MMS is incorporated, this menu item is not displayed.

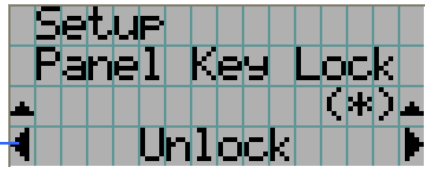


← Displays the currently selected item with asterisk (*).
← Displays the setting

Connect	To enable connection with external MMS
Disconnect	To disable connection with external MMS

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

- Even if the buttons on the projector's control panel are locked, remote controller buttons are available.
- When the buttons on the projector's control panel are locked, press the CANCEL button on the projector for about 10 sec. to unlock them (The key lock setting on the projector becomes Unlock).

GPIO Port

When controlling the projector from the external control terminal (GPI/O), select the subject of GPI/O port control. With the control subject set to "Cinema Only", the projector does not accept commands issued using the control panel buttons, remote controller or personal computer.

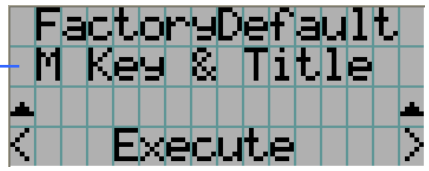
← Displays the currently selected item with asterisk (*).

← Displays the setting

Cinema Only	To restrict the subject of control from the external control terminal (GPI/O) to the Cinema board only
System/Cinema	To restrict the subject of control from the external control terminal (GPI/O) to the System board and the Cinema board

FactoryDefault

Used to select factory default values for the projector settings.



← Select the item to be reset.

← Press the ENTER button to execute resetting.

M Key & Title	Titles are set to factory default ones. (Tiles you have created are deleted, but files are not.)
All	All the settings of your projector are set to factory default values except for files.

Note

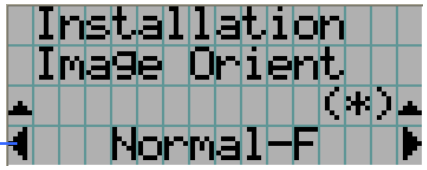
- Files previously deleted or rewritten cannot be restored.

4.3.3 Installation

Image Orient

Make a selection according to the setup position of your projector and screen.

Warning	Consult with your dealer/distributor for setup of this projector. Never carry out the setup by yourself. A fall or other accidents may occur and cause injury.



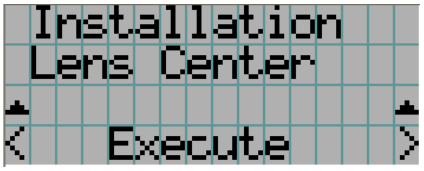
← Displays the currently selected item with asterisk (*).

← Displays the setting

Normal-F	Projection is made from front of the screen.
Normal-R	Projection is made from behind the screen

Lens Center

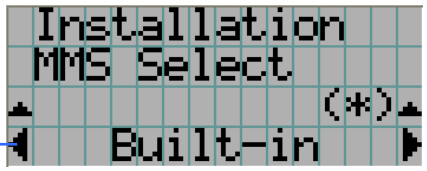
To move the lens shift to the center position. The center position may slightly shift depending upon mounting conditions of the lens.



← Press the ENTER button to execute moving.

MMS Select

Select the MMS for operation when you use a multimedia switcher (MMS) separately sold. You can connect only one MMS.



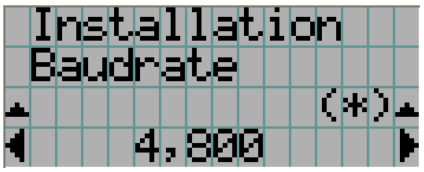
← Displays the currently selected item with asterisk (*).

← Displays the setting

Built-in	To use the incorporated MMS (optional)
External	To use the externally connected MMS (optional)
Not Use	Not to use MMS

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, 192000 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.

←Select the item to be set

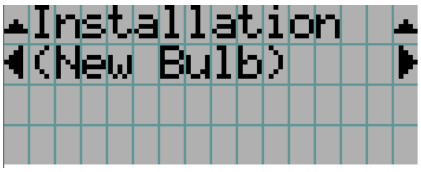
←Input numeric values

Use the remote controller to input numeric values. For the procedure to input alphanumeric characters, refer to "Users Manual".
Use the SELECT <Left/Right> buttons to move the cursor (under bar).

Date	Set the date here (Year, month, day).
Time	Set the time here (Hour, minute, second).

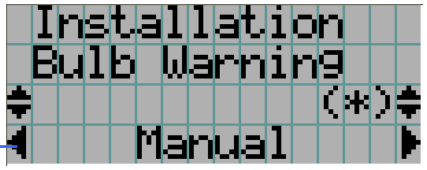
New Bulb

When the lamp bulb is replaced, reset the lamp time and select the lamp bulb type. This menu is active in standby mode only.



Bulb Warning

To set the time for display of lamp bulb warning. This menu is active in standby mode only.



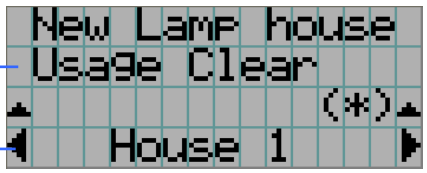
← Displays the currently selected item with asterisk (*).

← Displays the setting

Manual	Manually specify the warning time (H). Press the SELECT ▲ key to display the numeric input line (input the value using the remote controller).
Use Bulb Entry	Warning time set by BulbEntry is used.

New Lamp house

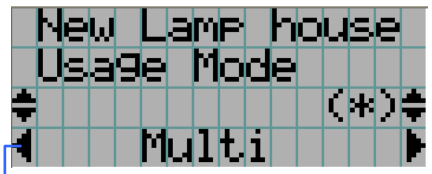
When the lamp house is replaced, reset the lamp house time and select the lamp house. This menu is active in standby mode only.



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

← Displays the setting

←Select the items for which the usage times are cleared.



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

← Displays the setting

←Select the mode for lamp house usage time.

Single	To set the mode in which lamp house is not replaced (Single mode)
Multi	To set the mode in which the lamp houses are alternately replaced for use (Multi-mode). - Lamp house 1: To use the lamp house 1 - Lamp house 2: To use the lamp house 2

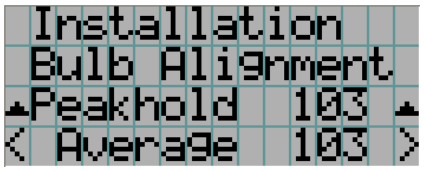
House	To set the mode in which lamp house is not replaced (Single mode)
House1	When multi-mode lamp 1 is used
House2	When multi-mode lamp 2 is used

Usage Clear	Reset the lamp house usage time.
Usage Mode	Set the mode for lamp house usage time.

Bulb Alignment

Use this for lamp bulb alignment adjustment.

Press [LAMP-] in [LAMP CTL] to clear the maximum value of Peakhold.



←Display the maximum value of the lamp light quantity input.

←Display the current input for lamp light quantity.

4.3.4 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 A-48).
Save the current status of lamp and lens to the memory in the projector (lens memory function and lamp memory function).
The saved contents are assigned to the titles for use.

← Select the saving item

← Display the registered memory name

Press the ENTER button to display the confirmation message asking you whether this memory can be overwritten or not.

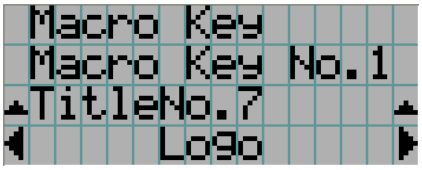
Lamp	To save the current lamp status
Lens	To save the current lens status

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 A-48).

4.4.1 Macro Key

Use this key to set the titles to be assigned to the macro keys.
You cannot assign the same title to several macro keys. If you want to assign any title to another number, cancel the assignment once and then set it to any key again.



← Select the macro key number (1 to 8)
← Display the selected number of the title
←Select the titles to be assigned to the macro keys

Select the titles from those registered in advance.
To clear assignment to macro keys, select "---".

4.5 Information

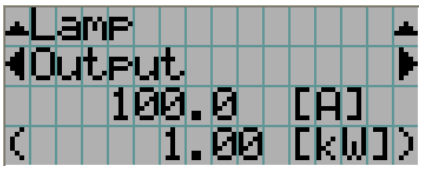
Displays the hours of lamp bulb use, the version information and error codes.

4.5.1 Lamp

Displays information relating to the lamp. (Such as lamp output and the type of lamp bulb.)

Output

Displays the lamp brightness (output) setting.



← Displays the set current (A).
← Displays the power consumption (kW).

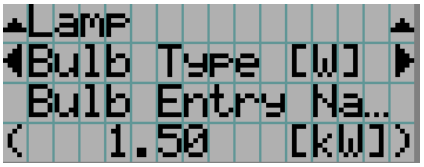
Bulb Type [A]

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

← Displays Bulb Entry registered name.
← Displays Bulb Entry maximum/minimum currents (A).

Bulb Type [W]

Displays the registered name and the lamp rated output (kW) of the currently used lamp bulb.



← Displays Bulb Entry registered name.
← Displays Bulb Entry lamp rated output (kW).

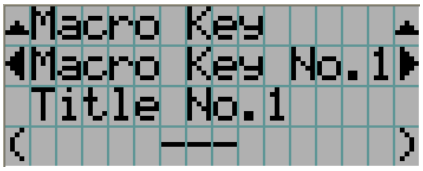
Bulb Type [H]

Displays the registered name and the lamp bulb warning time (Bulb Warning Time) and setting of the currently used lamp bulb.

← Displays Bulb Entry registered name.
← Displays Bulb Warning Time setting (H).

4.5.2 Macro Key

Displays the titles assigned to the macro keys of 1 to 8 on the projector's control panel.



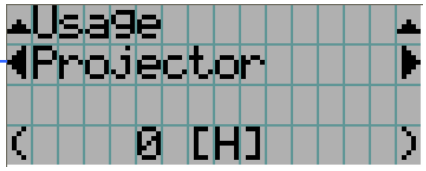
←Selects the macro key whose contents you want to display.

←Displays the assigned title numbers.

←Displays the registered names of the assigned titles.

4.5.3 Usage

Displays the hours of projector head, lamp, and lamp house usage, and warning display time of the lamp bulb.



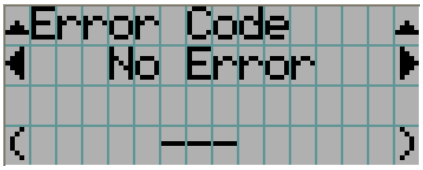
←Selects the item to display.

←Displays the hours of use (H).

Projector	Displays the hours of projector head use.
Bulb	Displays the hours of use of the current lamp bulb.
Lamphouse	Displays the hours of use of the current lamp house.
BulbWarning	Displays the currently enabled warning time. The following is displayed depending on the item set by the Bulb Warning setting. - When Use Bulb Entry is enabled: Displays the Bulb Entry value. - When in Manual setting: Displays the value set using Manual.

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.



←Displays the code of the error currently occurring.

←Displays the name of the error currently occurring.

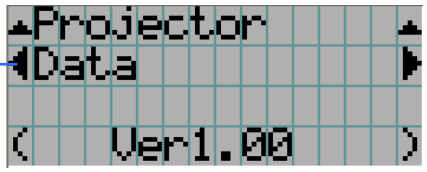
When multiple errors occur, you can display them by pressing the [MENU CTL] LEFT/RIGHT buttons.

4.5.5 Version

Displays the versions of the projector head, and the multi-media switcher (MMS) (optional).。

System

Displays the version information of the projector head.



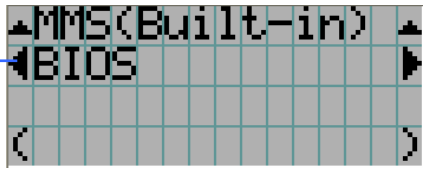
←Selects the item to display.

←Displays the version information.

BIOS	Displays the BIOS version of the projector head.
Firmware	Displays the firmware version of the projector head.
Data	Displays the data version of the projector head.
Serial No.	Displays the serial number of the projector head.

MMS (Built-in)

Displays the version of the multi-media switcher (MMS) connected to the projector head.



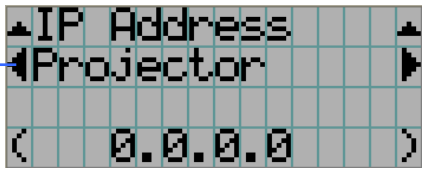
←Selects the item to display.

←Displays the version information.

BIOS	Displays the BIOS version of the built-in MMS.
Firmware	Displays the firmware version of the built-in MMS.
Data	Displays the data version of the built-in MMS.
FPGA	Displays the FPGA version of the built-in MMS.
Serial No.	Displays the serial number of the built-in MMS.

4.5.6 IP Address

Displays the IP address set in the projector head.



←Selects the item to display the IP address.

←Displays the IP address.

System	Displays the IP address set for the projector head (System).
Cinema	Displays the IP address set for the projector head (Cinema).

4.5.7 MMS Status

Indicates the status of the multi-media switcher (MMS) connected to your projector.

←Displays the status information of MMS linked operations.

←Displays the IP address of MMS.

Built-in	Built-in multi-media switcher (MMS) is linked.
External	External multi-media switcher (MMS) is linked.
Not Use	There is no link established.

5.

Appendix

5.1 Trouble shooting

[T.B.D]

5.1.1 List of Error code

[T.B.D]

5.2 List of registered titles (when shipped from the factory)

The data listed below have been cataloged in your projector before shipping from our factory. When projecting an image source covered by these data, you do not need to change the settings of your projector.

List of default Titles

Macro Key No.	TITLE	Input	FILES		source		TCGD	Anamorphic Lens
			PCF	SCREEN	active	aspect		
1	CS-SCOPE 1920	SDI-A	CS-SCOPE 1920x1080	Anamo1.25 SCOPE	1920x1080	2.35	P7v2 theatre	1.25
2	VV-FLAT 1920	SDI-B	VV-FLAT 1920x1080	DC2K VISTA	1920x1080	1.85	P7v2 theatre	none
3	HDTV	SDI-A	HDTV 1920x1080	DC2K HDTV	1920x1080	0	Rec 709	none
4	SDI-DUAL-RGB	SDI-A,B	SDI DUAL RGB 1920x1080	2048x1080 No Crop	1920x1080	0	P7v2 theatre	none
5	DVI-A	DVI-A	DVI 2048x1080	DC2K DVI	2048x1080	0	P7v2 theatre	none
6	DVI-B	DVI-B	DVI 2048x1080	DC2K DVI	2048x1080	0	P7v2 theatre	none
7	DVI-TWIN	DVI-A,B	DVI 2048x1080	DC2K DVI	2048x1080	0	P7v2 theatre	none

5.3 Index

Ver.1 1/06

DLP Cinema™ Projector Installation manual

Touch Panel

Precautions
Please read this manual carefully before using your NC-TP6401 Touch panel Controller and keep the manual handy for future reference.

CAUTION	
	To turn off main power, be sure to remove the plug from power outlet. The power outlet socket should be installed as near to the equipment as possible, and should be easily accessible.

CAUTION	
	TO PREVENT SHOCK, DO NOT OPEN THE CABINET. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.


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


This symbol alerts the user that important information concerning the operation and maintenance of this unit has been provided. The information should be read carefully to avoid problems.

WARNING

TO PREVENT FIRE OR SHOCK, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.
DO NOT USE THIS UNIT'S GROUNDED PLUG WITH AN EXTENSION CORD OR IN AN OUTLET UNLESS ALL THREE PRONGS CAN BE FULLY INSERTED.
DO NOT OPEN THE CABINET. THERE ARE HIGH-VOLTAGE COMPONENTS INSIDE. ALL SERVICING MUST BE DONE BY QUALIFIED SERVICE PERSONNEL.

DOC Compliance Notice

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

3. GSGV Acoustic Noise Information Ordinance:

The sound pressure level is less than 70 dB (A) according to ISO 3744 or ISO 7779.

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.

- DLP™ (Digital Light Processing™), DLP Cinema™ are trademarks of Texas Instruments.
- IBM is a registered trademark of International Business Machines Corporation.
- Other product and company names mentioned in this user's manual may be the trademarks of their respective holders.

RF Interference

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 Touch panel Controller and to prevent fire and shock. Please read them carefully and heed all warnings.

Installation

1. Do not place your Touch panel in direct sunlight, near heaters or heat radiating appliances.
2. Exposure to direct sunlight, smoke or steam can harm internal components.
3. Handle your Touch panel carefully. Dropping or jarring can damage internal components.
4. Do not place heavy objects on top of your Touch panel.

Power Supply

1. The Touch panel is designed to operate on a power supply of 19V DC. Ensure that your power supply fits this requirement before attempting to use your Touch panel.
2. Handle the power cable carefully and avoid excessive bending. A damaged cord can cause electric shock or fire.
3. If the Touch panel is not to be used for an extended period of time, disconnect the plug from the power outlet.
4. Do not touch the power plug with wet hand. Doing so can cause electrical shock or fire.
5. Do not touch the power plug during a thunder storm. Doing so can cause electrical shock or fire.

Cleaning

1. Before cleaning the touch panel controller, turn off the power.
2. Wipe it with a soft lint-free cloth. In doing so, do not strain the liquid crystal panel; it may cause a damage.
3. When the panel is badly stained, soak a cloth in neutral detergent deluted with water, wring it out, and wipe the stain off. As a finishing touch, wipe the panel with a dry cloth.

   When using a chemical dustcloth, follow its instructions.

CAUTION

- Do not have the liquid crystal panel touched with a sharp-pointed tool such as a mechanical pencil or a screwdriver. Do not press firmly the surface of the liquid crystal panel or the frame of the touch panel; they may be scratched or break down.
- Should the liquid crystal panel be damaged, do not put the internal liquid into your mouth or touch it. If the liquid gets in your mouth, gargle at once. If the liquid comes in contact with your skin or it gets in your eye, first rinse your skin or eye with running water for more than 15 minutes and then see the doctor immediately.
- This machine is designed to monitor and control the projector. Do not use the machine for other than intended use. Particularly, never use this machine to make a device which may affect people's lives (such as an emergency stop switch).

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 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.

Fire and Shock Precautions

1. Prevent foreign objects such as paper clips and bits of paper from falling into your Touch panel. Do not attempt to retrieve any objects that might fall into your Touch panel. Do not insert any metal objects such as a wire or screwdriver into your Touch panel. If something should fall into your Touch panel, disconnect it immediately and have the object removed by a qualified service personnel.
2. When using a LAN cable:

   For safety, do not connect to the connector for peripheral device wiring that might have excessive Voltage.

Table of Contents

1.

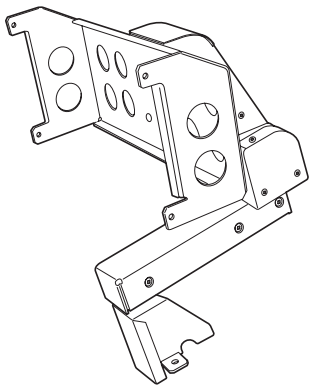
Before Setting Up Your Projector

1.1 What's in the Box?

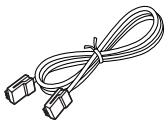
To install the touch panel (NC-TP6401) to the projector, you need a holder arm (optional: NC-TH6401). This section describes how to install the touch panel to your projector using the holder arm.

Before installing NC-TH6401 holder arm, be sure the shipping box includes the following items.

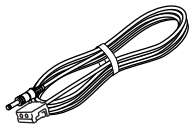
- holder arm (NC-TH6401)



- LAN cable x1



- PS cord x1



- Mounting screws x4

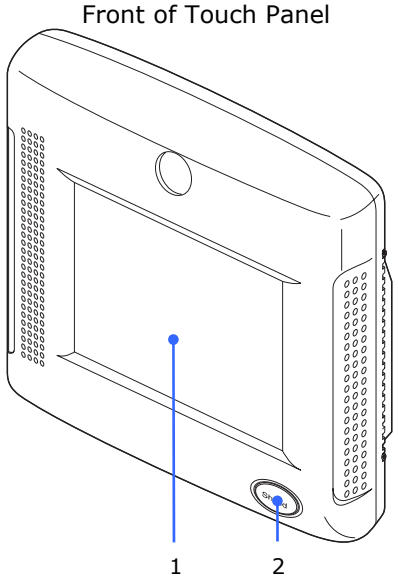
- Bushing x1

- Clamp x5

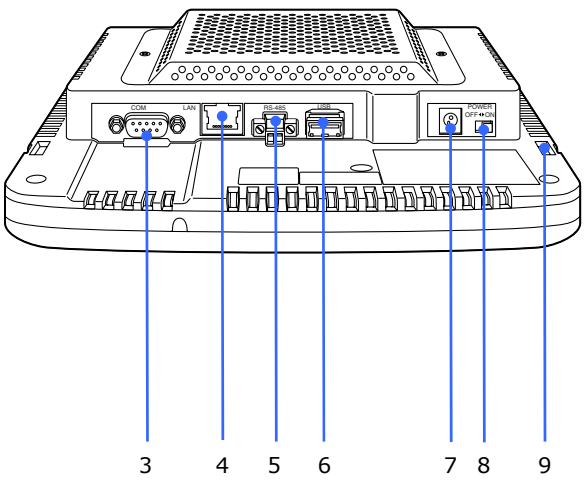
Note • The Clamp (5 pieces) is only for the holder arm. Do not use it in the projector.

1.2 Description of the Touch Panel Sections

Front of Touch Panel



Rear of Touch Panel (down ward)



1 LCD panel

A touch panel screen.

2 Shield button

Button that temporarily disables operations from the touch panel screen,
Press again to enable operations.

3 External control terminal (RS-232C)

This is not used with this Controller.

4 LAN port (LAN) (RJ-45)

Use a LAN cable (Ethernet cable) to connect the controller with the projector.

5 External control terminal (RS-232C) (Bayonet-locking)

This is not used with this Controller.

6 USB port (Type A)

This is not used with this controller.

7 DC IN terminal (DC power input terminal)

A power terminal. Ask the service personnel to connect the power cord.

8 Power ON/OFF switch

The main power switch of this controller. The power of the controller is linked with the power for the projector.

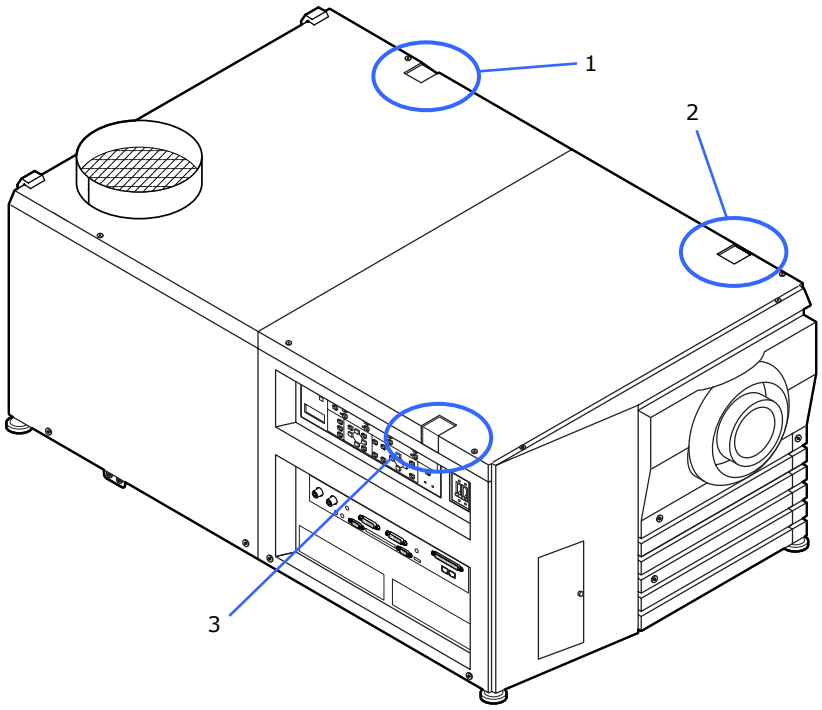
9 Holder arm mounting hole

Mount the controller to the projector using a bracket and these holes.

1.3 Checking Mounting Position

There are three possible mounting positions for the touch panel on the top of the projector. Select the desired location for the touch panel.

- On the rear of the projector/lens
- On the front of the projector/lens
- On the projector's front control panel



2.

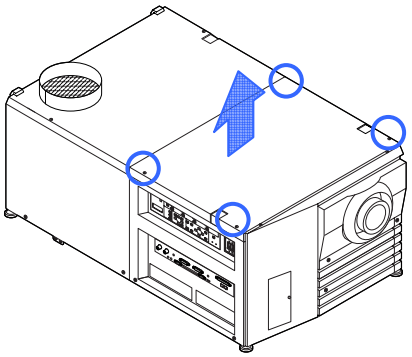
Setting Up & Connections

This section describes how to set up the touch panel and how to connect it to the DLP Cinema Projector.

2.1 Installing the Holder Arm to the Projector Head

[1] Remove the top front cover from the projector head.

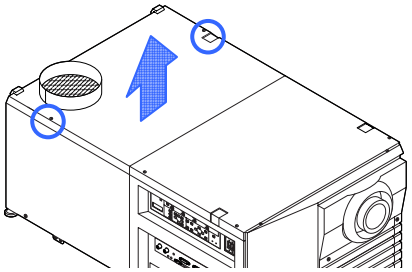
Remove four hexagonal fasteners from the top to remove the front cover (lens side).



[2] To install the touch panel to the rear of the Projector / lens, remove the top rear cover from the projector head.

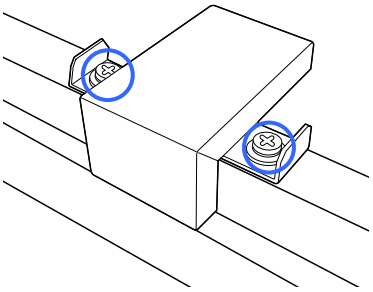
Remove the two hexagonal fasteners from the top of the projector.

When removing the top rear cover, the cable must be disconnected from the rear status indicator. Refer to the Projector Installation Manual "NC2500S" for further information.



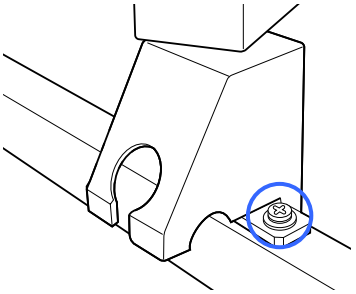
[3] Remove the touch panel mounting bracket from the projector head.

Remove the two Phillips head screws securing the touch panel to the bracket using a Phillips-head screwdriver. These screws will be used to install the holder arm.



[4] Mount the holder arm to the projector head.

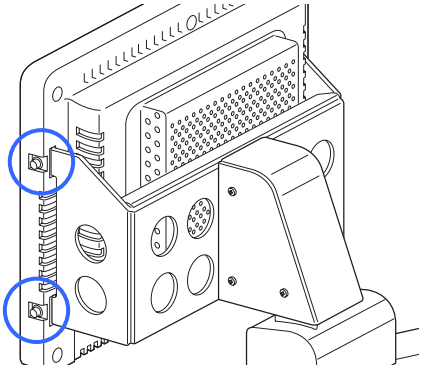
Using the two screws removed in Step [3], install the holder arm.



[5] Attach the touch panel to the holder arm.

Using the four mounting screws supplied with the touch panel, attach the panel to the holder arm.

Take care not drop the touch panel when installing it to the arm.



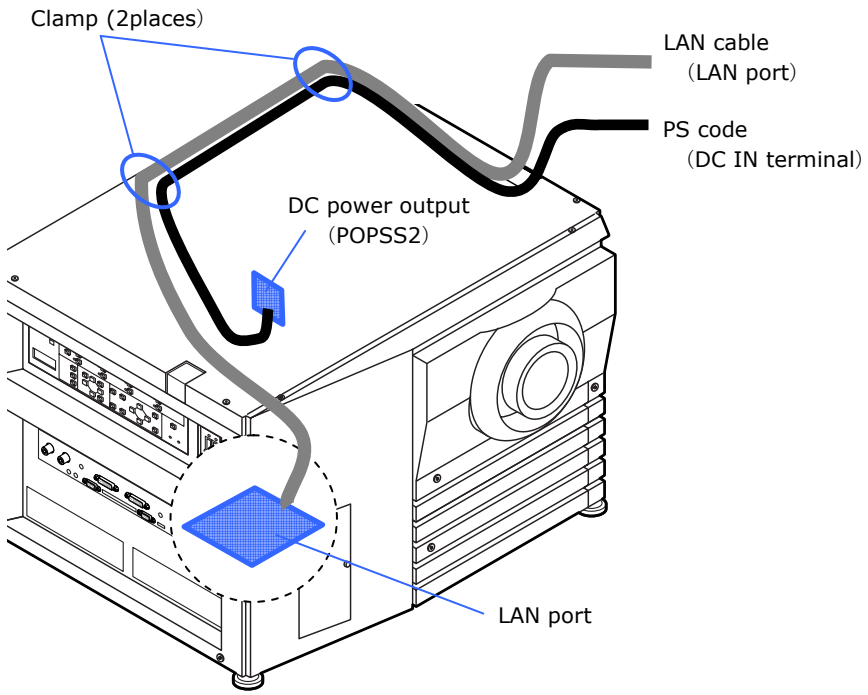
Now, you are ready to connect the power cord and LAN cable.

2.2 Connecting the Power Cord and LAN Cable

Connect the power cord and LAN cable to the projector head.

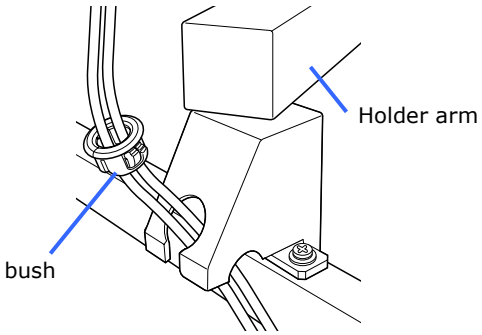
Outline

It is an example for the installation on the front of the projector/lens.



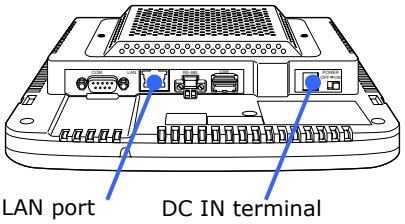
Using the bushing supplied with the holder arm, pass the power cord and LAN cable through the hole in the holder arm to the projector head.
Route the cable to the projector by passing it through the clamp and frame in the projector, taking care not to let the cable come into contact with the PC boards and lens mechanism.
Steps for connecting the LAN cable and power cord to the projector are given below.

[1] Pass the power cord and LAN cable through the cable hole in the holder arm and then install the supplied bushing.



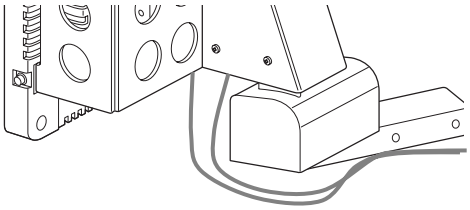
[2] Connect the cord.

Connect the power cord to the DC IN jack on the back of the touch panel and connect the LAN cable to the LAN jack on the back of the touch panel.



[3] Attach the cable.

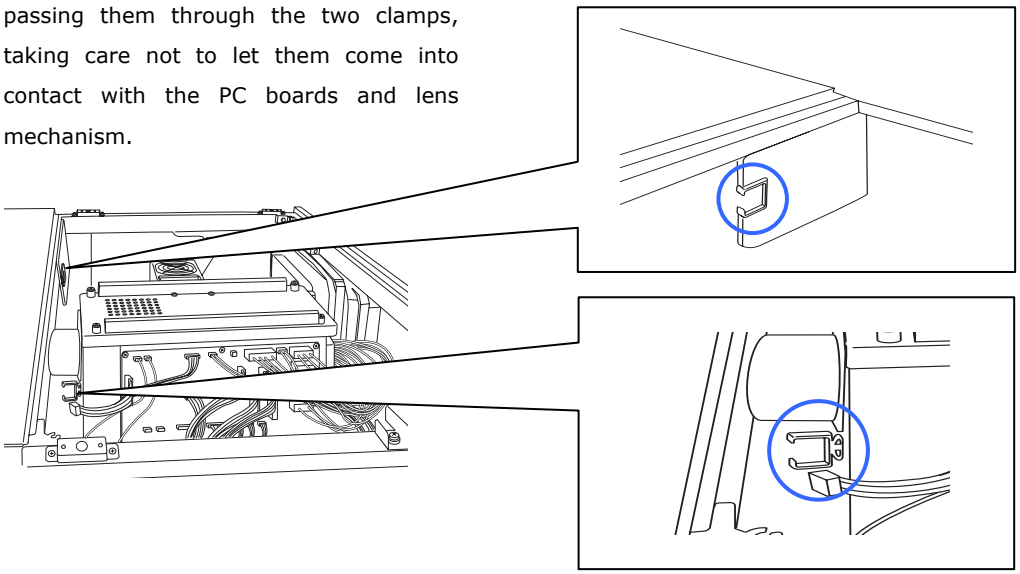
Fit the cable to the arm of the holder arm and secure it with the two clamps, taking the movement of holder arm into consideration. Ensure that the cable is not accidentally caught up.



NOTE • The Clamp (5 pieces) is only for the holder arm. Do not use it in the projector.

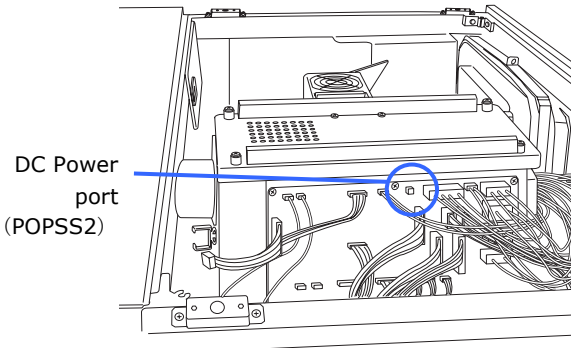
[4] To install the holder arm to the rear or the front lens, fit the power cord and LAN cable to the frame in the projector.

Route the cables to the projector by passing them through the two clamps, taking care not to let them come into contact with the PC boards and lens mechanism.



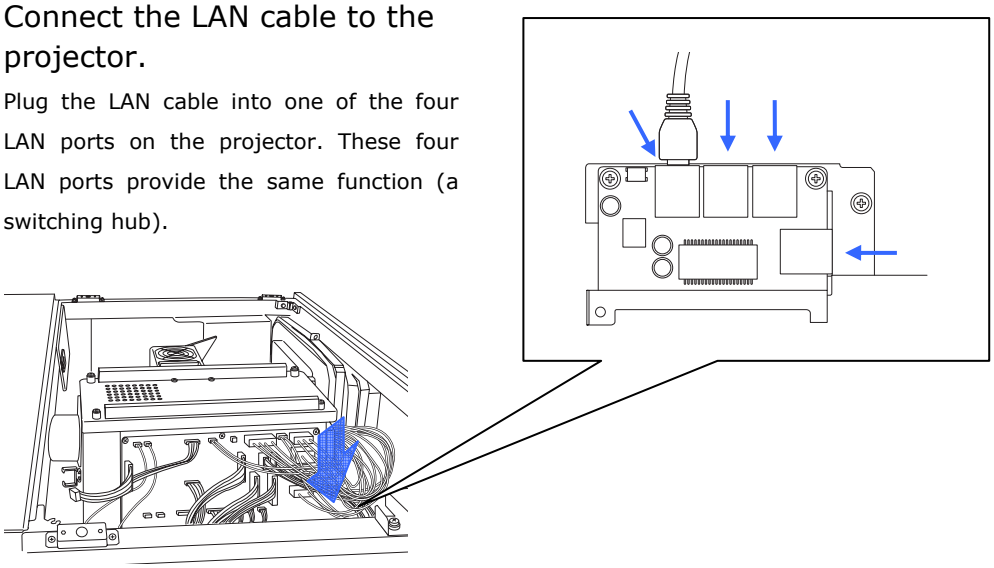
[5] Connect the Power cord to the projector.

Attach the power cord connector to the power port (POPSS2) on the project



[6] Connect the LAN cable to the projector.

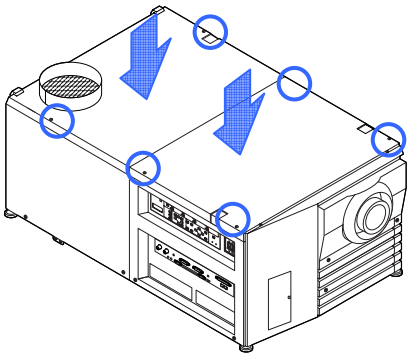
Plug the LAN cable into one of the four LAN ports on the projector. These four LAN ports provide the same function (a switching hub).



[7] Bundle an extra length of the cable to the PC board.

[8] Attach the projector cover.

For details on how to attach the cover , see "NC2500 section" in Installation manual.



Installation of the touch panel is now complete.

3.

Setting Up Your Projector

This chapter describes how to initialize the projector using the Digital Cinema Communicator (DCC) for the touch panel.

MEMO

See "4.1. List of Menu Items"(Page.42) Using the menu (Menu Descriptions & Functions)" for information about the various functions.

3.1 Starting/Exiting the Software

The touch panel power works together with the projector. When you turn on the main power to your projector, it enters standby mode and the software automatically starts. Turning off the main power to the projector causes the software to automatically exit.

3.2 Following Setup

●STEP1

Adjusting Colors

●STEP2

Creating "MCGD" Data

●STEP3

Adjusting the Lens and the Brightness of the Lamp

●STEP4

Creating New Titles

3.3 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.

MEMO

his 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).

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.
- 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.

To perform advanced adjustments, entry of the passcode is required.

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.

3.3.1 Changing the Control Mode to Installation Mode

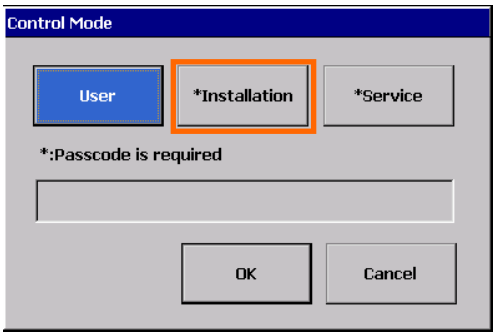
To perform advanced adjustments, you need to select the Installation (or Service) mode. Color adjustment is not available in the User mode.

[1] Press the "MODE" button on the menu bar.

The "Control Mode" screen appears.

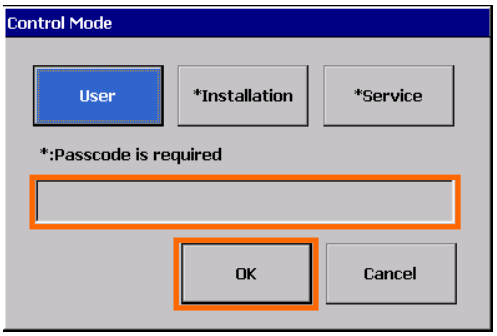
[2] Press the "Installation" button.

This section describes the steps for performing color adjustments in the Installation mode. You can also perform color adjustments in the Service mode.



[3] Enter your passcode and press the "OK" button.

The "MODE" button on the menu bar changes to "MODE(I)". The projector then enters the Installation mode.

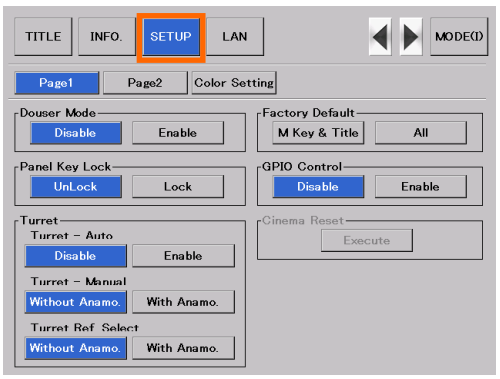


3.3.2 Creating "MCGD" Data

[1] Press the "SETUP" button on the menu bar.

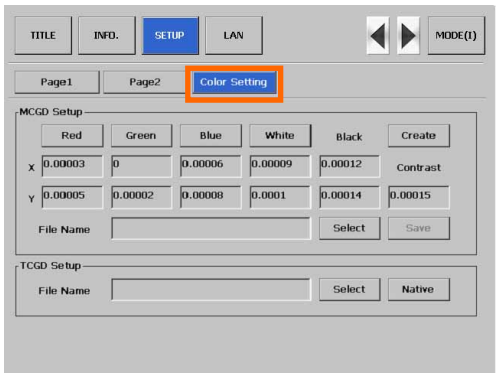
The "SETUP" screen appears.

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.

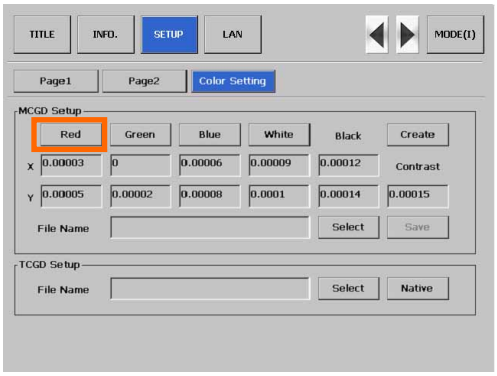


[3] Press the "Create" button in the "MCGD Setup".

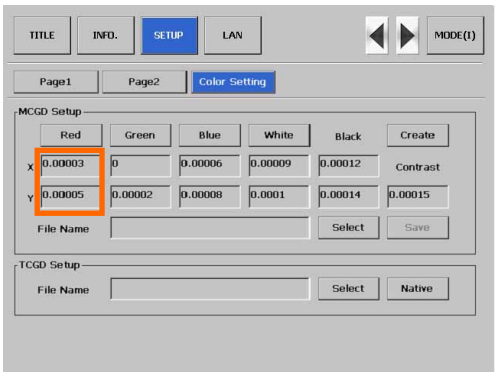
The "Red", "Green", "Blue", and "White" buttons within MCGD Setup will become valid.

[4] Press "Red" button.

There will be projection to the screen in the native color (red) of the projector.



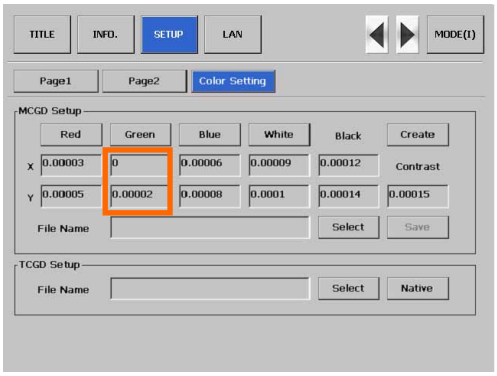
[5] Measure the chromaticity [x, y] of the screen center, then enter the measured value into the [x] section and the [y] section located under [Red].



[6] Press "Green" button.

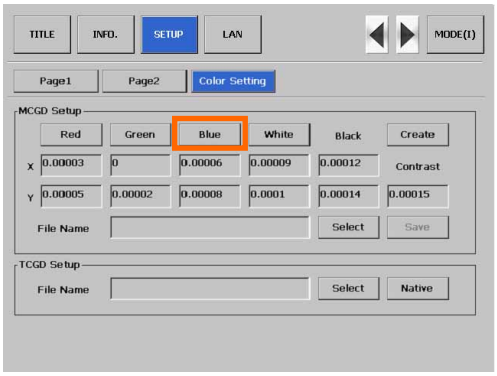
There will be projection to the screen in the native color (Green) of the projector.

[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].

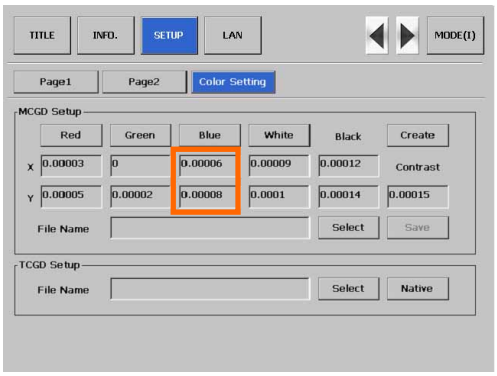


[8] Press "Blue" button.

There will be projection to the screen in the native color (Blue) of the projector.

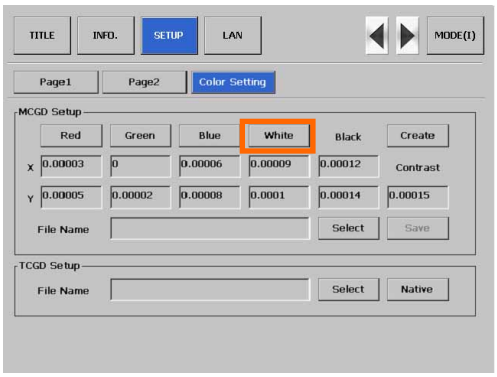


[9] Measure the chromaticity [x, y] of the screen center, then enter the measured value into the [x] section and the [y] section located under [Blue].

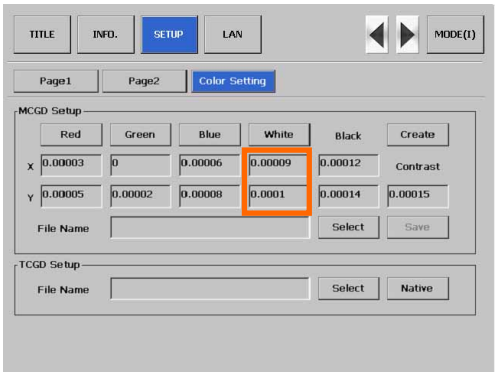


[10] Press "White" button.

There will be projection to the screen in the native color (White) of the projector.

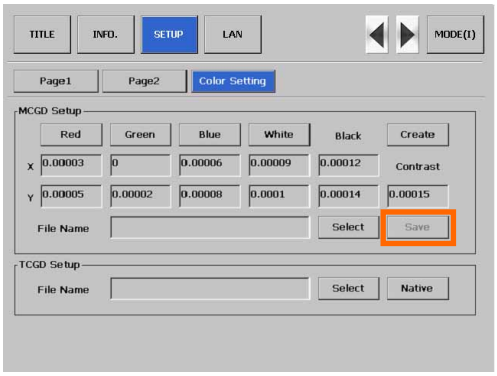


[11] Measure the chromaticity [x, y] of the screen center, then enter the measured value into the [x] section and the [y] section located under [White].



[12] Save the settings.

Press the "Save" 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 "OK" button.



Memo

- It is recommended that you use name "M10I" since it is used for the default file for all of signal source.
- When you save your file using filename "M10I", projector will use this data for default ("M10i" will be applied to all signal sources).

3.3.3 Projecting Red, Green, Blue, and White Colors

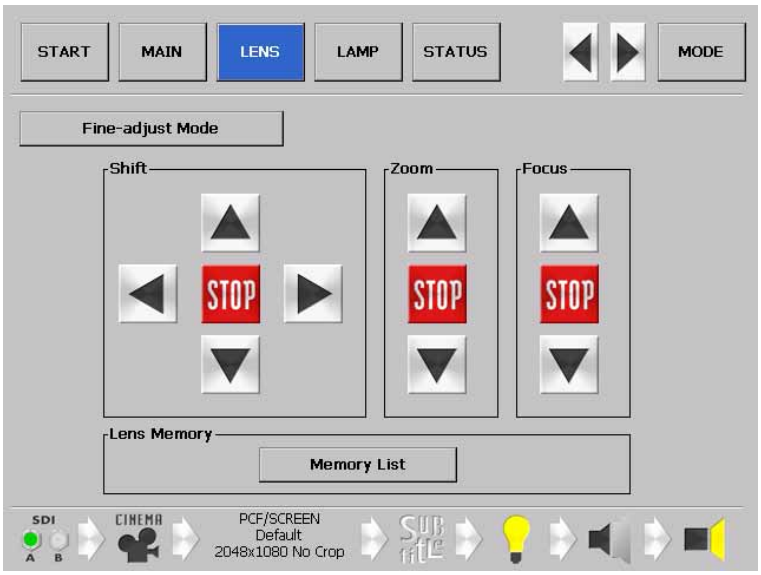
By pressing the "Red", "Green", "Blue", and "White" buttons in the "MCGD Setup", you can project an image in colors, respectively.
To select a target color (TCGD file), press the "SELECT" button in the "TCGD Setup".
You can also select a native color of the projector with the "Native" button.

3.4 Adjusting the Lens Setup and Lamp Brightness

You can register adjusted lens settings (lens memory function) or adjusted brightness of the lamp (lamp memory function). Assign registered settings to titles to call them up later. For information on the lens and lamp memory functions, refer to the NC-TP6401 Touch Panel Controller User's Guide.

3.4.1 Adjusting the Lens

The projector zoom, focus and projected screen (lens shift) are adjusted with the "LENS" screen for information on how to adjust them, refer to the NC-TP6401 Touch Panel Controller User's Guide.

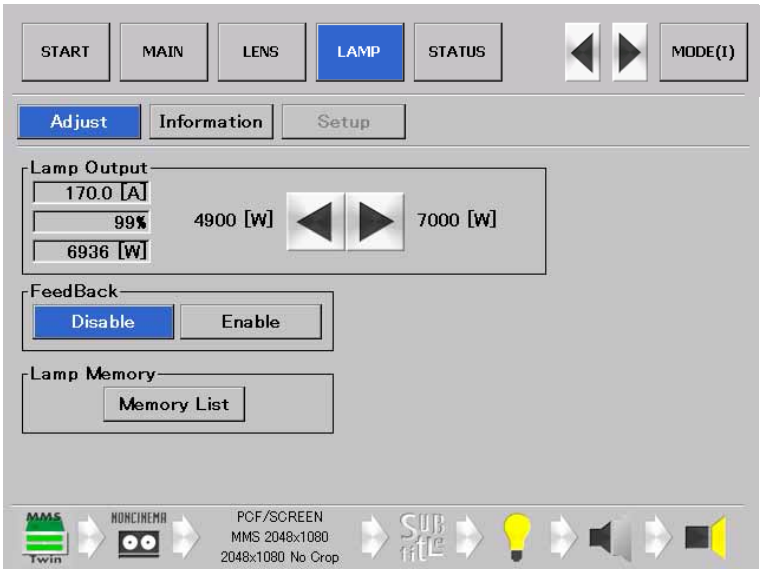


3.4.2 Adjusting the Brightness of the Lamp

The brightness of the lamp is adjusted using the LAMP screen. For information on how to adjust it, refer to the NC-TP6401 Touch Panel Controller User's Guide.
Setting FeedBack to "Enable" allows the set brightness to be maintained automatically.
In the case of movies, adjust the brightness of your DLP Cinema Projector to approximately 12 or 14 (ftl).

Note

- The set value will be invalidated after replacement of the lamp, therefore, you must set lamp brightness once again.
- If you set 100% of the lamp output, automatic brightness adjustment (FeedBack mode) will be disabled.



3.5 Registering Titles

3.5.1 Information on Default Titles

The data listed below have been cataloged in your projector before shipping from our factory.

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, "3.5.4. Creating New Titles" (Page.B-25) Title Creation and Editing" and subsequent sections.

List of Default Titles

Macro Key No.	TITLE	Input	FILES		source		TCGD	Anamorphic Lens
			PCF	SCREEN	active	aspect		
1	CS-SCOPE 1920	SDI-A	CS-SCOPE 1920x1080	Anamo1.25 SCOPE	1920x1080	2.35	P7v2 theatre	1.25
2	VV-FLAT 1920	SDI-B	VV-FLAT 1920x1080	DC2K VISTA	1920x1080	1.85	P7v2 theatre	none
3	HDTV	SDI-A	HDTV 1920x1080	DC2K HDTV	1920x1080	0	Rec 709	none
4	SDI-DUAL-RGB	SDI-A,B	SDI DUAL RGB 1920x1080	2048x1080 No Crop	1920x1080	0	P7v2 theatre	none
5	DVI-A	DVI-A	DVI 2048x1080	DC2K DVI	2048x1080	0	P7v2 theatre	none
6	DVI-B	DVI-B	DVI 2048x1080	DC2K DVI	2048x1080	0	P7v2 theatre	none
7	DVI-TWIN	DVI-A,B	DVI 2048x1080	DC2K DVI	2048x1080	0	P7v2 theatre	none

List of Default PCF files

PCF FILE NAME	source		LUT-DG	CSC	TCGD
	active	aspect	[gamma]		
CS-SCOPE 1280x1024 Post.PCF	1280x1024	2.35	Gamma 2.6	YCbCr 240M	P7v2 telecine
CS-SCOPE 1280x1024.PCF	1280x1024	2.35	Gamma 2.6	YCbCr 240M	P7v2 theatre
CS-SCOPE 1920x1024 Post.PCF	1920x1024	2.35	Gamma 2.6	YCbCr 240M	P7v2 telecine
CS-SCOPE 1920x1024.PCF	1920x1024	2.35	Gamma 2.6	YCbCr 240M	P7v2 theatre
CS-SCOPE 1920x1080 Post.PCF	1920x1080	2.35	Gamma 2.6	YCbCr 240M	P7v2 telecine
CS-SCOPE 1920x1080.PCF	1920x1080	2.35	Gamma 2.6	YCbCr 240M	P7v2 theatre
Default Post.PCF	0x0	0	Gamma 2.6	YCbCr 240M	P7v2 telecine
DVI 1920x1080 Post.PCF	1920x1080	0	Gamma 2.6	Unity RGB	P7v2 telecine
DVI 1920x1080.PCF	1920x1080	0	Gamma 2.6	Unity RGB	P7v2 theatre
DVI 2048x1080 Post.PCF	2048x1080	0	Gamma 2.6	Unity RGB	P7v2 telecine
DVI 2048x1080.PCF	2048x1080	0	Gamma 2.6	Unity RGB	P7v2 theatre
HDTV 1920x1080 Post.PCF	1920x1080	0	2.2	YCbCr 709	Rec 709
HDTV 1920x1080.PCF	1920x1080	0	2.2	YCbCr 709	Rec 709
MMS 1920x1080 125.PCF	1920x1080	1.25	2.2	Unity RGB	Rec 709
MMS 1920x1080 133.PCF	1920x1080	1.33	2.2	Unity RGB	Rec 709
MMS 1920x1080 178.PCF	1920x1080	1.78	2.2	Unity RGB	Rec 709
MMS 1920x1080 185.PCF	1920x1080	1.85	2.2	Unity RGB	Rec 709
MMS 1920x1080 235.PCF	1920x1080	2.35	2.2	Unity RGB	Rec 709
MMS 1920x1080.PCF	1920x1080	0	2.2	Unity RGB	Rec 709
MMS 2048x1080 125.PCF	2048x1080	1.25	2.2	Unity RGB	Rec 709
MMS 2048x1080 133.PCF	2048x1080	1.33	2.2	Unity RGB	Rec 709
MMS 2048x1080 178.PCF	2048x1080	1.78	2.2	Unity RGB	Rec 709
MMS 2048x1080 185.PCF	2048x1080	1.85	2.2	Unity RGB	Rec 709
MMS 2048x1080 235.PCF	2048x1080	2.35	2.2	Unity RGB	Rec 709
MMS 2048x1080.PCF	2048x1080	0	2.2	Unity RGB	Rec 709
SDI DUAL RGB 1920x1080 Post.PCF	1920x1080	0	Gamma 2.6	YCbCr 240M	P7v2 telecine
SDI DUAL RGB 1920x1080.PCF	1920x1080	0	Gamma 2.6	YCbCr 240M	P7v2 theatre
VV-FLAT 1280x1024 Post.PCF	1280x1024	1.85	Gamma 2.6	YCbCr 240M	P7v2 telecine
VV-FLAT 1280x1024.PCF	1280x1024	1.85	Gamma 2.6	YCbCr 240M	P7v2 theatre

PCF FILE NAME	source		LUT-DG	CSC	TCGD
	active	aspect	[gamma]		
VV-FLAT 1920x1024 Post.PCF	1920x1024	1.85	Gamma 2.6	YCbCr 240M	P7v2 telecine
VV-FLAT 1920x1024.PCF	1920x1024	1.85	Gamma 2.6	YCbCr 240M	P7v2 theatre
VV-FLAT 1920x1080 Post.PCF	1920x1080	1.85	Gamma 2.6	YCbCr 240M	P7v2 telecine
VV-FLAT 1920x1080.PCF	1920x1080	1.85	Gamma 2.6	YCbCr 240M	P7v2 theatre

List of Default SCREENs

SCREEN FILE NAME	anamorphic factor	screen presentation
Anamo125 SCOPE.SCREEN	1.25	2048x1080
DC2K SCOPE.SCREEN	1	2048x1080
DC2K DUAL.SCREEN	1	2048x1080
DC2K DVI.SCREEN	1	2048x1080
DC2K HDTV AREA.SCREEN	1	1920x1080
DC2K HDTV.SCREEN	1	2048x1080
DC2K SXGA AREA.SCREEN	1	1280x1024
DC2K VISTA AREA.SCREEN	1	1998x1080
DC2K VISTA.SCREEN	1	2048x1080
1280x1024 No Crop.SCREEN	1	1280x1024
1400x1050 No Crop.SCREEN	1	1400x1050
2048x1080 No Crop.SCREEN	1	2048x1080

List of Default SOURCEs

SOURCE FILE NAME	source	
	active	aspect
1280x1024 SCOPE.SOURCE	1280x1024	2.35
1920x817 SCOPE.SOURCE	1920x817	0
1920x1024 SCOPE.SOURCE	1920x1024	2.35
1920x1080 SCOPE.SOURCE	1920x1080	2.35
2048x1080 SCOPE.SOURCE	2048x1080	2.35
1280x1024 VISTA.SOURCE	1280x1024	1.85
1920x1024 VISTA.SOURCE	1920x1024	1.85
1920x1038 VISTA.SOURCE	1920x1038	0
1920x1080 VISTA.SOURCE	1920x1080	1.85
2048x1080 VISTA.SOURCE	2048x1080	1.85
1280x1024 HDTV.SOURCE	1280x1024	1.778
1920x1024 HDTV.SOURCE	1920x1024	1.778
1920x1080 HDTV.SOURCE	1920x1080	0
2048x1080 HDTV.SOURCE	2048x1080	1.778

3.5.2 Overview of Titles

A total of 100 titles (01-99) can be set for the projector. You can preset the followings for each title.

- Select Signal (selection of input signal and signal type)
- Lens memory
- Lamp memory
- Setup of anamorphic lens motorized turret
- PCF files
- MCGD files
- SCREEN files

Calling up a preset title facilitates switching of input signals. You can also assign titles to the Macro keys on the projector's control panel and call them up directly using these keys.

3.5.3 Displaying TITLE Screen

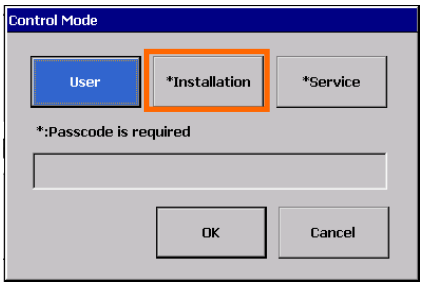
To create or edit a title, you need to change the Control Mode to Installation (or Service) mode. Titles cannot be created or edited in the User mode.

[1] Press "MODE"button on the menu bar.

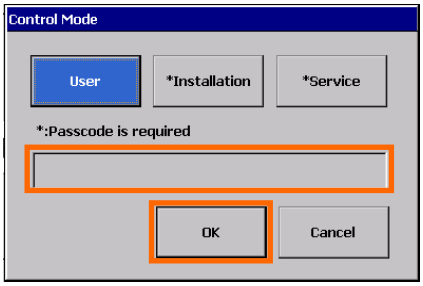
The "Control Mode"Screenwill appear.

If the "TITLE" button is not visible, press the ">" button on the menu bar and then scroll the menu bar.

[2] Press "Installation"button



[3] Enter the passcode and press "OK" button.



[4] Press the "TITLE" button on the menu bar.

The "TITLE" screen will appears.

If the "TITLE" button is not visible, press the ">" button on the menu bar and then scroll the menu bar.

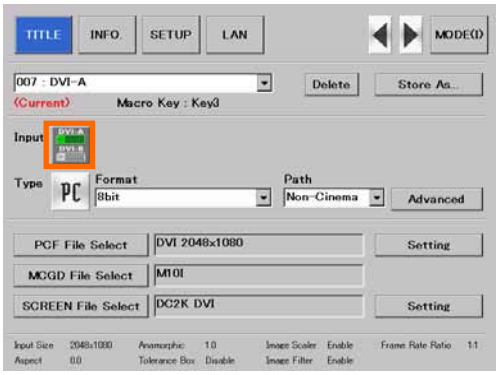
3.5.4 Creating New Titles

This section describes how to create a new title that is associated with a video signal input. For the steps for registering a test pattern for a title, see 3-5-6, Registering a Test Pattern for a Title (Page B-32). For the steps for editing a registered title, see 3-5-5, editing a Title (Page B-31).

Preparation:
Open the "TITLE" screen. For details, see 3-5-3, Displaying TITLE Screen (Page B-25).

[1] Press the "Input" icon.

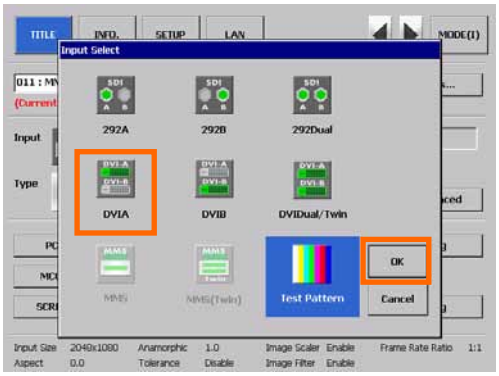
The "Input Select" screen appears.



[2] Select the desired input signal and then press the "OK" button.

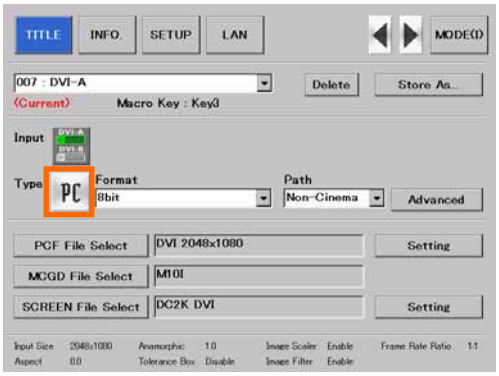
The selected icon is displayed as a blue cursor. Press the "OK" button to return to the "TITLE" screen.

The "Type Select" screen appears.



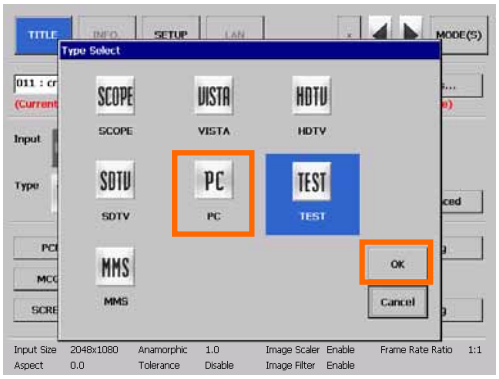
[3] Press the "Type" icon.

The "Type Select" screen appears.



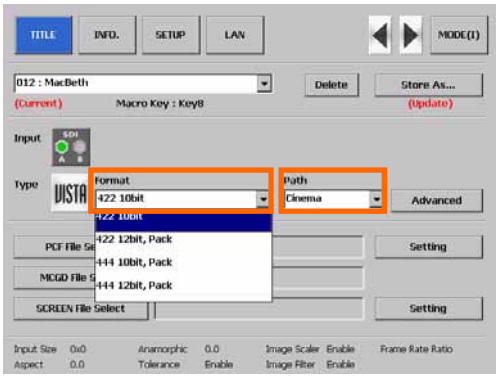
[4] Select the type of input signal and then press the "OK" button.

The selected icon is displayed as a blue cursor. Press the "OK" button to return to the "TITLE" screen.



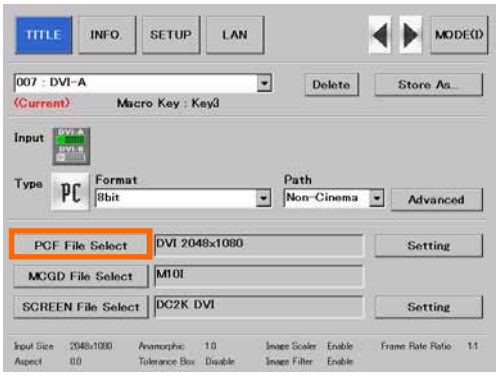
[5] Select the Format, Path.

From the pull-down list, selects the format of the input signal and the path (Cinema/Non-Cinema).



[6] Press the "PCF File Select" button.

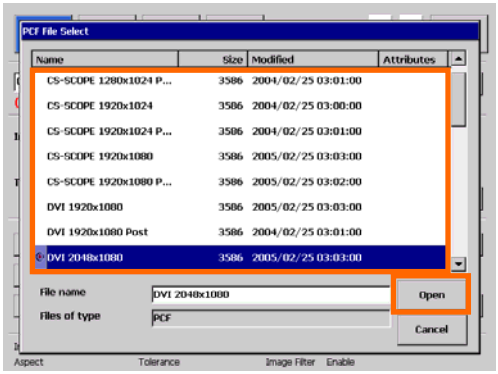
The "PCF File Select" screen appears.



[7] Select a PCF file that is associated with the signal and press the "Open" button.

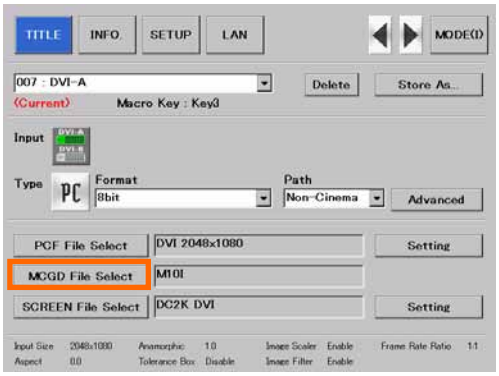
Press the "Open" button to return to the "TITLE" screen.

To create a new PCF file, press the "Setting" button to create the file. For details on how to set a new PCF file, see 3-6, Creating a PCF File.



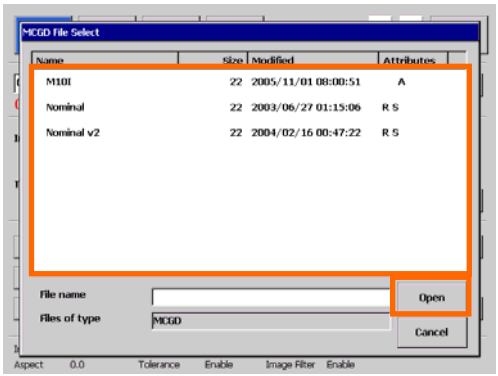
[8] Press the "MCGD File Select" button.

The "MCGD File Select" screen appears.



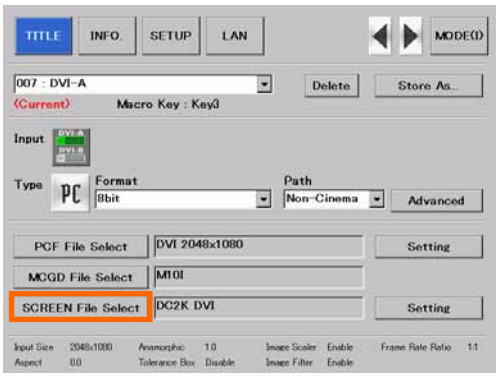
[9] Select an MCGD file that is associated with the signal and press the "Open" button.

Press the "Open" button to return to the "TITLE" screen.



[10] Press the "SCREEN File Select" button.

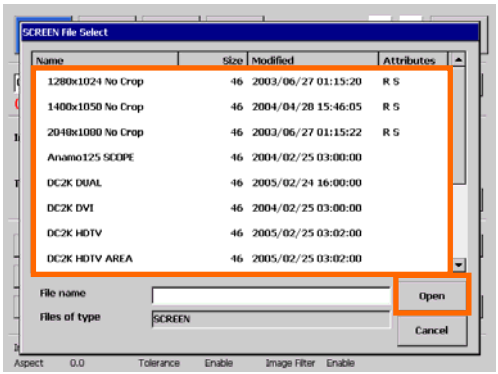
The "SCREEN File Select" screen appears.



[11] Select a SCREEN file that is associated with the signal and press the "Open" button.

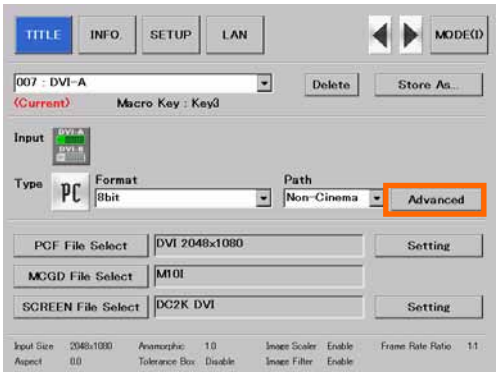
Press the "Open" button to return to the "TITLE" screen.

To create a new SCREEN file, press the "Setting" button to create the file. For details on how to set a new SCREEN file, see 3-7, Creating a SCREEN File.



[12] Press the "Advanced" button.

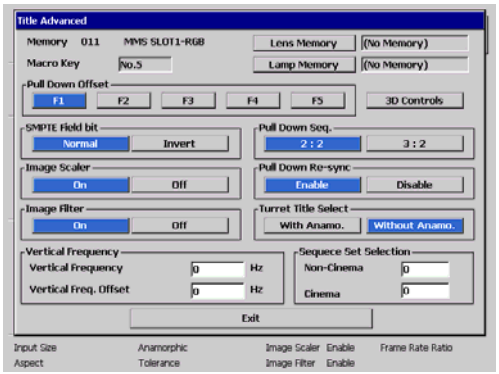
The "Title Advanced" screen will appears.



[13] Configure the advanced settings depending on the input signal and press the "Exit" button.

For details of the settings, see "List of Settings Items on Title Advanced"(page. B-54) in 4.8.1.

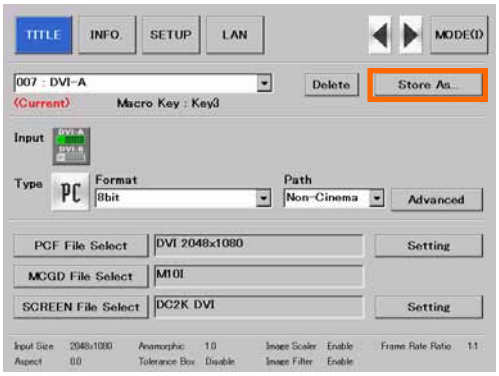
Press the "Exit" button to return to the "TITLE" screen.



[14] Press the "Store As ..." button.

Save the settings. Press the "Store As ..." button to display the "Title List" screen.

Select the title number you want to register with the projector and press the "OK" button. If you select a title number that has been registered (its title name is displayed), it is saved.



3.5.5 Editing a Title

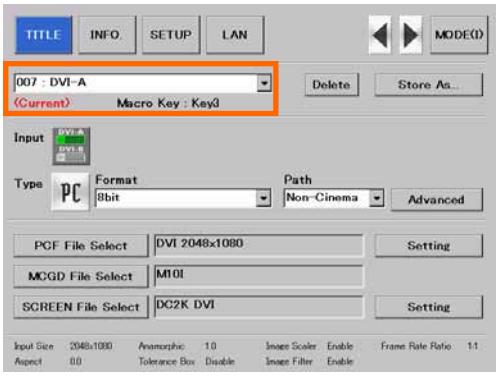
Preparation:

Open the "TITLE" screen. For details, see 3-5-3, Displaying TITLE Screen (Page B-25).

[1] 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 macro key has been assigned, its key number appears in the "Macro Key: " column.



[2] Edit the settings.

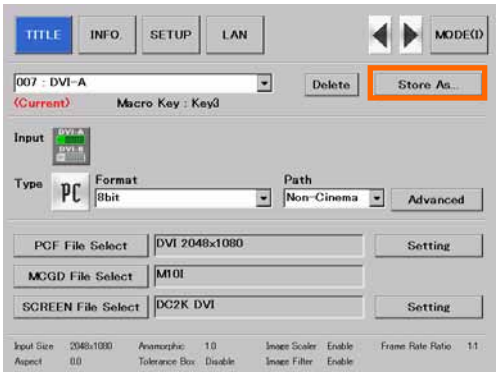
Edit the settings as described in 3-5-4, Creating New Titles (See, Page B-25).

[3] Press the "Store As ..." button.

Save the settings. Press the "Store As ..." button to display the "Title List" screen.

To overwrite an edited title, check that the title number you are editing is selected before pressing the "OK" button.

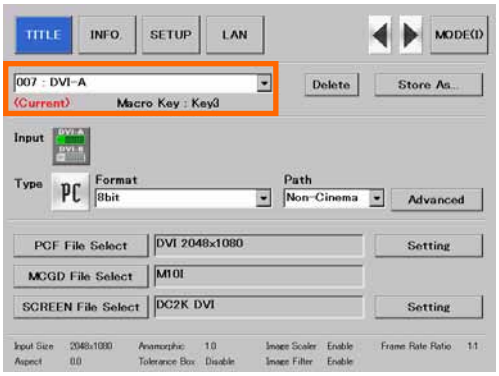
To register an edited title as a new title, select a number for which no title has been selected (no title name is displayed) and press the "OK" button.



3.5.6 Deleting a Title

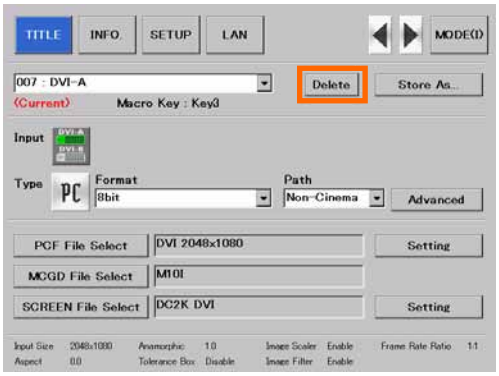
[1] From the pull-down menu, select a desired title.

Press the pull-down menu, select a title from the list that appears.



[2] Press the "Delete" button.

When a confirmation message appears, press the "Yes" button.



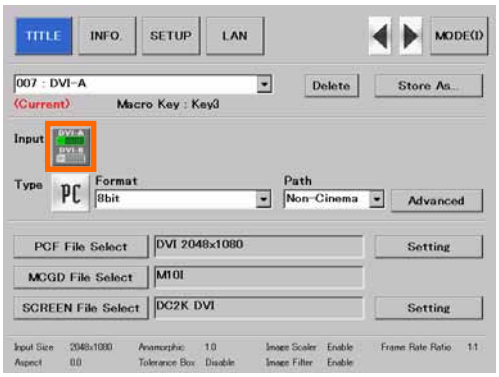
3.5.7 Registering a Test Pattern for a Title

Preparation:

Open the "TITLE" screen. For details, see 3-5-3, Displaying TITLE Screen (Page B-25).

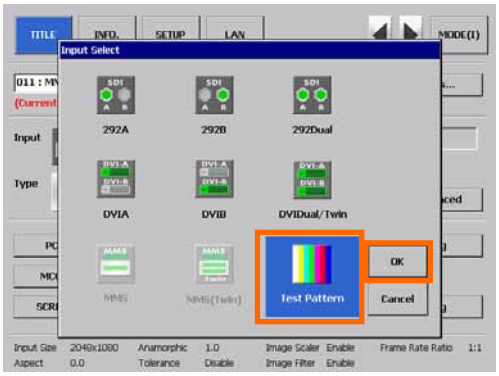
[1] Press the "Input" icon.

The "Input Select" screen appears.



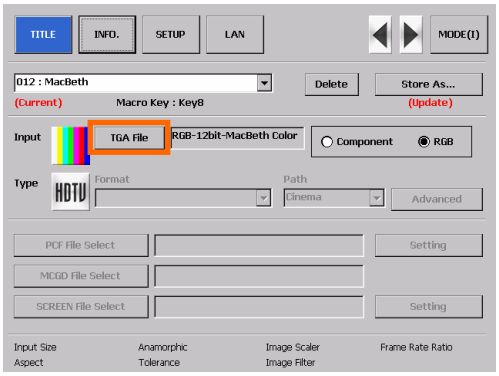
[2] Select the "Test Pattern" icon and press the "OK" button.

The selected icon is displayed as a blue cursor. Press the "OK" button to return to the "TITLE" screen.

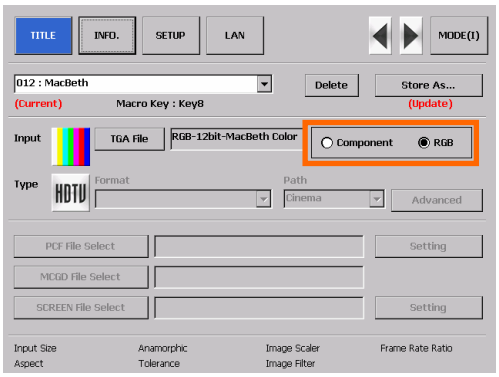


[3] Press the "TGA File" button to select the test pattern you want to register.

When you press the "TGA File" button, the "TGA File" screen appears. Select the test pattern you want to register and press the "OK" button.



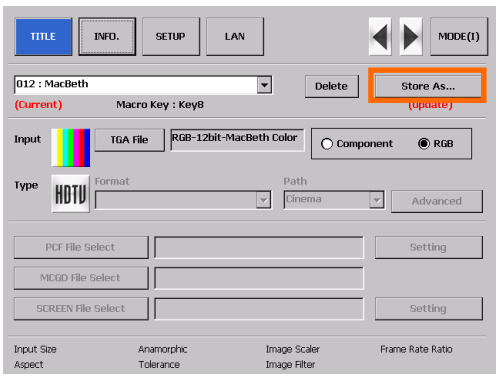
[4] Select "Component" or "RGB" for the type of test pattern signal.



[5] Press the "Store As ..." button.

Save the settings. Press the "Store As ..." button to display the "Title List" screen.

Select the title number you want to register with the projector and press the "OK" button. If you select a title number that has been registered (its title name is displayed), it is saved.



3.6 Creating a PCF File

3.6.1 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
- Native color information (MCGD)
- Target color information (TCGD)

To create a PCF file, use the "Setting" button on the "TITLE" screen. One creation method is to call an existing file, make changes, and then save the file, and another method is to create a new file; however, the basic operations are the same and the method of creating a new file will be described here

For information on assigning a PCF file to a title, see 3-5-4, “Creating a New Title” (Page 25).

3.6.2 Creating a New PCF File

Preparation:

Open the "TITLE" screen. For details, see 3-5-3, Displaying TITLE Screen (Page B-25).

[1] Press the “Setting” button in the “PCF File Select”

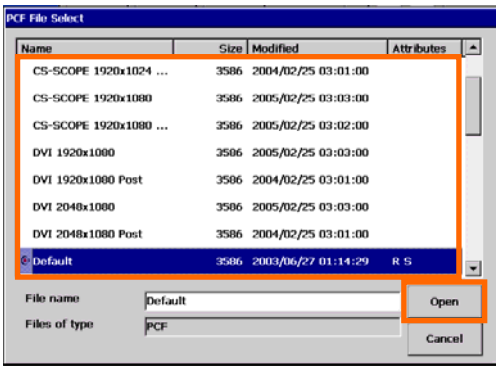
The “PCF File Select” Screen appears.

[2] Select the PCF file you want to browse and press the "Open" button.

To create a PCF file by browsing an existing file, select the desired PCF file.

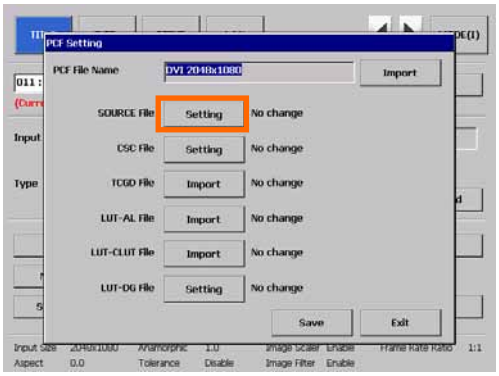
To create a new PCF file, select "Default".

The "PCF File Setup" screen appears.



[3] Press the "Setting" button in the SOURCE File.

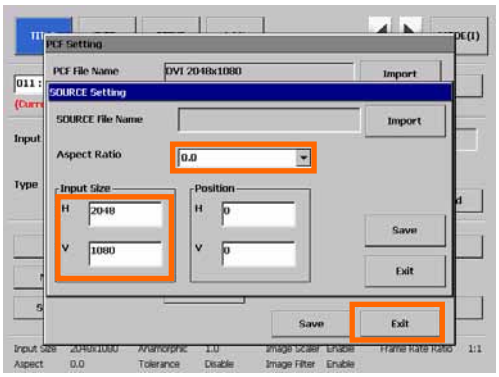
The "SOURCE Setting " screen appears.



[4] Enter the Aspect Ratio and Input Size, then press "EXIT" button.

The "PCF File Setup" screen reappears

For Detail of SOURCE Setting Screen, See "SOURCE Setting" (page. B-55).



Example of setting SOURCE File

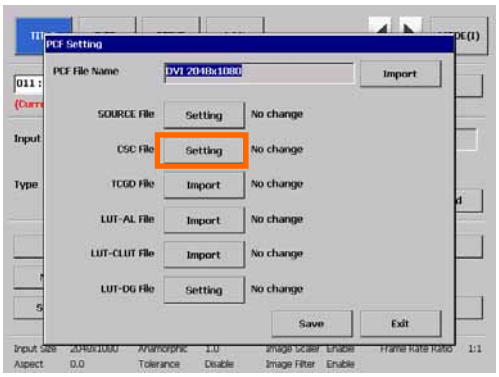
Conditions:

- 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

[5] Press the "Setting" button in the "CSC File".

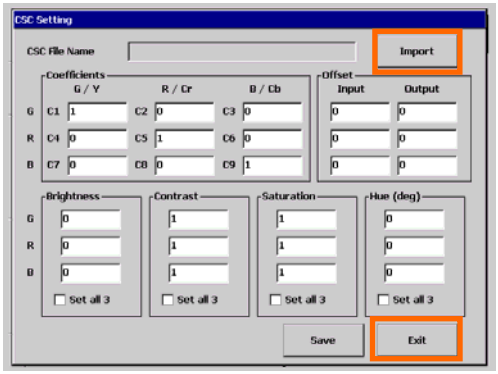
"CSC Setting" screen will appears.



[6] Press the "Import" button and select a color space file that corresponds to the input signal.

Since the required CSC file is already contained in the projector, you do not need to enter numerical values.

When you have selected the file, press the "Exit" button to return to the "PCF Setting" screen.



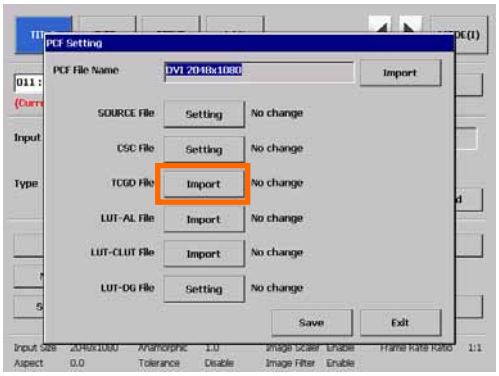
Example of selecting a CSC file:

For DVI connector	-RGB input: "Unity RGB.CSC" (same as "Mk7 Unity RGB.CSC")
For HD-SDI connector	- Component input:10-bit 64-940.CSC"

[7] 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.

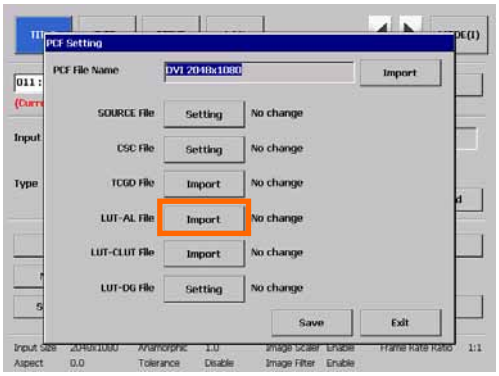
When you have selected the file, press the "Exit" button to return to the "PCF File Setup" screen.



[8] Press the "Import" button in "LUT-AL File" to select the LUT-AL file.

(Usually, you do not need to select it.)

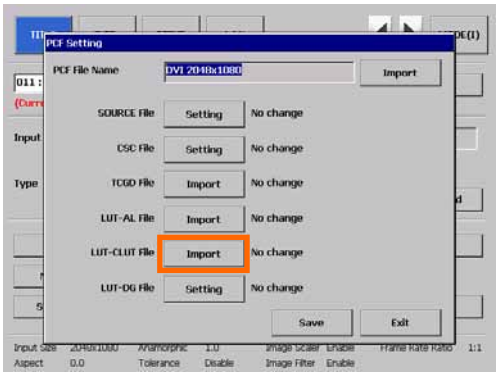
When you have selected the file, press the "Exit" button to return to the "PCF File Setup" screen.



[9] Press the "Import" button in "LUT-CLUT File" to select the LUT-CLUT file.

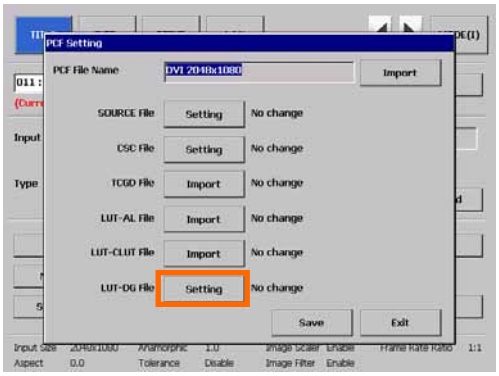
(Usually, you do not need to select it.)

When you have selected the file, press the "Exit" button to return to the "PCF File Setup" screen.



[10] Press the "Setting" button in "LUT-DG File".

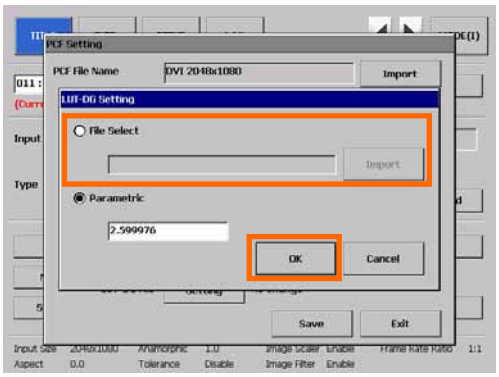
The "LUT-DG File Setup" screen appears.



[11] Set the LUT-DG file and then press the "OK" button.

Normally, select File Select and set the file shown below

When you have set the file, press the "OK" button to return to the "PCF File Setup" screen.



Example of setting LUT-DG File

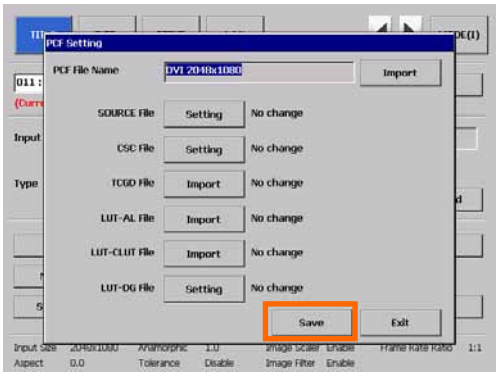
Movies	"Gamma 2.6.LUT-DG" (equivalent to "Mk7 PL2.6.LUT-DG)
PC and Other Input	"Graphics_Enhanced.LUT-DG
When using Parametric	Select "Parametric" to enter the degamma value.

[12] Press the "Save" button.

Save the settings. Press the "Save" button to display the "PCF File Select" screen appears.

To overwrite an existing file, check that the file being edited is selected before pressing the "OK" button.

To register a new file, enter the name of file and then press the "OK" button.



3.7 Creating a SCREEN File

3.7.1 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

To create a SCREEN file, use the "Setting" button on the "TITLE" screen. One creation method is to call an existing file, make changes, and then save the file, and another method is to create a new file; however, the basic operations are the same and the method of creating a new file will be described here.
For information on assigning a PCF file to a title, see 3-5-4, "Creating a New Title" (Page 25).

3.7.2 Creating a New SCREEN File

Preparation:
Open the "TITLE" screen. For details, see 3-5-3, "Displaying TITLE Screen" (Page B-25).

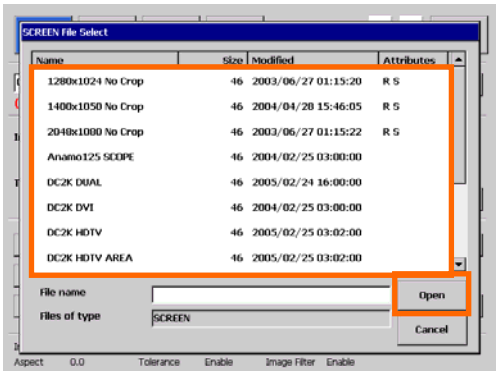
[1] Press the "Setting" button on the right-hand side of "SCREEN File Select".

The "SCREEN File Select" screen appears.

[2] Select the SCREEN file you want to browse and press the "Open" button.

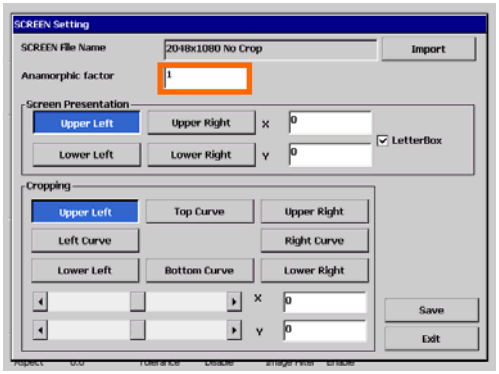
To create a SCREEN file by browsing an existing file, select the desired SCREEN file. To create a new SCREEN file, select "Default"

The "SCREEN File Setup" screen appears.



[3] Input the magnification of Anamorphic Lens in the "Anamorphic factor"

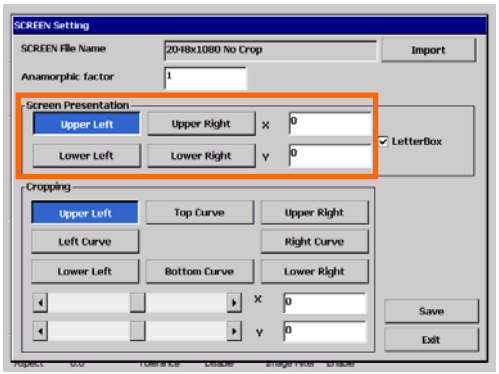
When the anamorphic lens is not used, "1" is input.



[4] 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 :0～2047
- Y :0～1079



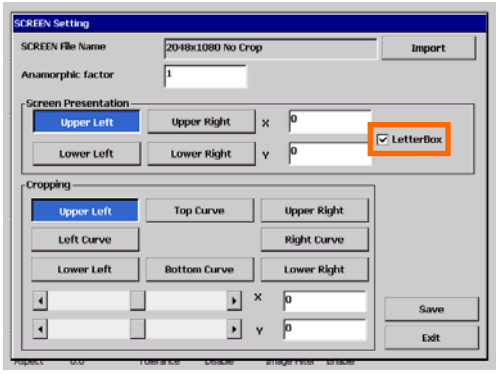
Example of setting SCREEN file

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.

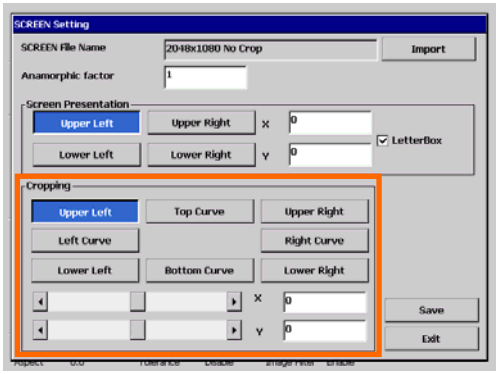
VISTA Screen	Call the DC2K VISTA AREA.SCREEN file.
HDTV Screen	Call the DC2K HDTV AREA.SCREEN file.

[5] Select the "Letterbox" checkbox.

Usually this checkbox should be selected.



[6] "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 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.

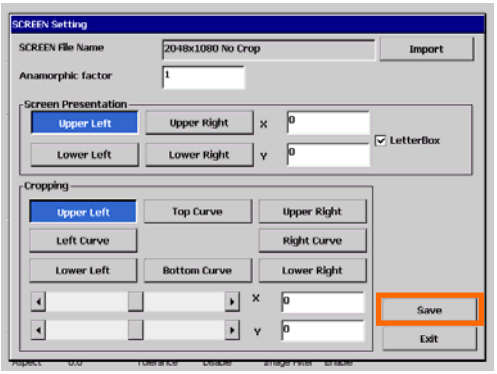
Upper Left	Sets the amount of cropping at the upper left of the screen. (This becomes the reference point of the XY coordinates.)
Left Curve	Sets the amount of curvature of the left vertical line of the screen. Enter the value of the relative value from the x coordinates of Upper Left and Lower Left. 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.

[7] Press the "Save" button.

Save the settings. Press the "Save" 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 "OK" button.

To register a new file, enter the name of file and then press the "OK" button.

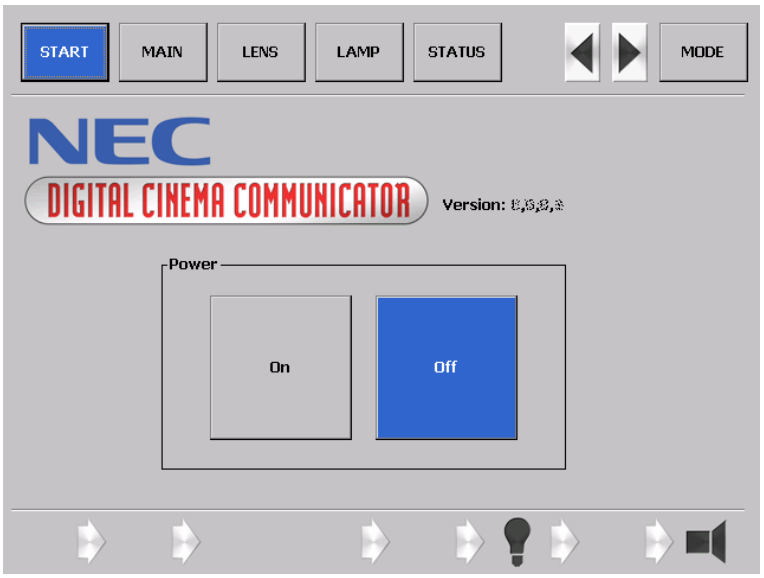
Upon completion of adjustments, press the "Exit" button to return to the "TITLE" screen.



4.

Menu Descriptions & Functions

This chapter describes functions of the menu items available on the touch panel.
For information on the basic operations of the touch panel, refer to the NC-TP6401 Touch Panel Controller User's Guide.



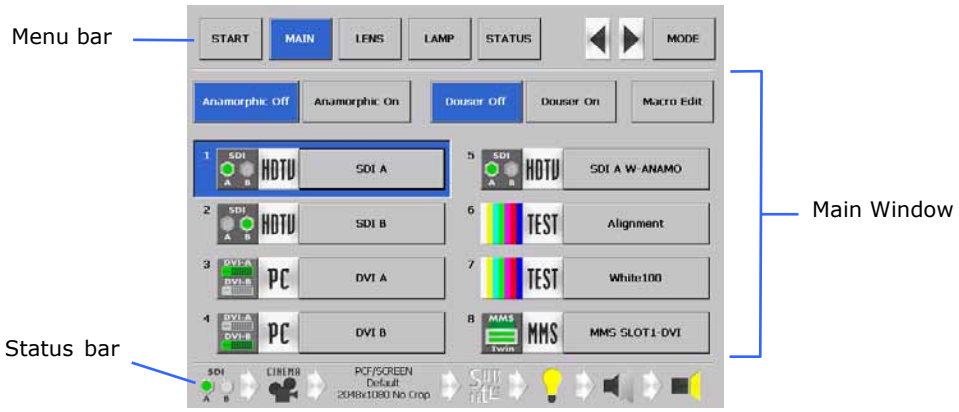
4.1 List of Menu Items

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

Main menu	Submenu	Description	Ref. page
START		This screen is displayed when the controller is started.	B-45
	POWER	To turn on and off the projector.	
MAIN		Select the input signal from this screen.	B-46
	Anamorphic Off/On	To control the anamorphic lens.	
	Douser Off/On	To control the Douser function.	
	(Macro Edit)	For service personnel. Sets the titles to be assigned to the macro keys of 1 to 8.	
	Display of signal	To display the titles assigned to macro keys 1 to 8 on the projector.	
LENS		Control the lens from this screen.	B-48
	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	Screen for various settings and display for the lamp.	
LAMP		To save the current lens settings and call the saved settings.	B-50
	Adjust	To adjust the lamp brightness.	
	Information	To display the lamp information.	
	(Setup)	To set up the lamp.	
	Lamp Memory	To save the current lamp settings, and call the saved settings.	
STATUS		Projector setting status is displayed in this screen.	B-52
(TITLE)		Set titles and display the list in this screen. This is used by the service personnel.	B-53
INFO		Screen for display of various information about the projector.	B-57
(SETUP)		Screen for initial setting upon installation. This is used by the service personnel.	B-59
(LAN)		Screen for LAN setting of SYSTEM and CINEMA.. This is used by the service personnel.	B-63
< > button		Buttons that switch pages for the main menu bar. - Menu items for page1: START, MAIN, LENS, LAMP, and STATUS - Menu items for page2: TITLE, INFO, SETUP, and LAN	-
MODE button		Button to change the menu mode. The menu of this controller has three modes as follows. -User mode: To display the basic menu items only. -Installation mode: Menu for installation. Input of the pass code is required to use this mode. -Service mode: Menu for the service personnel. To use the Installation or Service mode, you need to enter your passcode.	-

4.2 Description of the Sections in the Menu Screen

The menu screen of this controller consists of three sections below.
The selected (active) button is displayed in blue.



Menu bar	Menu buttons are displayed here. The menu selected here is displayed in the main window below.
Main Window	The menu selected from the menu bar is displayed here.
Status bar	The status of the controller is displayed with icons.

4.2.1 Status bar

(1) Signal Input icon
Shows the input signal terminal selected.

DVI-A DVI-B	Input for DVI-A terminals	SDI A B	Input for SDI-A terminals	MMS	Input for the multi-media switcher (MMS) terminal
DVI-A DVI-B	Input for DVI-B terminals	SDI A B	Input for SDI-B terminals	MMS Twin	TWIN Input for the multi-media switcher (MMS) terminal
DVI-A DVI-B	Dual/Twin input for DVI-A and DVI-B terminals	SDI A B	Dual input for SDI-A and SDI-B terminals		Displaying test patterns

(2) Cinema Mode icon

Shows the status of the Cinema mode (ON/OFF).

	When the Cinema mode is turned on
	When the Cinema mode is turned off (Non-cinema)

(3) Show Title

Shows the title selected.

(4) Subtitle icon

Shows the status of the subtitle (ON/OFF).

	When the subtitle is turned ON
	When the subtitle is turned OFF

(5) Lamp icon

Shows the status of the lamp (ON/OFF).

	Lamp ON
	Lamp OFF

(6) Anamorphic Lens icon

Shows the status of the anamorphic lens (ON/OFF).

	anamorphic lens ON
	anamorphic lens OFF

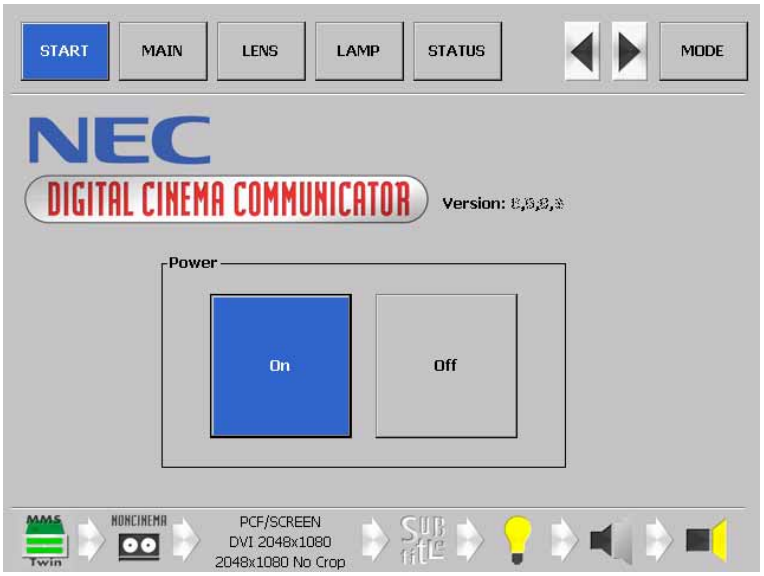
(7) Douser icon

Shows the status of the douser (ON/OFF).

	Douser ON
	Douser OFF

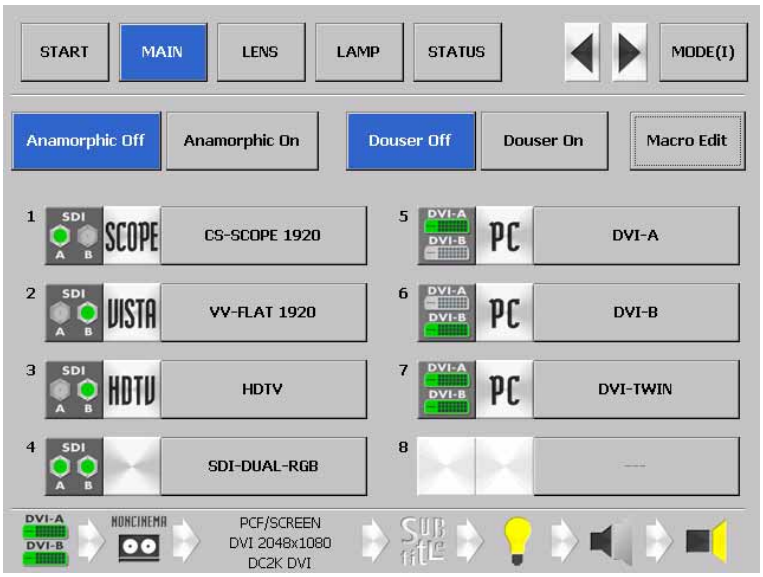
4.3 START Screen

When the touch panel 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.



4.4 MAIN Screen

Press the [MAIN] button from the menu bar to display the MAIN screen. From the MAIN screen, you can select title and control anamorphic lens and douser.



Anamorphic OFF button Anamorphic ON button	Used to select Anamorphic ON/OFF.
Douser OFF button Douser ON button	The following buttons control the douser. - Douser ON button : Causes the douser to shut off the light to the projector. - Douser OFF button : Deactivates the douser.
Macro Edit button	Used to edit macro keys.
1-8 button	These buttons serve the same function as macro keys 1-8 provided on the control panel of the projector. Pressing the title buttons allows you to select titles (input signals) assigned to macro keys 1-8. - Title displayed blue : Title is selected. - Title indicated by "---" : Title is not registered.

The meaning of icons that are displayed are outlined below.

Input icon

Shows the input signal terminal.

	Input for DVI-A terminals		Input for SDI-A terminals		Input for the multi-media switcher (MMS) terminal
	Input for DVI-B terminals		Input for SDI-B terminals		TWIN Input for the multi-media switcher (MMS) terminal
	Dual/Twin input for DVI-A and DVI-B terminals		Dual input for SDI-A and SDI-B terminals		Displaying test patterns

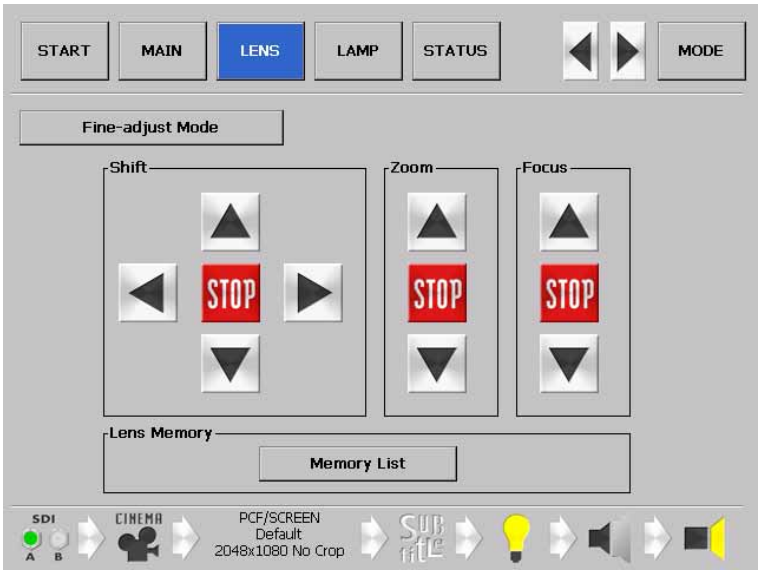
Type icon

Indicates a signal type.

	SCOPE		HDTV		Signal of Multi-media switcher(MMS)
	VISTA		SDTV		If none is selected:
	PC		TEST signal		

4.5 LENS Screen

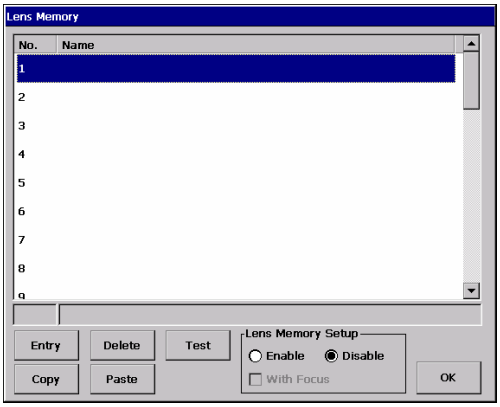
Press the [LENS] button from the menu bar to display the LENS screen.
From the LENS screen, you can perform lens controls such as lens shifting, zoom adjustment, and focus adjustment.



[Fine-adjust Mode] button	Press the [Fine-adjust Mode] button for fine adjustment.
Shift	Move the projection screen vertically and horizontally. [▲] 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. • Press the [▲] [▼] [◀] or [▶] buttons again during moving to stop the moving.
Zoom	Zoom in and zoom out the projection screen. [▲] button: To zoom in. [▼] button: To zoom out. [STOP] button: To stop zooming in or out. • Press the [▲] or [▼] button again during zooming in or out to stop the zoom-in or zoom-out operation.
Focus	Adjust the focus of the projection screen. [▲] button: To set the focus distance longer. [▼] button: To set the focus distance shorter. [STOP] button: To stop focus moving. • Press the [▲] and [▼] button again during a moving focus to stop the focus moving.
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

Lens Memory Screen

Press the [Memory List] on the LENS window to display the Lens Memory window.



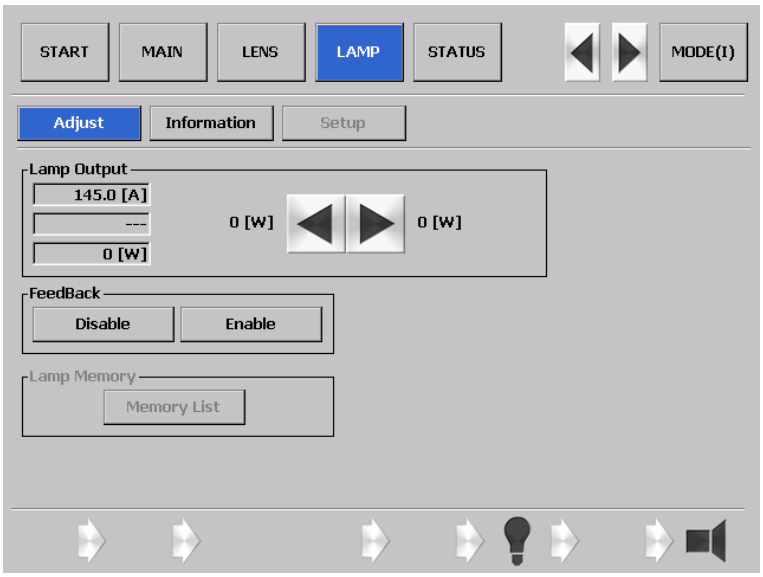
"Entry" button	Saves the current adjustment value to the memory.
"Delete" button	Deletes the memory selected in the list from the Lens Memory.
"Test" button	Tests the adjustment value of the memory selected in the list.
"Copy" button	Copies the memory selected in the list.
"Paste" button	Saves the copied memory to any location.
Len Memory Setup	With Focus: Apply a check mark here to turn it on to also call up focus adjustment values (Only when the setting is "Enable").
"OK" button	Closes the Lens Memory window and returns to the LENS window.

4.6 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.

- Adjust :To adjust the lamp brightness. (See This page)
- Information :To display the lamp information.(See Next page)
- Setup :Screen used by the service Personnel. [T.B.D]

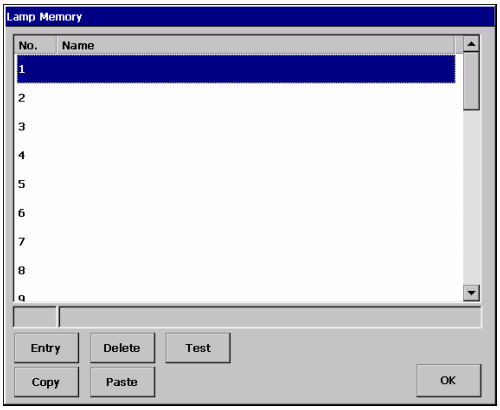
4.6.1 LAMP Screen (Adjust)



Lamp Output	Adjusts the lamp output (brightness). Control the current at 0.1 A increments.
FeedBack	Sets the lamp brightness constant mode that uses a brightness sensor. ・Disable: Disables the lamp brightness constant mode. ・Enable: Enables the lamp brightness constant mode.
Lamp Memory	The lamp output 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.

Lamp Memory Screen

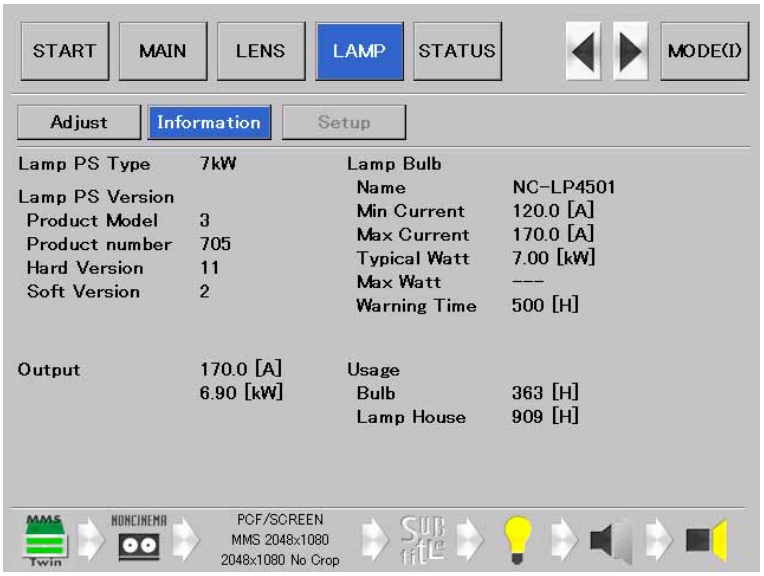
Press the [Memory List] on the LAMP window (Adjust) to display the Lamp Memory window.



"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 to any location.
"OK" button	Closes the Lamp Memory window and returns to the LAMP window.

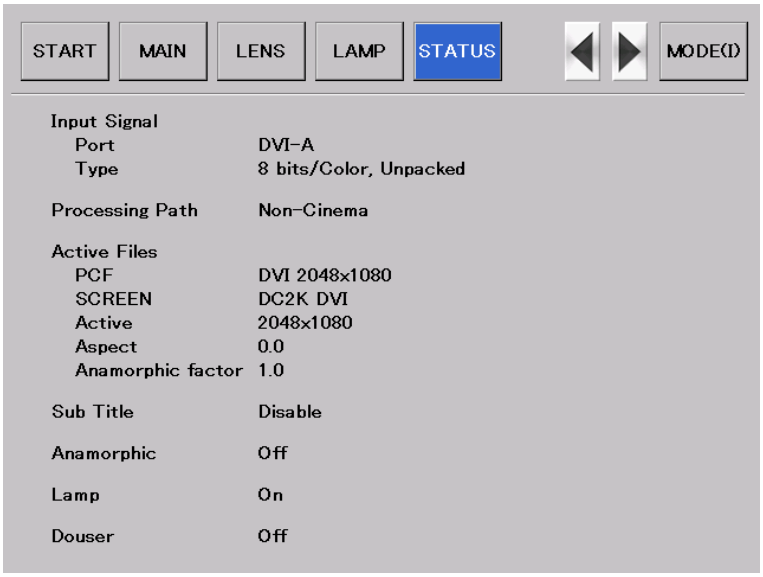
4.6.2 LAMP Screen(Information)

Press the "Information" button on the LAMP screen to display the LAMP screen (Information). On the LAMP screen (Information) you can display the lamp information.



4.7 STATUS Screen

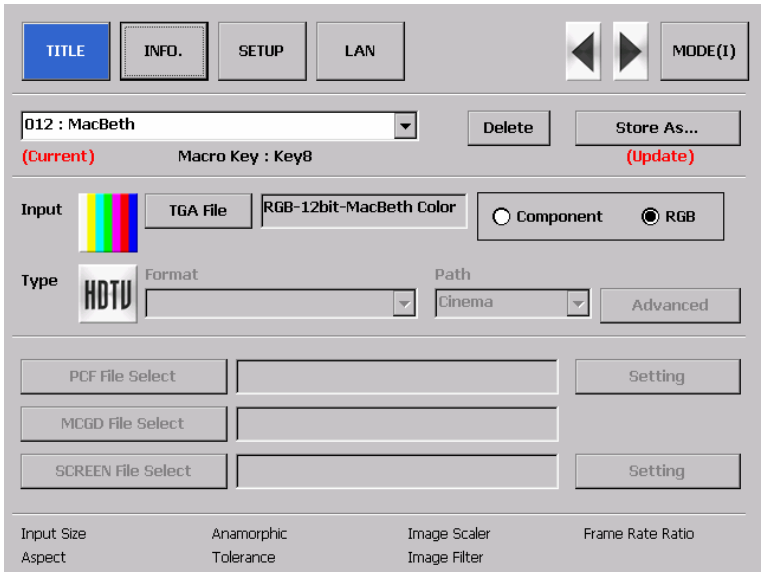
Press the "STATUS" button from the menu bar to go to the LAMP screen.
From the LAMP screen, you can adjust the lamp output and display the lamp information.



Input Signal	Port	Displays the terminal of input signal.
	Type	Displays the type of input signal.
Processing Path		Indicates whether or not Cinema is used.
Active Files	PCF	Displays the name of PCF file selected.
	SCREEN	Displays the name of SCREEN 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 control (On/Off).
Lamp		Displays the status of lamp output control (On/Off).
Douser		Displays the status of douser control (On/Off).

4.8 TITLE Screen

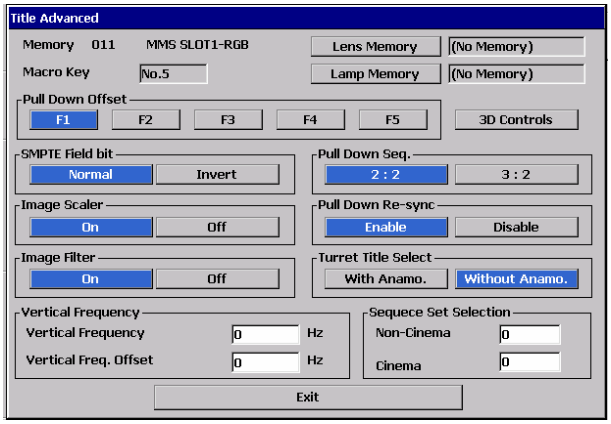
This menu is only available in the Installation or Service mode.
Press the "TITLE" button on the menu bar to display the "TITLE" screen.
On the TITLE screen you can register or edit titles. For details on how to register or edit titles, see "3.5. Registering Titles" (Page. B-22).



Title names (pull-down menu)		Displays the title name to be edited. - (Current): Indicates the title is being selected. - (Update): Indicates the title is being edited.
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.
	TGA File	Displays the name of PCF file selected in the right column.
	Component／RGB	Selects Component or RGB signal input.
Type		A field that shows or sets the type of signal. Pressing the icon allows you to change the corresponding icon.
	Format	Selects a format for the signal type.
	Path	Selects the path for signal type.
	Advanced	Sets the details of signal type.(See Next page)
PCF File Select		Selects a PCF file. Displays the name of PCF file selected in the right column.
	Setting	Sets a PCF file.(See Page. 22)
MCGD File Select		Selects a MCGD file. Displays the name of MCGD file selected in the right column.
SCREEN File Select		Selects a SCREEN file. Displays the name of SCREEN file selected in the right column.
	Setting	Sets a SCREEN file.
(View status)		Shows information on the title selected.

4.8.1 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.

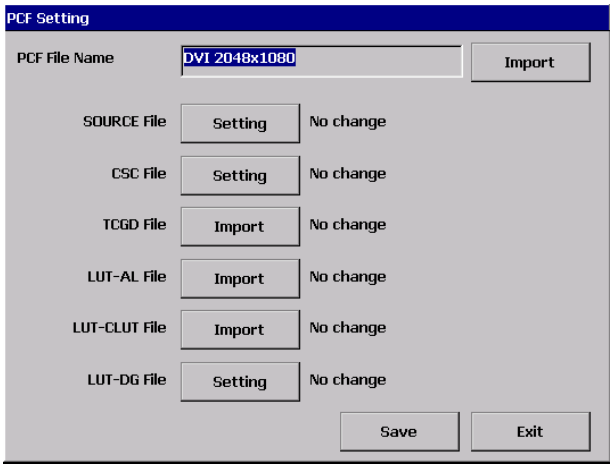


List of Setting Items on Title Advanced

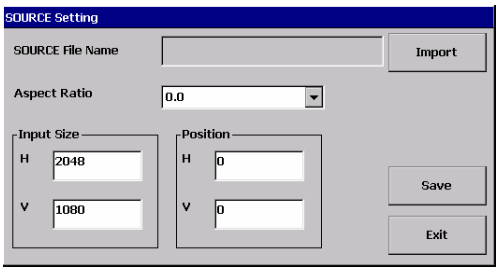
Memory	Displays the title (number and name) selected.
Macro Key	Displays macro key numbers if macro keys are assigned. For assignment of macro keys, see the description of "Macro Key" buttons on the "MAIN" screen.
"Lens Memory" Button	Select a lens memory to associate with the selected title when the 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. - When you want to use the lens memory, select it from the "Lens Memory" screen and press the "OK" button. - When you do not want to use the lens memory, select "Not Use" from the "Lens Memory" screen and press the "OK" button. - The associated lens memory appears in the right column of the "Lens Memory" button.
"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. - When you want to use the lamp memory, select it from the "Lamp Memory" screen and press the "OK" button. - When you do not want to use the lamp memory, select "Not Use" from the "Lamp Memory" screen and press the "OK" button. - The associated lamp memory appears in the right column of the [Lamp Memory] button.
Pull Down Offset	Select offset required for progressive signal conversion sequence to be applied at input of 2:2/2:3 pull-down signals.
"3D Controls" button	This is used to use the 3D. Press the "3D Controls" button on the "Title Advanced" screen to display the "3D Controls" screen. This screen is used to set the 3D .
SMPTE Field bit	Factory-set default value; keep '0' in normal operations.

Image Scaler	Controls the scaling circuit. Keep Enable in normal operations.
Image Filter	Controls the scaling circuit filter. Keep Enable in normal operations. (Click Disable for signals that do not require scaling such as PC input signals.)
Pull Down Seq.	Set sequence to be applied at input of pull-down signals: 2:2 : Select this for signals other than those converted with 3:2 pull-down signals 3:2 : Select this for signals converted with 3:2 pull-down signals
Pull Down Re-sync	Factory-set default value; keep Enable in normal operations.
Turret Title Select	Select an anamorphic lens when an optional motor-operated turret is used: - With Anamo. : Selects the anamorphic lens mounted to the optional motor-operated turret lens - Without Anamo. : No anamorphic lens is used.
Vertical Frequency	Factory-set default value; keep '0' in normal operations.
Sequence Set Selection	Factory-set default value; keep '0' in normal operations.
"Exit" button	Used to save all the settings entered and quit the Title Edit submenu/operation.

4.8.2 PCF Setting Screen



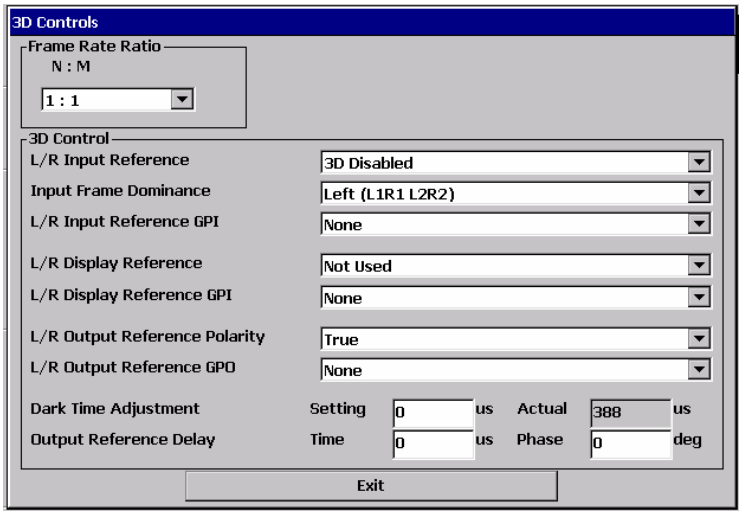
SOURCE Setting Screen



"Import" button	Used to call an existing file.
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.

4.8.3 3D Controls Screen

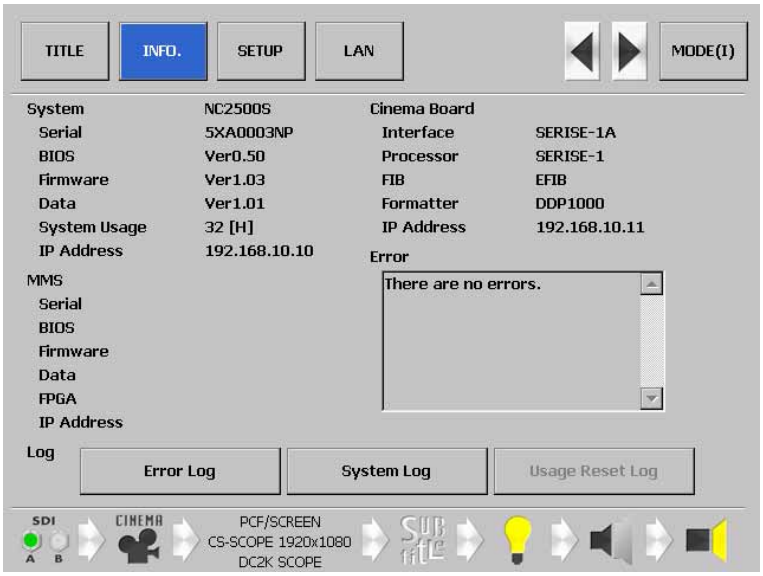
Press the "3D Controls" button on the Advanced screen to display the 3D Controls Screen.



4.9 INFO Screen

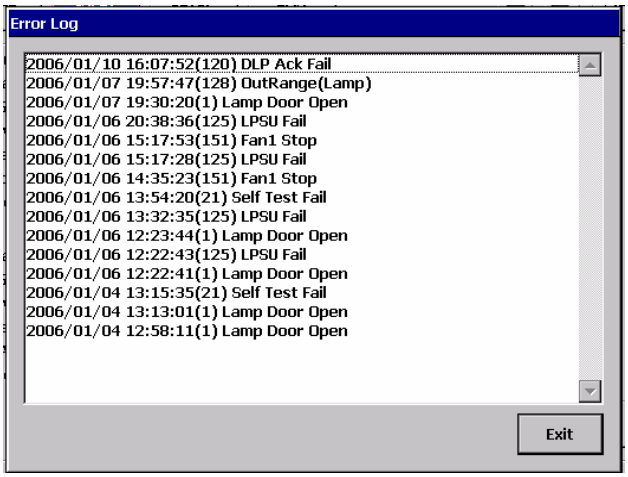
Press the "INFO" button on the menu bar to display the "INFO" screen.

On the "INFO" screen, you can verify the information on the projector version or various types of log information.

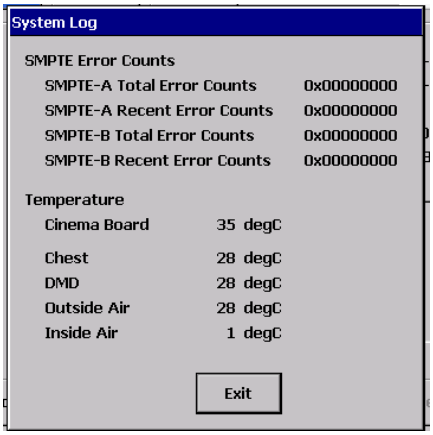


System		Dsiplays the system status of the projector head.
	Serial	Displays the serial number of the projector head.
	BIOS	Displays the BIOS version of the projector head.
	Firmware	Displays the firmware version of the projector head.
	Data	Displays the data version of the projector head.
	System Usage	Displays the hours of use of projector head.
	IP Address	Displays the IP address of the projector head.
MMS		Dsiplays the version 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.
	IP Address	Displays the IP address of use of MMS.
Cinema Board		Dsiplays the system status of the Cinema Board.
	Interface	Displays the interface type of the Cinema Board.
	Processor	Displays the processor type of the Cinema Board.
	FIB	Displays the FIB type of the Cinema Board.
	Formatter	Displays the Formatter type of the Cinema Board.
	IP Address	Displays the IP address of the Cinema Board .
Error		Displays the error currently occurring.
Log	"Error Log"button	Displays the error log.
	"System Log"button	Displays the system log.
	"Usage Reset Log"button	Displays the Usage Reset Log.

Error Log Screen



System Log Screen



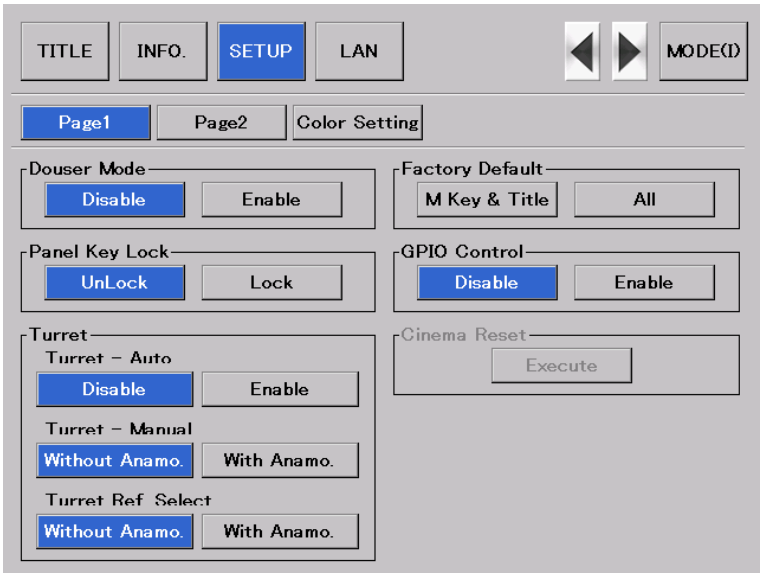
4.10 SETUP Screen

This menu is only available in the Installation or Service mode.
Press the " SETUP" button on the menu bar to display the "SETUP" screen.
The "SETUP" screen consists of three windows below.

- Page1 : Use this window to configure various settings for the projector. (this page)
-Page2 : Use this window to configure various settings for the projector. (Page. B-61)
・Coler Setting : Use this window to make color adjustments. (Page. B-62)

4.10.1 SETUP Screen(Page1)

Press the " Page1" button on he "SETUP" screen to display the "SETUP(Page1)" window.



Douser Mode

The douser function will be activated during the switching of signals the light for projection.

Disable	The lens douser function will be not activated during the switching of signals.
Enable	The lens douser function will be activated during the switching of signals.

Panel Key Lock

The control buttons on your projector are locked to be inoperative.

Lock	Enable a lock on the control buttons on your projector.
Unlock	Disable the lock on the control buttons.

NOTE

- Even if the buttons on the projector's control panel are locked, remote controller buttons are available.
- When the buttons on the projector's control panel are locked, press the CANCEL button on the projector for about 10 sec. to unlock them (The key lock setting on the projector becomes Unlock).

Turret

Controls the turret on which the anamorphic lens is mounted.

Turret-Auto	The anamorphic lens selected at Title switches automatically when the title is switched. - Disable : Lens switching does not take place in conjunction with the title. - Enable : Lens switching takes place in conjunction with the title.
Turret-Manual	Manually control the turret. - Without Anomo: Disables anamorphic lens. - With Anamo: Enables anamorphic lens.
Turret Ref.Select	Specify whether to enable or disable the anamorphic lens for the selected title. - Without Anomo: Disables anamorphic lens. - With Anamo: Enables anamorphic lens.

GPIO Control

Select a PC board under control of the GP I/O port when the projector is to be controlled by the External Control terminal (GP I/O).

With "Enable" selected to be controlled by the GP I/O, the projector does not accept commands issued using the control panel buttons, remote control unit or personal computer.

Disable	To restrict the subject of control from the external control terminal (GPI/O) to the System board and the Cinema board
Enable	To restrict the subject of control from the external control terminal (GPI/O) to the Cinema board only

FactoryDefault

Used to select factory default values for the projector settings.

M Key & Title	Titles are set to factory default ones. (Tiles you have created are deleted, but files are not.)
All	All the settings of your projector are set to factory default values except for files.

Note

- Files previously deleted or rewritten cannot be restored.

Cinema Reset

Resets the Cinema PC board. Press the "Execute" button to reset the Cinema PC board.

4.10.2 SETUP Screen (Page2)

Press the "Page2" button on the "SETUP" screen to display the "SETUP (Page2)" window.

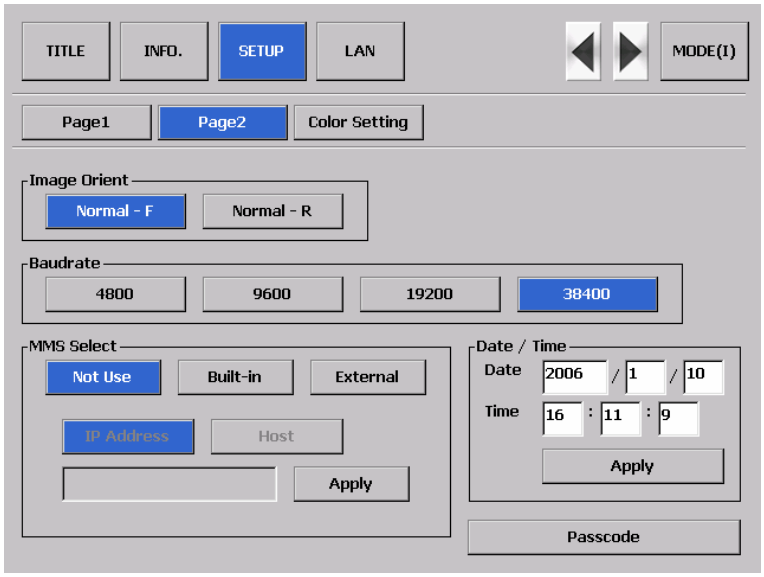


Image Orient

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

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, 192000 and 38400. Select the transfer speed corresponding to the speed of the connected devices.

MMS Select

Select the MMS for operation when you use a multimedia switcher (MMS) separately sold. You can connect only one MMS.

Not Use	Not use the MMS
Built-in	To use the incorporated MMS (optional)
External	To use the externally connected MMS (optional)
IP Address	To set IP address for the MMS (optional)
Host	To set IP address for the Host
Apply	Updates it in the changed IP address.

Date/Time

Use this to set the date and time on the projector.

Date	Set the date here (Year, month, day).
Time	Set the time here (Hour, minute, second).
Apply	Updates it in the changed Date/Time.

Passcode

Use to changed pass code of the projector head.

・Enter new passcode: Input new pass code.

・Enter new passcode to confirm: Input new pass code to confirm.

4.10.3 SETUP Screen (Color Setting)

Press the "Color Setting" button on the "SETUP" screen to display the "SETUP (Color Setting)" window.

For details of the settings, see "3.3. Adjusting Colors"(Page. B-15).

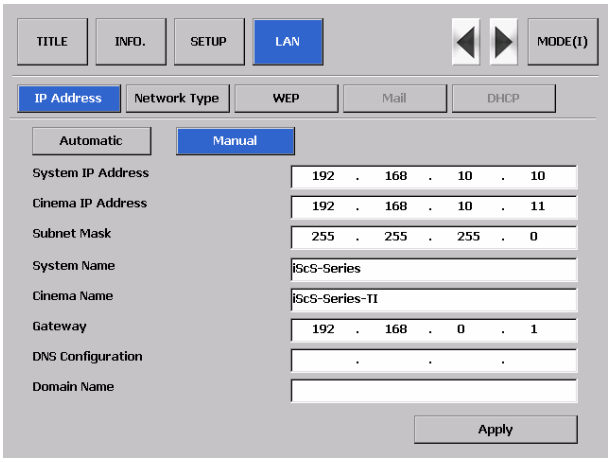
MCGD Setup		Used for the MCGD settings.
	"Create" button	Start creating the MCGD data.
TCGD Setup		Used for factory settings.
	"Native" button	Used for the Native color.

4.11 LAN Screen

This menu is only available in the Installation or Service mode.
Press the "LAN" on the menu bar to display the LAN Screen.
The "LAN" screen consists of five windows below.

- IP Address : Used when making LAN settings of SYSTEM and CINEMA.
- Network Type : Used to select communication mode when a wireless LAN is used:
- WEP : Used to set up whether WEP (data encryption) should be used or not:
- Mail : Used to set up mail function.
- DHCP : Used to setup DHCP server.

4.11.1 LAN Screen (IP Address)



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	If Manual is clicked in the IP Setting box above, enter in this field the System IP address (12 numerals) in the network to which it is connected.
Cinema IP Address	If Manual is clicked in the IP Setting box above, enter in this field the Cinema IP address (12 numerals) in the network to which it is connected.
Subnet Mask	If Manual is clicked in the IP Setting box above, enter in this field the subnet mask (12 numerals) of the network to which your projector is connected.
System Name	Enter the System name in a maximum string of 16 characters comprised of alphanumeric characters and symbols.This entry permits your PC to identify the System when a multiple number of projectors are connected to the same LAN.

Cinema Name	Enter the Cinema name in a maximum string of 16 characters comprised of alphanumeric characters and symbols.This entry permits your PC to identify the Cinema when a multiple number of projectors are connected to the same LAN.
Gateway	Select when you need to enter the default gateway (in 12 numerals) of the network to which your projector is connected. Selection is possible only when you have selected Manual in the IP Setting box above. When you click this checkbox, the address you set in the fields below as the default gateway becomes valid. When you deselect this checkbox (empty), no default gateway is set.
DNS Configuration	Enter the IP address of the DN server (12 numerals) of the network to which your projector is connected.
Domain Name	Enter the domain name (max. 60 alphanumeric characters) of the network to which your projector is connected.
Apply	Used to apply the entered settings.

5.

Appendix

5.1 Trouble Shooting

[T.B.D]

5.2 Index

Ver.1 1/06

DLP Cinema™ Projector Installation manual

MMS

Precautions: This manual has been prepared for service personnel. For safe use of MM2000B by the customer, precautions for installation of the multimedia switcher **MM2000B** to the projector are given below.
Please read this prior to setup to use your **MM2000B** safely. To use this projector safely, always observe the following precautions when setting up the switcher. There is the possibility of serious accidents that can lead to death or serious injuries if the projector is handled improperly because these precautions were ignored. Handle this switcher only after you completely understand these precautions.

- The explanation below is given for the case where the projector to which MM2000B is installed is NC2500S as an example.
- Among menu items, those with the description [Support of upgrading is planned] are planned to be supported by the software upgrading.

WARNING

REQUEST YOUR DEALER / DISTRIBUTOR TO INSTALL /REMOVE THIS PART. CUSTOMERS MUST NEVER ATTEMPT TO INSTALL / REMOVE.
TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

DOC compliance Notice

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

3. GSGV Acoustic Noise Information Ordinance:
The sound pressure level is less than 70 dB (A) according to ISO 3744 or ISO 7779.
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.

- DLP™ (Digital Light Processing™), DLP Cinema™ are trademarks of Texas Instruments.
- HQV® is registered in the U.S. and Japan as a trademark of Silicon Optix Inc.
- Windows is registered trademarks or trademarks of Microsoft Corporation in the U.S. or other countries.
- Other product and company names mentioned in this user's manual may be the trademarks of their respective holders.

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. Do not place the projector in direct sunlight, near heaters or heat radiating appliances.
2. Exposure to direct sunlight, smoke or steam could harm internal components.
3. Handle your switcher carefully. Dropping or jarring your switcher could damage internal components.
4. Do not place heavy objects on top of the projector.

Power Supply

Do not touch the projector during a thunder storm. Doing so can cause electrical shock or fire.

Fire and Shock Precautions

1. Prevent foreign objects such as paper clips and bits of paper from falling into your Switcher. Do not attempt to retrieve any objects that might fall into your Switcher. Do not insert any metal objects such as a wire or screwdriver into your Switcher. If something should fall into your Switcher, disconnect it immediately and have the object removed by a qualified service person.
2. Do not place any liquids on top of your Switcher. Refer servicing to qualified service personnel if liquid has been spilled.

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 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.

Table of Contents

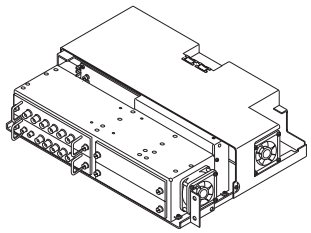
1.

Before Setting Up Your Switcher

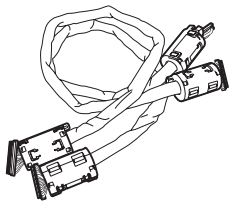
1-1. What's in the Box?

Check the accessory contents as follows:

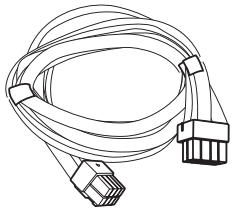
- Multimedia Switcher (MM2000B)



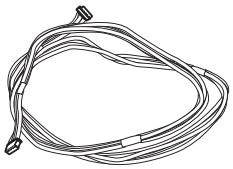
- Video cable (20pins) 2 pieces



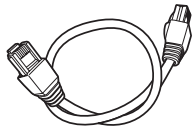
- Power cord (6pins) 1 piece



- Control cable (5pins) 1 piece

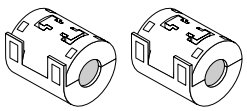


- LAN cable (light blue) 1 piece



- Mounting screws (4pieces)

- Ferrite core (large) 2 pieces (for RGB cable)



- Ferrite core (small) 1 piece (for optional MM-DVI)

- HQV® logo seal
- User's Manual

2.

Setting Up & Connections

2-1. Flow of Installation and Connecting

•**Step1**
Removing Covers from Projector
•**Step2**
Connecting the Cables
•**Step3**
Mounting to the NC2500S
•**Step4**
Attaching the NC2500S Cover
•**Step5**
Setup for the NC2500S

2-1-1. Articles prepared

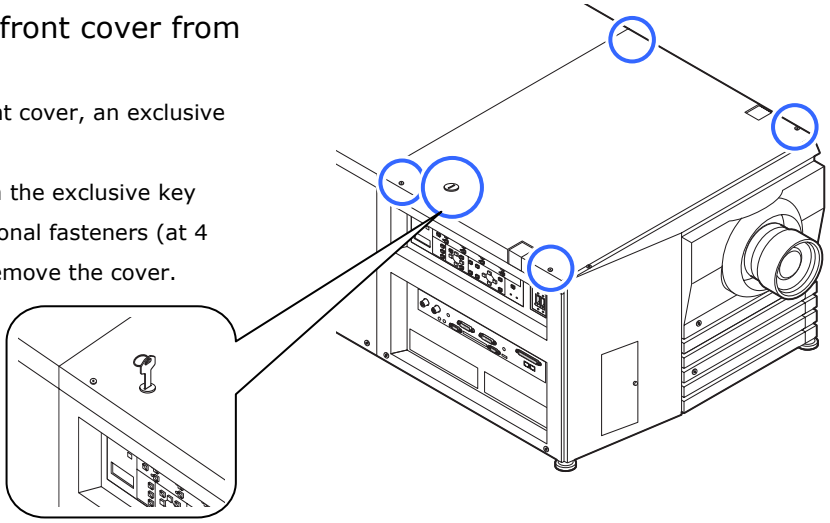
- 3 mm ball screwdriver
- Phillips head type screwdriver
- Exclusive key (used for removing the cover of the NC2500S)

2-2. Removing Covers from the NC2500S

[1] Remove the top front cover from the NC2500S.

To remove the top front cover, an exclusive key is required.

Cancel the locking with the exclusive key and remove the hexagonal fasteners (at 4 places) at the top to remove the cover.



[2] Remove the side front cover of the NC2500S.

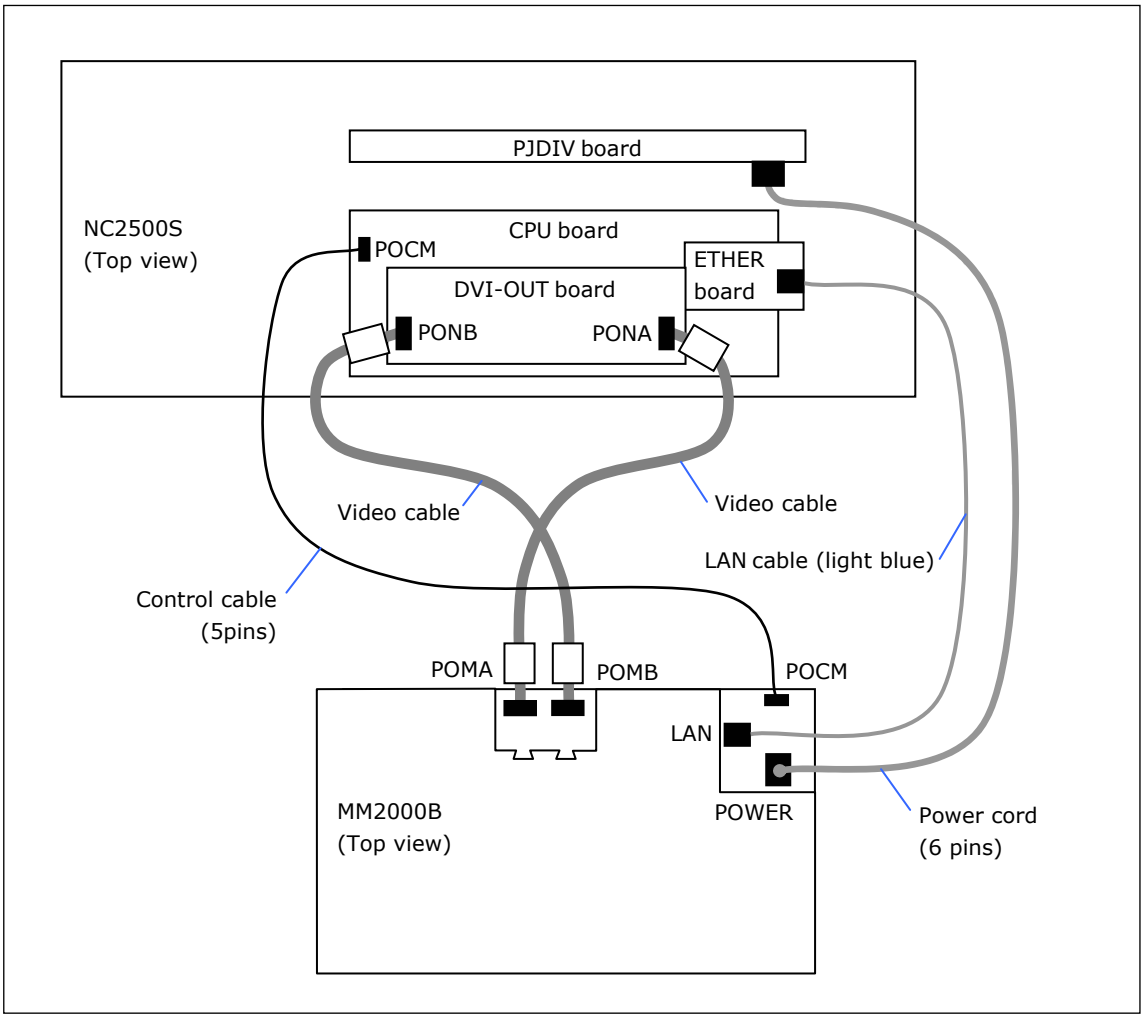
For removing the side front cover, it is necessary to remove the screws (4places) at the connection terminal section.

Remove the screws (4places) and the lower hexagonal fasteners (2places) and pull down the cover to remove it.

2-3. Connecting the Cables

⚠ Caution	Before connecting the power cords, check that the main power switches of the NC2500S are turned off. Implement the connection with AC power shut off.

Schematic diagram of connection

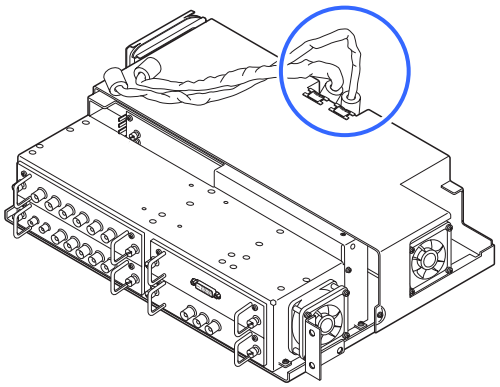


Note Both ends of POMA and PONA connector and video cable (either one) are marked in green. Connect the video cables between POMA and PONA and between POMB and PONB. If you connect inappropriate video cable, the video images are not projected.

Connect the cables according to the connection procedure below.

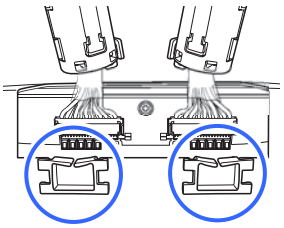
[1] Connect the video cables (2 pieces) to MM2000B.

Connection should be made to MM2000B connectors (POMA, POMB). On the connector (POMA) end, the video cable marked in green is connected.



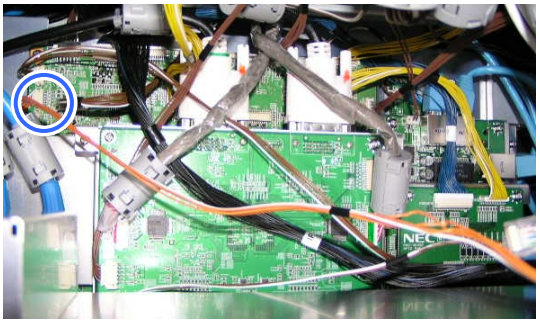
[2] Pass the video cables respectively to the clamps of MM2000B.

Arrange the parts so that the ferrite cores and cables do not come out from the MM2000B case.



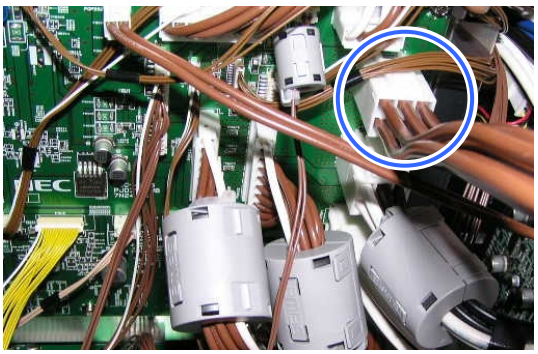
[3] Connect the control cable to the NC2500S.

Insert the control cable to the connector (POCM) on the CPU board.



[4] Connect the power cord to the NC2500S.

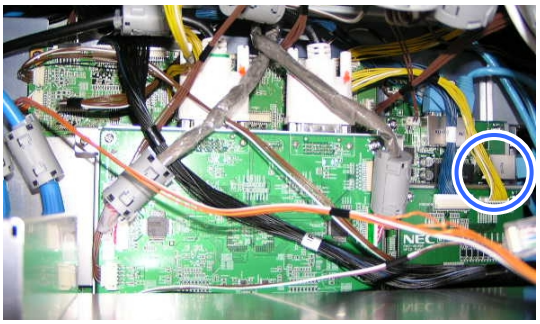
Insert the power cord into the connector on the PJDIV board.



[5] Connect the LAN cable to the NC2500S.

Connect the LAN cable to the LAN Port on the ETHER board.

These four LAN ports provide the same function (a switching hub).



[6] Temporarily mount MM2000B (insert it for about 1/3) to the NC2500S.

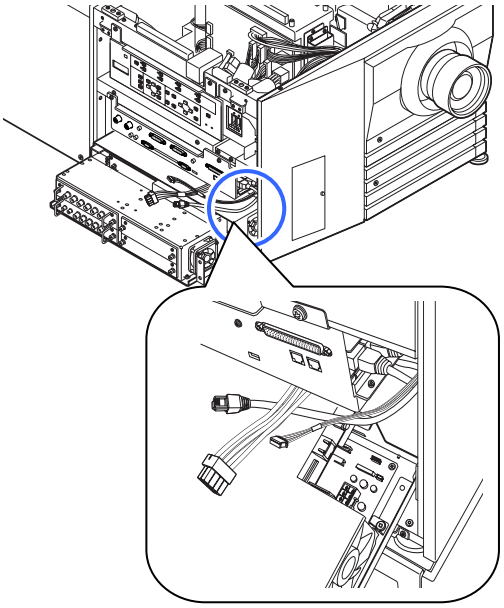
Place MM2000B once at the position where various cables can be connected.

Pay attention not to drop MM2000B.

(Hint)

When inserting MM2000B, put the end of the video cables connected in step [1] at the back of the insertion port in advance.

At about a half of the insertion port, a gate-shaped guide for MM2000B fixing is provided. If you insert MM2000B first, the ferrite core of the video cables is stopped by this guide.

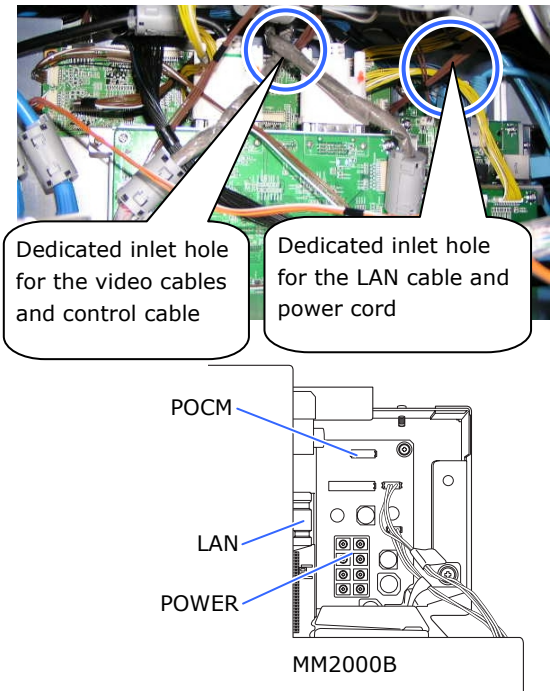


Note When mounting MM2000B to the NC2500S, pay attention not to cause cable catching or cable falling.

[7] Connect the cables connected at Steps [3] to [5] to MM2000B.

Put the control cable under the CPU board, put the LAN cable and power cord under the Ether board, and connect them to MM2000B.

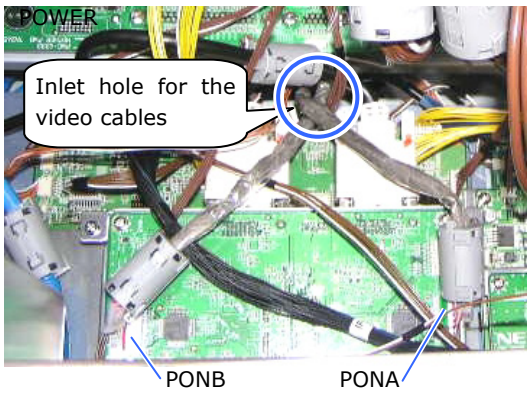
(Hint)
It is easier to insert the cables if you connect the control cable, the power cord and the LAN cable in this order.



Note When laying out the cables, do not pull them forcibly. It may cause cable or connector failure.

[8] Pull in the video cables (2 pieces) from under the CPU board and connect them to the NC2500S.

Connect the video cables (2 pieces) to the connectors (PONA, PONB) on the DVI-OUT board.
Connect the video cable with the ends marked in green (Cable connected to POMA) to PONA.

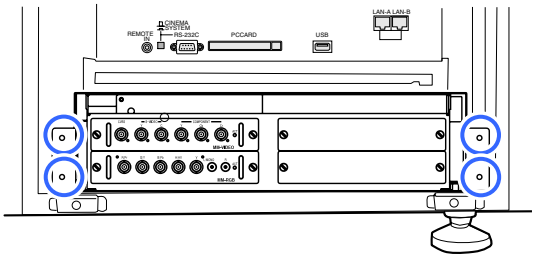


Note Both ends of POMA and PONA connector and video cable (either one) are marked in green. Connect the video cables between POMA and PONA and between POMB and PONB. If you connect inappropriate video cable, the video images are not projected.

2-4. Mounting to the Projector

[1] Fully insert MM2000B and fix it to the NC2500S.

Fix MM2000B using the mounting screws (4 pieces) attached.

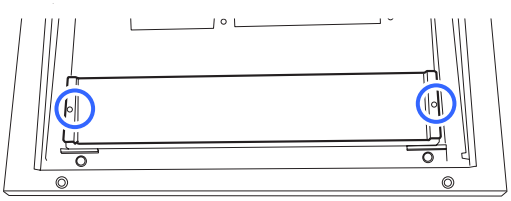


Note When mounting MM2000B to the NC2500S, pay attention not to cause cable catching or cable falling.

2-5. Attaching the NC2500S Cover

[1] Remove the blind cover of the side from cover.

The side front cover is provided with a blind cover for MM2000B inlet inside. Remove the screws (at 4 places) and remove the blind cover.



Tips The removed blind cover should be kept by the customer.

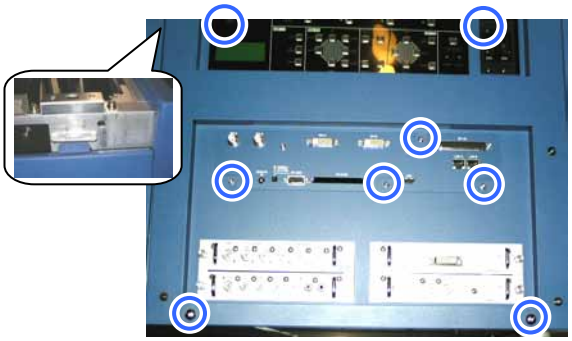
[2] Mount the side front cover.

Mount the cover according to the procedure below.

<1> Insert the claws at the cover top (2 places) into the cover mounting holes of the projector.

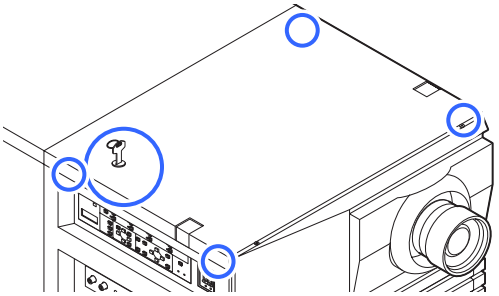
<2> Close the hexagonal fasteners (2 places) at the cover bottom.

<3> Mount the fixing screws (4 places) of the terminal section.



[3] Mount the top front cover.

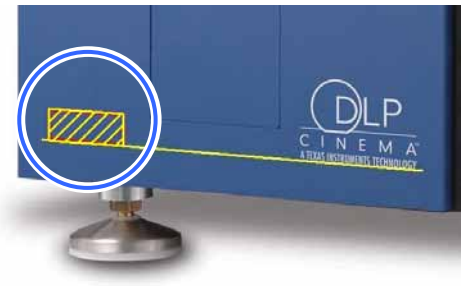
Close the hexagonal fasteners (4 places) at the top and lock them with the exclusive key.



[4] Applying the HQV® Logo Seal.

Apply the accessory HQV® logo seal to the position shown in the drawing at the right.

The seal should be positioned so that its bottom edge is in line with the bottom edge of the DLP™ logo.



MM2000B installation is now completed. When using MM2000B, it is necessary to have the NC2500S recognize the incorporated MMS (Built-in) from the projector menu. Refer to the next section for the setting procedure.

2-6. Setup for the NC2500S

2-6-1. MM2000B link setting

After installation, select "Built-in" from the NC2500S menu "MMS Select". Have the NC2500S recognize the installed MM2000B. Explanation below is for an example where the setting is made from the LCD menu.
For operation of the NC2500S, refer to "NC2500S section".

[1] Turn on the NC2500S.

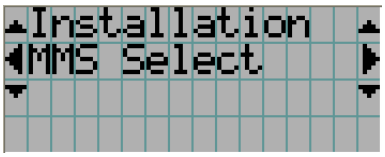
[2] Enable the menus for our service personnel.

Installation menu is for our service personnel. It is not available usually (in user mode). It is necessary to enable the service personnel mode using a remote controller.

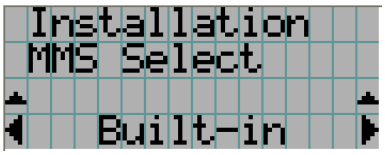
[3] Press [MENU] button.

TITLE SELECT is displayed in the menu.

[4] Press SELECT [>]and [▼] buttons to select Configuration -> Installation -> MMS Select.

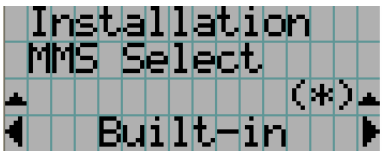


[5] Press SELECT [<]and [>] buttons to select Built-in.



[6] Press [Enter] button.

When "Built-in" is selected, (*) mark is indicated.



2-6-2. Title Registration

For selection of input signal from MM2000B, title registration is required. For registration of titles, refer to "NC2500S section". This completes the installation and connection of MM2000B. Input signal to MM2000B and check that there is no problem about image display.

3.

Installation of PC Control Software

3-1. Overview of PC Control Software

MM2000B is set up and controlled by <PC Control Software for MM2000B> (hereafter, PC Control Software for MM2000B is called the "Software").
With the Software, you can adjust the quality of the image projected by MM2000B and switch the operation mode from a PC connected to the projector. The projector and the PC should be connected by LAN or wireless LAN.
The language supported by the Software is English (as of February 2006).

3-2. Operating Environment

This software can be used with the personal computer that fills the following environments.

Supported OS	Windows XP Professional Edition Windows XP Home Edition Windows XP Tablet PC Edition Windows 2000 Professional
Supported hardware	IBM PC/AT compatible personal computers
CPU	Pentium 300MHz or higher required
Memory	128MB or more
Network environment	TCP/IP-compatible LAN or wireless LAN environment required For wireless LAN connection, use NEC optional wireless LAN card (NWL-100Series).

3-3. Software Installation

Note Windows XP operations are described in examples given in this section.
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.
If you have NEC Projector User Supportware (PC Control for iS/cS/MMS) installed on your PC, be sure to uninstall it before installing the PC Control Software.

3-3-1. Installing

Preparatory operation:
- Boot up your PC's Windows (XP).
- If you have already started Windows, quit all running application programs.
  If you do not quit all running programs before installing the PC Control Software, you risk having unsuccessful installation.

Execute PcCtlMMxxxxxxxxE.exe to start the installer. Install the Software according to the instructions from the installer.

3-3-2. Uninstalling

Uninstall the Software from the menu shown below.

- For Windows XP
  [Start] -> [Control Panel] -> [Add or Delete Program]
- For Windows 2000
  [Start] -> [Control Panel] -> [Add or Delete Applications]

4.

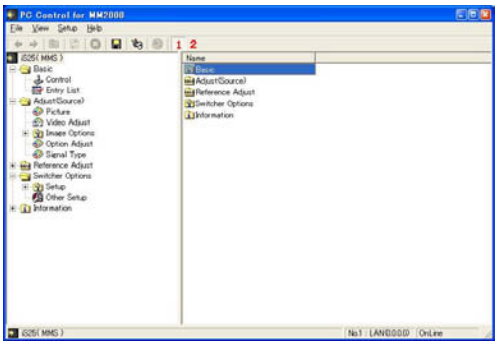
Basic Operation of PC Control Software

4-1. Starting/Exiting the Software

Starting the Software

[1] From the [Start] menu click [Program] -> [NEC Projector User Supportware] -> [PC Control for MM2000B].

The "PC Control for MM2000B" will start.



Tips See "1. Details of PC Control Software Menus" for information about the various functions. (see Page C-22).

Exiting the Software

[1] Click [File].

The [File] menu will appear.

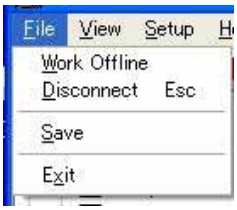
[2] Click [Exit].

The Software will close.

4-2. Basic Screen

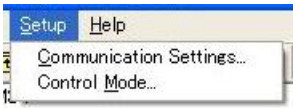
Menu bar and icon configurations are as follows:

4-2-1. Menu Bar Explanation

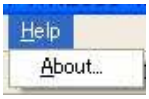


Work Offline : To operation without being connected
Disconnect : To cancel communication
Save : To save the settings
Exit : To exit this program

Go To : To go to the applicable page (Previous page, next page or upper layer page)
Refresh : To update the information
Undo : To restore the settings to those when the menu page is opened



Communication Settings : To execute settings for communications
Control Mode : To switch the mode Communication Settings



About : To indicate the version of this program

4-2-2. Icon Explanation

To go to the screen displayed immediately before

To display the page displayed before click on [Return] button

To go to the one upper layer in the menu tree

[Refresh] To update the information

[Disconnect] To cancel communication

[Save] To save the settings

[Control Mode] To switch the mode

[Undo] To restore the settings to those when the menu page is opened

Select the communication settings.

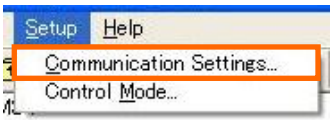
4-3. Initial Setting

4-3-1. Communication Connection Setting

Execute the setting for communications with the built-in MM2000B.
For this software, use LAN for connection.

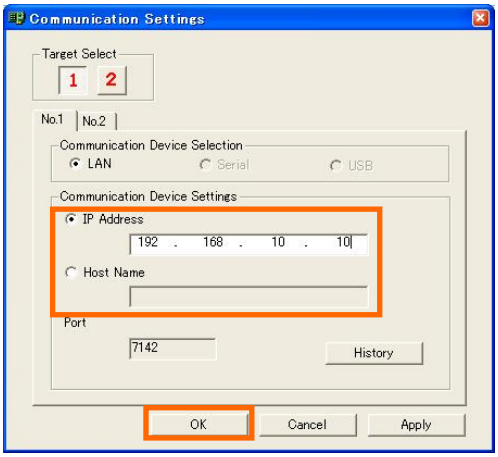
[1] Select [Setup] menu -> [Communication Settings].

The [Communication Settings]screen will appear.



[2] Click the "IP Address" or "Host Name" of the projector that is to be controlled.

- When "IP Address" has been selected, enter the IP Address of the projector. (Factory default: 192.168.10.10)
- When "Host Name" has been selected, enter the Host Name of the projector. (Factory default: NC-Series)
- It is usually not necessary to change the port number. (Factory default: 7142)



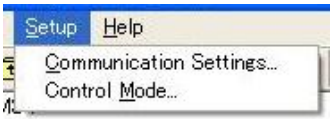
[3] When the required items have been set, click "OK".

4-3-2. Using the Service Personnel Menu (Mode switching)

In order to use the menus for service personnel, it is necessary to switch the control mode to [Service]. The procedure to switch the control mode to [Service] is explained below.

[1] Click [Setup] menu.

The [Setup] menu will appear.



[2] Select [Control Mode].

The control mode screen will appear.

[3] Select [Service] and input the passcode and press [OK].

5.

Details of PC Control Software Menus

5-1. Table of adjustment menus

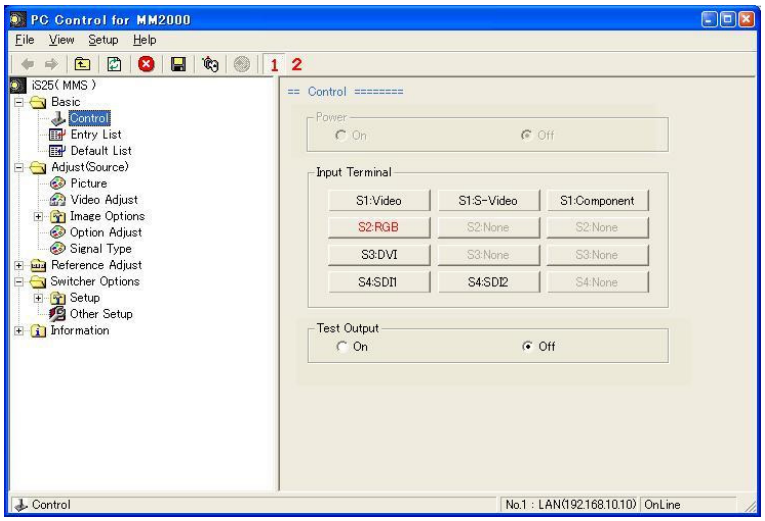
Menus in parentheses are those for our service personnel.
Menus with (*) are those planned to be supported in future. We are planning to support them one by one with software upgrading.

Menu	Submenu		Description
Basic	Control	(Power)	To save the user setting information
		Input Terminal	To select the input signal
		(Test Output)	To use for the inspection in the factory.
	Entry List	-	-
	(Default List)	(Load)	-
Adjust	Picture	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. This adjustment is only valid for Video and Component inputs.
		Sharpness	Controls the detail of the image for Video.
		Setup Level	"7.5 IRE" must be chosen to project products manufactured in USA.
	Video Adjust	Noise Reduction	To reduce noise
		Color Matrix	To select the color matrix
		Y/C Delay	Adjusts Y/C delay level.
		Contrast Enhancement (*)	For a function to improve the contrast
		3D Y/C Separation	To set the 3 dimension separation feature

	Image Options	Page1	Pixel Adjust	To adjust the phase shift of RGB signal pixels
			Position	To adjust the input signal display position
			Aspect Ration	To select the aspect ratio of the input signal
			Resolution	To set enlarging or reduction for the output resolution
			Overscan	To set the overscan ratio
			Video Filter	To reduce graininess and jitter
		Page2	Blanking	To adjust the display range at the top, bottom, left and right ends
			Input Resolution	To adjust the input signal resolution
		(Page3)	(Synchronize)	To select the form of the output signal
			(Amplitude)	To adjust the vertical and horizontal enlarge ratios
	Option Adjust		Clamp Timing	To adjust the fixing position of the black level for RGB signal
			Sync Protection	To adjust the inclination of copy-guard video image
			VD Delay	To adjust the screen disturbance
			Signal Level	To adjust the input level of each signal
	Signal Type		Signal Type	To switch between signal formats (RGB and component)
Reference Adjust	Page1		3D Reform (*)	To adjust the keystone correction
Switcher Options	Setup	Page1	Background	To display a blue/black screen or logo when no signal is available.
			Sync Termination	To select the impedance of RGB input terminal
			Factory Default	To reset the adjusted values to those at the shipment from the factory
		Page2	Signal Select (*)	To select the signal type
		Page3	Auto Adjust	To set whether the display position and pixel shift are automatically adjusted
			Default Source Select (*)	To set the input terminal to be used when the power is turned on
		Page4	Output Resolution	To select the display resolution
			Output Timing	To select the form of the output signal
	Other Setup		Image Mode (*)	To set the seamless switch and 2-screen display
			Password(Logo) (*)	To set the password check at the background switching
			Logo (*)	To change the background logo data
Information	Source Information			To display the information of the input signal
	Switcher Information			To check the version information of firmware or the like

5-2. Basic

5-2-1. Control



- **Power**

  This is not used for MM2000B.

- **Input Terminal**

  Use this menu to select the input terminal for projection. The currently selected input terminal has the button name displayed in red.

  S1 to S4 are for Slot 1 to Slot 4 in the back view below.

Slot 1	Slot 3
Slot 2	Slot 4

  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 C-41).

- **Test Output**

  This menu is enabled in service mode. This is used for the inspection in the factory.

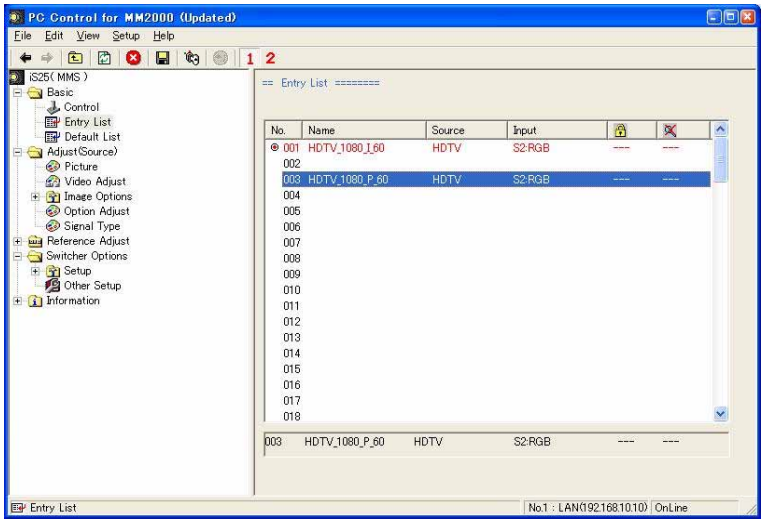
Select input terminal

Select the input terminal for projection.

S1: Video	To display the image of the devices connected to the CVBS input terminal at Slot 1.
S1: S-Video	To display the image of the devices connected to the S-video input terminal at Slot 1.
S1: conponent	To display the image of the devices connected to the component video input terminal at Slot 1.
S2: RGB	To display the image of the devices connected to the RGB input terminal at Slot 2.
S3: None	This can be selected when the interface board is mounted to Slot 3.
S4: None	This can be selected when the interface board is mounted to Slot 4.

(*) The above table is for the status when shipped from the factory. Display depends on the interface board mounting status.

5-2-2. Entry List



Making any adjustments to the current picture will automatically register its adjustments to the Entry List. The registered signal can be loaded any time from the Entry List.
NOTE: Up to 100 presets can be registered.
You can edit signals on the Entry List.

Storing the projected signal (Store)

Enables you to store the currently projected signal.

[1] Click the right-button of the mouse at the signal stored with Entry List.

The right-click menu is displayed.

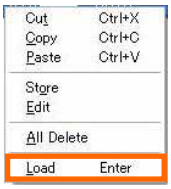
[2] Click on the [Store].

Selecting signal from Entry List (Load)

Enables you to select a signal from the list.

[1] Click the right-button of the mouse at the signal selected with Entry List.

The right-click menu is displayed.



[2] Click on the [Load].

Editing signal of Entry List (Edit)

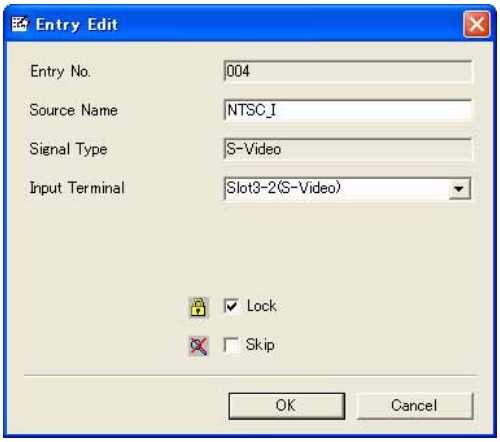
Enables you to change source names or assign the direct key.

[1] Click the right-button of the mouse at the signal edited with Entry List.

The right-click menu is displayed.

[2] Click on the [Edit].

The "Entry Edit" screen will appear.



Entry No.	To display the registration No.
Source Name	Up to 18 alphanumeric characters can be used.
Signal Type	To display the signal format
Input Terminal	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. When complete, select OK and press ENTER. To exit without storing setting, select Cancel.

[3] Click [OK] button.

Note When editing the signal currently projected, you cannot change the input terminal.

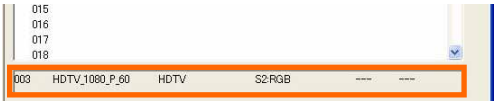
Cutting signal from Entry List (Cut)

[1] Click the right-button of the mouse at the signal deleted with Entry List.

The right-click menu is displayed.

[2] Click on the [Cut].

The applicable signal is deleted from Entry List and the deleted signal is displayed in the clipboard at the bottom of Entry List.



Note

- You cannot delete the currently projected signal.
- When you select the signal locked from the Entry Edit screen, [Cut] is disabled and cannot be selectable.

Tips
- You can paste (copy) the clipboard contents to the signal list by [Paste] in the signal edit commands.
- Clipboard contents are not cleared even when you close the Entry List.

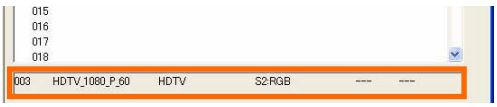
Copying signal of Entry List (Copy/Paste)

[1] Click the right-button of the mouse at the item you want to copy in Entry List.

The right-click menu is displayed.

[2] Click on the [Cory] button.

Enables you to copy a selected signal from the list and place it on the "clipboard" in the Switcher.



[3] Click the right-button of the mouse at the item you want to copy in Entry List.

The right-click menu is displayed.

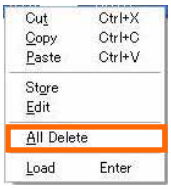
[4] Click on the [Paste].

Enables you to paste the signal placed on the "clipboard" to any other line of the list. To do this, select "Paste" and then select the line number you want to paste to. Last press ENTER.

Deleting all items in Entry List (All Delete)

[1] Click the right-button of the mouse at Entry List.

The right-click menu is displayed.



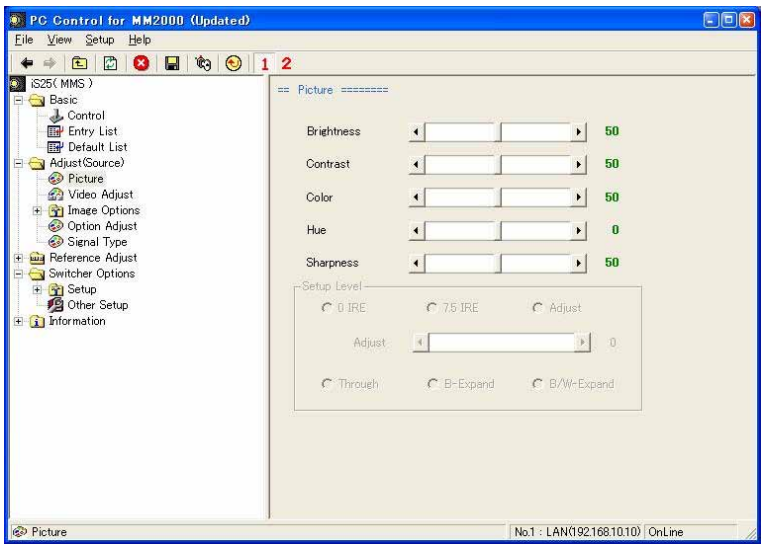
[2] Click on the [All Delete].

Note The signals locked from the Entry Edit screen are not deleted.

5-3. Adjust (Source)

5-3-1. Picture

Adjust the video image projected to the screen.



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. This adjustment is only valid for Video and Component inputs.
Sharpness	Controls the detail of the image for Video.
Setup Level	"7.5 IRE" must be chosen to project products manufactured in USA.

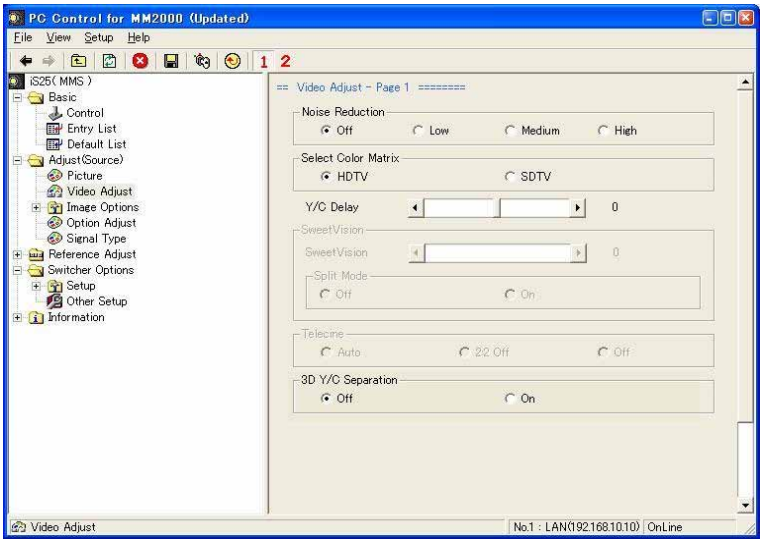
Note

There is an item that cannot be adjusted according to the input signal.

Items	RGB	DVI	SDI	Component	Video, S-Video
Brightness	O	O	O	O	O
Contrast	O	O	O	O	O
Color	O	O	O	O	O
Hue	O	O	O	O	O
Sharpness	O	O	O	O	O
Setup Level	NA	NA	O	O	O
Adjust	NA	NA	O	O	O
SDI	NA	NA	O	NA	NA

(O: Available, NA: Not Available)

5-3-2. Video Adjust



- **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.

- **Select Color Matrix**

  Selects the signal type.

HDTV	Color matrix according to high definition TV specifications
SDTV	Color matrix according to standard TV specifications

- **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.

- **Contrast Enhancement** **[Support of upgrading is planned]**

  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).

- **Telecine**

  Set whether or not the I-P conversion processing mode in this machine is automatically switched to the optimum mode for telecine signal when projecting movies.

  On this machine, this function works in auto mode only. The setting cannot be changed.

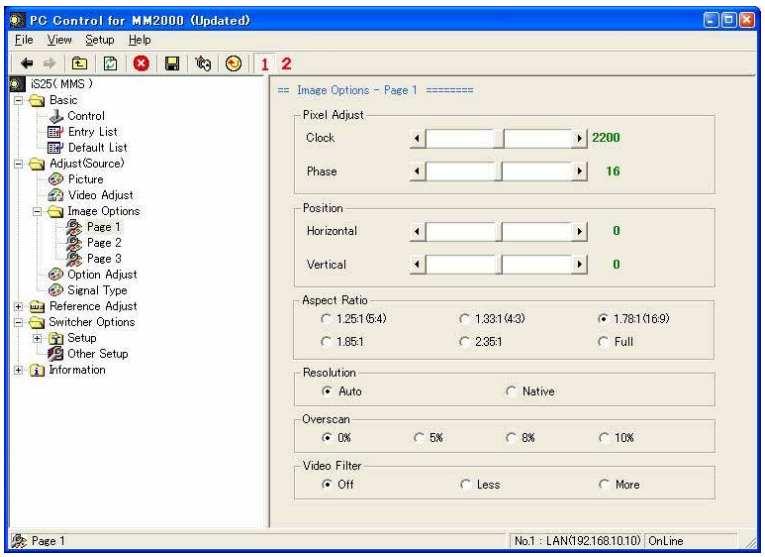
- **3D Y/C Separation**

  This option turns on or off the 3 dimension separation feature.

  This feature is available for NTSC3.58 of Video signal only.

5-3-3. Image Options

Page 1



- **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.(This is evident when part of your image appears to be shimmering.) Use the SELECT < and > buttons to adjust the image.

  Use "Phase" only after the "Clock" is complete.

- **Position**

  Adjusts the image location horizontally and vertically using the SELECT [<] and [>] buttons.

- **Aspect**

  You can select the aspect ratio for input signal.

  Select the appropriate aspect ratio using the SELECT [<] or [>] button.

  - When "Resolution" is set to "Native", this feature is not available, and the aspect ratio is set to "1.33:1 (4:3)".
  - Selection of "Full (1.33:1)" results in a ratio corresponding to the "Output Resolution" setting of the Switcher.

Note When [Resolution] is set to [Real], the aspect function is disabled and cannot be selected. The aspect setting will be 1.33:1 (4:3).
When this machine is used for projecting images for business purpose or for public viewing, compression or enlargement of the screen with [Aspect] or other image size switching function could infringe the copyright protected under the Copyright Law.

Tips
- 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".

- **Resolution**

When projecting the input signal, this selects whether to automatically display with enlargement or reduction to yield the number of display pixels that were set in "Output Resolution" (see Page C-40) (irrespective of the resolution of the signal) or to display at the resolution of the signal without change.

Auto	This projects with automatic enlargement or reduction to yield the number of display pixels for the resolution of the signal (VGA, SVGA, XGA, SXGA, U-XGA, etc.) that was set in "Output Resolution".
Native	Projects at the native resolution.

Note
- When "Resolution" has been set to [Native], "Aspect Ratio", "Screen" and "Overscan" will not be available. Also note that until the settings have been return to [Auto], the various adjustment values and setting values will be in the factory shipping condition.
- When displaying a signal of resolution higher than the number of display pixels set with "Output Resolution", "Resolution" will appear in white characters and will not be selectable.

- **Overscan**

Select overscan percentage (0%, 5%, 8% and 10%) for signal.

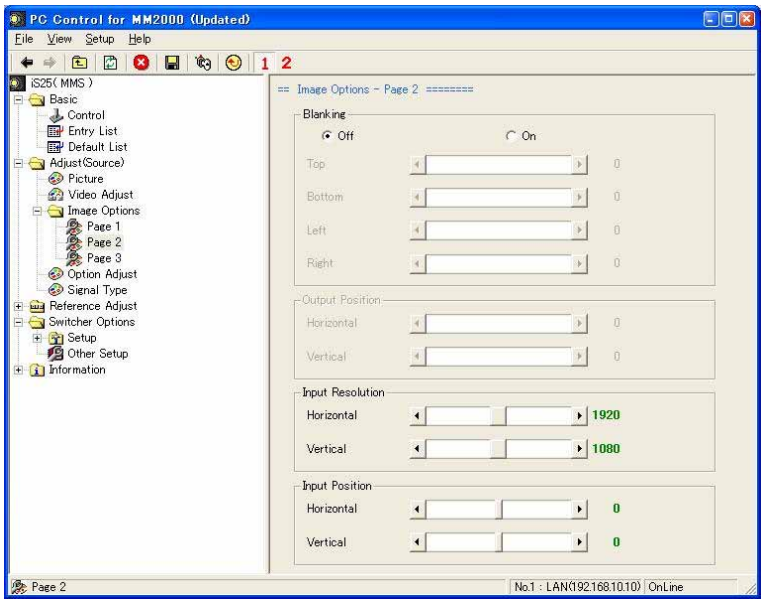
Note When "Resolution" is set to [Native], the function cannot be selected. When "Resolution" is set to [Native], the overscan setting already set is kept as it is.

- **Video Filter**

  This function reduces video noise.

Off	The filter is removed.
Less	The low-pass filter is applied partially.
More	The low-pass filter is applied fully.

Page 2



- **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.

- **Output Position** **[Support of upgrading is planned]**

  This sets the video output position of the resolution conversion processing section.

  Although similar to the "Position" adjustment within the "Screen" screen, adjustment in the horizontal direction and the vertical direction is permitted here.

  This function can be used to make adjustments when changing the video position in the Real display mode as well as at other times.

- **Input Resolution**

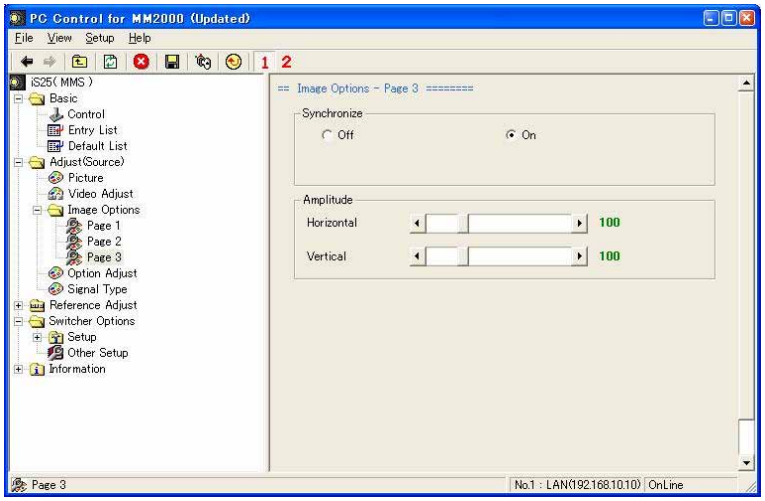
  This adjusts the resolution of the video area of the signal that is input to the resolution conversion processing section. When the resolution of the input signal cannot be detected properly with Auto Adjust, this function can be used to manually set the correct resolution.

- **Input Position**

  This adjusts the position of the video that is input to the resolution conversion processing section.

Page 3

This screen is enabled in the service personnel mode.



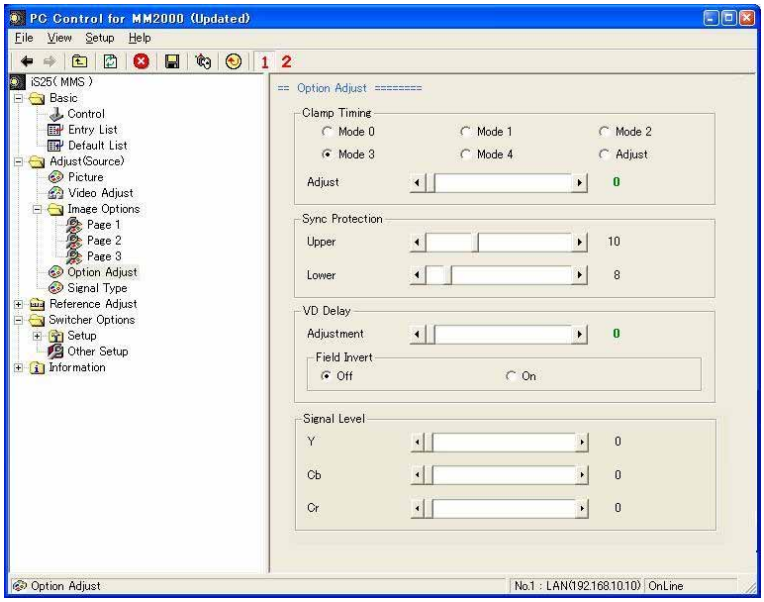
- **Synchronize**

  This function is enabled when "Output Timing" (see Page C-40) on Page 4 of Setup Menu is set for synchronization. Use this to change the synchronization mode of the projected signal.

- **Amplitude**

  Vertical and horizontal enlarge ratios are individually adjusted.

5-3-4. Option Adjust



- **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.

- **Sync Protection**

  When a VCR, DVD, or some other equipment that supports Copyguard (a copy prevention system) is played back, the screen may be displayed in a curved manner. Adjustments are made in such circumstances. Use the SELECT [<] or [>] button to adjust the VD level.

- **VD Delay** **[Partial support of upgrading is planned]**

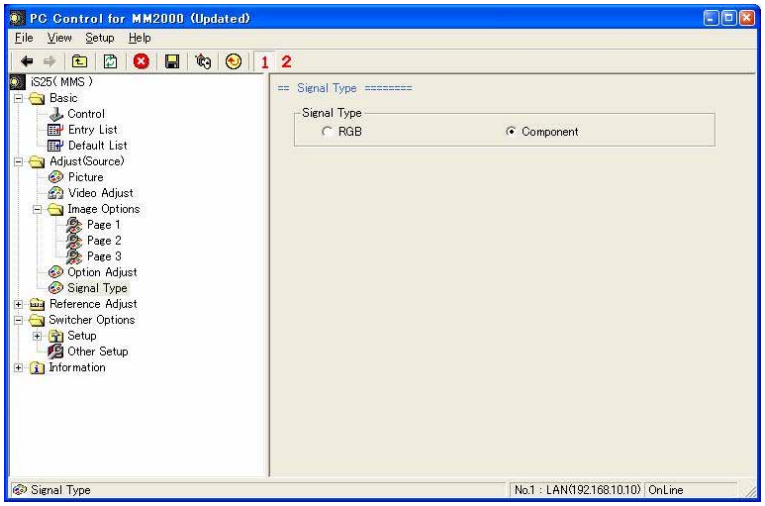
Adjustment:	This feature is used to correct vertical jitter of a signal. When connecting with a scan converter: If an image from the scan converter is not correctly displayed, adjust to select the best level point so that the image is displayed correctly.
Field Invert: [Support of upgrading is planned]	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.

- **Signal Level**

  R/G/B, Y/Cb/Cr or Y/Pb/Pr Gain:

  Adjust RGB, Component or HDTV Gain to match multiple projector color uniformity.

5-3-5. Signal Type



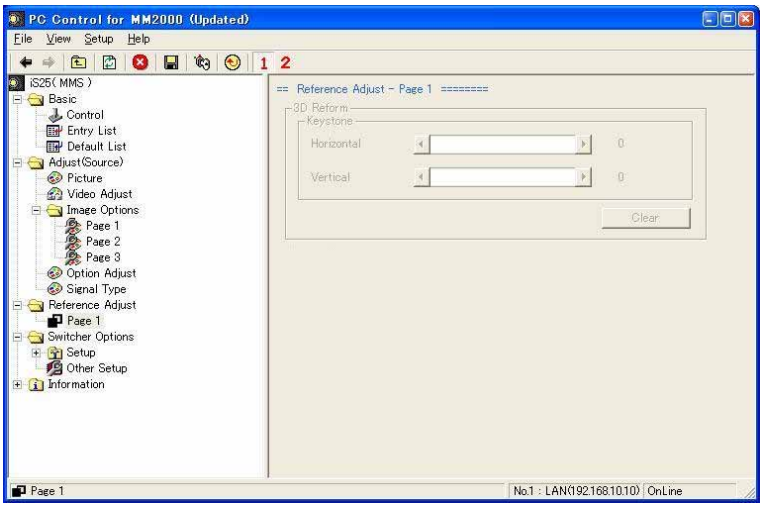
- **Signal Level**

  If the image color is unnatural when RGB or component signal is projected, switch the setting.

  If the projection is not clear even after switching "Signal Select" (See Page C-38), switch the setting of [Signal Level].

RGB	RGB signal
Component	Component signals such as Y/Cb/Cr, Y/Pb/Pr

5-4. Reference Adjust



- **3D Reform** **[Support of upgrading is planned]**

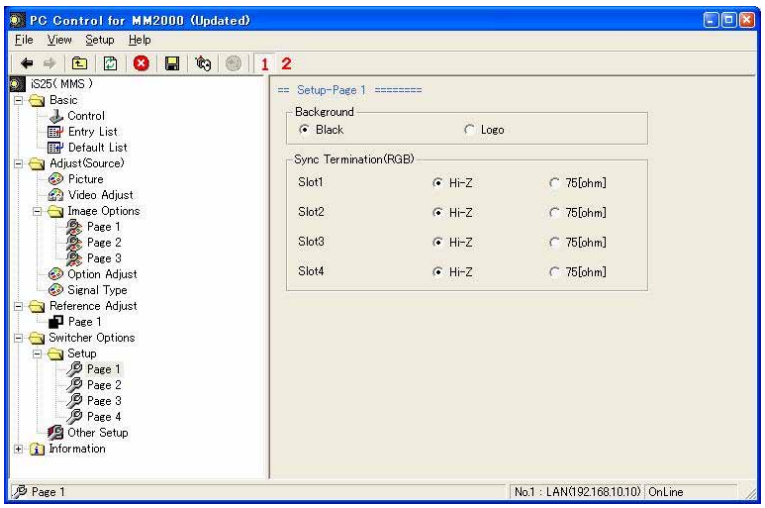
  This is for correction of the keystone distortion. To return to the status without correction, press [Clear] button.

Note Adjustment is not available when [Resolution] is set to [Real].

5-5. Switcher Options

5-5-1. Setup

Page 1



- **Background**

  Selecting a Color or Logo for Background.

  Use this feature to display a black screen or logo when no signal is available. The default background is "Black".

Tips When "Logo" is selected, the "NEC" logo is displayed. Change of displayed logo is planned to be implemented in upgrading.

The background will not change when the Factory Default is performed.

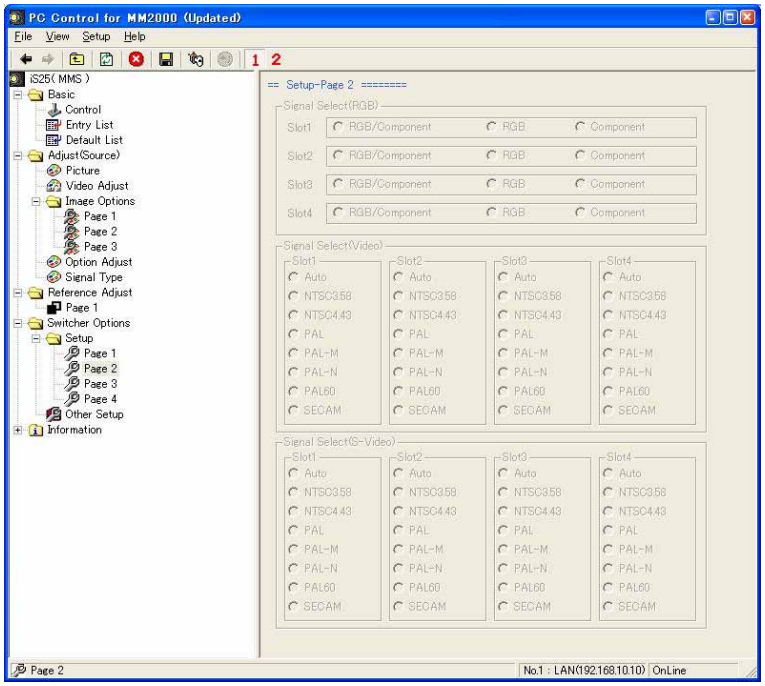
- **Sync Termination (RGB)**

  This function is used to select the impedance of the sync signal.

  Select "75[ohm] " or "Hi-Z".

  This should be "75[ohm] " for normal use. Select the "Hi-Z" when inputting a TTL signal.

Page 2



- **Signal Select** **[Support of upgrading is planned]**

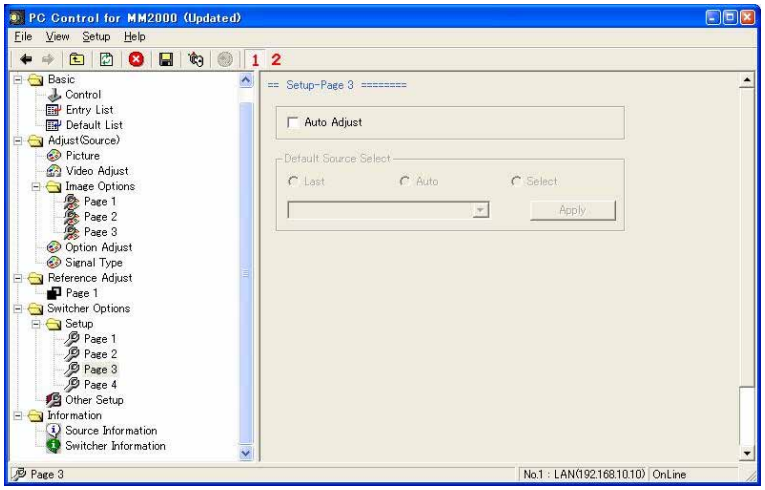
Select the signal mode for the RGB input terminal (RGB), video image input terminal (VIDEO) and S-video image input terminal (S-VIDEO).

When you select “RGB/Component" for RGB, the RGB signal and the component signal are automatically judged.

If the signal cannot be automatically judged, set the signal mode according to the mode of the output device connected to this machine.

RGB	Allows you to choose "RGB" for an RGB source such as a computer, or "Component" for a component video source such as a DVD player. Normally select "RGB/Component" and the Switcher automatically detects an either incoming signal. However there may be some component signals that the Switcher is unable to detect. If this is the case, select "Component".
Video/S-video	This feature enables you to select composite video standards manually. Normally select "Auto". Select the video standard from the pulldown menu. Composite video standards are as follows: NTSC :U.S. TV standard for video in U.S. and Canada. NTSC4.43 :TV standard used in Middle East countries. PAL :TV standard used in Western Europe. PAL-M :TV standard used in Brazil. PAL-N :TV standard used in Argentine, Paraguay and Uruguay. PAL60 :TV standard used for NTSC playback on PAL TVs. SECAM :TV standard used in France and Eastern Europe.

Page 3



- **Auto Adjust**

  Enabling Auto Adjust. When "Auto Adjust" is set to "On", 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".

On	Automatically adjusts image "Horizontal Position", "Vertical Position", "Clock", "Phase" and "Resolution".
Off	User can adjust the image display functions ("Horizontal Position", "Vertical Position", "Clock", "Phase" and "Resolution") manually.

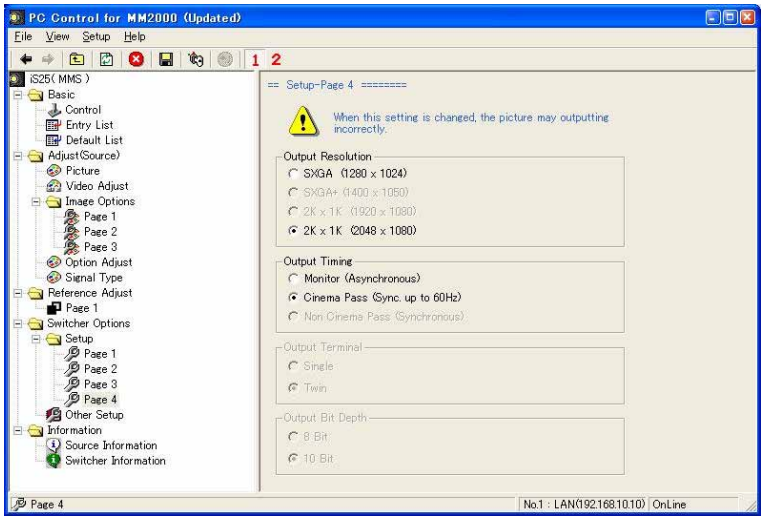
Note For some video images, proper adjustment cannot be made automatically or it takes time for adjustment after signal switching. In such cases, manually execute the adjustment (See Page C-28).

- **Default Signal Select** **[Support of upgrading is planned]**

  Selecting Default Source. You can set the Switcher to default to any one of its inputs each time the Switcher is turned on.

Last	Sets the Switcher to default to the previous or last active input each time the Switcher is turned on.
Auto	Searches for an active source in order of Slot 1 → Slot 2 → Slot 3 → Slot 4 → Slot 1 and displays the first found source.
Select	Displays the selected source input every time the Switcher is started up. Select an input from the pull-down menu.

Page 4



- **Output Resolution**

  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).

- **Output Timing**

  This selects the format of the DVI output signal.

  See "Table: Select the format of the DVI output signal" below.

Output Timing Setting		Refresh rate
SXGA	Monitor Asynchronous	60Hz fixed, Asynchronous output
	Synchronous(up to 60Hz)	Synchronized with input. Fixed output at 60Hz for input over 60Hz.
	Synchronous	Not supported yet
2Kx1K (2048x 1080)	Monitor Asynchronous	60Hz fixed, Asynchronous output
	Synchronous(up to 60Hz)	Synchronized with input. Fixed output at 60Hz for input over 60Hz.
	Synchronous	Not supported yet

  SXGA+, 2Kx1K (1920x1080) and Synchronous are not supported by this machine.

- **Output Terminal**

  This is fixed to [Twin] and cannot be changed for this machine.

- **Output Bit Depth**

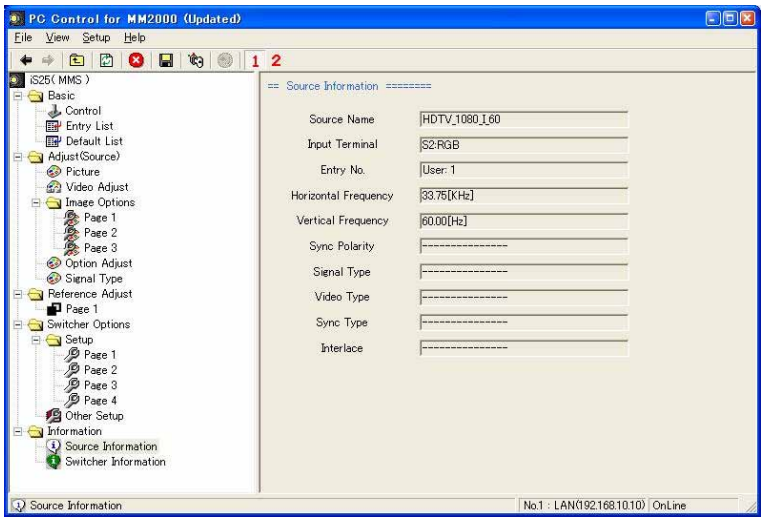
  This is fixed to [Twin] and cannot be changed for this machine.

5-5-2. Other Setup [Support of upgrading is planned]

The functions below are planned to be supported in future.

5-6. Information

5-6-1. Source Information



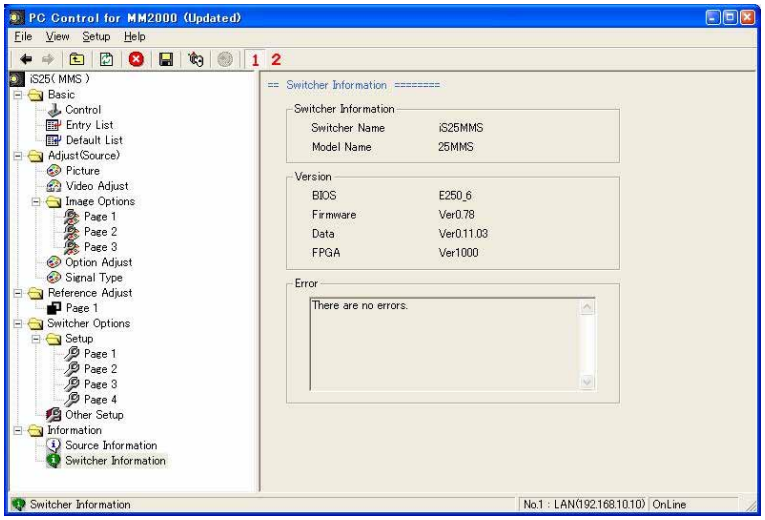
- **Source Information** **[Partial support of upgrading is planned]**

  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 "MM2000B User's Manual").

5-6-2. Switcher Information



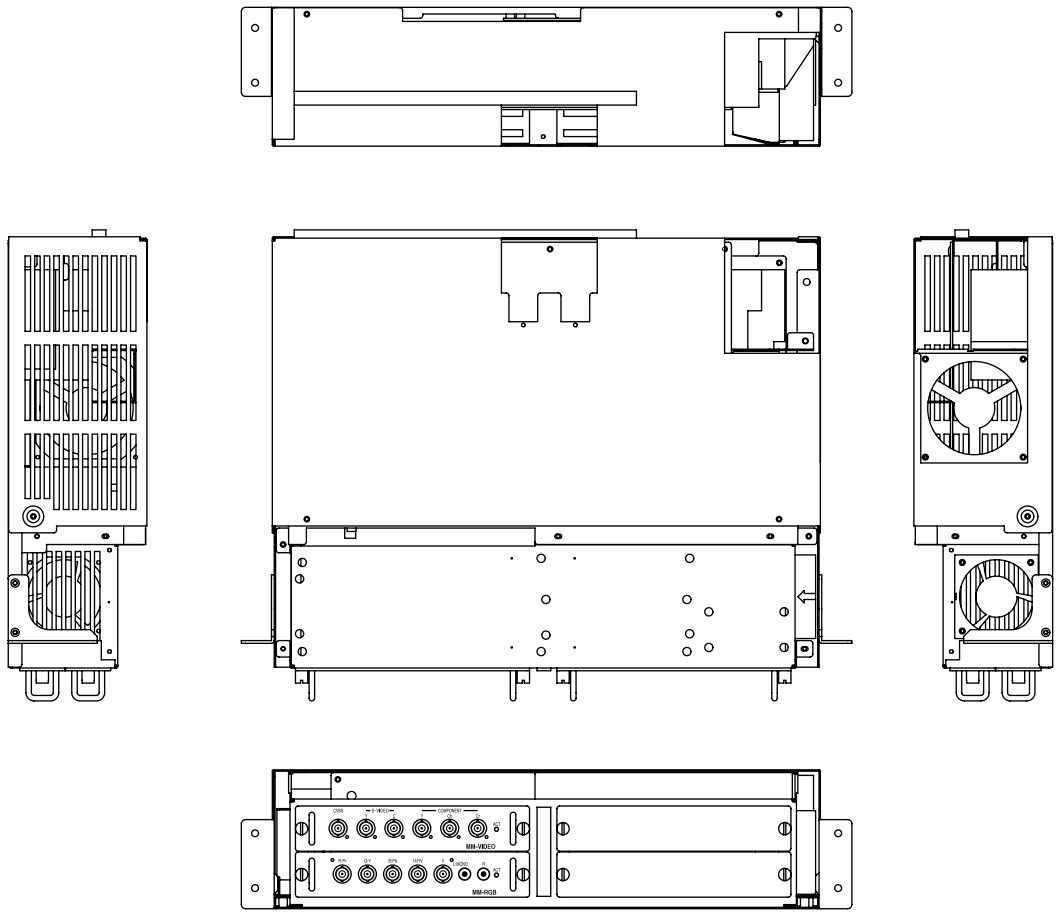
- **Switcher Information**

  Use this to check the switcher version information and error information.

6.

Appendix

6-1. Appearance



6-2. Index

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