Dolby® Atmos™ Cinema Processor CP850 Software Manual

Issue 1 Part Number 9111760

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Axis/Apache/: http://axis.apache.org/axis2/c/core/

GWT: https://developers.google.com/web-toolkit/

Source Sans Pro font: http://www.fontsquirrel.com/foundry/Adobe

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Regulatory Notices

United States (FCC)

NOTE: 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 this instruction 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.

European Union (CISPR 22)

The Dolby® Atmos™ CP850 Cinema Processor and the Dolby Atmos Interface DAC3201comply with the EMC requirement of EN55022 and EN55024 when operated in accordance with this manual.

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.

Canada

This Class A digital apparatus complies with Canadian ICES003. Cet appareil de la calsse A est conforme à la norme NBM003 de Canada.

China

警告
此为 A 级产品。在生活环境中，该产品可能会造成无线电干扰。在这种情况下，
可能需要用户 对下扰采取切实可行的措施。

Korean

이 기기는 업무용 (A 급) 전자파적합기기로서 판
매자 또는 사용자는 이 점을 주의하시기 바라
며 , 가정외의 지역에서 사용하는 것을 목적으로
합니다 .

Important Safety Instructions

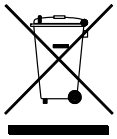
1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
7. Clean only with dry cloth.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. No naked flame sources, such as lighted candles, should be placed on the apparatus
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Unplug this apparatus when unused for long periods of time.
13. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as powersupply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
14. Do not expose the apparatus to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.

15. CAUTION: Troubleshooting must be performed by a trained technician. To reduce the risk of electric shock, do not attempt to service this equipment unless you are qualified to do so.
16. Do not defeat the safety purpose of the polarized or groundingtype plug. A polarized plug has two blades with one wider than the other. A groundingtype plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
17. This apparatus must be earthed (grounded) by connecting to a correctly wired and earthed power outlet.
18. Ensure that your mains supply is in the correct range for the input power requirement of the unit.
19. In order to reduce the risk of electrical shock, the power cord must be disconnected when the power supply assembly is removed.
20. This equipment is designed to mount in a suitably ventilated 19” rack; ensure that any ventilation slots in the unit are not blocked or covered.
21. The mains power disconnect device for this unit is the plugin mains cord rather than a power switch. The mains cord must remain readily accessible for disconnecting mains power.
22. To avoid exposure to dangerous voltages and to avoid damage to the unit, do not connect the rearpanel Ethernet port to telephone circuits.

23. As the colors of the cores in the mains lead may not correspond with the colored markings identifying the terminals in your plug, proceed as follows:
    - The green and yellow core must be connected to the terminal in the plug identified by the letter E, or by the earth symbol ⏚, or colored green, or green and yellow.
    - The blue core must be connected to the terminal marked with the letter N or colored black.
    - The brown core must be connected to the terminal marked with the letter L or colored red.
24. This apparatus must be earthed.

CAUTION – Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type. Dispose of used batteries according to local law.

PRODUCT ENDOFLIFE INFORMATION



This product was designed and built by Dolby Laboratories to provide many years of service, and is backed by our commitment to provide highquality support. When it eventually reaches the end of its serviceable life, it should be disposed of in accordance with local or national legislation. For current information please visit our website: www.dolby.com/environment.

This symbol that appears on the unit rear panel and in this manual is intended to alert the user to the presence of uninsulated “dangerous” voltage within the product’s enclosure that maybe of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important safety operating and maintenance instructions.

IMPORTANT SAFETY NOTICE

These units comply with safety standard EN609501. These units shall not be exposed to dripping or splashing and no objects filled with liquids, such as coffee cups, shall be placed on the equipment. To ensure safe operation and to guard against potential shock hazard or risk of fire, the following **must** be observed:

- Ensure that your mains supply is in the correct range for the input power requirement of the unit.
- Ensure **fuses** fitted are the **correct rating and type** as marked on the unit.
- The unit **must be earthed** by connecting to a correctly wired and **earthed** power outlet.
- The **power cord** supplied with this unit must be wired as follows:

Live—Brown Neutral—Blue Earth—Green/Yellow

GB

IMPORTANT – NOTE DE SECURITE

Ces unités se conformer à la norme de sécurité EN609501. Ne pas exposer ces appareils aux éclaboussures ou aux gouttes de liquide. Ne pas poser d'objets remplis de liquide, tels que des tasses de café, sur l'appareil. Pour vous assurer d'un fonctionnement sans danger et de prévenir tout choc électrique ou tout risque d'incendie, veillez à ob les recommandations suivantes.

- Le selecteur de tension doit être placé sur la valeur correspondante à votre alimentation réseau.
- Les fusibles doivent correspondre à la valeur indiquée sur le materiel.
- Le materiel doit être correctement relié à la terre.
- Le cordon secteur livré avec le materiel doit être cablé de la manière suivante:

Phase—Brun Neutre—Bleu Terre—Vert/Jaune

F

WICHTIGER SICHERHEITSHINWEIS

Diese Geräte erfüllen die Sicherheitsnorm EN609501. Die Geräte darf nicht mit Flüssigkeiten (Spritzwasser usw.) in Berührung kommen; stellen Sie keine Gefäße, z.B. Kaffeetassen, auf die Geräte. Für das sichere Funktionieren der Geräte und zur Unfallverhütung (elektrischer Schlag, Feuer) sind die folgenden Regeln unbedingt einzuhalten:

- Der Spannungswähler muß auf Ihre Netzspannung eingestellt sein.
- Die Sicherungen müssen in Typ und Stromwert mit den Angaben auf dem Gerät übereinstimmen.
- Die Erdung des Geräte muß über eine geerdete Steckdose gewährleistet sein.
- Das mitgelieferte Netzkabel muß wie folgt verdrahtet werden:

Phase—braun Nulleiter—blau Erde—grün/gelb

D

NORME DI SICUREZZA – IMPORTANTE

Queste unità sono costruiti a norma di sicurezza EN609501. I prodotti non deve essere sottoposto a schizzi, spruzzi e gocciolamenti, e nessun tipo di oggetto riempito con liquidi, come ad esempio tazze di caffè, deve essere appoggiato sul dispositivo. Per una perfetta sicurezza ed al fine di evitare eventuali rischi di scossa êlettrica o d'incendio vanno osservate le seguenti misure di sicurezza:

- Assicurarsi che il selettore di cambio tensione sia posizionato sul valore corretto.
- Assicurarsi che la portata ed il tipo di fusibili siano quelli prescritti dalla casa costruttrice.
- L'apparecchiatura deve avere un collegamento di messa a terra ben eseguito; anche la connessione rete deve avere un collegamento a terra.
- Il cavo di alimentazione a corredo dell'apparecchiatura deve essere collegato come segue:

Filo tensione—Marrone Neutro—Blu Massa—Verde/Giallo

I

AVISO IMPORTANTE DE SEGURIDAD

Estas unidades cumplen con la norma de seguridad EN609501. Estas unidades no debe ser expuesta a goteos o salpicaduras y no deben colocarse sobre el equipo recipientes con liquidos, como tazas de cafe. Para asegurarse un funcionamiento seguro y prevenir cualquier posible peligro de descarga o riesgo de incendio, se han de observar las siguientes precauciones:

- Asegúrese que el selector de tensión esté ajustado a la tensión correcta para su alimentación.
- Asegúrese que los fusibles colocados son del tipo y valor correctos, tal como se marca en la unidad.
- La unidad debe ser puesta a tierra, conectándola a un conector de red correctamente cableado y puesto a tierra.
- El cable de red suministrado con esta unidad, debe ser cableado como sigue:

Vivo—Marrón Neutro—Azul Tierra—Verde/Amarillo

E

VIKTIGA SÄKERHETSÅTGÄRDER!

Dessa enheter uppfyller säkerhetsstandarden EN609501. Dessa enheter får inte utsättas för yttre åverkan samt föremål innehållande vätska, såsom kaffemuggar, får ej placeras på utrustningen. För att garantera säkerheten och gardera mot eventuell elchock eller brandrisk, måste följande obas:

- Kontrollera att spänningsväljaren är inställd på korrekt nätspänning.
- Konrollera att säkringarna är av rätt typ och för rätt strömstyrka så som anvisningarna på enheten föreskriver.
- Enheten måste vara jordad genom anslutning till ett korrekt kopplat och jordat eluttag.
- Elsladden som medföljer denna enhet måste kopplas enligt följande:

Fas—Brun Neutral—Blå Jord—Grön/Gul

S

BELANGRIJK VEILIGHEIDSVOORSCHRIFT:

Deze eenheden voldoen aan de EN609501. Deze apparaten mag niet worden blootgesteld aan vocht. Vanwege het risico dat er druppels in het apparaat vallen, dient u er geen vloeistoffen in bekers op te plaatsen. Voor een veilig gebruik en om het gevaar van electrische schokken en het risico van brand te vermijden, dienen de volgende regels in acht te worden genomen:

- Controleer of de spanningscaroussel op het juiste Voltage staat.
- Gebruik alleen zekeringen van de aangegeven typen en waarden.
- Aansluiting van de unit alleen aan een geaarde wandcontactdoos.
- De netkabel die met de unit wordt geleverd, moet als volgt worden aangesloten:

Fase—Bruin Nul—Blauw Aarde—Groen/Geel

NL

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Introduction

Welcome to Dolby® Atmos™.

Dolby Atmos is our latest innovation in audio technology, vastly expanding the palette for content creators and enhancing the audience experience in cinematic presentations.

After you install, set up, and connect to your Dolby Atmos Cinema Processor CP850, as explained in the *Dolby CP850 Quick Start Guide*, this manual shows you how to calibrate an auditorium using the Dolby Atmos Designer software and how to operate the CP850 using the web client.

You can set high-resolution multiple-rate equalization for all channels automatically using the Dolby Atmos Designer software or manually from the web client user interface.

This manual covers the following information:

- Positioning Microphones
- Setting Up Audio Capture
- Installing Dolby Atmos Designer
- Launching Dolby Atmos Designer
- Designing a New Configuration
- Configuring the Speaker Parameters
- Assigning Arrays
- Configuring the Routing Parameters
- Configuring the Bass Management Parameters
- Running AutoEQ
- Connecting to the CP850
- Configuring Macros
- Displaying and Configuring the Equalization Parameters
- Displaying and Configuring the Auditorium Parameters
- Configuring Preferences
- Checking the Logs
- Setting Up User Access
- Modifying the Network Settings
- Performing Maintenance Tasks
- Rebooting the System
- Accessing Documentation
- Viewing Dolby Atmos Status in Show Manager

Questions or Feedback

If you have questions or comments regarding this document or another related document, please contact technical publications.

If you have technical questions regarding this product/technology, please contact technical support.

Using Dolby Atmos Designer

This chapter shows you how to use the Dolby® Atmos™ Designer software to calibrate an auditorium in a Dolby Atmos Cinema Processor CP850 playback environment. We also support this application for use in a postproduction environment with the Dolby Rendering and Mastering Unit (RMU), but this information is not required or included here. Information regarding the RMU is provided with that unit.

With Dolby Atmos Designer, you can calibrate your auditorium using its automated equalization (AutoEQ) capability. This application provides tools that enable you to measure the response of an auditorium and design and implement an equalization configuration. You can then obtain an equalized response, which approximates a desired target response curve, such as a flat response or the standard cinema X–curve.

You can run Dolby Atmos Designer in online mode when you are connected to a Dolby Digital Cinema network that includes a CP850, or in offline mode when you are not connected. In offline mode, you can enter information regarding your auditorium and save a Dolby Atmos configuration (.dac) file. You can then reopen this file later to complete the process when you are online in your auditorium.

This chapter covers the following information:

- Positioning Microphones
- Installing Dolby Atmos Designer
- Setting Up Audio Capture
- Launching Dolby Atmos Designer
- Designing a New Configuration
- Configuring the Speaker Parameters
- Configuring the Amplifier Parameters
- Assigning Arrays
- Configuring the Routing Parameters
- Configuring the Bass Management Parameters
- Running AutoEQ

Note: Before you begin this process, follow the instructions in your *Dolby CP850 Quick Start Guide* and *Dolby Atmos Cinema Processor CP850 Manual* to install your CP850 in a Dolby Digital Cinema network.

2.1 Positioning Microphones

This section assumes that you are online in your auditorium. If you are offline, proceed to Section 2.2.

To run Dolby Atmos Designer in online mode, you need the following equipment:

- Eight microphones
- A supported audio interface
- An external sound pressure meter

Begin the configuration by positioning your microphones.

1. Place microphone 1 at the reference position, along the center line of the image at a point approximately two-thirds the length of the room.
2. Place microphones 2–8 at different positions within the room.

   Position microphones 2–8 so they cover the middle to rear portion of the seating area.
3. If possible, avoid the following:
   - Do not place microphones 2–8 at points of symmetry. That is, avoid placing microphones half the distance between walls (antinode for all harmonics), one-third the distance between walls, or one-quarter of the distance between walls.
   - Two microphones in the same node structure: Do not place microphone pairs with front/back or left/right symmetry. That is, avoid placing two microphones at the same distance from a parallel wall. (For example, if one microphone is placed 15 feet from the left wall, do not place a second microphone 15 feet from the right wall.)
   - Do not place microphones close to wall surfaces, hard partitions, equipment credenzas, or other surfaces that could cause errors in the measured frequency response due to sound reflections.
   - Do not place microphones in close proximity to an individual loudspeaker.

Figure 2-1 shows a typical auditorium microphone setup.

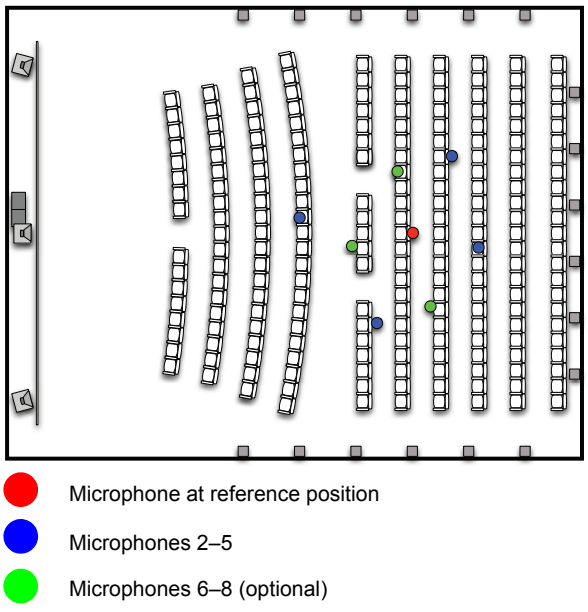


Figure 2-1 Auditorium Microphone Setup

Microphone Angle and Elevation

Take the following precautions when positioning the angle and elevation of your microphones.

1. Position each microphone near the typical ear height of a seated person, but with enough distance from the seat to prevent frequency response errors due to sound reflections.
2. Place microphone capsules no closer than 6 inches (15.24 cm) from the top of a seat and oriented straight up.

Caution: High-back chairs can prevent you from placing a microphone near the ear height of a seated person. In such a case, elevated seated ear height is desirable to avoid frequency response errors that result from sound reflecting off the seat.

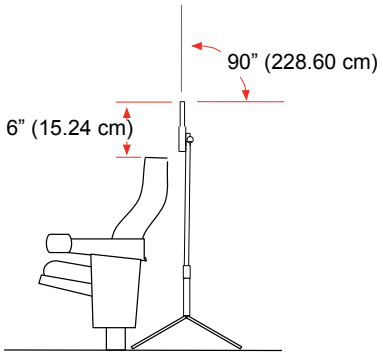


Figure 2-2 Microphone Relative to Seated Person Ear Height

2.1.1 Setting Up Audio Capture

You continue the auditorium configuration by setting up audio capture.

Audio Capture Configuration

Figure 2-3 shows you how to set up a CP850 with a computer, PC audio interface, and microphones to perform audio measurements.

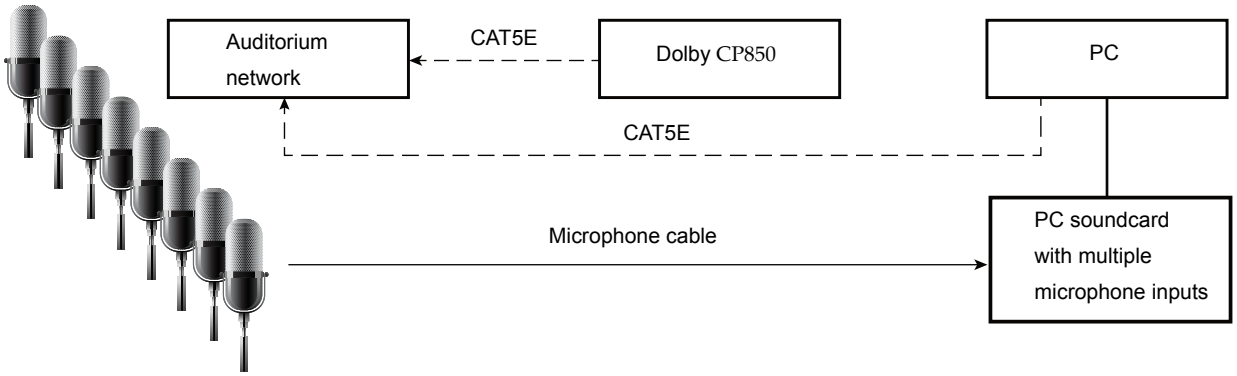


Figure 2-3 Audio Capture Configuration

Dolby Atmos Designer supports the following audio interfaces:

- Roland® Octa-Capture high-speed USB audio interface
- RME Micstasy with DiGiCo UB MADI Multichannel Audio Digital Interface (MADI) USB 2.0 connector

2.2 Installing Dolby Atmos Designer

The Dolby Atmos Designer software runs on Microsoft® Windows® 7. To install Dolby Atmos Designer:

1. Download the Dolby Atmos Designer software from https://www.dolbysecure.com/cinematech. You will need to set up a user ID and password to access this website. You can also download periodic software updates here.
2. Double-click on the **Dolby Atmos Designer** icon to begin the installation process, then follow the screen prompts.

2.3 Launching Dolby Atmos Designer

To launch Dolby Atmos Designer, click **Start** > **Dolby Atmos Designer** or click the shortcut on your desktop.

The **main menu** screen appears. When you launch Dolby Atmos Designer, this screen always opens a new project, as indicated in the title bar as **untitled Dolby Atmos configuration**.

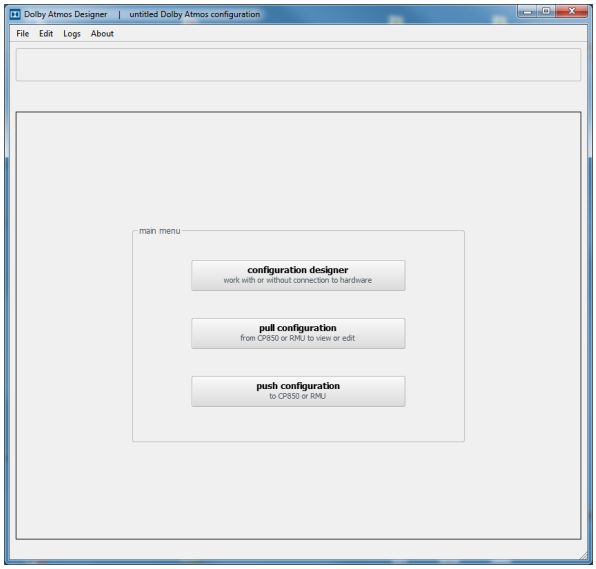


Figure 2-4 Main Menu Screen

In the **main menu** screen, you can:

- Design a new configuration (online or offline)
- Open an existing configuration from disc (online or offline)
- Pull an existing configuration from a CP850 (online)
- Push a configuration to a CP850 (online)
- Save a configuration to disc (online or offline), or push it to a CP850 (online)

- Configure preferences (online or offline)
- Show or clear logs (online or offline)

After opening an existing configuration, you can edit the respective settings.

Note: When you design or edit a configuration by making entries in the various screens, be sure to click **Save** in the **File** menu to save your settings.

2.3.1 Using the File Menu

In the **File** menu, you can open an existing configuration from your local disc, start a new configuration (if an existing configuration is open), or save your configuration settings.

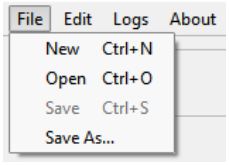


Figure 2-5 File Menu

2.3.2 Pulling and Pushing a Configuration

To pull an existing configuration from a CP850 or push an existing configuration to a CP850, click the **pull configuration**

button or the **push configuration**

button, then click on the respective CP850 button, and enter the desired IP address at the prompt.

2.4 Designing a New Configuration

To design a new configuration:

1. If Dolby Atmos Designer is not running, launch it by clicking **Start** > **Dolby Atmos Designer** or click the shortcut on your desktop.

   An new untitled project opens in the **main menu** screen.

2. Click **Preferences** in the **Edit** menu.

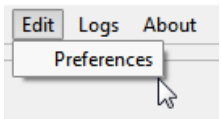


Figure 2-6 Select Preferences in the Edit Menu

The **Preferences** screen appears. In this screen, you can select your ASIO device, enable the display of speaker labels in your speaker and array configurations, and specify your measurement units.

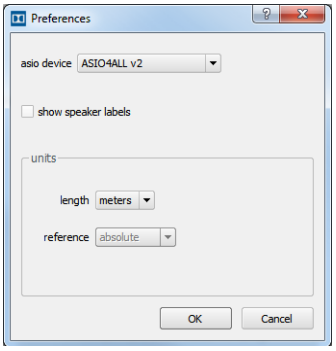


Figure 2-7 Preferences Screen

3. Enter your preferences, then click **OK**.
4. Click the **configuration designer** button.

   The **configuration designer** screen appears. In this screen, you can configure a room and configure speakers and arrays online or offline. To run the automated equalization tool (AutoEQ), you must be online.

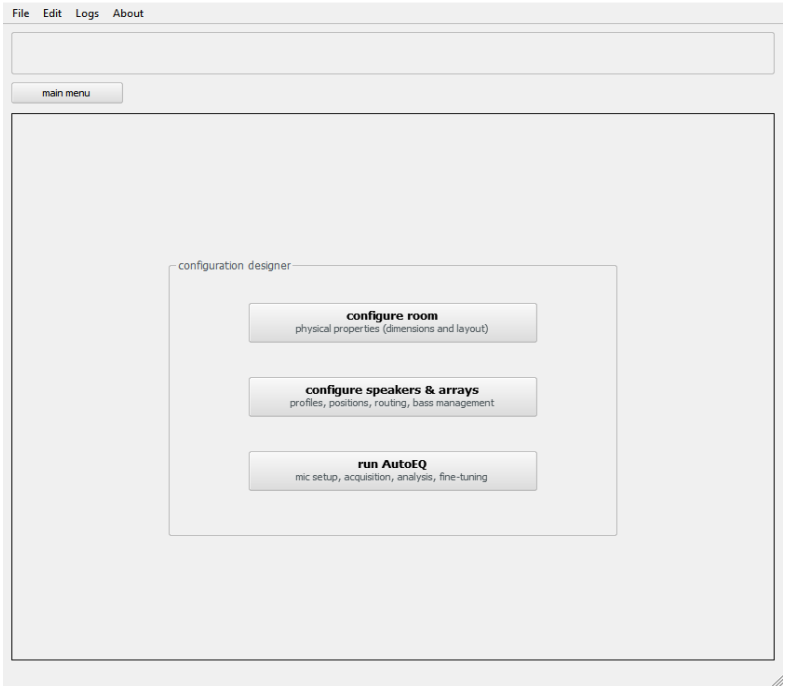


Figure 2-8 Configuration Designer Screen

2.4.1 Configuring the Auditorium

To configure your auditorium:

1. Click **configure room** configure room physical properties (dimensions and layout) .

   The **configure room** screen appears. In this screen, you click the wall and ceiling icons to enter the respective parameters for each area in your auditorium. You can also use the left and right arrows < > at the upper-right corner to move to the next or previous set of parameters. Figure 2-9 shows the **screen wall** parameters, which is the first set of parameters to appear. The active wall is always highlighted in blue, while inactive walls are highlighted in red.

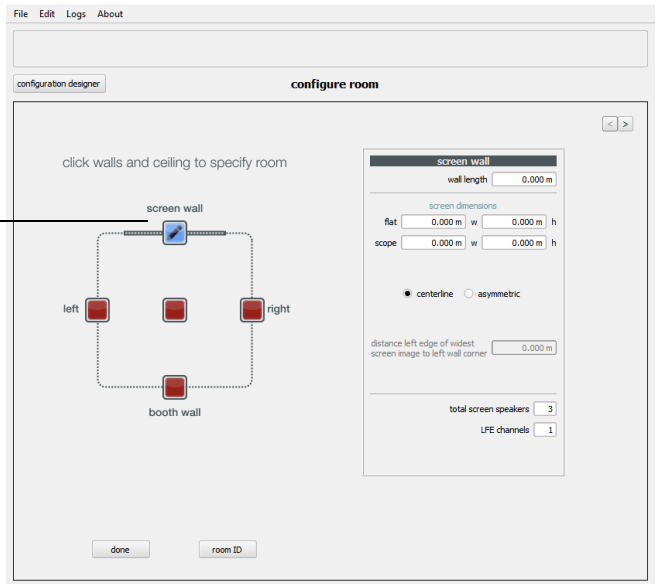


Figure 2-9 Configure Room Screen (Screen Wall)

2. Enter the desired parameters for the screen wall.

   When you click the **done** done button to confirm your settings (see step 8), the icons turn green (except for the active wall), which indicates that you entered complete and valid data (see Figure 2-15).

3. Click the **left** or **right** icon.

   The **left and right** icons are highlighted in blue to indicate they are now active, and the **left and right walls** parameters appear, as shown in Figure 2-10.

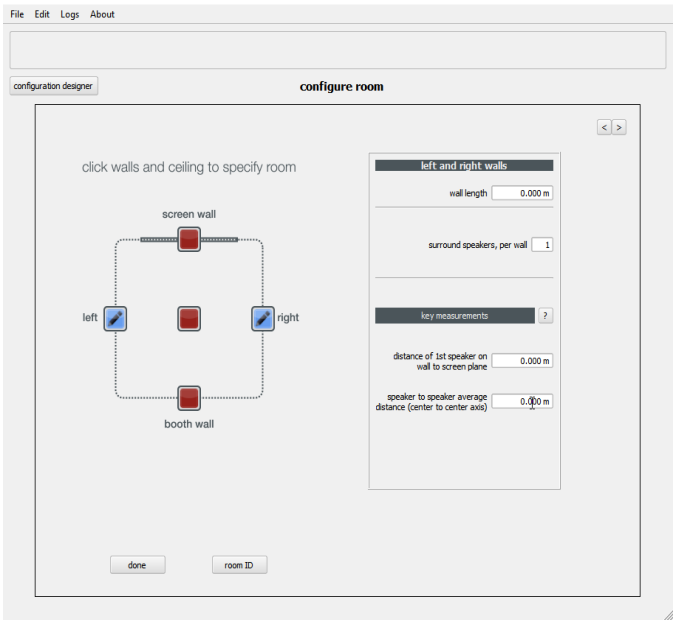


Figure 2-10 Left and Right Walls Parameters

4. Enter the desired **left and right walls** parameters in the respective fields.

5. Click the **booth wall** icon to enter the parameters for the booth wall and bass management subwoofers.

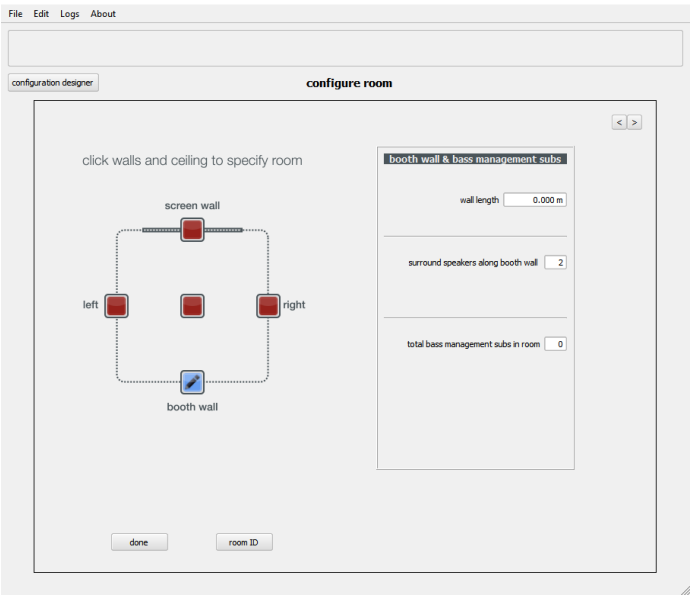


Figure 2-11 Booth Wall and Bass Management Parameters

6. Click the **floor and ceiling** icon (middle icon) to enter the respective parameters.

   If the auditorium floor is flat, retain the default floor settings (0.000 m). If the auditorium ceiling is flat, enter the ceiling elevation at the screen for all three values.

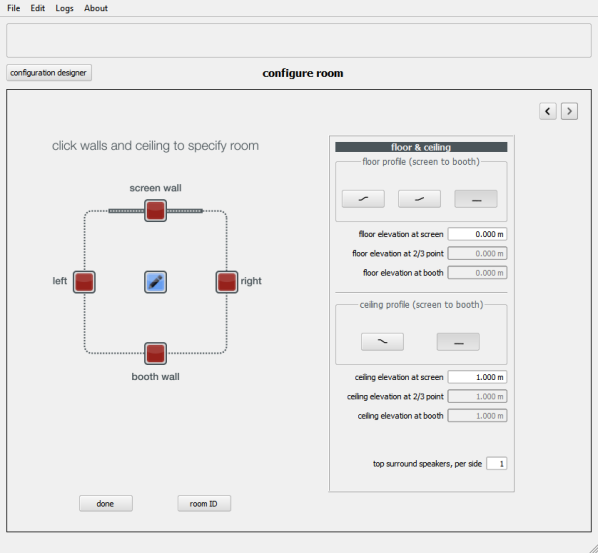


Figure 2-12 Floor and Ceiling Parameters

7. Click the **room ID** button at the bottom of the **configure room** screen to enter the desired information, then click **OK**.

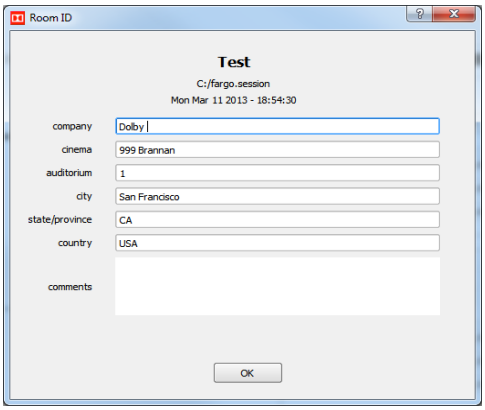


Figure 2-13 Room ID Screen

8. Click the **done** button at the bottom of the **configure room** screen. If your parameters are valid, the specified room configuration appears and the **done** button changes to an **edit** button, as shown in Figure 2-14. Clicking **edit** allows you to change any of your previously saved parameters.

   If you enter valid parameters, icons change to green, except for the active wall (see Figure 2-15).

   If you enter incomplete parameters but the data includes the minimum viable settings, icons are half white and half green. If you press the **done** button and your parameters are invalid, icons are red and an error message appears. In such a case, you must enter valid settings.

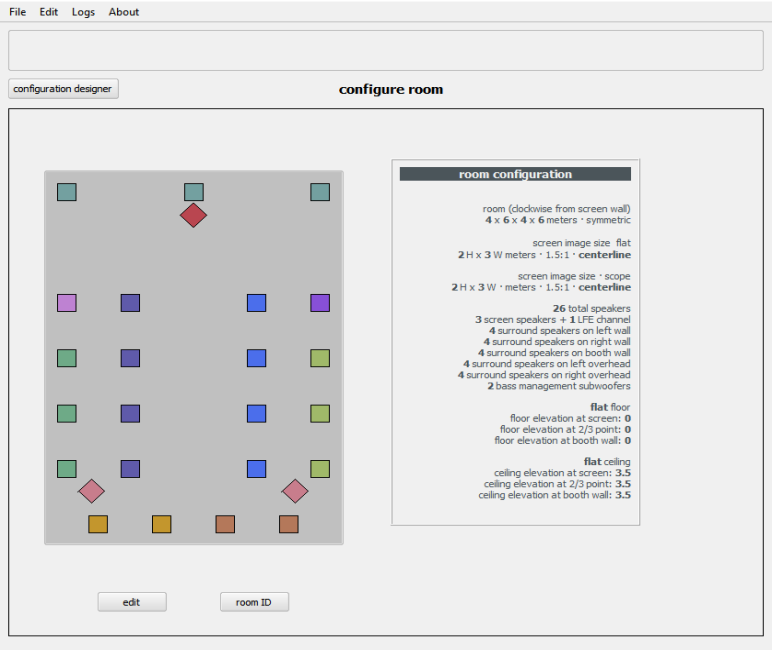


Figure 2-14 Room Configuration Summary

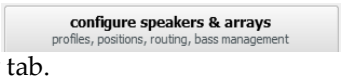
9. After entering complete valid parameters and clicking the **done** button, the respective icons change to green, except for the active wall, which is editable (see Figure 2-15).

Figure 2-15 Editable Room Screens

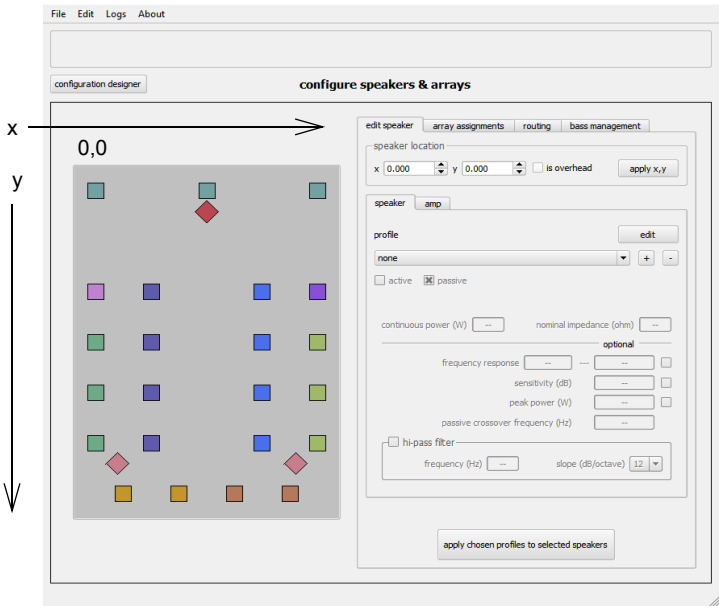
2.4.2 Configuring the Speaker Parameters

To configure the speaker parameters:

1. Click **configuration designer**

at the upper-left side of the screen.
2. Click **configure speakers & arrays** 

to display the parameters under the **edit speaker** tab.



x, y speaker locations are in relation to the plane

Figure 2-16 Configure Speakers and Arrays

3. To configure the parameters for a specific speaker, click on its icon at the left side of the screen. The speaker and amplifier profile database is prepopulated with read-only profiles. If your speaker model is not in the database, you can add a profile and edit it accordingly. Screen speaker x, y locations are read only.

   You can also draw a marquee around a group of speakers and edit the parameters for that group, except when you enter the x and y coordinates for a speaker location (as in step 6). To add or remove a speaker, press <Ctrl> on your PC.

4. To select a speaker configuration, click in the **profile** field and assign the appropriate speaker model from the drop-down menu.

   If your speaker model is not listed, proceed directly to step 5.

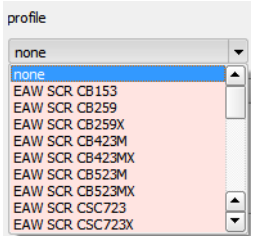


Figure 2-17 Select Speaker Model

When you select a speaker model, the manufacturer and speaker specifications automatically populate the respective fields, as shown in the following figures.

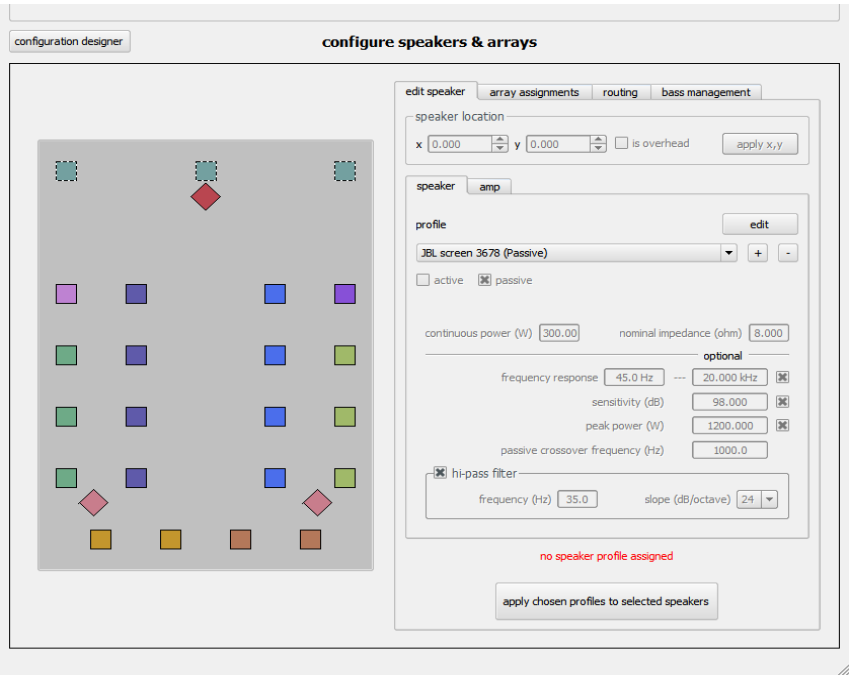


Figure 2-18 Configure Screen Speakers

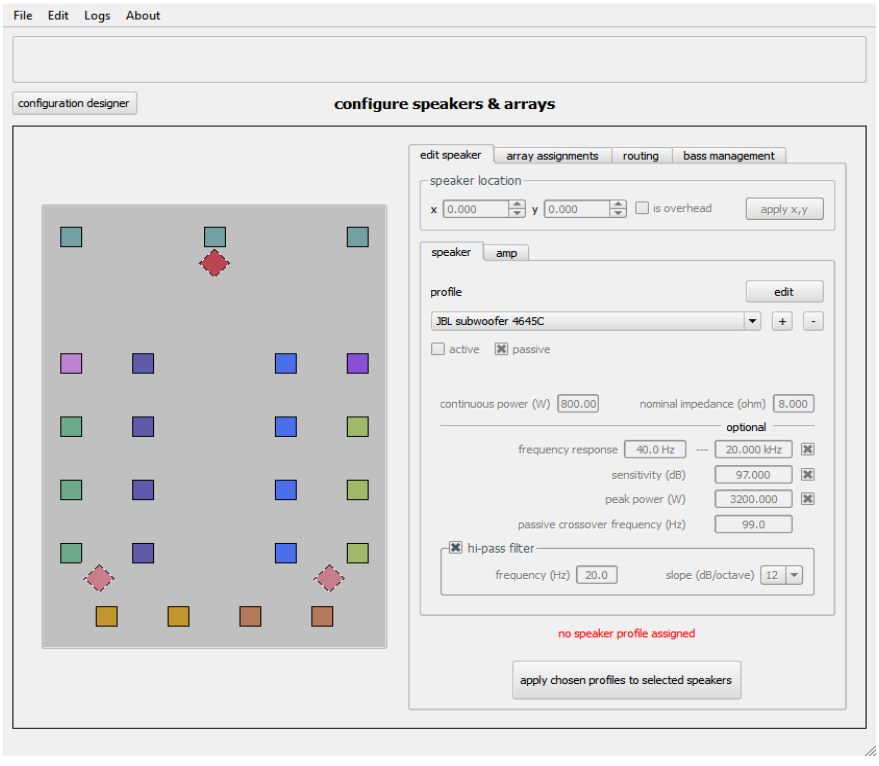


Figure 2-19 Configure Subwoofers

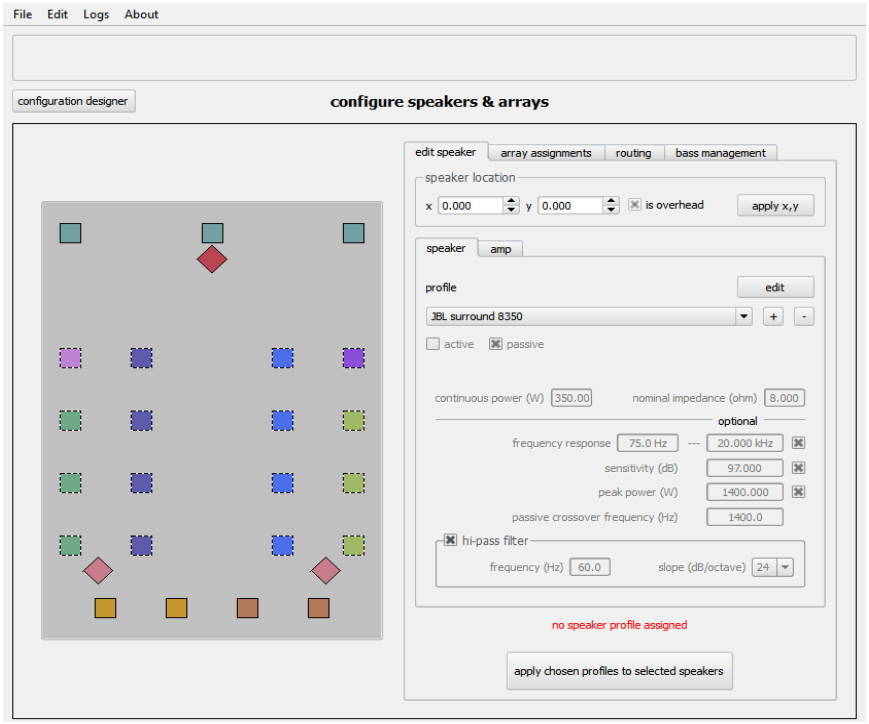


Figure 2-20 Configure Surrounds

5. If your speaker model is not listed, click the + button next to the speaker model field, then enter the manufacturer, the specifications (per the speaker data sheet), and optional data (if available) in the respective fields. The **edit** edit button changes to a **save** save button.
   - Click **save** to save your custom speaker settings to your speaker database. To edit a custom configuration, click the **edit** button, change the desired settings, then click the **save** button.
6. If you need to manually override the speaker locations, use the **x** and **y** fields, then click **apply x, y** to confirm your entries. The x and y coordinates are in relation to the plane.

   If you are designating a speaker as an overhead, click in the **is overhead** box.

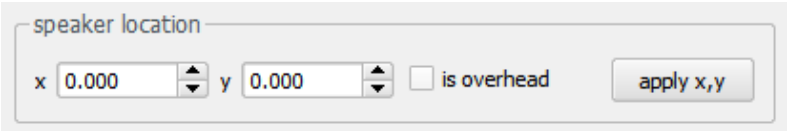


Figure 2-21 Enter Speaker Location

7. Click **apply chosen profiles to selected speakers** to complete your settings using one of the provided setups. Repeat this step each time you select and assign a single speaker or a group of speakers.

2.4.3 Configuring the Amplifier Parameters

To configure the amplifier parameters, click the **amp** tab and follow the same sequence that you performed for the speaker parameters.

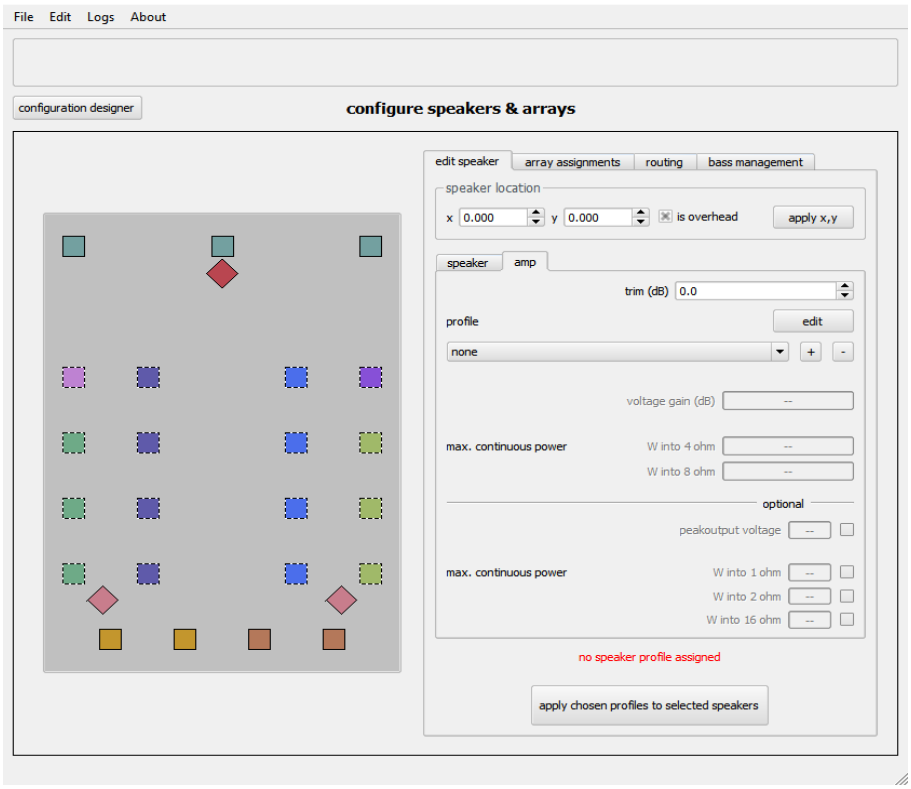


Figure 2-22 Amplifier Parameters

2.4.4 Assigning Arrays

After configuring your speakers, as described in the previous section, you can assign the arrays as follows:

1. Click the **array assignments** tab.

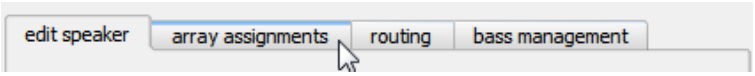


Figure 2-23 Click Array Assignments Tab

The **array assignments** appears, as shown in Figure 2-24.

Dolby Atmos Designer automatically assigns speaker feeds to the arrays based on predefined rules. The colors of the speakers correspond to their array assignments, as shown Figure 2-24.

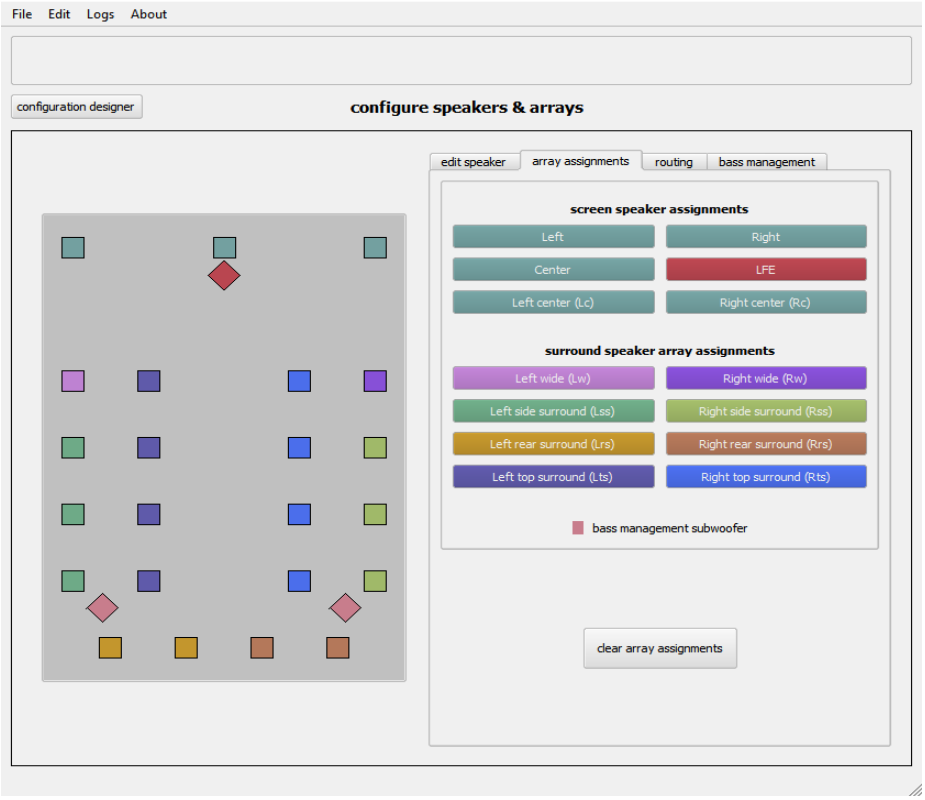


Figure 2-24 Array Assignments

2. To change the speaker assignments:
   - Click on a speaker to outline it with dashes.
   - Click the desired speaker assignment button.

2.4.5 Configuring the Routing Parameters

After you assign arrays, click the **routing** tab to configure routing.

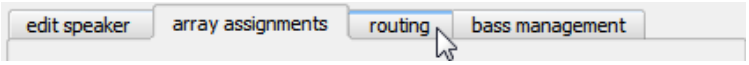


Figure 2-25 Click Routing Tab

The routing parameters appear. In this screen, you can apply Manual Routing routing to a specific speaker or Automatic Routing to a group of speakers.

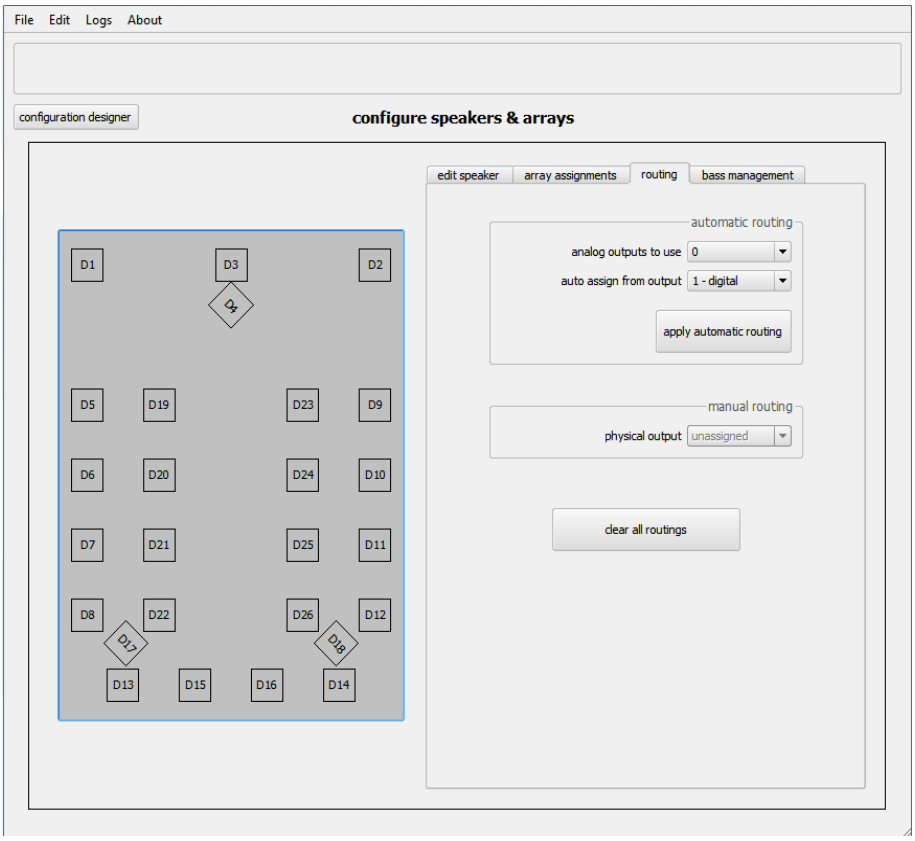


Figure 2-26 Routing Parameters

Manual Routing

To perform manual routing:

1. Click on a speaker to outline it

.
2. In the **manual routing** pane, select an output that corresponds to the appropriate routing in the **physical output** drop-down menu. Alternatively, you can type the number of the desired output on your keyboard and press <Enter>.

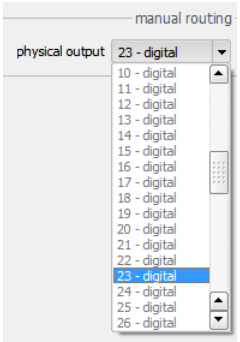


Figure 2-27 Select Output for Manual Routing

3. Repeat steps 1 and 2 for each speaker.
   You can clear all of your selections by clicking the **clear selected routings** button.

Automatic Routing

Automatic routing follows these predefined rules:

- The autoassignment of the screen is left, right, center.
- The autoassignment for the left and right side and ceiling surrounds is screen to booth.
- The autoassignment for the rear surrounds is left, right, left, right, left, right until the system fully assigns the arrays

To apply automatic routing:

4. Draw a marquee around a group of speakers (or select them one at a time by pressing <Ctrl>).

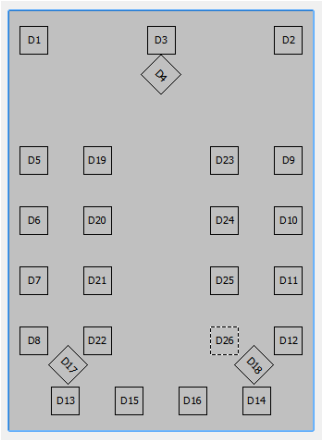


Figure 2-28 Select Group of Speakers for Automatic Routing

5. In the **automatic routing** pane, select any analog output from the **analog outputs to use** drop-down menu.

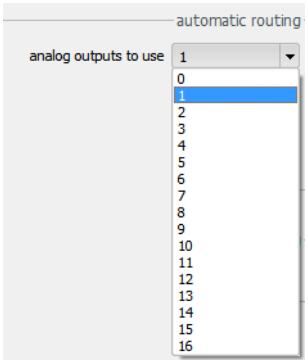


Figure 2-29 Select Analog Output for Automatic Routing

6. Select the output where you want to start the automatic routing operation in the **auto assign from output** drop-down menu.

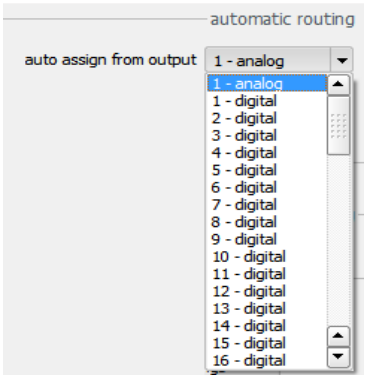
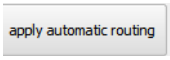


Figure 2-30 Assign First Output for Automatic Routing

7. Click the **apply automatic routing** button 

.

   The automatic routing operation begins routing incrementally from the first speaker in the speaker group (according to the previously described automatic routing rules) until the process is completed.

2.4.6 Configuring the Bass Management Parameters

After you configure the routing parameters, configure the bass management parameters for one or two subwoofers as follows:

1. Click the **bass management** tab.

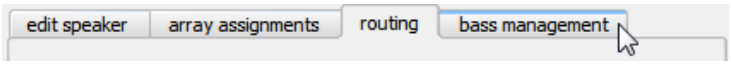


Figure 2-31 Click Bass Management Tab

2. Select speakers one at a time or by dragging a marquee around a group of speakers.

   Do not select subwoofers. If you accidentally select subwoofers, press <Ctrl> on your keyboard to deselect them.

3. Assign the speaker or speakers to the bass management subwoofers.
4. Assign a bass management frequency to the group.
5. Click the **apply** button.

Figure 2-32 Configure Bass Management

2.4.7 Running AutoEQ

After you configure your speakers and arrays, you can run AutoEQ, as follows:

1. Click the **configuration designer**

button.
2. Click **run AutoEQ** to display the **AutoEQ** screen, as shown in Figure 2-33.

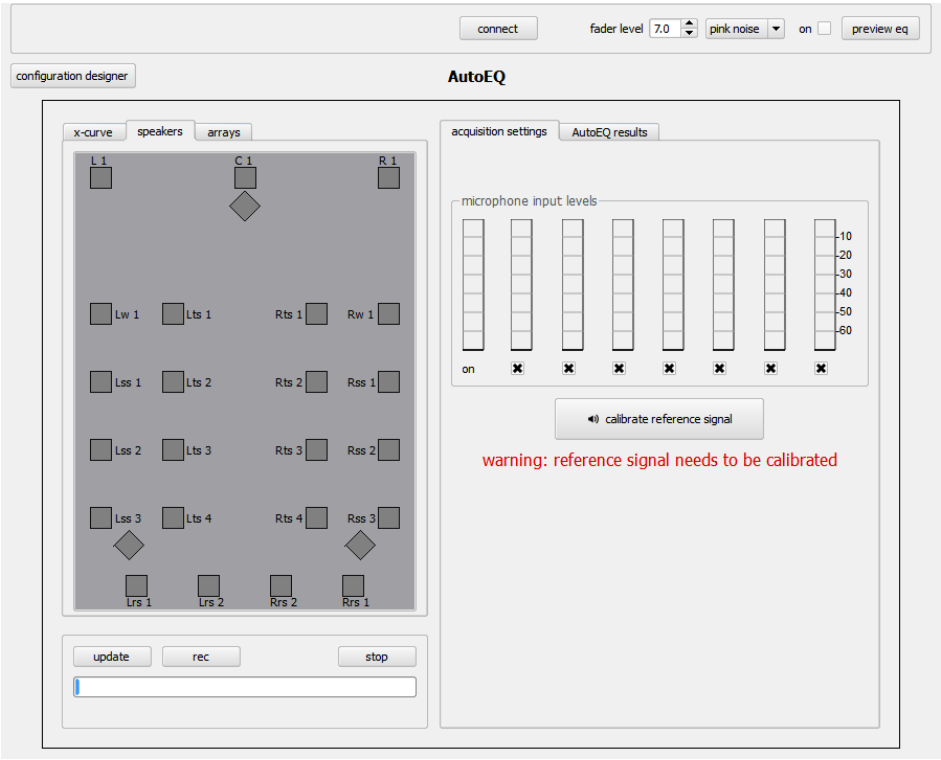


Figure 2-33 AutoEQ Screen

3. Click the **connect** button at the top of the screen.

Figure 2-34 Click Connect

A dialog box appears requesting an IP address for your CP850.

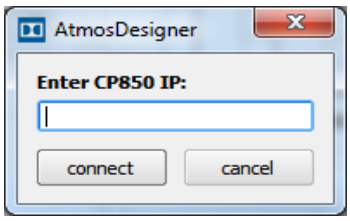


Figure 2-35 Enter CP850 IP Address

4. Enter the CP850 IP address, and click **connect** in the dialog box.

   Once connected, the **connect** button in the **AutoEQ** screen changes to a connected button and the color changes to green, indicating that you are now connected to your CP850. In addition, the CP850 IP address is displayed in the Windows title bar, as shown in Figure 2-36.

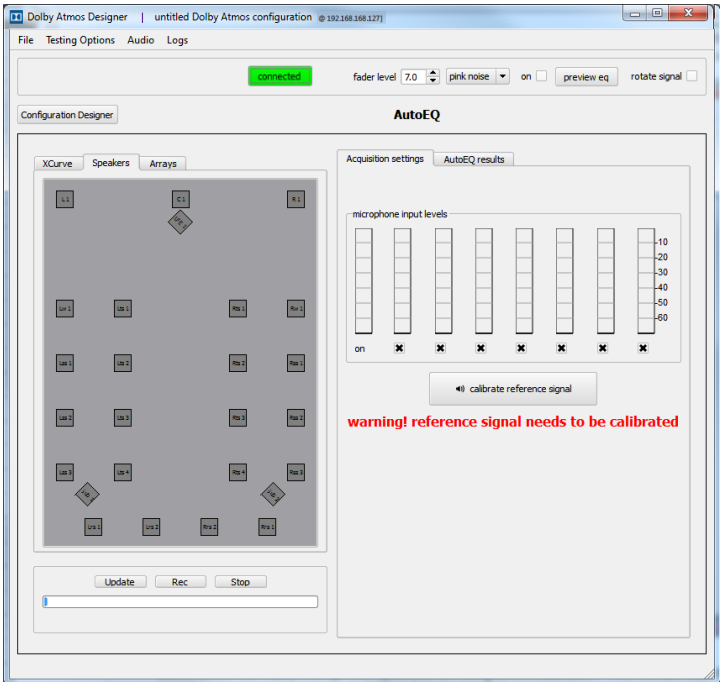
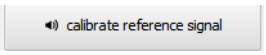


Figure 2-36 Connected to CP850

5. Select the number of microphone inputs you are using for the calibration. An **x** below any meter in the **microphone input levels** section indicates that the system will use the corresponding microphone input for the acquisition process. You cannot disable microphone 1.

6. Click the **calibrate reference signal**  button.

   The **Reference Signal Calibration** screen appears.

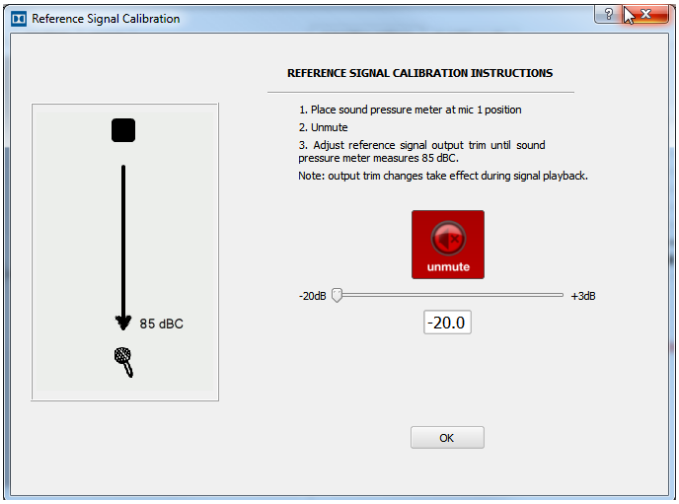


Figure 2-37 Reference Signal Calibration Screen

7. Unmute the signal by clicking the **unmute** button.

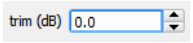
   The red **unmute** button changes to a gray mute button. This generates pink noise from the center speaker. The signal is attenuated by –20 dB. The sound pressure level (SPL) should be very low. Using an SPL meter increase the fader icon until the sound pressure level from the Center channel is 85 dBC.

8. Click **OK**.
9. After calibrating the reference signal, we recommend that you adjust the output gain of each speaker to optimize the dynamic range of the system:
   - Turn on noise by clicking the check box at the top of the **AutoEQ** screen.
   - Select **pink noise** as the test signal.
   - Select the speaker feed by clicking the desired speaker icon on the left side of screen.
   - Measure the C-weighted SPL at the reference position in the auditorium.
   - Adjust the amplifier gain until the speaker output level is 85 dBC.
   - Note the input gain adjustment.
   - Repeat the preceding steps for each speaker.
   - Once the gain adjustments are complete for each speaker, turn off the pink noise.

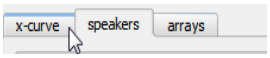
Note: Set the Low-Frequency Effects (LFE) channel to +10 dB inband-gain (~91 dBC SPL), and set bass management subwoofers to 0 dB inband-gain (~81 dBC SPL).

10. After setting all the speaker feeds to 85 dBC SPL, click **configuration designer**.

    at the upper-left side of the screen.
11. Click **configure speakers & arrays**

    .
12. Select a speaker feed by clicking a speaker on the left side of the screen.
13. Click on the **amp** tab.
14. Adjust the input trim 

    based on the input gain adjustment. (See step 9, bullet 6.)
15. Repeat the preceding steps for each speaker based on the input gain adjustment. (See step 9, bullet 6.)

16. Click the **x-curve** 

tab.

    The **x-curve** parameters appear.

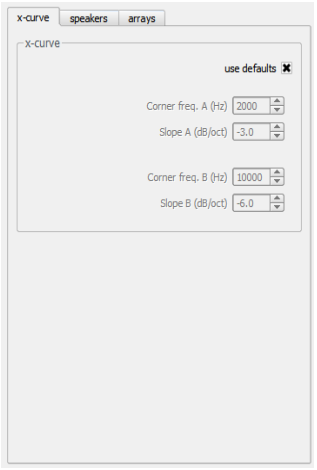


Figure 2-38 Default X-Curve Parameters

17. Set the boost-level frequencies.

    Boost limits define the point where no boost above 0 dB is applied to frequencies above and below the high and low limits for a speaker or an array feed. The system automatically assigns default boost-limit frequency points to each speaker and array feed. To change the boost-limit frequency:

    - Select a speaker at the left side of the screen, or draw a marquee around a group of speakers to edit the parameters for that group.
    - Select the **AutoEQ results** tab.
    - Edit the boost-limits value by typing in a value or using the up/down arrows.

Note: Avoid setting boost limits to frequencies above or below the bandwidth limits of the speakers (± 3 dB points) to avoid excessive boost where the output of the speaker begins to rapidly decrease.

18. Click the record

button.

19. At the prompt, enter a file name and click **save** to save your file if you have not done so already.

    Recording begins immediately. During a measurement, the speaker being measured flashes red and a signal is displayed on the input level meter. In addition, a progress bar appears at the bottom of the screen and the speaker being acquired is displayed below.

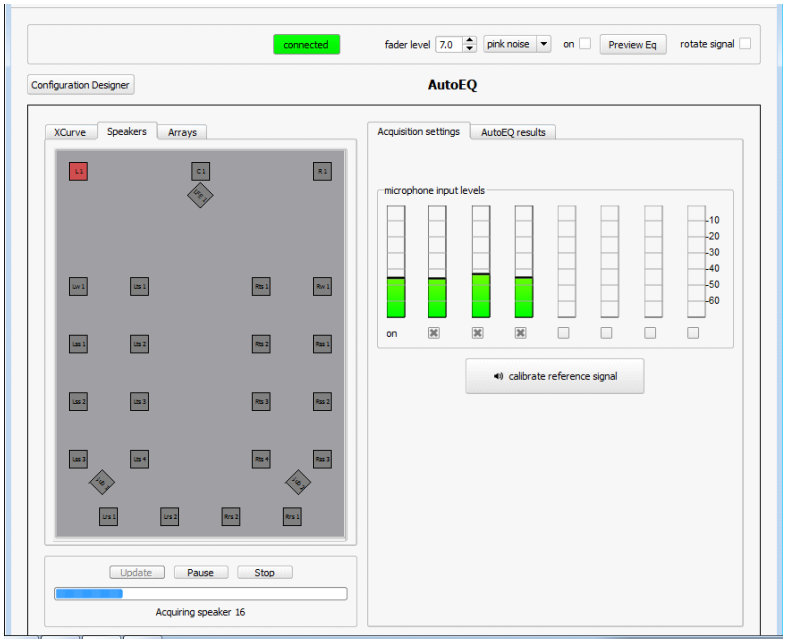


Figure 2-39 Speaker Measurements

When the speaker feed measurement is completed, the system automatically starts processing data. Once processed, a speaker icon turns green.

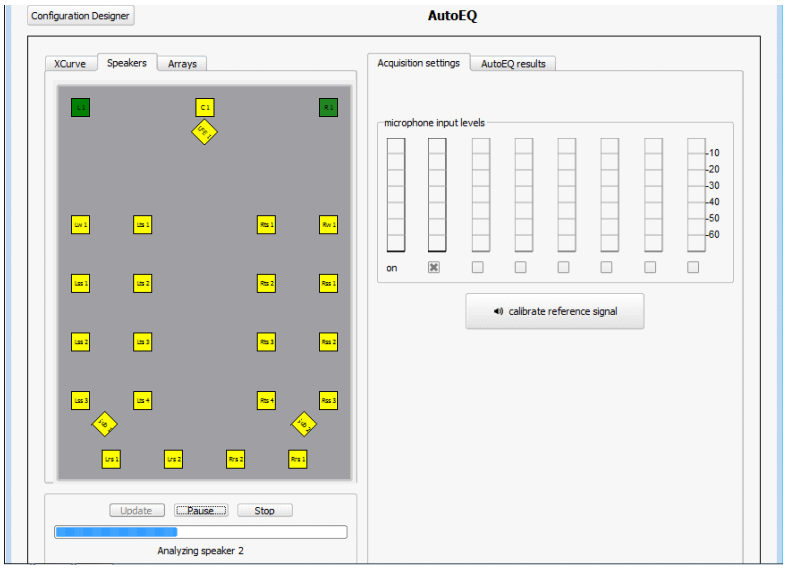


Figure 2-40 Processing Speaker Feed Data

During the EQ process, you can view real-time results by clicking the **AutoEQ results** tab.

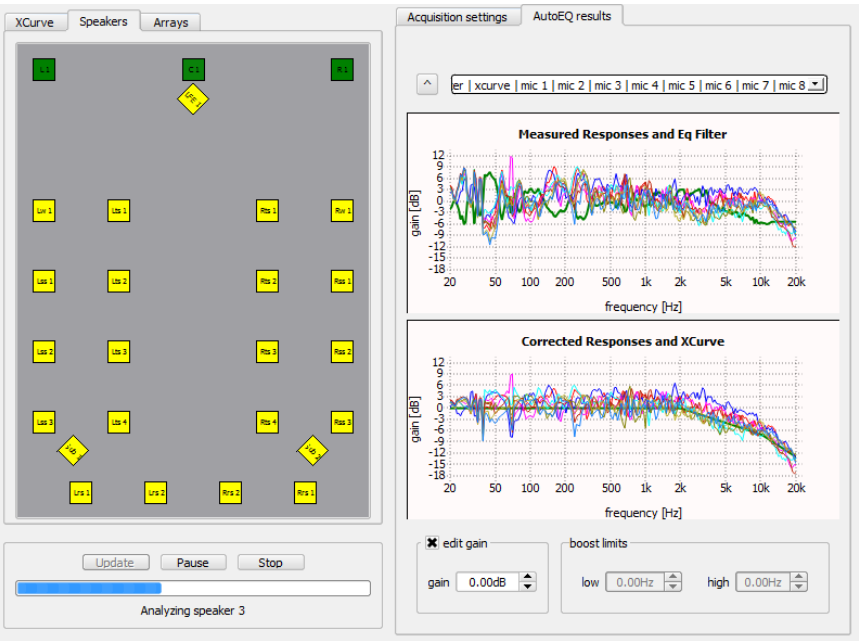


Figure 2-41 AutoEQ Processing

During speaker feed processing, the system automatically begins array measurements. The arrays being measured flash red, measured arrays appear in yellow, and a signal appears on the input level meters. Array icons with no color indicate that there is no measurement data present. Some speakers are assigned to multiple arrays. Array icons that are half green and half yellow indicate that one of the arrays is processed and the other is not. Array icons that are completely green indicate that the array acquisitions were processed.

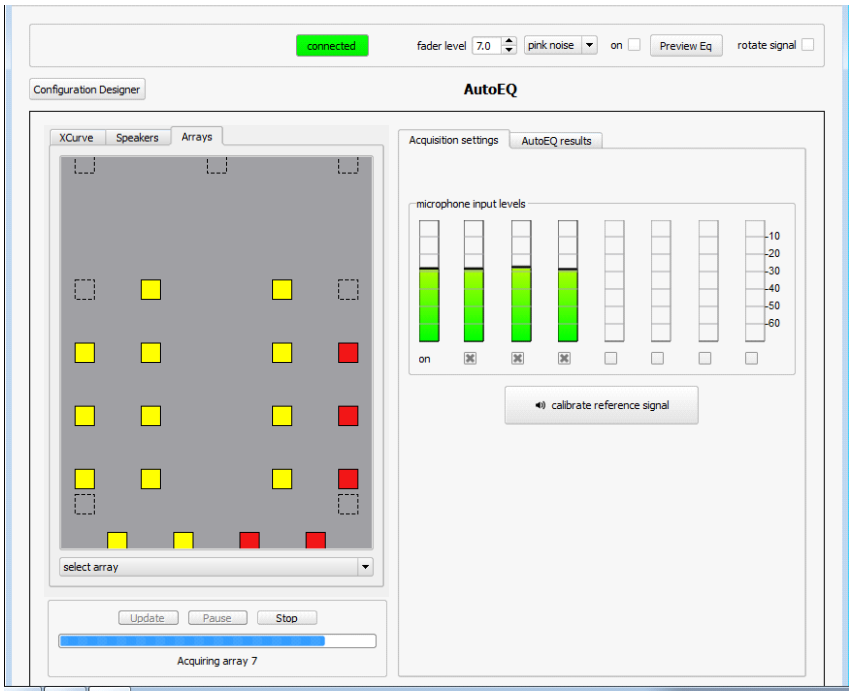


Figure 2-42 Array Measurements

At the end of the entire process, a message indicates that AutoEQ is completed.

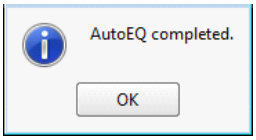


Figure 2-43 AutoEQ Completed

20. Click **OK**.

    Once the equalization process is complete, we recommend that you inspect each speaker feed and array feed to confirm that the equalization and levels are appropriate:

    - Select a speaker feed by clicking a speaker icon on the left side of the screen.
    - Navigate to the **AutoEQ results** tab.
    - Observe the gain value for each speaker feed and equalization curve.
    - If the gain or equalization seems incorrect for a speaker feed, you can:

    a. Remeasure the speaker by clicking on a speaker at the left side of the screen, or select multiple speakers by pressing <Ctrl> and clicking on the desired speakers. You can also draw a marquee around a group of speakers. Remeasure by pressing the **rec** button.

    b. Update the speaker by clicking on a speaker at the left side of the screen, or select multiple speakers by using the methods described in step a. Change a value, such as a boost-limit frequency or x-curve parameter. Select **update** to reprocess the data with the edited value.

Note: If you update a surround speaker, the system remeasures the array to which the speaker feed is assigned.

21. Click the **Configuration Designer** button.
22. Click the **Main Menu** button.
23. Click **Save Configuration**.
24. Click **Push to CP850**.

    If you are connected to a CP850, the system pushes the Dolby Atmos configuration .dac file to your unit. If you are not connected to a CP850, you must enter an IP address at the prompt before the system pushes the EQ file to your unit.

    A warning message with a backup prompt appears. You can ignore this warning and click **overwrite**. However, if you need to back up the existing .dac file on the CP850, use the CP850 web client, as described in Section 3.9.

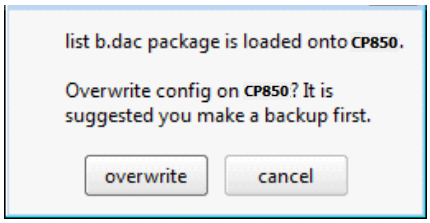


Figure 2-44 Backup Prompt

When the system writes the Dolby Atmos configuration (.dac) file to the CP850, a confirmation dialog box appears.

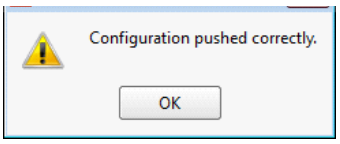


Figure 2-45 Configuration Pushed Confirmation

25. Click **Save As** in the **File** menu to save your .dac file to the desired directory on your PC as a backup. You can also transfer these settings directly to another CP850.

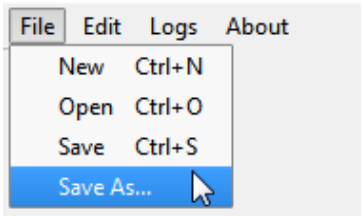


Figure 2-46 Save Dolby Atmos Configuration File Backup

Dolby Atmos Configuration File Contents

The .dac file contains the following information, which includes speaker data:

- Site information
- Room configuration
- Speaker type
- Amplifier type
- Output routing
- Speaker location
- Limiter settings
- Bass management routing (if used)
- Bass management frequency
- Equalization data for speakers and arrays
- File version data
- Indexes to capture data for a given session

For information on using the web client backup and restore functions to load .dac files that contain additional data from web client settings, see Performing Maintenance Tasks.

Using the Web Client User Interface

After using Dolby® Atmos™ Designer software to calibrate your auditorium, this chapter shows you how to operate the CP850 using the web client user interface. It covers the following information:

- Connecting to the CP850
- Configuring Macros
- Displaying and Configuring the Equalization Parameters
- Displaying and Configuring the Auditorium Parameters
- Configuring Preferences
- Checking the Logs
- Setting Up User Access
- Modifying the Network Settings
- Performing Maintenance Tasks
- Rebooting the System
- Accessing Documentation

Note: Before you begin, follow the instructions in your *Dolby CP850 Quick Start Guide* to install your CP850 in a Dolby Digital Cinema network, and refer to Chapter 2 for information on calibrating an auditorium.

3.1 Connecting to the CP850

After you install the CP850, as described in the *Dolby CP850 Quick Start Guide*, connect your computer to the CP850:

1. Connect your computer to the auditorium network switch.
2. Open the web browser on your computer. Currently, the CP850 is compatible with Mozilla® Firefox® v3.5 or later, Google™ Chrome™ v5.0 or later, Apple® Safari® v6.0 or later, and Microsoft® Internet Explorer® v8.0 or later.
3. Connect to the CP850 by typing its IP address in your web browser.

   A login screen appears requesting a user name and password, as shown in Figure 3-1. The default administrator user name and password are both `admin`. If you are a system administrator, you should change the administrator password, and then set up user access levels and passwords for all other users, as described in Section 3.7.

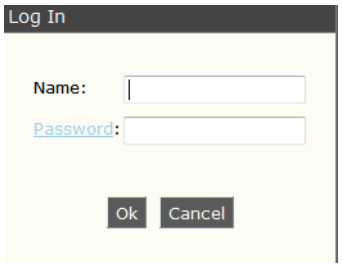


Figure 3-1 Login Screen

After you log in, the CP850 web client **status** screen appears, as shown in Figure 3-2.

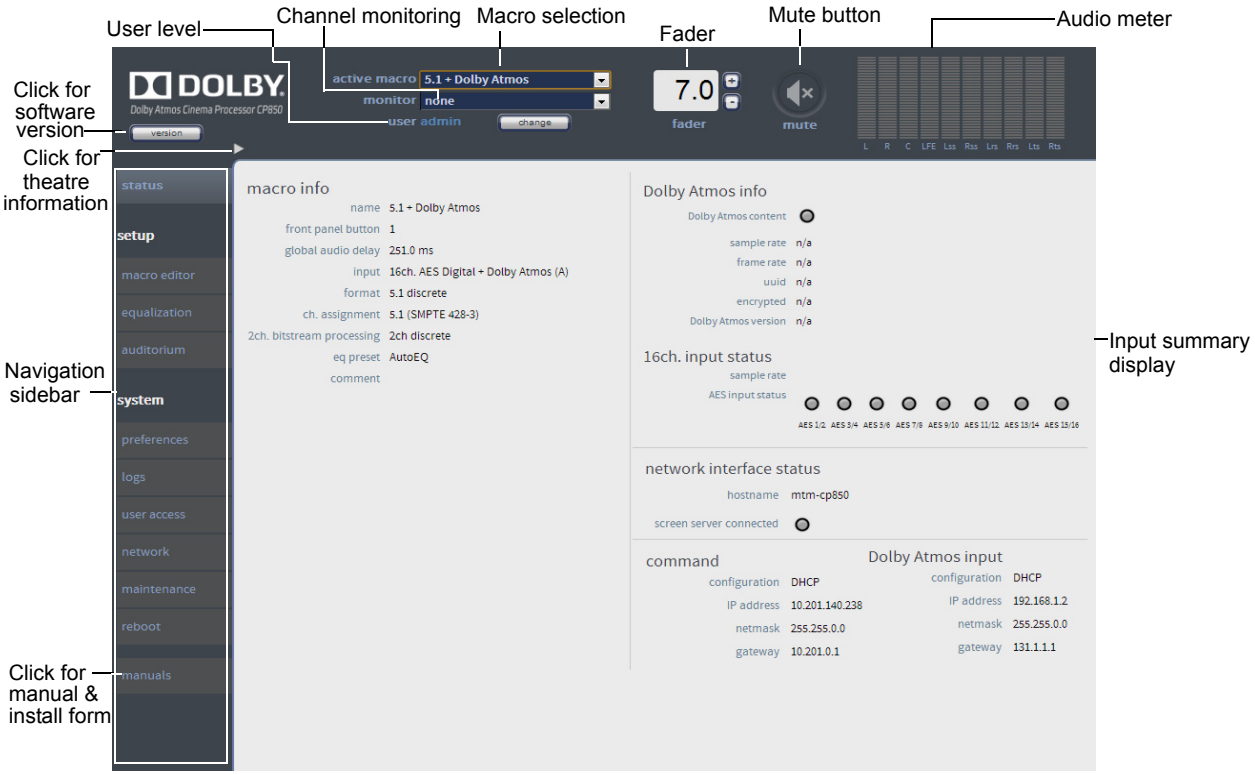


Figure 3-2 CP850 Web Client Status Screen

Following is a description of all of the objects that appear in each of the web client user-interface screens.

3.1.1 Navigation Bar

The CP850 navigation bar provides access to all of the CP850 **status**, **setup**, and **system** screens. Click the desired menu option to display the corresponding screen.

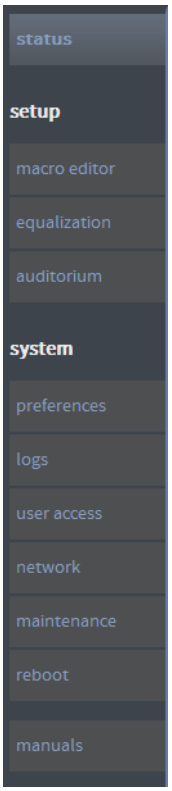


Figure 3-3 Navigation Bar

3.1.2 Active Macro Field

In this field, you can select the desired macro to use for your input source. The CP850 requires macros to process audio. You can use the default macros that are provided with the system, or you can create your own macros. For more information, see Section 3.2.

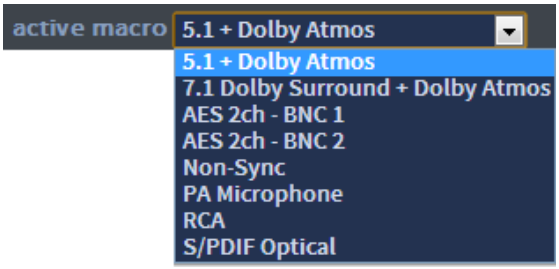


Figure 3-4 Active Macro Menu

3.1.3 Monitor Field

In this field, you can select a channel for booth monitor output.

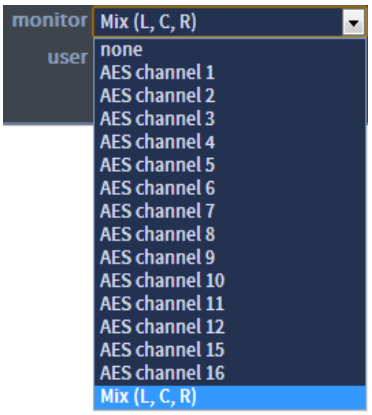


Figure 3-5 Monitor Menu

3.1.4 Mute Button

You can click this button to mute and unmute the system.

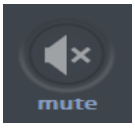


Figure 3-6 Mute Button

3.1.5 Fader Field

You can increase or decrease the volume by clicking the **+** or **–** buttons or by entering the desired value in this field.

Figure 3-7 Fader Field

3.1.6 Audio Meter

This meter displays the audio levels for channel-based audio. It shows the signal intensity of PCM input channels, decoded bitstreams, and upmixed content. When decoding a Dolby Atmos soundtrack, this meter shows the intensity of object audio and bed audio.

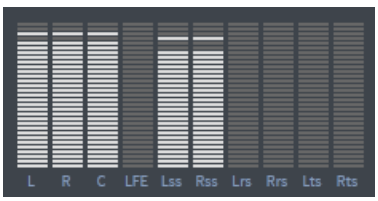


Figure 3-8 Audio Output Meter

3.2 Configuring Macros

The CP850 requires macros to process audio. The system provides you with the following default macros that you can use, edit, or discard.

- **5.1 + Dolby Atmos**
- **7.1 Dolby Surround + Dolby Atmos**
- **AES 2ch – BNC 1**
- **AES 2ch – BNC 2**
- **Non-Sync**
- **PA Microphone**
- **RCA**
- **S/PDIF Optical**

In addition, you can create macros from scratch. To configure a macro and assign it to a front-panel button and GPIO input, select **macro editor** in the **setup** menu.

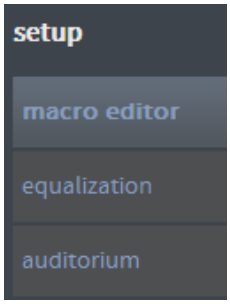


Figure 3-9 Select Macro Editor in Setup Menu

The **macro editor** screen appears, as shown in Figure 3-10 for a 7.1 Dolby surround input source. In this screen, you can create or edit a macro by entering the desired parameters.

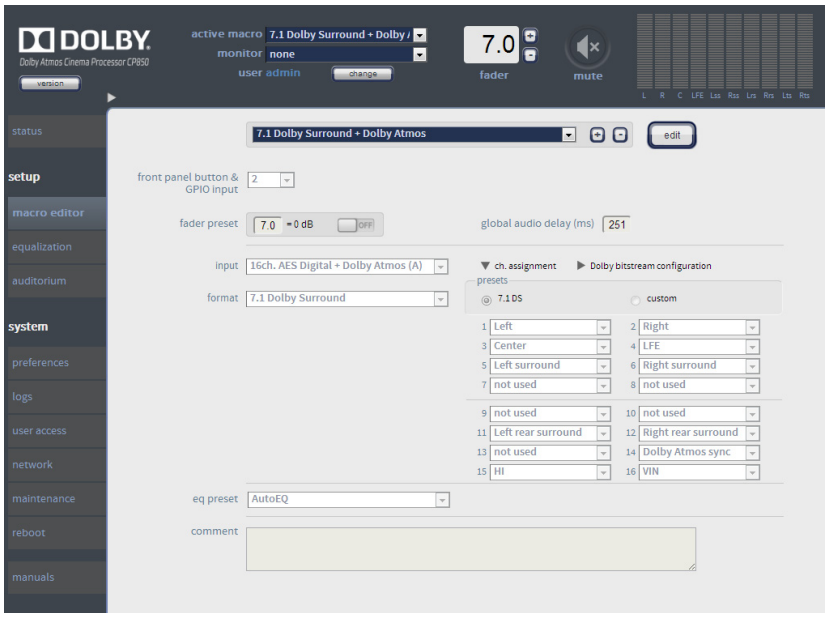


Figure 3-10 Macro Editor Screen

Figure 3-11 identifies all of the parameters in the **macro editor** screen. This example uses a 7.1 Dolby Surround format. The available parameters can change, based on your input source.

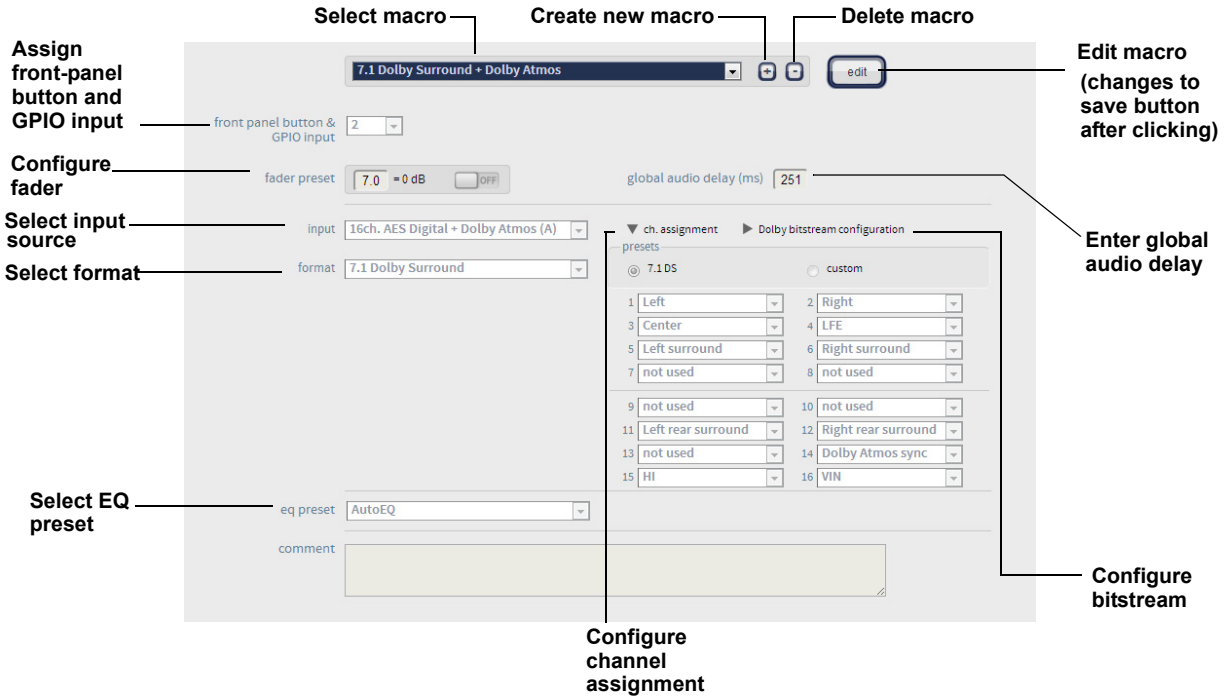


Figure 3-11 Configure Macro for 7.1 Dolby Surround

Create New Macro

1. Click the button to create a new macro or the **edit** edit button to edit an existing macro.

   If you click either of these buttons, the parameter fields are now active and you can enter the desired settings. In addition, the **edit** button changes to a **save** button and a **cancel** button appears save cancel. The **cancel** button allows you to cancel your entries.

2. Configure the desired parameters in the **macro editor** screen.

   Following is a description of all the parameters in the **macro editor** screen. The available parameters can change, based on your input source. After configuring all of the parameters, click the **save** button.

Macro Selection

Click in this field to select the macro that you want to edit.

If you click the or

button, you can enter a name for your macro in this field.

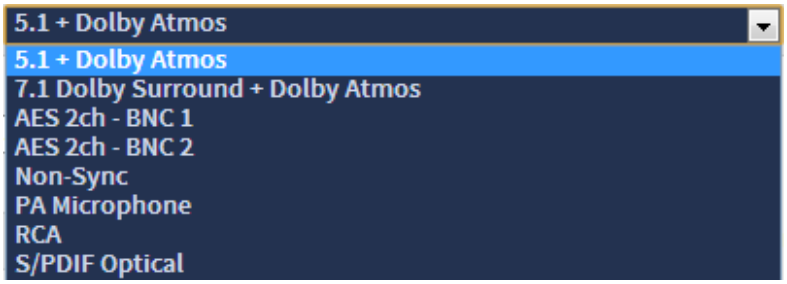


Figure 3-12 Select Macro to Configure

Delete Macro

Click the button to delete the selected macro.

Front-Panel Button and GPIO Input

Click in this field to assign a front-panel button and GPIO automation input for your macro.

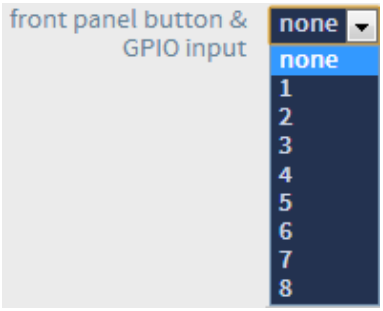


Figure 3-13 Select Front-Panel Button and GPIO Input

Fader Preset

Click in this field to enter a fader value and slide to the **ON** or **OFF** position to activate or deactivate the fader for your macro.

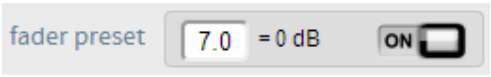


Figure 3-14 Enter Fader Preset

Global Audio Delay (ms)

Click in this field to enter a global audio delay (in milliseconds) for your macro. You need to add picture delay to the DSS200 or DSS220 media block when using 16-channel input. (For details, refer to the **Media Block** setup instructions in your *Dolby Digital Cinema System Manual*.)

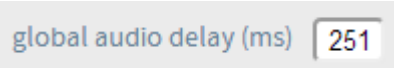


Figure 3-15 Enter Global Audio Delay

Input

Click in this field to select the desired input source.

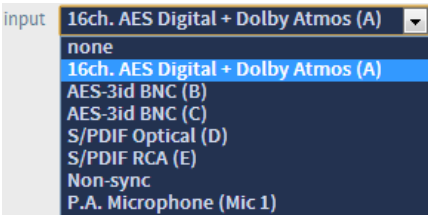


Figure 3-16 Select Input Source

Format

Click in this field to select the desired audio format.

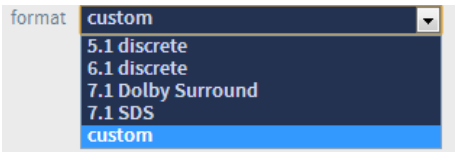


Figure 3-17 Select Audio Format

Channel Assignment

Click this button to assign channels. If you click on the **custom** preset button, you can customize the channel assignment by clicking in the respective field, as shown in Figure 3-18.

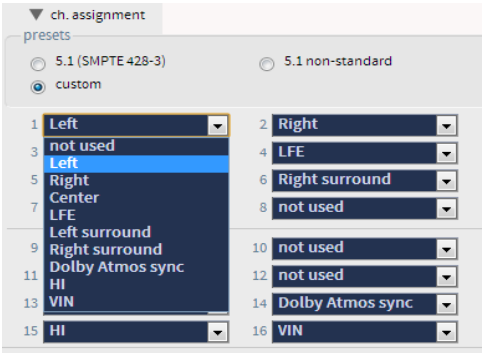


Figure 3-18 Configure Custom Channel Assignment

Dolby Bitstream Configuration

Click this button to select the Dolby bitstream configuration.

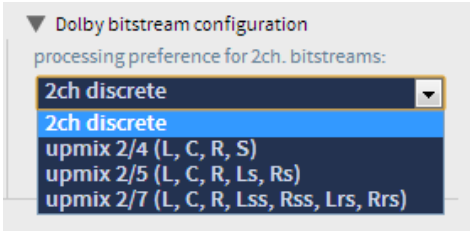


Figure 3-19 Configure Dolby Bitstream

If you select one of the **upmix** modes, you can enable the subwoofer by moving the slider to the **ON** position for the **subwoofer** parameter.

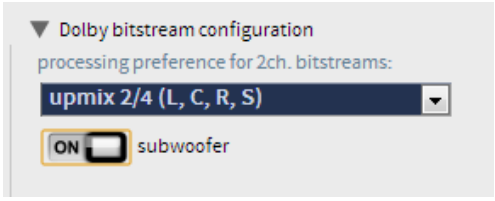


Figure 3-20 Enable Subwoofer for Dolby Bitstream

EQ Preset

Click on this field to select the equalization preset parameters. These parameters are either the automated equalization (**AutoEQ**) settings or custom settings that you can create, as described in Section 3.3.

Figure 3-21 Select an EQ Preset

3.3 Displaying and Configuring the Equalization Parameters

To display and configure the equalization parameters:

1. Select **equalization** in the **setup** menu.

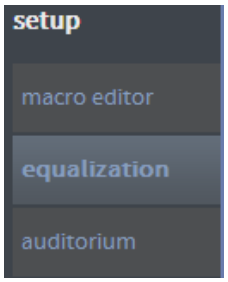


Figure 3-22 Select Equalization in Setup Menu

The real-time analyzer (RTA) EQ display appears in the **equalization** screen. In this screen, you can create or edit equalization settings based on the AutoEQ parameters or any custom (preset) parameters.

Note: You cannot change any of the AutoEQ parameters unless you save these settings under a different name.

Figure 3-23 Displaying and Configuring the Real-Time Analyzer EQ Display

1. Click the button to add a new equalization file, or click the **edit** button to edit an existing file.

   The **edit** button changes to a **save** button, and a **cancel** button appears . The **cancel** button allows you to cancel your entries.

2. Configure the desired parameters in the **equalization** screen.
   Following is description of all the parameters in the **equalization** screen. After configuring all of the parameters, click the **save** button.

Delete Button

Click the button to delete a custom equalization preset. You cannot delete the **AutoEQ** preset.

EQ Presets

Click in this field to select an equalization file to edit or to add a new file.

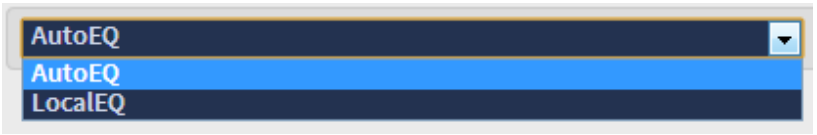


Figure 3-24 Select AutoEQ or LocalEQ

If you select a custom preset to edit, the **edit** button is activated. If you click the **edit** button, a message informs you that if you proceed, audio is interrupted.

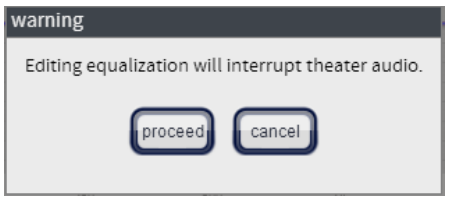


Figure 3-25 Editing Equalization Warning Message

Click **proceed** to edit your preset. All of the equalization parameters are now activated for editing.

Figure 3-26 Equalization Parameters Activated for Editing

If you click the button to add a new equalization preset, you are prompted to base your preset on either the **AutoEQ** settings or a previously created custom preset. In either case, you must also enter a name for your new preset.

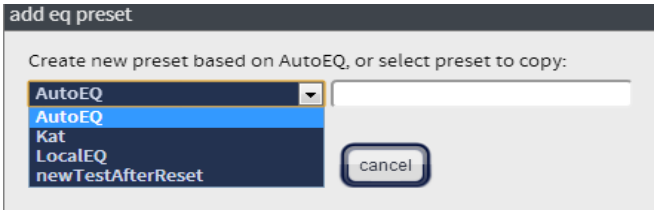


Figure 3-27 Add an EQ Preset

When you enter a name for your new preset, an **ok** button appears.

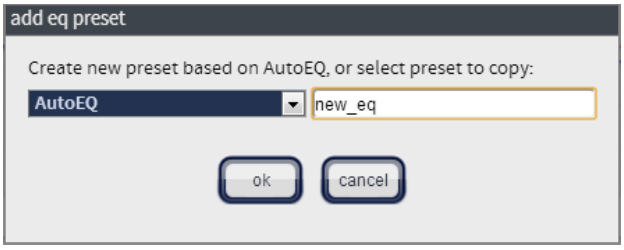


Figure 3-28 Click OK to Save New Preset

Click **ok** to save your new preset. The warning message, as shown in Figure 3-25 appears.

Click **proceed** to edit your preset. The equalization parameters are now activated for editing, as shown in Figure 3-26.

Pink Noise and Real-Time Analyzer Microphone Phantom Power

You can turn these parameters on and off by dragging the respective sliders. In addition, you can rotate and snap pink noise by clicking in the respective boxes and selecting an option from the **pink noise** drop-down menu.

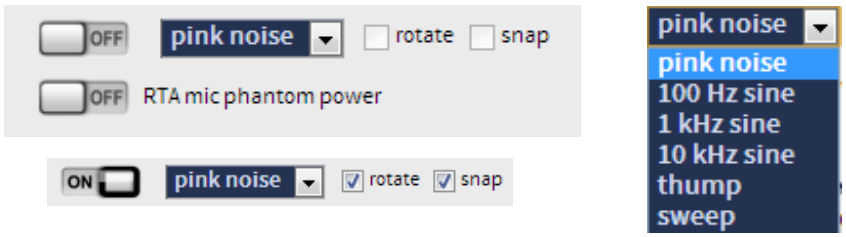


Figure 3-29 Pink Noise and Real-Time Analyzer Phantom Power Parameters

Array Speaker Feeds

Click in this field to select an array speaker feed. This field is always active. You can select from the drop-down menu or use the arrow buttons to scroll through the list.

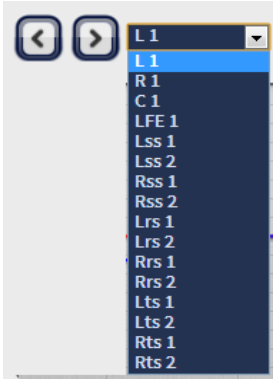


Figure 3-30 Array Speaker Feeds

Bypass AutoEQ

This parameter specifies that the system will bypass the AutoEQ parameters and use the specified custom preset. You can move the slider to the **ON** or **OFF** position to enable or disable this parameter.

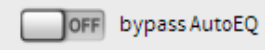


Figure 3-31 Bypass AutoEQ

Note: When you select **ON**, the system bypasses AutoEQ only for the channel you are currently editing (as specified in the array speaker feed drop-down menu, as shown in Figure 3-30).

All Output Levels

Click this button to display the output levels for each speaker in your preset. Select an individual speaker by clicking on it, or press <Ctrl> on your keyboard to select multiple speakers. You can use the slider to specify output levels. In addition, you can enable/disable pink noise in this screen. Click **ok** to confirm your entries.

Figure 3-32 All Output Levels Screen

Copy Speaker EQ

Click this button to copy manual speaker EQ settings from one source to one or more destinations. When you drag a speaker to a new location, the **copy** button is activated and you can click on this button to confirm the location.

Figure 3-33 Manual Speaker EQ

Real-Time Analyzer EQ Display Slider

Drag this slider or click the up and down arrow buttons to view different areas of the RTA EQ display.

Figure 3-34 Real-Time Analyzer EQ Display Slider

Graphic Equalizer

Click on the **graphic eq** button and drag each slider to adjust the gain of the range of frequencies, as shown on the RTA EQ display. Click the **flatten** button to flatten the curve.

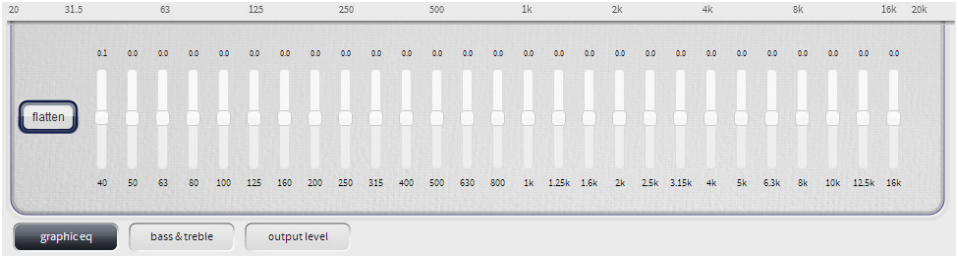


Figure 3-35 Graphic Equalizer

Base and Treble

Click on the **bass & treble** button, drag the corresponding sliders, and change settings to adjust each parameter, as shown on the RTA EQ display. Click the **flatten** button to flatten the curve.

Figure 3-36 Bass and Treble

Output Level

Click on the **output level** button and drag the corresponding slider to adjust the output level. Click the **flatten** button, to flatten the output level.

Figure 3-37 Output Level

3.4 Displaying and Configuring the Auditorium Parameters

To display the auditorium configuration summary and routing information:

1. Select **auditorium** in the **setup** menu.

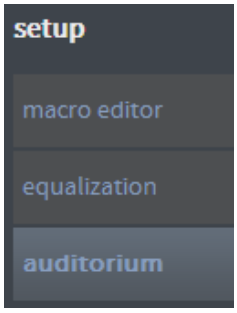


Figure 3-38 Select Auditorium in Setup Menu

The **auditorium** screen appears, with the speakers displayed according to their x and y coordinates, and the corresponding summary information.

Figure 3-39 Display the Room Configuration Summary

When you hover your mouse on any of the solid-colored icons, the following information appears: channel name, position, array (if assigned to an array), routing, speaker data (if populated), and bass management assignment (indicating the speaker that is bass managed) if bass management is applied.

If you have multiple speaker feeds with the same positional data, a multicolored icon appears. When you click on this icon, it indicates the speakers that share this positional data.

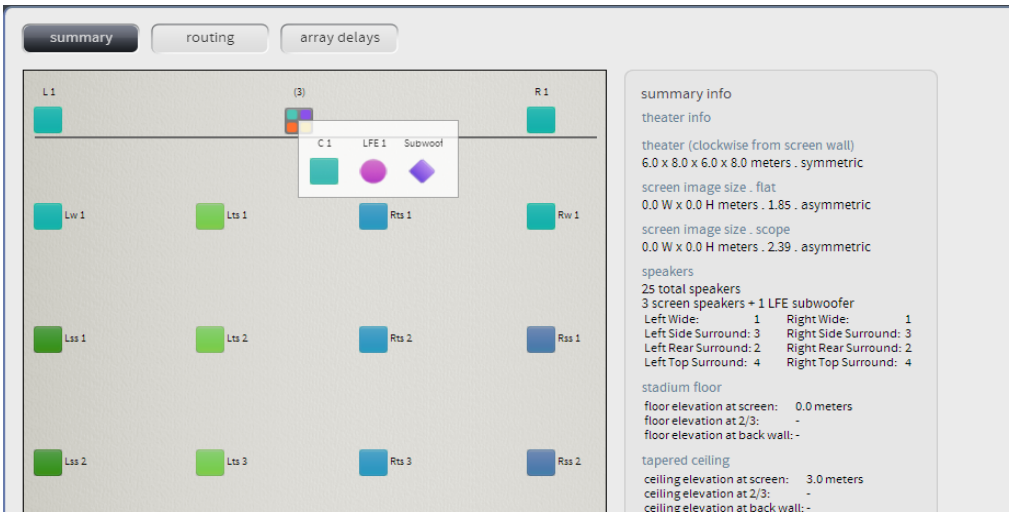


Figure 3-40 Hover Mouse to Display Additional Information

2. Click the **routing** button.

   The **routing** screen appears. In this screen, the output routing channel is identified within each icon. If it is a digital output, the routing icon is a square. If it is an analog output, the routing icon is a circle.

Figure 3-41 Routing Screen

When you hover your mouse on any of the solid-colored icons, the following information appears: channel name, position, array (if assigned to an array), routing, speaker data (if populated), and bass management assignment (indicating the speaker that is bass managed) if bass management is applied.

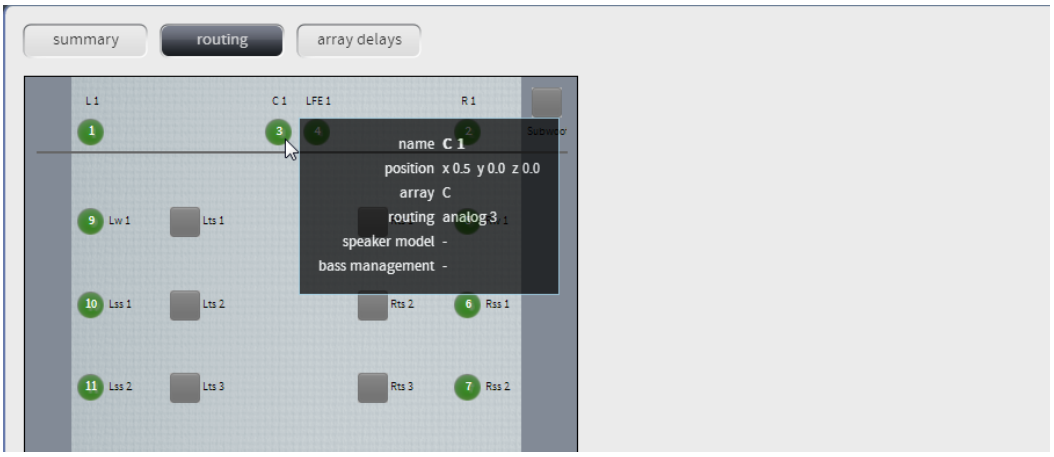


Figure 3-42 Hover Mouse to Display Channel Information

3. Click the **array delays** button.

   The **surround speaker array delays** screen appears. The Dolby Atmos Designer software automatically creates the surround delay values. If you slide the **use configuration file values** to the **ON** position, the system uses those values. If you slide it to the **OFF** position, you can enter the desired delay values.

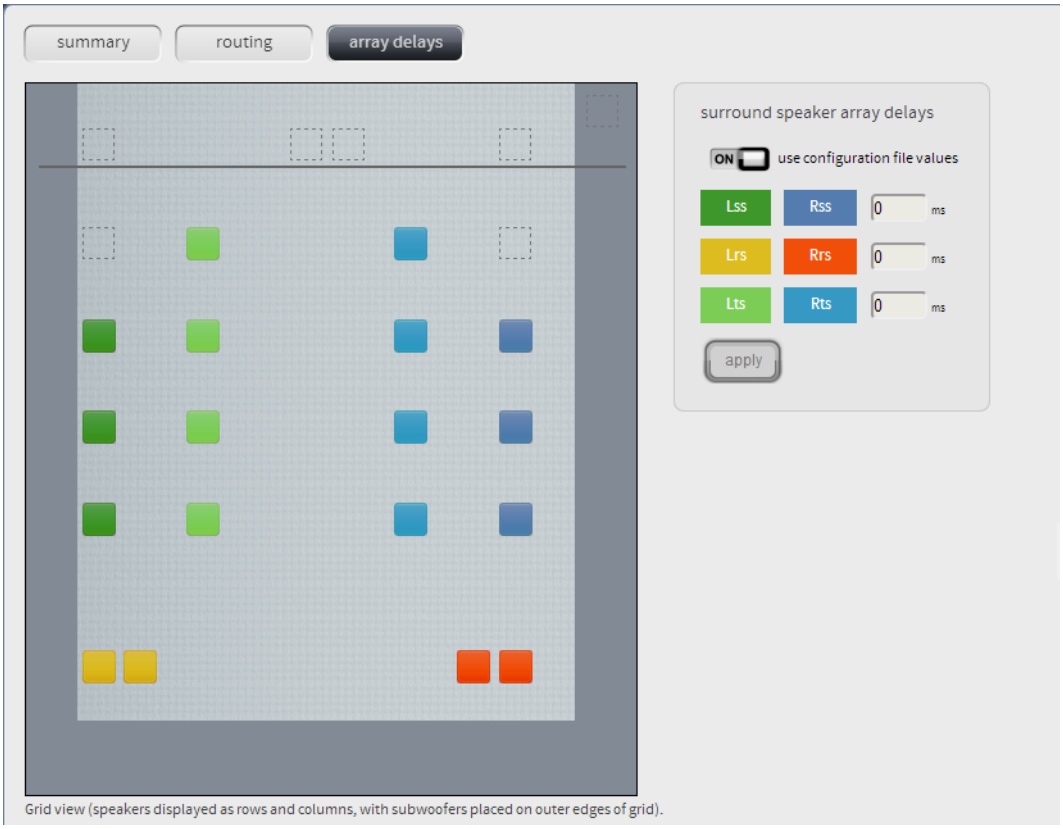


Figure 3-43 Surround Speaker Array Delays Screen

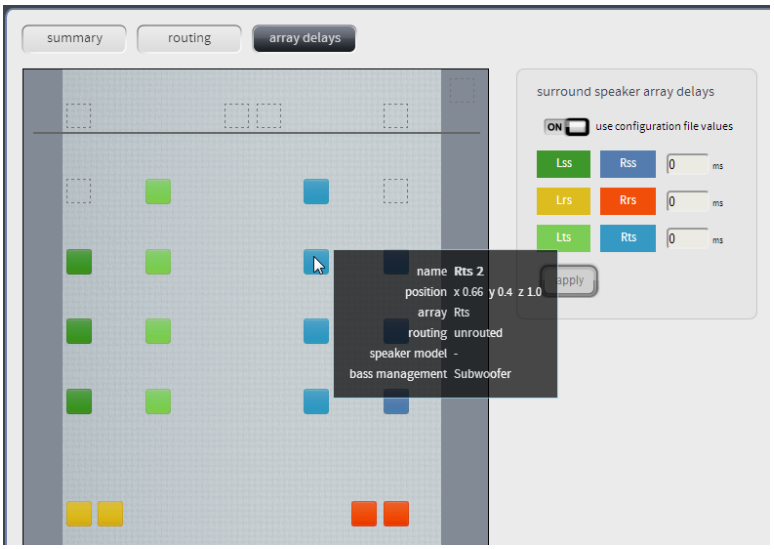


Figure 3-44 Hover Mouse to Display Additional Information

3.5 Configuring Preferences

To configure preferences, select **preferences** in the **system** menu.

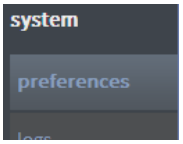


Figure 3-45 Select Preferences in System Menu

The **preferences** screen appears. In this screen, you can enter the mute duration and activate or deactivate the GPIO analog fader. The **fade in** and **fade out** settings each have a range of 0.2 to 5 seconds, in 0.1-second steps. You can set these values by moving the respective sliders.

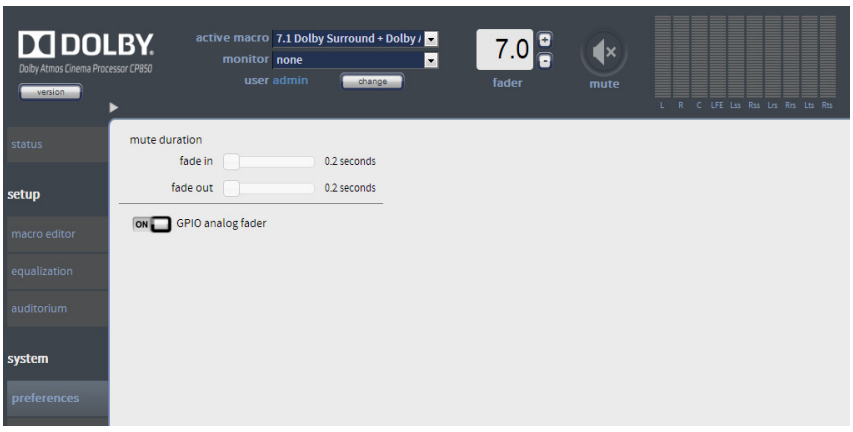


Figure 3-46 Preferences Screen

3.6 Checking the Logs

The logs display information regarding the incoming signal and the system. To check the logs status, select **logs** in the **system** menu.

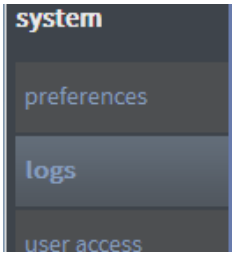


Figure 3-47 Select Logs in the System Menu

The **logs** screen appears. You can filter the logs by **level**, **category**, and **start time**/**end time** by clicking the respective area and making the desired selection, or by clicking **show all** to remove all filters. In addition, you can download a .zip file by clicking **download** or clear the list of events by clicking **clear events.**

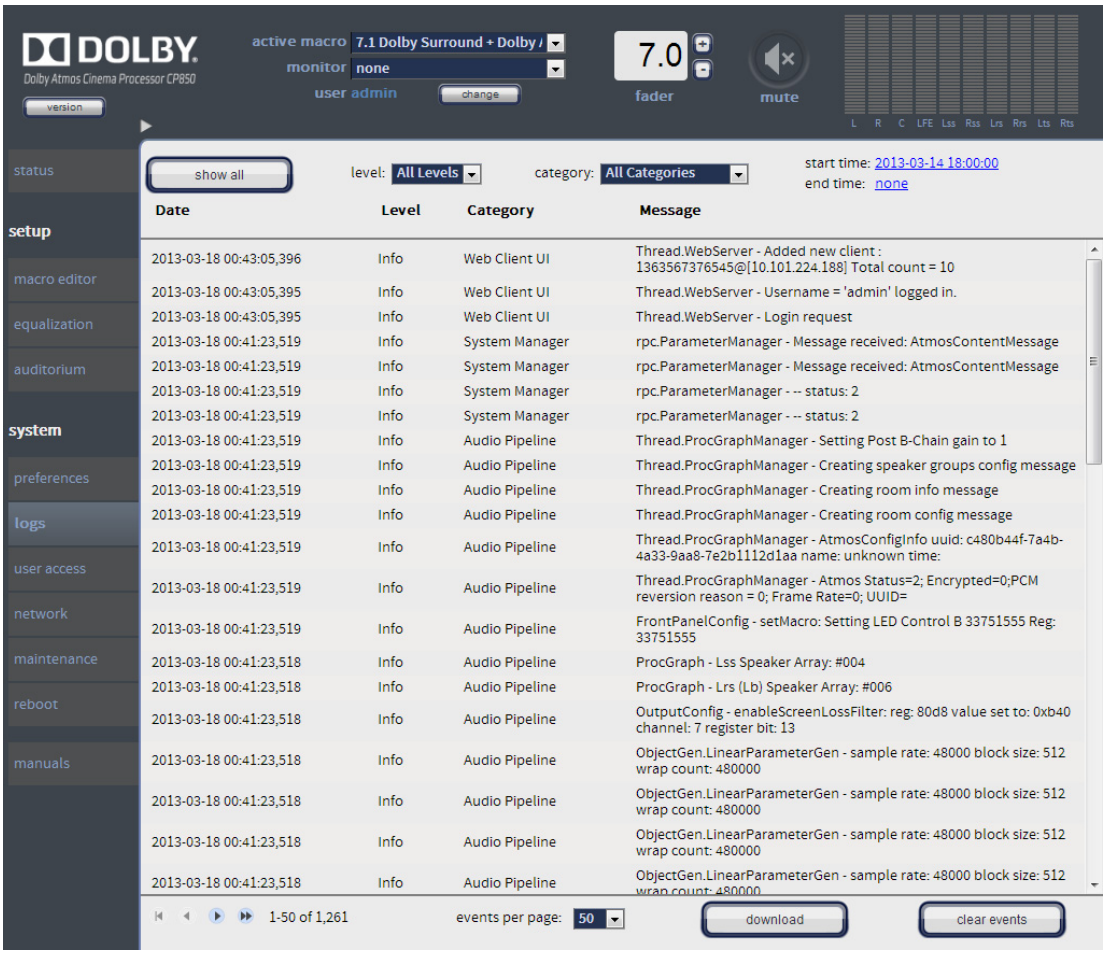


Figure 3-48 Event Logs Screen (All Levels, All Categories Selected)

When you click the **level** field, the corresponding drop-down menu appears, where you can select the user log display level, as shown in Figure 3-49.

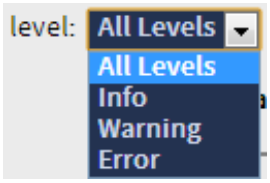


Figure 3-49 Level Menu

Category

When you click the **category** field, the corresponding drop-down menu appears, where you can select the user log display category, as shown in Figure 3-50.

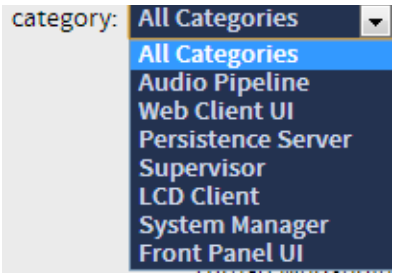


Figure 3-50 Category Menu

Start Time/End Time

When you click the **start time** or **end time** field, two options appear: **All** and **Custom. All** specifies a log for all time frames. **Custom** activates the date and time fields, where you can select a specific time frame. Click the ✔ to display the specified log. If you click the ✖, the system displays all time frames (same as **All**).

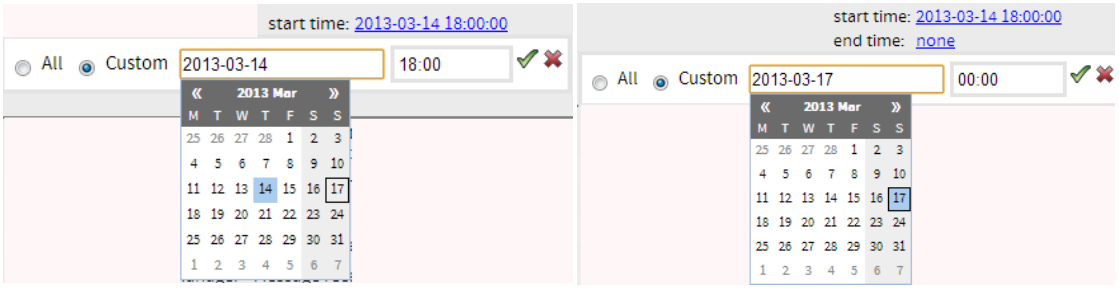


Figure 3-51 Start Time/End Time Fields

3.7 Setting Up User Access

If you have administrator privileges, you can set up user access as follows:

1. Select **user access** in the **system** menu.

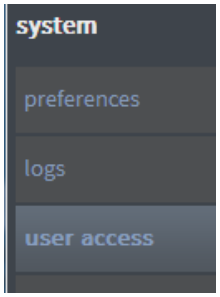


Figure 3-52 Select User Access

The **user access** screen appears. In this screen, if you are a system administrator, you can change (or reset) the default administrator password (*admin*) and set up (or reset) user access and passwords for all other users.

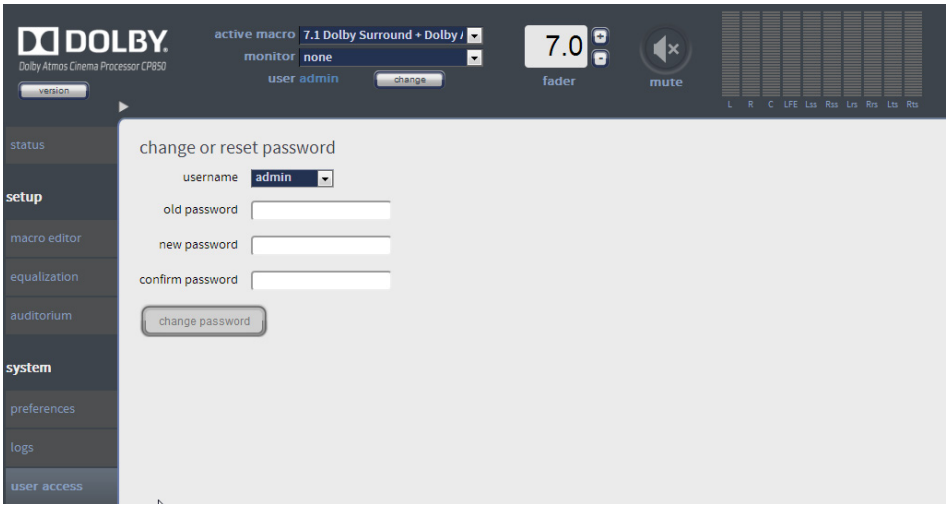


Figure 3-53 User Access Screen

To set up user access:

1. Click the **username** field.
   The **username** menu appears with a list of all the user levels.

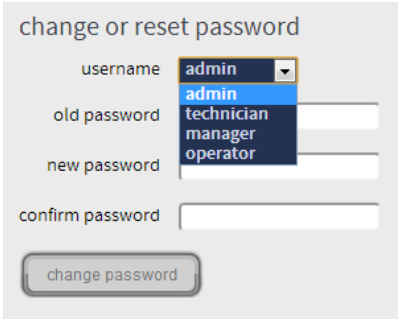


Figure 3-54 User Name Menu

2. Select a user name, enter the old password, enter the new password, and then confirm the new password in the respective fields. The default passwords are the same as the user names.

   Following are the capabilities at each user level:

- **operator**: Access status screen, change macros, fader, and monitor selection. View auditorium configuration and event logs. Download event logs.
- **manager**: Access all operator-level tasks, and edit macros and assign them to front-panel buttons. Change the operator-level password.
- **technician**: Access all manager-level tasks. Perform manual equalization, change network settings, clear event logs, update system software, manage system settings, reboot system, change the operator- and manager-level passwords, and update the certificate.
- **admin**: Access all technician-level tasks, and change the operator-, manager-, and technician-level passwords.

3.8 Modifying the Network Settings

To modify the network settings, select **network** in the **system** menu.

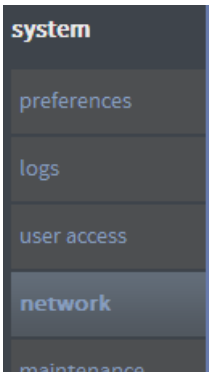


Figure 3-55 Select Network in the System Menu

The **network** screen appears. In this screen, you can change the host name and modify the IP configuration for the command port and the Dolby Atmos input port.

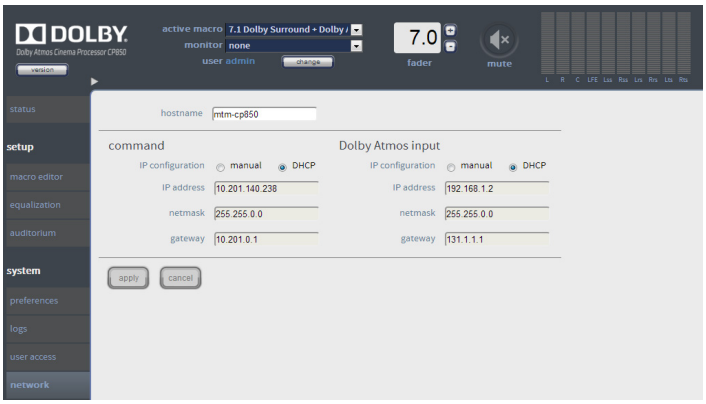


Figure 3-56 Modifying the Network Settings

3.9 Performing Maintenance Tasks

If you are a technician or a system administrator, select **maintenance** in the **system** menu to perform maintenance tasks.

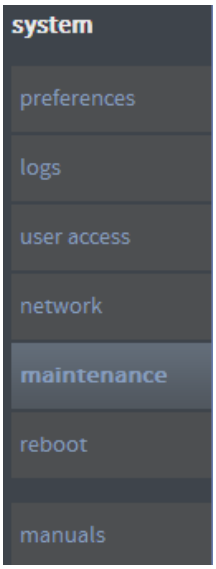


Figure 3-57 Select Maintenance in the System Menu

The **maintenance** screen appears. In this screen, you can download the CP850 certificate, upgrade the system, and manage settings.

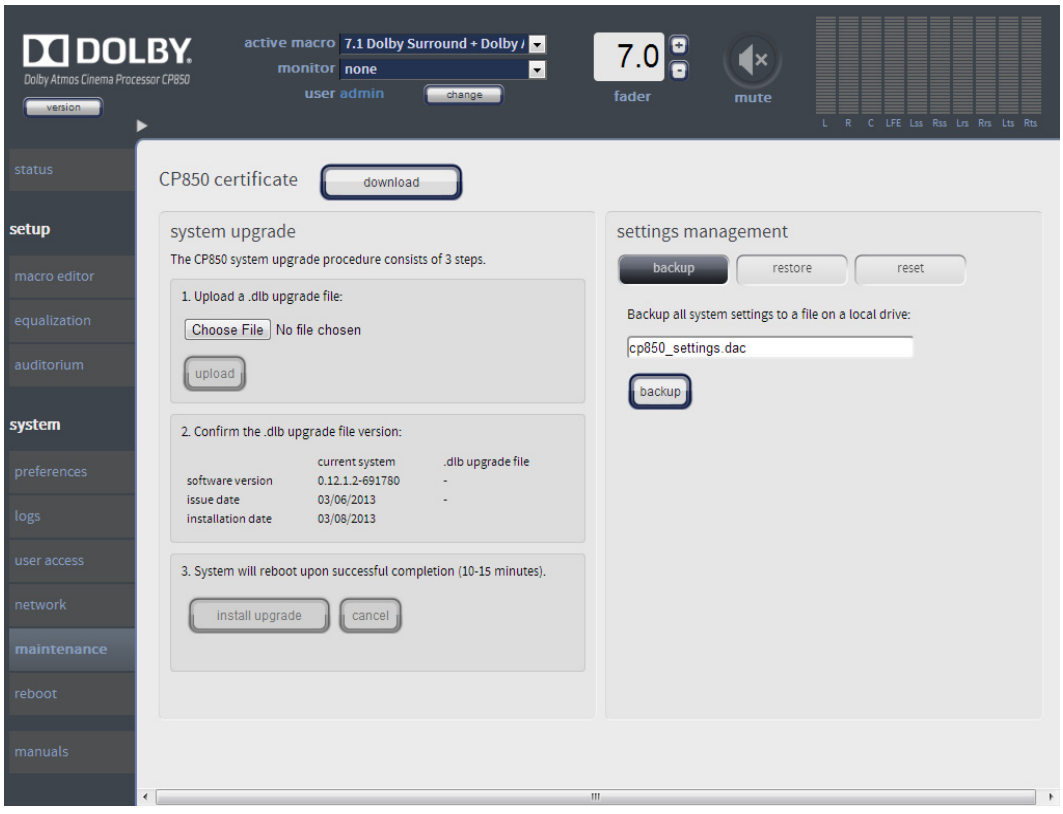


Figure 3-58 Maintenance Screen

Following is a description of each of the **maintenance** screen operations.

CP850 Certificate

The CP850 certificate identifies your unit. Your content distributor includes the certificate in all key delivery messages (KDMs) in the trusted device list to authorize the playback of content by your unit. Download this certificate to your local disk by clicking the **download** button, and send it to your content distributor upon request.

System Upgrade

To upgrade your system:

1. Obtain the .dlb upgrade file from Dolby Laboratories at https://www.dolbysecure.com/cinematech.
2. Copy the upgrade file to your local disk.
3. Click **Choose File**, then click **upload**.
4. Confirm the displayed upgrade file version, then click **install upgrade**.

   The system initiates the upgrade process, displays the progress, and reboots the CP850 when the upgrade is completed.

Settings Management

To perform settings management tasks:

- Click the **backup** button to save your CP850 system settings (.dac file) in your designated **Downloads** directory on your PC.
- Click the **restore** button at the upper-right side of the screen, then click **Choose File** to select a .dac restore file. You can restore all of your system settings (except user access) or select specific settings by clicking in the corresponding boxes. Click the **restore** button at the lower-right side of the screen to run the restoration process.
- Click the **reset** button at the upper-right side of the screen. You can reset all of your system settings to factory defaults (except for user access) or reset specific factory settings by clicking in the corresponding boxes. Click the **reset** button at the lower-right side of the screen to run the reset operation.

3.10 Rebooting the System

If you have technician- or administrator-level access, you can reboot the CP850 from the web client by clicking **reboot** in the **system** menu.

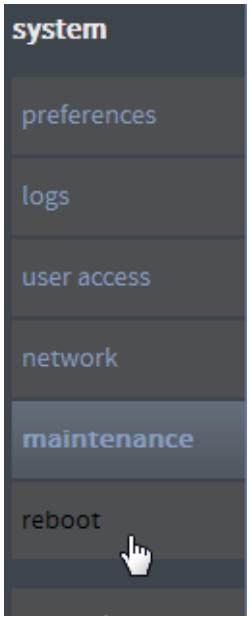


Figure 3-59 Rebooting the System

3.11 Accessing Documentation

To access the CP850 hardware manual and the *Dolby Atmos Cinema Installation Submission* form, click **manuals** in the **system** menu.

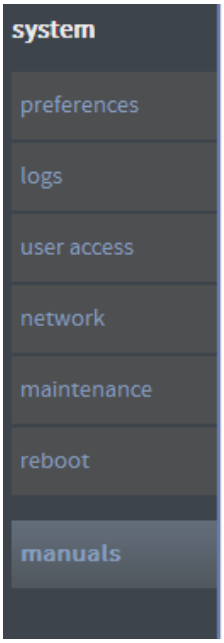


Figure 3-60 Select Manuals

Viewing Dolby Atmos Status in Show Manager

When you play back Dolby® Atmos™ content on your DSS200 or DSS220, Dolby Show Manager displays related status information. This chapter shows Dolby Show Manager screens that may appear in various states when you play back Dolby Atmos content.

4.1 Show Manager Dolby Atmos Content Identification

This section describes Show Manager screens that identify Dolby Atmos content.

4.1.1 Show Manager Control Screen

The Show Manager **control** screen displays an **A** in all Dolby Atmos clip icons, verifies the license, and indicates that Dolby Atmos audio is playing (via a green indicator on the lower-right side). In addition, Dolby Atmos auditorium icons display an **A** in all Show Manager screens.

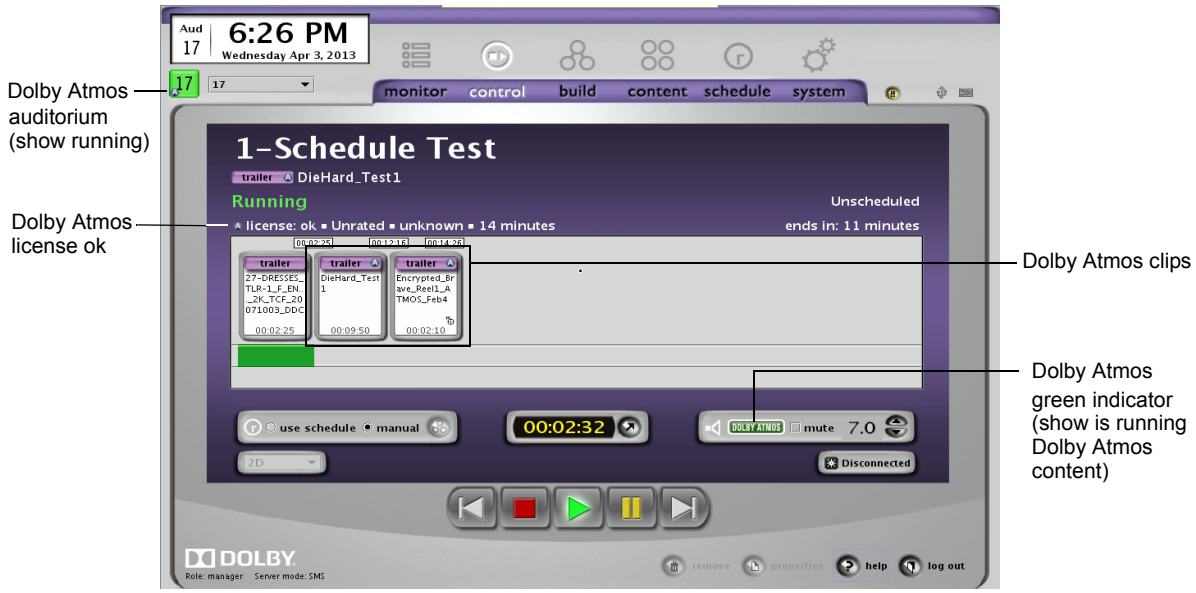


Figure 4-1 Show Manager Control Screen

4.1.2 Show Manager Build Screen

The Show Manager **build** screen displays an **A** in all Dolby Atmos show and clip icons.

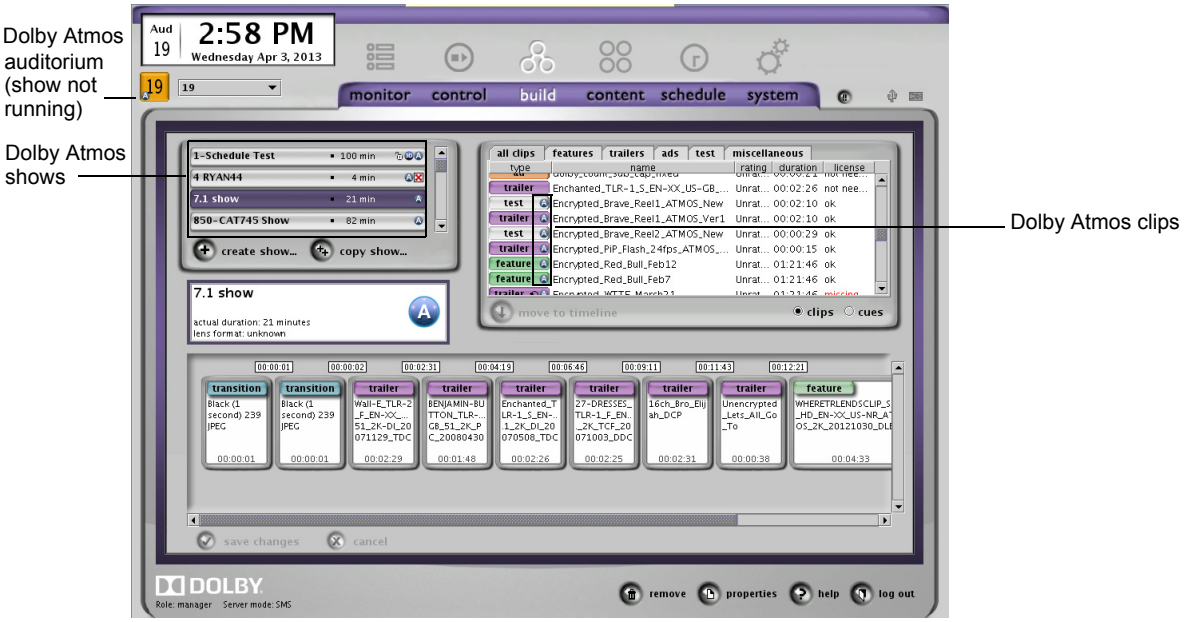


Figure 4-2 Show Manager Build Screen

4.1.3 Show Manager Schedule Screen

The Show Manager **schedule** screen shows various Dolby Atmos icons related to shows and related hardware (CP850 and CAT745). An **A** appears in all Dolby Atmos show icons.

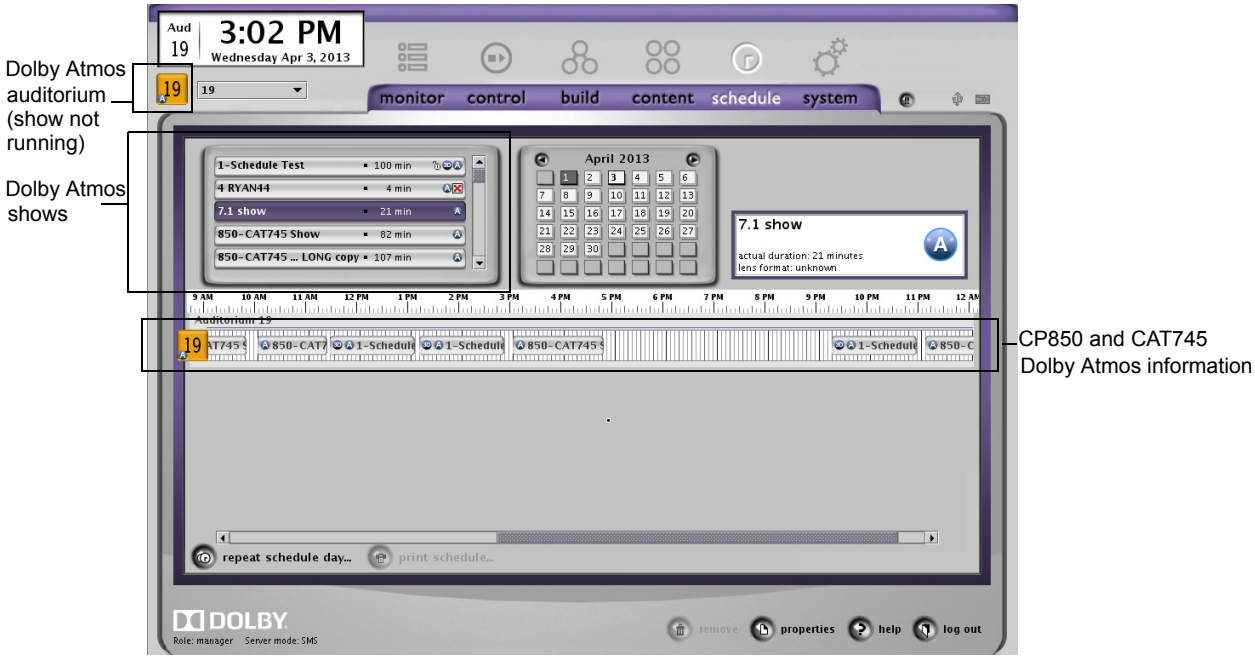


Figure 4-3 Show Manager Schedule Screen

4.2 Show Manager Dolby Atmos Error States

This section describes Show Manager screens that identify Dolby Atmos error states.

4.2.1 Show Manager Control Screen (Dolby Atmos License Missing)

The Show Manager **control** screen displays a flashing yellow indicator when a Dolby Atmos license is missing for encrypted content. In such a case, the show plays back with main audio only.

Figure 4-4 Show Manager Control Screen Indicates Dolby Atmos License Is Missing

4.2.2 Show Manager Control Screen (Dolby Atmos Error Message)

The Show Manager **control** screen displays a flashing red indicator when a cable is disconnected, when Dolby Atmos content is corrupted, or for other issues. In such a case, the show plays back with main audio only.

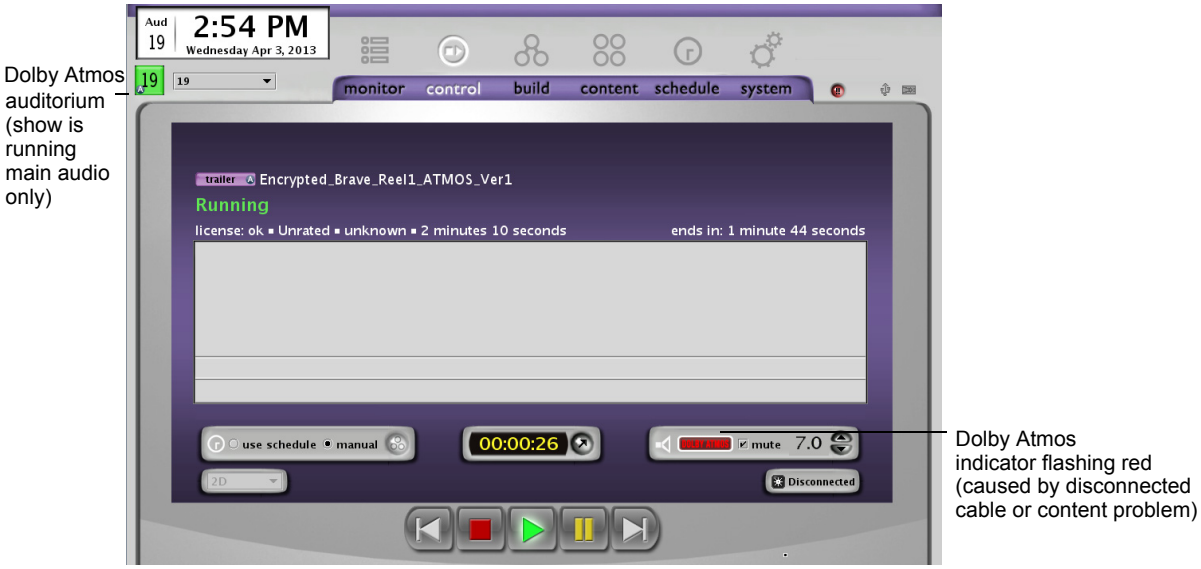


Figure 4-5 Show Manager Control Screen Indicates Problem with Dolby Atmos Content