Dolby® IMS3000 user's manual

Issue 1

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Product Model

This documentation applies to Model CID1002

Safety precautions

This device must be grounded.

Important

Power requirements for electrical equipment vary from area to area. Please ensure that the Dolby IMS3000 meets the power requirements in the surrounding area. If in doubt, consult a qualified electrician or a Dolby Laboratories, Inc., dealer.

Dolby IMS3000 power ratings

The Dolby IMS3000 Maximum Power Consumption is up to 53 W in playback at 400 Mbps with three external USB devices attached that can draw 5 V/0.5 A from the Dolby IMS3000 USB ports.

WARNING: Multiple sources of supply; disconnect all sources before servicing.

Dolby IMS3000 rack mount and thermal information

- Maximum operating ambient temperature is 40° C.
- Never restrict the airflow through the device fan or vents.

Protecting yourself and the Dolby IMS3000

Never touch the AC plug with wet hands. Always disconnect the projector from the power supply by pulling on the plug, not the cord. Allow only a Dolby Laboratories, Inc., dealer or qualified professional engineer to repair or reassemble the Dolby IMS3000. In addition to voiding the warranty, unauthorized engineers may receive a serious electric shock when touching live internal parts. Do not put or allow anyone to put any object, especially metal objects, into the Dolby IMS3000. Use only a listed AC power supply. Never use a DC power supply. Repair of the Secured Physical Boundary (SPB) area (including SPB type 1) can only be performed at the Dolby Laboratories factory.

If water or any other liquid is spilled into or onto the Dolby IMS3000, disconnect the power and call a Dolby Laboratories, Inc., dealer. The unit must be well ventilated and away from direct sunlight. To avoid damage to internal circuitry, as well as the external finish, keep the Dolby IMS3000 away from direct sources of heat (heater vents, stoves, radiators). Avoid using flammable aerosols near the Dolby IMS3000. They can damage the surface area and may ignite. Do not use denatured alcohol, paint thinner, or similar chemicals to clean the Dolby IMS3000. These can damage the unit.

Modification of this equipment is dangerous and can result in the impairment of the functions of the Dolby IMS3000. Never attempt to modify the equipment in any way. In order to ensure optimum performance of the Dolby IMS3000, select the setup location carefully and make sure the equipment is used properly. Avoid setting up the Dolby IMS3000 in any of these locations:

- In a humid or dusty environment
- In a room with poor ventilation
- On a surface that is not level
- Inside a moving vehicle where it will be subject to vibration
- In an extremely hot or cold environment

Removable drives warning

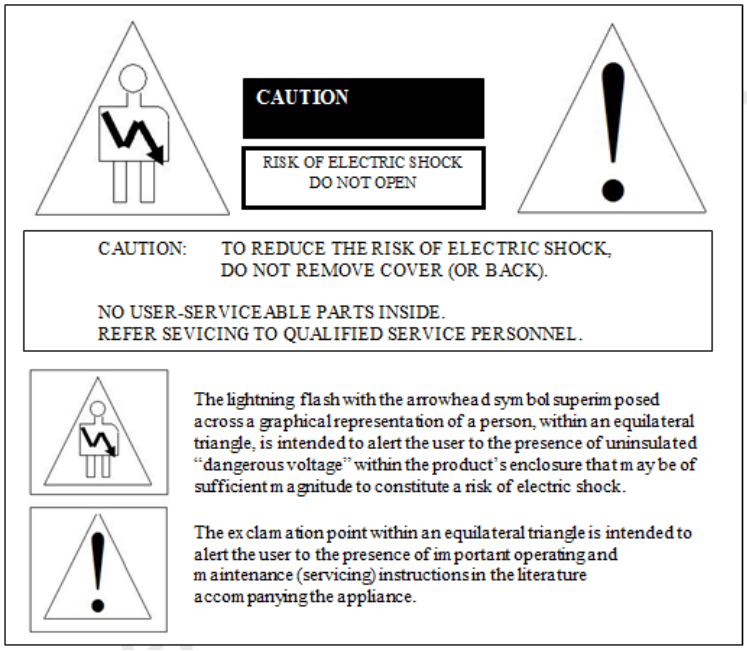
Removal of the hot-swappable hard drives allows access to pins and traces supplying power to the hard drive backplane. This is considered an energy hazard. Removal of the hard drives must be performed by a trained service specialist or by trained personnel. The equipment may be used only in a restricted access area that is not accessible to the general public.

Caution

- The nonremovable battery is located on the Dolby IMS3000 fusion board.
- Danger of explosion if battery is removed.

Warning

- To prevent fire or shock hazard, do not expose this appliance to rain or moisture.



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Introduction to the Dolby IMS3000 user's manual

1.1 About this documentation

This manual provides the instructions for operating the Dolby® IMS3000.

1.2 Supporting documentation

Dolby provides a full set of documentation to support setting up and configuring the Dolby IMS3000 with Dolby Atmos audio.

- The *Dolby Atmos designer user's manual* provides instructions for configuring the theatre auditorium audio parameters and for generating a Dolby Atmos Designer (.dad) file.
- The *Dolby DAC3202 manual* provides instructions for setting up the Dolby IMS3000 with a Dolby DAC3202.
- The *Dolby Multichannel Amplifier manual* provides instructions for setting up the Dolby IMS3000 with a Dolby Multichannel Amplifier.
- The *Dolby IMS3000 installation manual* provides instructions for operating the Dolby IMS3000.
- The *Dolby IMS3000 release notes* include the information about software component versions, known bugs, and workarounds.

1.3 Contacting Dolby

This documentation provides instructions for contacting Dolby Cinema Technical Support and for submitting feedback about the documentation.

For questions about product functionality, contact Dolby Cinema Technical Support at cinemasupport@dolby.com.

Use these regional telephone numbers to contact Dolby Cinema Technical Support.

- Americas: +1-415-645-4900
- Europe/Middle East/Africa (EMEA): +44-179-384-2130
- Asia-Pacific (APAC): +86-105-910-3066
- Japan: +81-3-3524-7350

The Dolby customer portal contains software and documentation for the Dolby IMS3000. To access the Dolby customer portal, use www.dolbycustomer.com.

For questions about this documentation, send an email to documentation@dolby.com.

Dolby IMS3000 overview

The Dolby® IMS3000 is a Digital Cinema Initiatives (DCI) compliant playback server, integrated media block, and cinema audio processor in a single, series II–compliant package. The Dolby IMS3000 plays both Society of Motion Picture and Television Engineers (SMPTE) and Interop Digital Cinema Packages (DCPs), along with decoding MPEG2 and H.264 for alternative content. JPEG2000 is decoded at up to 500 Mbps, playing from either the internal RAID 5 storage or an optional external network-attached storage (NAS).

Alternative content can be played back via the High Definition Multimedia Interface™ (HDMI™) and 3G serial digital interfaces (SDIs) or an internet protocol (IP) stream (StreamIt functionality).

The built-in cinema audio processor includes all B-chain Equalizer (EQ) functions and Dolby Atmos object-based audio rendering. Default functionality is Dolby Surround 7.1, and it can be upgraded to full Dolby Atmos capability with a separate license. The Dolby IMS3000 can decode Dolby consumer audio formats through the HDMI and IP streaming inputs. Audio system outputs include both AES-3 × 8 (16 channels) and AES-67 (up to 64 channels for full Dolby Atmos playback).

2.1 Features and functions

- Screen Management System (SMS), Integrated Media Block (IMB), and audio processor in a single device
- Integrated Audio Processor includes Dolby Atmos® capability
- HDMI input
- Web-based interface
- Support for accessibility products (Fidelio and CaptiView)
- Ingest through eSATA, USB 2.0 and 3.0, or Ethernet
- Live playback support (Ethernet stream, MPEG-2, H.264, and SMPTE 421M [VC-1] up to 50 Mbps)
- Scaler and deinterlacer included
- General-purpose input and output ports (GPIO): Four inputs and six outputs
- Linear timecode (LTC) output port
- Serial Digital Interface (SDI) input ports supporting the following 3D mappings:
  - Dual stream
  - Side by side
  - Top/bottom

2.2 JPEG 2000 digital cinema package playback

- 2K 2D playback up to 120 fps
- 2K 3D playback up to 60 fps (per eye)
- 4K 2D playback up to 30 fps
- Bit rates up to 500 Mbps
- DCI compliant
- 12-bit 4:4:4 X'Y'Z' in all formats

2.3 MPEG-2/H.264/VC-1 MXF interop

- 720p at 60 fps; 1080i, 1080p up to 30 fps
- Bit rates up 50 Mbps
- 4:2:0, 8 bits

2.4 Video processing features

- Color conversion support: YCbCr601, YCbCr709, RGB rec709, X'Y'Z', and YCxCz
- Scaler (upscale up to 4K)

2.5 Security

- Dolby forensic watermarking for audio and video.
- The Security Manager module (media block) of the Dolby IMS3000 Integrated Media Server is compliant with all FIPS 140-2 Security Level 2 requirements and some of the FIPS 140-2 Security Level 3 requirements.

  This results in an overall FIPS 140-2 Level 2 compliance.

2.6 Audio

- 16 channels, AES/EBU, 24 bits up to 96 kHz
- AES67
- AUX AES supporting several digital audio in or out
- There are no analog audio ports on the Dolby IMS3000

2.7 Alternative content

- HDMI input
- Dual 3G-SDI
- Live content (IP Stream)
- Alternative audio routing (using HDMI audio, SDI embedded audio, and live input)
- Processing: Decode Dolby audio formats

2.8 Preloaded test content

Used for testing playback when hard drives are not installed.

2.9 Input and output ports

- Three-gigabit Ethernet (RJ-45)
- One eSATA 3 Gbps
- One USB 2.0 port
- Two USB 3.0 ports
- One HDMI input
- Two 3G-SDI bidirectional (input and output) ports
- Eight AES pairs (using two RJ-45)
- Four GPI ports (one RJ-45)
- Six GPO ports (one RJ-45)
- Two AUX AES pairs in and two AUX AES pairs out (one RJ45)
- Dolby Remote Fader
- One AUX AES port (one RJ-45) for alternative audio in/out

2.10 Environmental specifications

Temperature range (ambient):

- Operating: 5° C to 40° C (40° F to 104° F)
- Nonoperating: –20° C to 60° C (–4° F to 140° F)

2.11 Performance storage and power

The Dolby IMS3000 storage and power specifications are as follows:

- Three 1 TB hard-disk drives (2.5 inch), providing 2 TB of media storage
- Software RAID 5 storage
- Battery: Panasonic™ vanadium rechargeable lithium battery (VL3032). Non user replaceable
- Power <70 W (power input 12 V at 6.25 A from projector main low-voltage differential signaling [LVDS] connector)
- Optional External network-attached storage (NAS) support for additional content storage

2.11.1 Ethernet

The Dolby IMS3000 has three built-in gigabit Ethernet connectors.

From the left, the ports are identified as **ETH0**, **ETH1**, and **ETH2**.

2.12 eSATA

The **eSATA** port is used for ingesting content.

2.13 USB

There are three universal serial bus (USB) ports on the front panel that can accommodate an external USB device, such as the CaptiView transmitter or USB external drive for content ingestion. One is a USB 2.0 port, and two are USB 3.0 ports.

The Dolby IMS3000 supports USB 3.0 for ingesting content at much higher speeds than devices using USB 2.0. In some situations, a USB 3.0 drive may be detected as USB 2.0. This prevents you from ingesting content at the highest speed possible. Make sure that you are using a good quality cable.

You can identify a USB 3.0 cable by looking at the connector ends. USB 3.0 cables have blue connectors, as shown here.

Figure 2-1 USB 2.0 and USB 3.0

If the cable is plugged into the Dolby IMS3000 slowly, the USB 2.0 pins are detected first and the drive is mounted using the slower 2.0 settings. If a prompt appears that says **"This device could perform faster"**, this indicates that the USB 3.0 drive was detected as USB 2.0. In such a case, try to reseat the connection.

2.14 HDMI

Use HDMI for viewing alternative content (Blu-ray Disc™ player, game console, digital camera, or laptop).

High-bandwidth Digital Content Protection (HDCP) is supported.

2.15 SDI-A and SDI-B

- 3G-SDI
- For dual-projector setups
- Chase mode
- Alternative content inputs

Updating the Dolby IMS3000

Before you use the Dolby® IMS3000, we recommend that you update the server with the latest software package.

Note: With previous products, you were updating several different components. The Dolby IMS3000 update procedure allows you to change the firmware, software, and security manager all at once in a bundle package.

3.1 Updating the Dolby IMS3000

The latest Dolby IMS3000 package is available from the Dolby customer portal, located at www.dolbycustomer.com. If you do not have access, sign up on the site or contact your dealer. If needed, you can contact Dolby Cinema Technical Support.

3.1.1 Installing the update using the ingest manager

To install the update bundle using the Ingest Manager's Upload feature:

1. In the **Status** window, click **Ingest.**
2. Click **Upload**.
3. Click **Choose Files**.
4. Select the update bundle you want to upload.
5. Click **Upload**.

   If the file was uploaded successfully, this message appears: **Files uploaded successfully. Click here to reboot**.

   The Dolby IMS3000 reboots and then applies the update.

3.1.2 Installing the update using a USB flash drive

To install the update bundle using a USB flash drive:

1. Insert the USB flash drive containing the update bundle into a USB port on the Dolby IMS3000.
2. In the **Status** window, click **Ingest**.
3. In the **Ingest Scan** window, from the **Select a Location** list, select **Local Storage**.
4. Select the update bundle package.
5. Click **Ingest**.
6. Reboot the Dolby IMS3000 to apply the update.

3.1.3 Installing the update using the FTP site

To install the package remotely using File Transfer Protocol (FTP):

1. After you receive the software package, open an FTP client from your computer.
2. Enter the Dolby IMS3000 IP address. Then log in as admin.
3. Find the software package, and upload it to the `/etc/rc.once` directory.
4. Reboot the Dolby IMS3000 to apply the update.

Setting up the Dolby IMS3000

This chapter describes how to set up the Dolby® IMS3000.

4.1 Selecting a site language

To localize the Dolby IMS3000 user interface (UI), you may select a language for your site.

To select a site language:

1. Open your web browser and enter the Internet protocol (IP) address of the Dolby IMS3000 in address bar.
2. Click **Site Language**.

Figure 4-1 The Dolby IMS3000 login window

3. From the language list, select a language.

4.2 Logging in

You must log in to use the Dolby IMS3000.

To log in:

1. In the login window, enter your user name and password.
2. Click **Login**.

   The Dolby IMS3000 **Status** window opens. The status window contains information about the Dolby IMS3000 and the cinema audio that is configured on the Dolby IMS3000.

   To log out, restart, or shut down the Dolby IMS3000:

   - In the **Status** window, click the power icon and click **Logout**, **Restart**, or **Shutdown**.

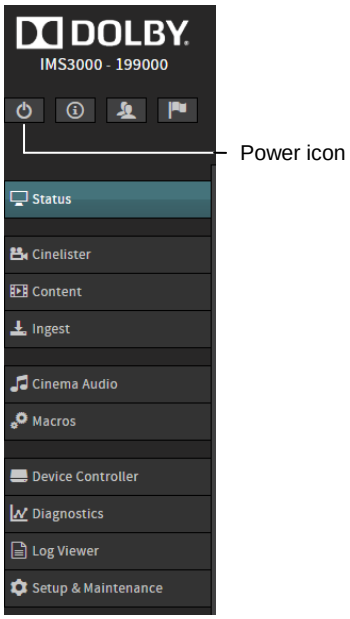

Figure 4-2 Power icon

4.3 Accepting the license agreement

Before you can use the Dolby IMS3000, you must read and accept the license terms.

To accept the license agreement:

1. Click **Setup & Maintenance**.
2. Click **System Settings**.
3. Click the **License Agreement** tab.
4. Read the license agreement and select the check box to accept the terms.

4.4 Dolby IMS3000 web UI

When you log on to the Dolby IMS3000, the **Status** window is displayed. The **Status** window presents:

- System information
- The fader and mute controls
- The playback status
- The system status

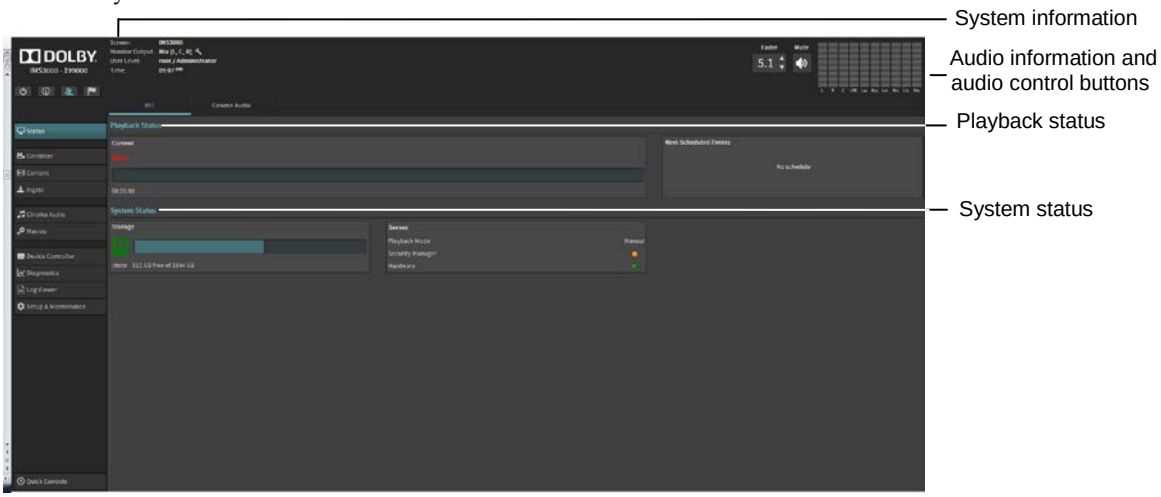

Figure 4-3 Dolby IMS3000 status window

You can view the system information from the **Status** window.

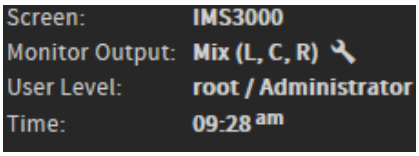

Figure 4-4 Dolby IMS3000 system information

You can control basic audio functions from the **Status** window:

1. In the **Fader** field, use the arrows to select a value.
2. Click **Mute** to disable the audio channels.

Figure 4-5 Dolby IMS3000 fader and mute controls

You can use the functional buttons to view setup information, sessions, and notifications.

- You can use the power button to logout, restart, shutdown, or put the Dolby IMS3000 into standby mode.
- Setup information includes versions of different components and the current bundle version.
- Sessions shows you any other web browsers or users that are connected to the system.
- Notifications display important or critical information related to the operation and health of the Dolby IMS3000.

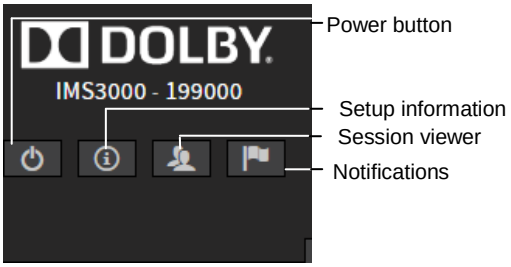

Figure 4-6 Dolby IMS3000 functional buttons

4.5 Working with user accounts

4.5.1 Creating a new user account

You can create user accounts and assign privileges based on user responsibilities. You must have administrator or root privileges.

To create a new user account:

1. Log in as administrator or root.
2. Click **Setup & Maintenance**.
3. Click **System Settings**.
4. Click **Account Manager**.
5. Click **New**.
6. In the **Add User** window:
   - Enter a user name.
   - Enter the user's full name.
   - Enter a password
   - Enter the password again to confirm.

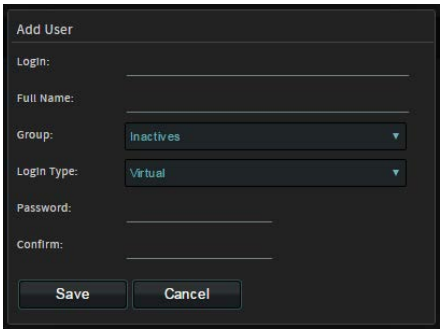

Figure 4-7 Add User window

7. From the **Group** list, select a group:
   - **Inactives**: This user does not have any privileges.
   - **Ingests**: This user is allowed to ingest content.
   - **Projectionists**: This user is allowed to operate the Dolby IMS3000, but cannot change the configuration or ingest content.
   - **ShowManagers**: In addition to the projectionist privileges, this user is allowed to ingest content, delete content and save or edit show playlists (SPLs).
   - **SuperUsers**: In addition to ShowManager privileges, this user is allowed to configure the Dolby IMS3000 and create, modify, and delete user accounts.
8. From the **Login Type** list, select a log-in type:
   - Virtual: A virtual user account only works with Dolby applications.
   - System: A system user account used anywhere on the system (for example, on Linux terminal windows).
9. Click **Save**.

4.5.2 Editing a user account

You can edit the user accounts on the Dolby IMS3000.

To edit a user account:

1. Click **Setup & Maintenance**.
2. Click **System Settings**.
3. Click **Account Manager**.
4. Click on the account to edit.
   Certain accounts may be protected against modification.

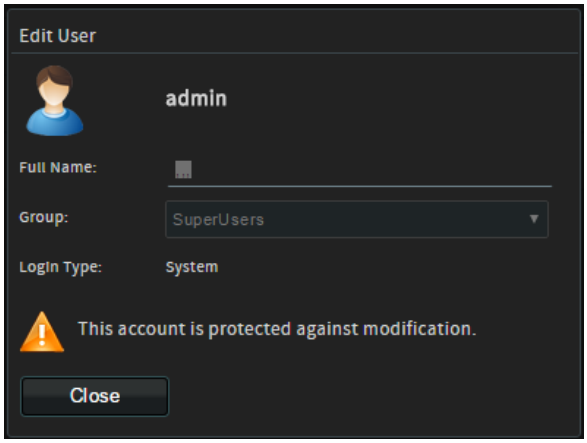

Figure 4-8 Edit user window

5. Click **Save**.

4.5.3 Deleting a user account

You can delete the user accounts on the Dolby IMS3000.

To delete a user account:

1. Click **Setup & Maintenance**.
2. Click **System Settings**.
3. Click on the **Account Manager** tab.
4. Move the cursor over the account and click **Delete**.
5. To confirm that you want to delete the account, click **Ok**.

4.6 Setting the time and adding NTP servers

You can set the time and date on your Dolby IMS3000. The system Real Time Clock (RTC) is allotted six minutes annually for adjustment by default. If more is needed, contact cinema technical support.

4.6.1 Setting the time

To set the time:

1. Click **Setup & Maintenance**.
2. Click **System Settings**.
3. Click **Date and Time**.
4. In the **Date and Time** section, select a time format, and then click **Update**.
5. Select the hour, minute, and second intervals.
6. Select either **am** or **pm**, and then click **Update**.
7. Select the time zone, and then click **Update**.

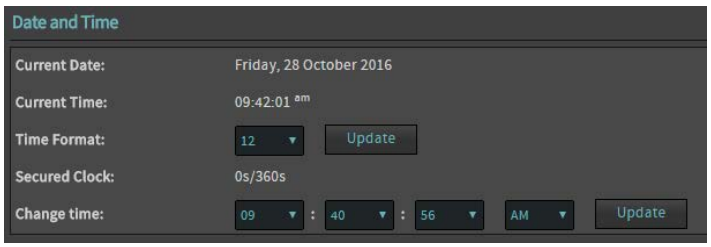

Figure 4-9 Date and time section

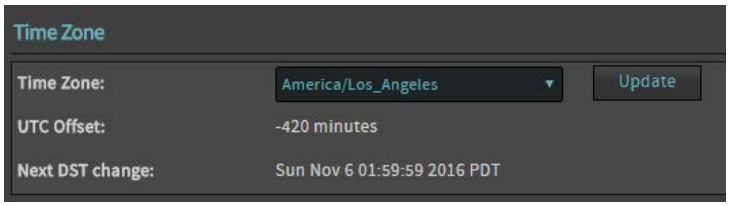

Figure 4-10 Time zone section

4.6.2 Adding an NTP server

To configure the NTP server:

1. Click **Setup & Maintenance**.
2. Click **System Settings**.
3. Click **Date and Time**.
4. Click **Add** in the **NTP Servers** section.
5. Enter the extra delay value (if needed) in the **Extra delay (seconds)** field.
6. Enter the IP address of the NTP server in the empty field below, and click **Test**.
7. Click **Save**.

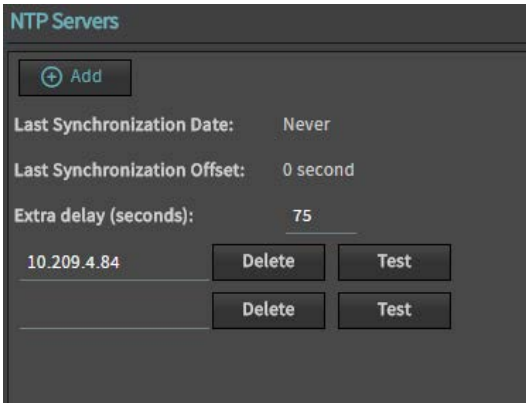

Figure 4-11 NTP server section

4.7 Configuring the network

To configure the network:

1. Click **Setup & Maintenance.**
2. Click **System Settings**.
3. Click **Network Configuration**.
4. Enter the host name of the Dolby IMS3000.
5. Define the IP address, Netmask, and Gateway settings as required for your installation.

Note: DHCP is supported but is not recommended.

6. Click **Save**.

4.8 Setting theatre properties and adding contacts

You can enter the information about the auditorium and facility location, and add contacts.

4.8.1 Entering the auditorium settings

To enter the auditorium settings:

1. In the **Status** window, click **Setup & Maintenance**.
2. Click **System Settings**.
3. Click the **Theater Properties** tab.
4. Enter the name of the screen in the **Screen Name** field.
5. Select the **Screen Aspect Ratio** drop-down menu, and select the screen aspect ratio.
6. Select the **Screen Mask** drop-down menu, and select the screen mask.
7. Select the **Screen Color** drop-down menu, and select the screen color.
8. Click **Save**.

Figure 4-12 Auditorium settings window

4.8.2 Entering the facility and address

To enter the facility and address:

1. In the **Status** window, click **Setup & Maintenance**.
2. Click **System Settings**.
3. Click the **Theater Properties** tab.
4. Enter the facility and address information in the **Facility & Address** field.
5. Click **Save.**

Figure 4-13 Facility and address window

4.8.3 Entering new contacts

To enter contacts:

1. In the **Status** window, click **Setup & Maintenance**.
2. Click **System Settings**.
3. Click the **Theater Properties** tab.
4. Click **New** in the **Contacts** section.
   a. Enter the Name of the contact.
   b. Enter the phone numbers of the contact.
   c. Enter the email address of the contact.
   d. Enter the country of the contact.
5. Click **Save**.

Figure 4-14 Contact information window

4.9 Configuring the CineLister playback settings

Using the **CineLister editor**, you can:

- Set the **Seek value** of the **Forward** and **Backward** options during playback.
- Specify the **Seek value** that is subtracted from the last known timecode in case of an emergency recover (power outage).

4.9.1 Setting the seek increment values

To configure the editor:

1. In the **Status** window, click **Setup & Maintenance**.
2. Click **CineLister Configuration**.
3. To move forward or rewind playback, enter a value to move forward or rewind.
4. To subtract to the last timecode, enter a value.

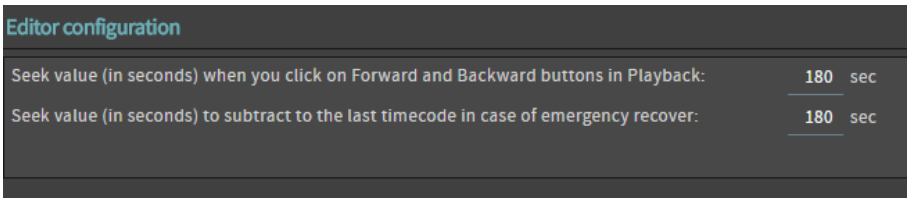

Figure 4-15 Editor configuration section

5. Click **Save.**

4.9.2 Configuring the scheduler

To configure the scheduler:

1. In the **Status** window, click **Setup & Maintenance**.
2. Select the drop-down menu, and select the day of the week for the scheduler to start from.

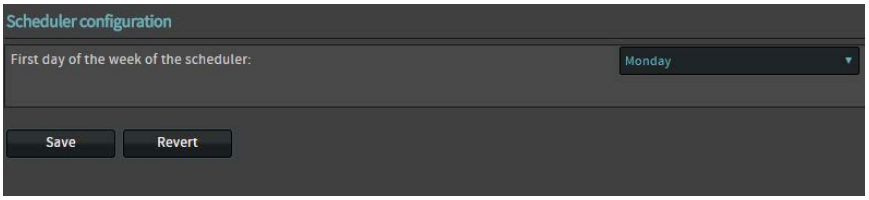

Figure 4-16 Scheduler configuration section

3. Click **Save**.

4.10 Configuring the Live Manager feature

Use the **Live Manager** application to add a virtual device as a source of a live event. These live CPLs can be added to the SPLs in **CineLister**.

4.10.1 Creating a new live composition playlist

To create a new live composition playlist:

1. In the **Status** window, click **Setup & Maintenance**.
2. Click the **Live Manager** tab.
3. Select the drop-down menu, and select the device type.
4. Enter the content title in the **Content title** field.
5. Enter the IP of the live source device in the **Device IP** field.
6. Enter the duration in the **Duration** field.
7. Click **Create**.

   The live composition playlist (CPL) appears in the **Live Composition Playlist** section.

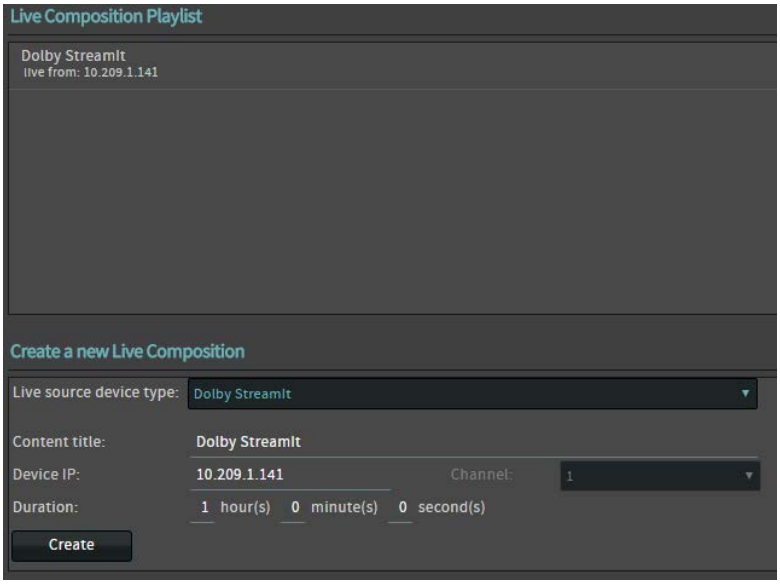

Figure 4-17 Live composition playlist window

4.10.2 Deleting a live composition playlist

To delete a live composition playlist:

1. Click **Content**.
2. Select the CPL to delete.
3. Click **Delete**.
4. Click **Ok**.

4.11 Configuring the Device Manager

Use the Device Manager to configure the connection between the Dolby IMS3000 and several different devices such as projectors, 3D systems, subtitle engine, closed caption systems, and raw devices.

You must have SuperUser privileges to add and delete devices.

4.11.1 Adding a projector

Use the Device Manager to add a projector.

To add a projector:

1. In the **Status** window, click **Setup and Maintenance**.
2. Click **Device Management**.
3. Click **Device Manager**, click **New**, and then select **Projector**.

Note: Any item in red indicates that the server is not licensed to support this feature.

4. Enter the name of the projector in the **Identifier** field.
5. From the **Projector Model** list, select the model of the projector.
6. Enter the Digital Light Processing (DLP) head IP address in the **DLP Head IP** field.
7. Select **Yes** to enable projector subtitles, or select **No** to disable projector subtitles.
8. Select **Yes** if this projector is used as the primary projector, or select **No** if this projector is not used as the primary projector.

   If **No** is selected, the projector is set as secondary. This is mainly used during a dual-projector setup.
9. If you are doing a dual-projector setup:
   a. Select the check box.
   b. Select the display drop-down menu, and select the display type.

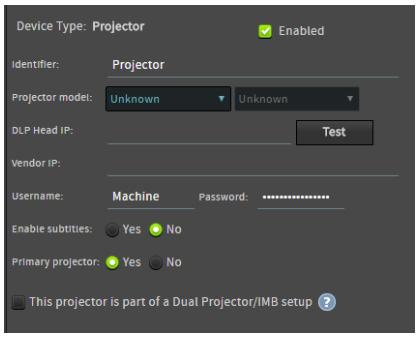

Figure 4-18 Projector window

10. Click **Save.**

4.11.2 Adding an audio processor

Use the Device Manager to add an audio processor.

To add an audio processor:

1. In the **Status** window, click **Setup and Maintenance**.
1. Click **Device Management**.
2. Click **Device Manager**.
3. Click **New**, and then select **Audio Processor**.

Note: Any item in red indicates that the server is not licensed to support this feature.

4. Enter the name of the audio processor in the **Identifier** field.
5. Select the **Processor Model** drop-down menu, and select the audio processor model.

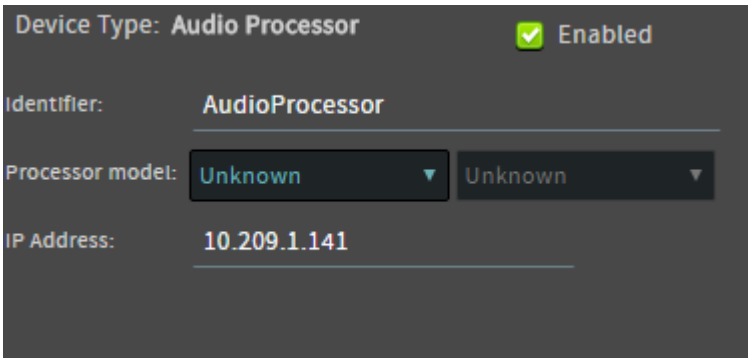

Figure 4-19 Audio processor window

6. Click **Save**.

4.11.3 Adding a Dolby DFC100

Use the Device Manager to add a DFC100.

To add a Dolby DFC100:

1. In the **Status** window, click **Setup and Maintenance**.
2. Click **Device Management**.
3. Click **Device Manager**.
4. Click **New**, and then select **Dolby DFC100**.

Note: Any item in red indicates that the server is not licensed to support this feature.

5. Enter the name of the Dolby DFC100 in the **Identifier** field.
6. Enter the server IP in the **Server IP** field.
7. Select the matrices in the **Matrices** field.

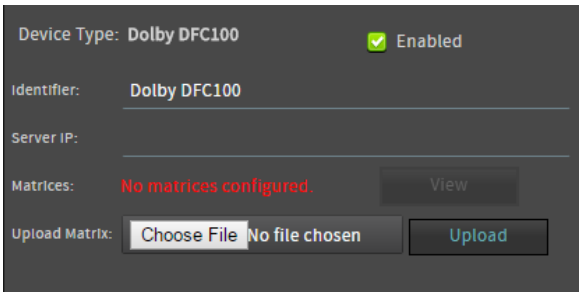

Figure 4-20 Dolby DFC100 window

8. Click **Save**.

4.11.4 Adding an eCNA device

Use the Device Manager to add an eCNA device.

To add an eCNA device:

1. In the **Status** window, click **Setup and Maintenance**.
2. Click **Device Management**.
3. Click **Device Manager**.
4. Click **New,** and select **eCNA**.

Note: Any item in red indicates that the server is not licensed to support this feature.

5. Enter the name of the eCNA device in the **Identifier** field.
6. Enter the server IP of the eCNA device.

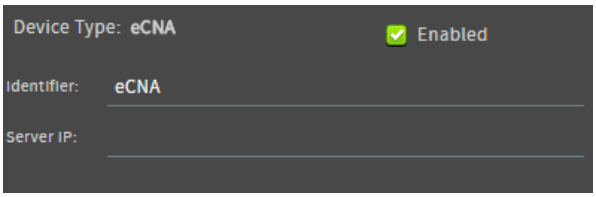

Figure 4-21 eCNA window

7. Click **Save**.

4.11.5 Adding a JNior device

Use the Device Manager to add a JNior device.

To add a JNior:

1. In the **Status** window, click **Setup and Maintenance**.
2. Click **Device Management**.
3. Click **Device Manager**.

Note: Any item in red indicates that the server is not licensed to support this feature.

4. Enter the name of the JNior device in the **Identifier** field.
5. Enter the server IP of the JNior device.
6. Enter the port.

Figure 4-22 JNior window

7. Click **Save.**
8. Reboot the Dolby IMS3000 to apply the changes.

4.11.6 Adding a raw device

Use the Device Manager to add a raw device.

A raw device allows for communication with an external device across an Ethernet connection using raw data formatted as text or binary strings:

1. In the **Status** window, click **Setup and Maintenance**.
2. Click **Device Management**.
3. Click **Device Manager**.
4. Click **New**, and select **Raw**.

Note: Any item in red indicates that the server is not licensed to support this feature.

5. Enter the name of the raw device in the **Identifier** field.
6. Enter the name of the vendor.
7. Enter the product name.
8. Enter the device IP and select the protocol.
9. Enter the port number.

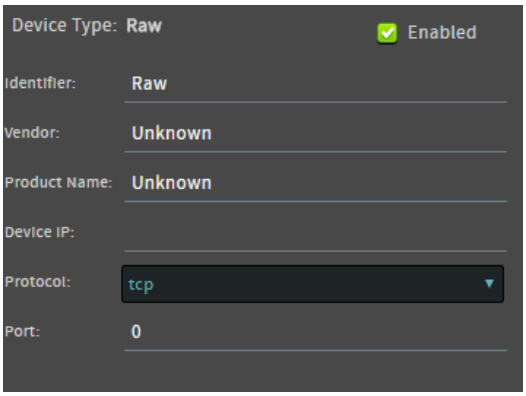

Figure 4-23 Raw device window

10. Click **Save**.

4.11.7 Adding the Subtitle Engine

Use the Device Manager to add a subtitle engine.

To add a subtitle engine:

1. In the **Status** window, click **Setup and Maintenance**.
2. Click **Device Management**.
3. Click **Device Manager**.
4. Click **New**, and select **Subtitle Engine**.

Note: Any item in red indicates that the server is not licensed to support this feature.

5. Enter the name of the subtitle engine device in the **Identifier** field.

   If necessary, select the check box to process closed-caption data if no subtitle content is detected.

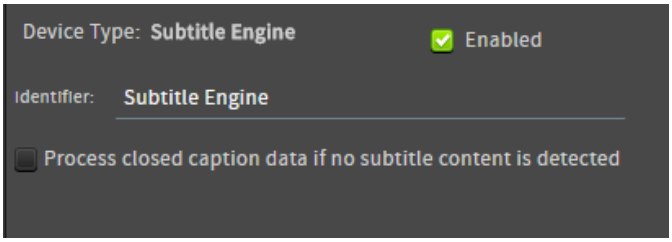

Figure 4-24 Subtitle engine window

6. Click **Save**.

4.11.8 Deleting a device

Use the Device Manager to delete a device.

To delete a device:

1. In the **Status** window, click **Setup and Maintenance**.
2. Click **Device Management**.
3. Click **Device Manager**.
4. Select the device to delete.
5. Click **Delete**, and then click **OK** to confirm.

4.11.9 Editing a device

Use the Device Manager to edit a device.

To edit a device:

1. In the **Status** window, click **Setup and Maintenance**.
2. Click **Device Management**.
3. Click **Device Manager**.
4. Edit the details of the device, and click **Save**.

4.12 Configuring the content feed manager

Use the Content Feed Manager to enter the information about servers used as sources for ingesting.

4.12.1 Adding a new content feed source

Use the Content Feed Manager to add a content feed source.

To add a content feed source:

1. In the **Status** window, click **Setup and Maintenance**.
2. Click **Device Management**.
3. Click **Content Feed Manager**.
4. Enter the name of the source in the **Identifier** field.
5. Select the **Ingest Protocol** drop-down menu, and then select the ingest protocol.
6. Enter the server IP.
7. Click **Test** to verify that the Dolby IMS3000 can communicate with the server.
8. Enter the user name and password associated with the feed source you are connecting to.
9. Enter the remote path if you have a specific folder you want to retrieve content from.

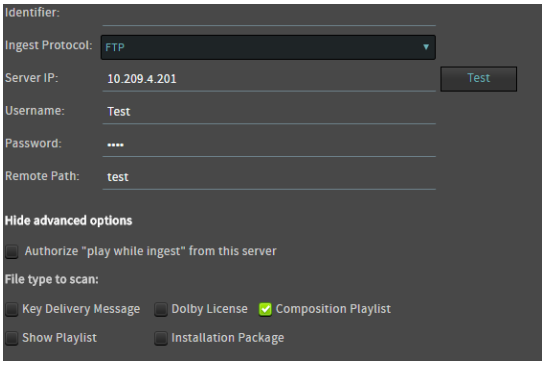

Figure 4-25 New Content Feed window

10. Click **Save**.

In the **Advanced Options** section, you can select the check box to enable the **Authorize "play while ingest" from this server** feature. You can also select the types of files to scan.

4.12.2 Deleting a content feed source

Use the Content Feed Manager to delete a content feed source.

To delete a content feed source:

1. In the **Status** window, click **Setup and Maintenance**.
2. Click **Device Management**.
3. Click **Content Feed Manager**.
4. Select the content feed source to delete.
5. Click **Delete**.
6. Click **Save**.

4.12.3 Editing a content feed source

Use the Content Feed Manager to edit a content feed source.

To edit a content feed source:

1. In the **Status** window, click **Setup and Maintenance**.
2. Click **Device Management**.
3. Click **Content Feed Manager**.
4. Select the content feed source to edit.
5. Edit the details of the content source and click **Save**.

4.13 Configuring network-attached storage devices

The Dolby IMS3000 can connect to a network-attached storage (NAS) device, allowing you to have additional hard-disk space on the network. The Dolby IMS3000 can also ingest and play from the NAS device.

4.13.1 Adding a NAS device

Use the NAS Manager to add a NAS device.

To add a NAS device:

1. In the **Status** window, click **Setup and Maintenance**.
2. Click **Device Management**.
3. Click **NAS Manager**.
4. Click **New.**
5. Verify that the **Enabled** check box is selected.
6. Enter annotation text.

7. Enter the vendor of the NAS device, and then enter the model of the NAS device.
8. Enter the directory, and then select the file system type.
9. Select the permissions, and enter the mount options.
10. Enter the Simple Network Management Protocol (SNMP).

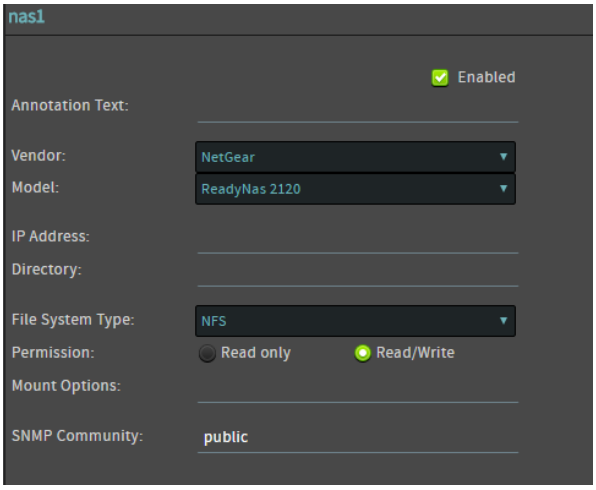

Figure 4-26 NAS device window

11. Click **Save**.

4.13.2 Deleting an NAS device

Use the NAS Manager to delete an NAS device.

To delete a NAS device:

1. In the **Status** window, click **Setup and Maintenance**.
2. Click **Device Management**.
3. Click **NAS Manager**.
4. Select the NAS device to delete.
5. Click **Delete**.
6. Click **Save.**

4.13.3 Editing an NAS device

Use the NAS Manager to edit an NAS device.

To edit an NAS device:

1. In the **Status** window, click **Setup and Maintenance**.
2. Click **Device Management**.
3. Click **NAS Manager**.
4. Select the NAS device to edit.
5. Edit the information.
6. Click **Save**.

Working with macros on the Dolby IMS3000

The macros feature allows you to create automation cues and trigger cues. The macros feature also has an **Execute Now** function, which allows you to execute a saved automation cue in one single click.

You need SuperUser privileges to complete the operations performed in this chapter.

5.1 Using the execute now function

The **Execute Now** function allows you to execute a saved automation cue in one single click.

To use the **Execute Now** function:

1. In the **Status** window, click **Macros.**
2. Click **Execute Now**.
3. Select a macro to execute from the list.

5.2 Using the automation cue tab

You can create a new automation cue, which allows you to send a command from your Dolby IMS3000 to any external device connected to the Dolby IMS3000. An automation cue can also be used for the purpose of inserting in item into an SPL.

5.2.1 Creating a new automation cue

Use the **Automation Cue** tab to create an automation cue.

To create a new automation cue:

1. In the **Status** window, click **Macros.**
2. Click **Automation Cue**.
3. Click **New**.
4. Enter the name of the macro, and then enter any necessary comments.
   If necessary, select the **Copy from** drop-down menu, and then select a macro to copy.
5. Click **Ok**.

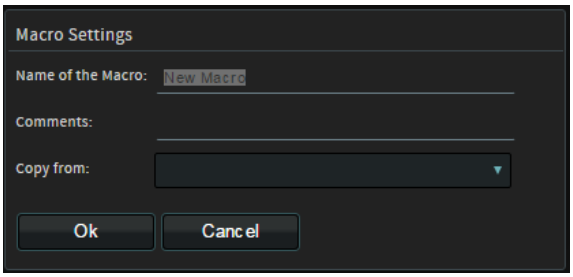

Figure 5-1 New macro window

6. Select the **Action to insert** drop-down menu, and then select the action to insert.
7. Click **Insert,** and select what function the macro performs.
8. Click **Save**.

5.2.2 Deleting an automation cue

Use the **Automation Cue** tab to delete an automation cue.

To delete an automation cue:

1. In the **Status** window, click **Macros.**
2. Click **Automation Cue**.
3. Select the macro to delete.
4. Click **Delete**.

5.2.3 Editing an automation cue

Use the **Automation Cue** tab to edit an automation cue.

To edit an automation cue:

1. In the **Status** window, click **Macros.**
2. Click **Automation Cue**.
3. Click on the macro to edit its actions.
4. Double-click on the macro to edit the name and components.
5. Click **Settings**, and then edit the information.
6. Click **Save**.

5.3 Using the trigger cue tab

You can create a new trigger cue, which allows you to send a command to the Dolby IMS3000.

5.3.1 Creating a new trigger cue

Use the **Trigger Cue** tab to create a trigger cue.

To create a trigger cue:

1. In the **Status** window, click **Macros.**
2. Click **Trigger Cue**.
3. Click **New**.
4. Enter the name of the macro and then enter any necessary comments.
5. If necessary, select the **Copy from** drop-down menu, and then select a macro to copy.
6. Click **Ok**.

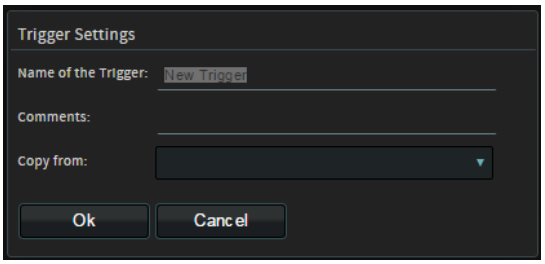

Figure 5-2 New trigger cue window

7. Select the **Action to insert** drop-down menu, and then select the action to insert.
8. Connect to an event.

Adding a general purpose input trigger

Use the **Trigger Cue** tab to add a general-purpose input (GPI) trigger.

To add a GPI trigger:

1. Select **General Purpose Input**.
2. Click **Add**.
3. Select the **Line number** drop-down menu, and then select the line number.
4. Select the **Value** drop-down menu, and select the value.
5. Click **Ok**.
6. Click **Save**.

Adding a signal trigger

Use the Trigger Cue tab to add a signal trigger.

To add a signal trigger:

1. Select **Signal**.
2. Click **Add**.
3. Enter a name for the trigger.
4. Enable the **Select from list** option if you have a signal setup, and select the driver and signal you want.
5. Click **Ok**.
6. Click **Save**.

5.3.2 Deleting a trigger cue

Use the Trigger Cue tab to delete a trigger cue.

To delete a trigger cue:

1. In the **Status** window, click **Macros.**
2. Click **Trigger Cue**.
3. Select the trigger cue to delete.
4. Click **Delete**.
5. Click **Save**.

5.3.3 Editing a trigger cue

Use the Trigger Cue tab to edit a trigger cue.

To edit a trigger cue:

1. In the **Status** window, click **Macros.**
2. Click **Trigger Cue**.
3. Select the trigger cue to edit.
4. Click **Settings,** and edit the information.
5. Click **Save**.

5.4 Using the quick controls tab

You can create quick controls for easy access to execute a saved automation cue from any screen on the Dolby IMS3000 web user interface (UI).

5.4.1 Creating quick controls

Use the **Quick Controls** tab to create quick controls.

To create quick controls:

1. In the **Status** window, click **Macros.**
2. Click **Quick Controls**.
3. Click **New Section**.
4. Drag and drop the automation cues to the new section.
5. Click **Save**.

5.4.2 Deleting quick controls

Use the **Quick Controls** tab to delete quick controls.

To delete quick controls:

1. In the **Status** window, click **Macros.**
2. Click **Quick Controls**.
3. Hover over the section, and click **X** to delete the section.
4. Click **Save**.

5.4.3 Editing quick controls

Use the **Quick Controls** tab to edit quick controls.

To edit quick controls:

1. In the **Status** window, click **Macros.**
2. Click **Quick Controls**.
3. Hover over the section, and click **X** to delete automation cues from the section.

   If necessary, click **Rename this section**, and then rename the section. You can also reorder the sections in the **Quick Controls** tab.

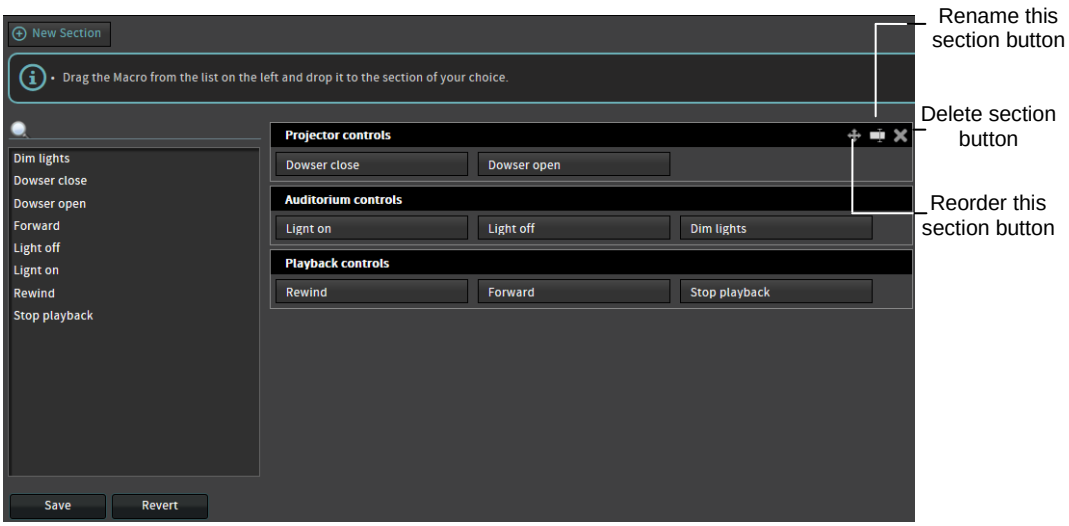

Figure 5-3 Quick controls

Ingesting content into the Dolby IM3000

The ingest feature allows you to ingest, monitor the ingest progress, and upload content to the Dolby IMS3000. You also have the ability to play content while ingesting using the ingest function.

You must have manager privileges to complete the operations performed in this chapter.

6.1 Using the ingest scan feature

The ingest scan function allows you to scan local and external devices for content, KDMs, and licenses for ingesting into the Dolby IMS3000.

To use the Ingest Scan feature:

1. In the **Status** window, click **Ingest.**
2. Select the **Location** drop-down menu, and select the location to perform the scan.
   If the ingest source is not available, click **Refresh**.
3. Select the **Custom Search** drop-down menu to search for specific content.
4. Click on the items to ingest, or click the **Select all** check box to select all content available on the ingest source.
   You can also hide content that has been ingested by clicking **Hide ingested content**.

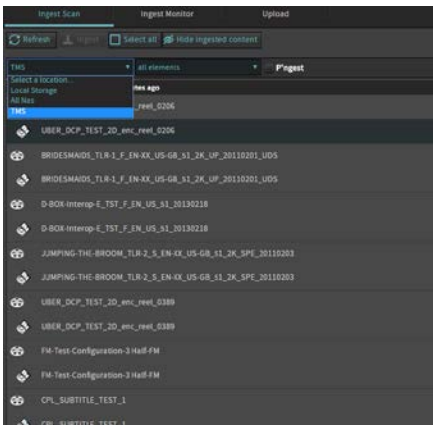

Figure 6-1 Ingest scan window

5. Click **Ingest**.

6.2 Using ingest monitor feature

The Ingest Monitor feature allows you to view the ingest progress for the content you are ingesting. You can also pause, cancel, delete, and resume the ingest process from the ingest monitor window.

Use the buttons on top to control the ingest process. You can view the ingest progress in the bottom-right corner.

To use the Ingest Monitor feature:

1. In the **Status** window, click **Ingest.**
2. Click **Ingest Monitor**.

   The progress for each piece of content is displayed.
3. Select an operation to control the ingest process.
   a. Click **Refresh** to refresh the list of ingesting content.
   b. Click **Delete** to delete the selected content.
   c. Click **Pause** to pause the ingest process on the selected content.
   d. Click **Resume** to resume the ingest process on the selected content.
   e. Click **Cancel** to cancel the ingest process on the selected content.
   f. Click the **Select all** check box to select all ingesting content.

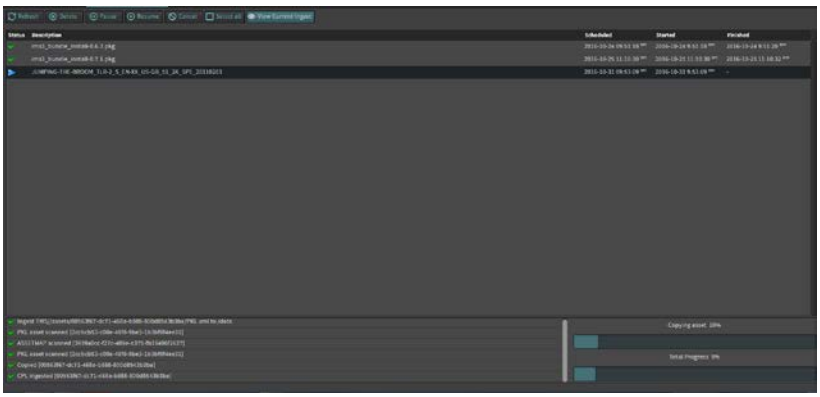

Figure 6-2 Ingest monitor window

6.3 Using the upload feature

The Upload feature allows you to ingest key delivery messages (KDMs), licenses, and update bundle files on the Dolby IMS3000.

Note: This upload feature is not made to ingest content.

To use the Upload feature:

1. In the **Status** window, click **Ingest.**
2. Click **Upload**.
3. Click **Choose Files**.
4. Select the file you want to upload.
5. Click **Upload**.

   If the file was uploaded successfully, this message appears: **Files uploaded successfully**.
6. To view the progress, click **Ingest Monitor**.

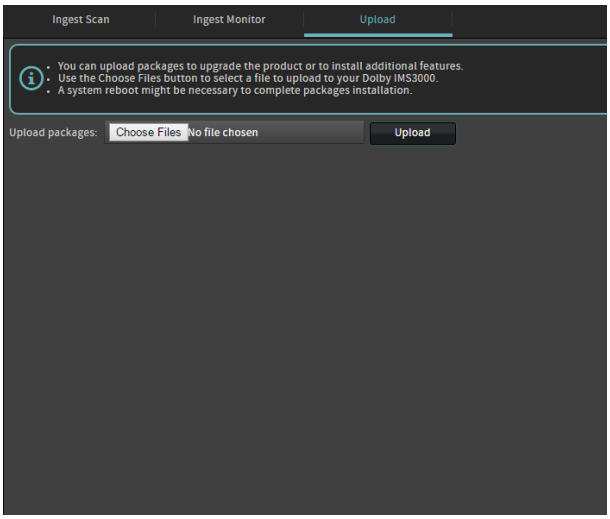

Figure 6-3 Upload window

Managing content on the Dolby IMS3000

The Dolby IMS3000 provides the capability of managing content including composition playlists (CPLs), playback decryption keys (KDMs), show playlists (SPLs), and licenses (DLMs).

You need manager privileges to complete the operations performed in this chapter.

7.1 Deleting content (CPLs)

You can delete CPLs from the Dolby IMS3000.

To delete CPLs:

1. In the **Status** window, click **Content.**
2. From the list, select the CPL to delete, and click **Delete**.

   You can also click the **Select all** check box to select all content available on the Dolby IMS3000.
3. Click **OK**.

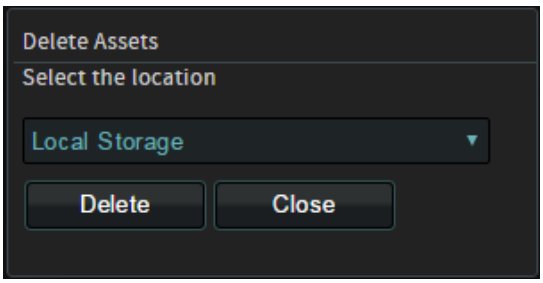

Figure 7-1 Deleting assets window

7.2 Deleting decryption keys (KDMs)

You can delete the decryption keys on the Dolby IMS3000.

To delete KDMs:

1. In the **Status** window, click **Content.**
2. Click **Decryption Keys**.
3. From the list, select the decryption key to delete, and click **Delete**.

You can also click the **Select all** check box to select all KDMs available on the Dolby IMS3000.

4. Click **OK.**

7.3 Delete an SPL

You can delete show playlists on the Dolby IMS3000.

To delete an SPL:

1. In the **Status** window, click **Content.**
2. Click **Show Playlist**.
3. From the list, select the SPL to delete, and click **Delete**.
4. You can also click the **Select all** check box to select all SPLs available on the Dolby IMS3000.
5. Click **OK.**

7.4 Deleting a license

You can delete the licenses on the Dolby IMS3000.

To delete a license:

1. In the **Status** window, click **Content.**
1. Click **Licenses**.
2. From the list, select the license to delete, and click **Delete**.

   You can also click the **Select all** check box to select all licenses available on the Dolby IMS3000.
3. Click **OK.**

7.5 Copying content to and from network-attached storage

You can copy content from the Dolby IMS3000 to a network-attached storage (NAS) device, as well as copy content from your NAS device to the Dolby IMS3000. This feature works only in Storage view.

To copy content:

1. In the **Status** window, click **Content.**
2. Click **Views,** and select **Storage**.
3. From the list, select the CPL to copy, and click **Copy**.

   You can also click the **Select all** check box to select all content available on the Dolby IMS3000.
4. Select the destination to copy the selected CPL.

5. Click **Copy,** and then click **OK**.

   The **Assets Management Logs** window appears, confirming the copy process is complete.

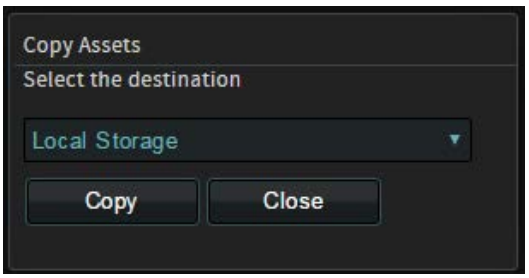

Figure 7-2 Copy assets window

6. Click **Close**.

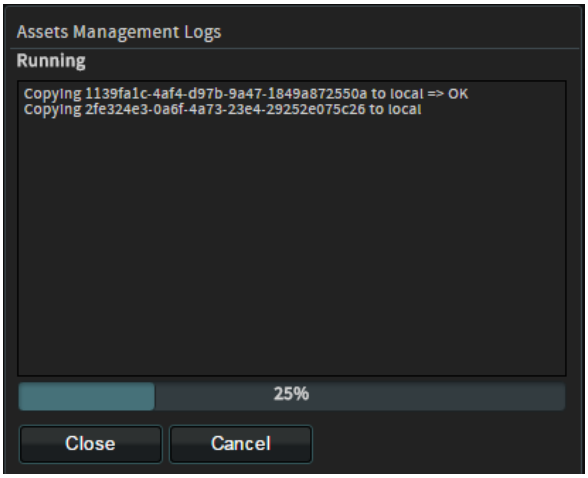

Figure 7-3 Asset management logs window

7.6 Checking content for validity

You can perform an integrity and sanity check on CPLs available on the Dolby IMS3000.

- The sanity check verifies that the composition playlist properties are correct.
- The integrity check verifies that all CPL Material Exchange Format (MXF) files are not corrupted.

7.6.1 Performing an integrity check

You can perform an integrity check on any CPL available on the Dolby IMS3000.

To perform the integrity check:

1. In the **Status** window, click **Content.**
2. Select the CPL to be checked.
3. Click **Checks**, and select **Integrity**.
4. The **Integrity Check** window appears with the results.
5. Click **Close.**

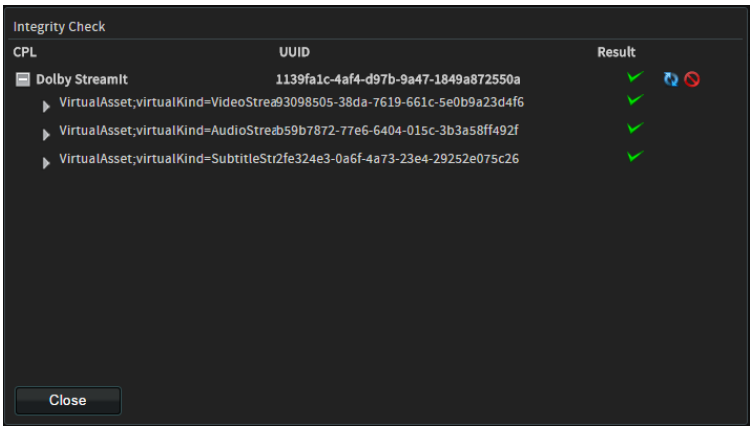

Figure 7-4 Integrity check summary window

7.6.2 Sanity check

You can perform a sanity check on any CPL available on the Dolby IMS3000.

To perform the sanity check:

1. In the **Status** window, click **Content.**
2. Select the CPL to be checked.
3. Click **Checks** and select **Sanity**.

   The **Sanity Check** window appears, with the results.
4. Click **Close.**

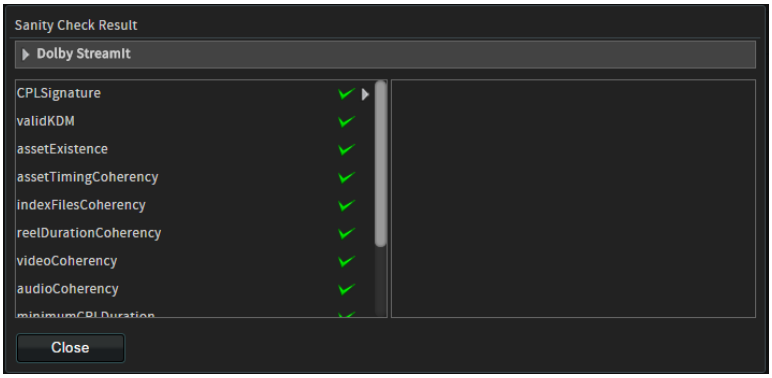

Figure 7-5 Sanity check summary window

Working with CineLister

CineLister allows you to create, delete, schedule, and perform playback for show playlists (SPLs) on the Dolby IMS3000.

You need manager privileges to complete the operations performed in this chapter.

8.1 Using the CineLister editor

8.1.1 Creating a new show playlist

You can create a show playlist (SPL) on the Dolby IMS3000.

To create an SPL:

1. In the **Status** window, click **CineLister.**
2. Click **New**.
3. Click on the elements available in the **All available elements** section.
4. Click **Save**.
5. Name the new SPL, and then click **Save**.
   The show playlist appears in the **Show Playlist** column.

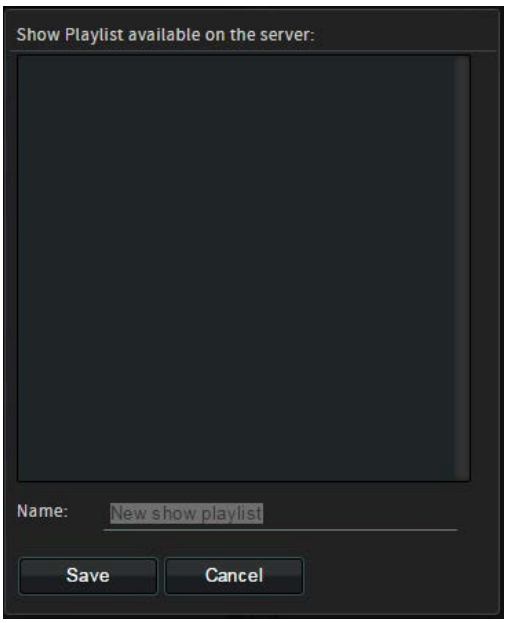

Figure 8-1 Saving the SPL

8.1.2 Deleting a show playlist

You can delete an SPL on the Dolby IMS3000.

To delete an SPL:

1. In the **Status** window, click **CineLister.**
   The **CineLister editor** window appears.
2. Click **Delete**.
3. Select the SPL to delete.
4. Click **Delete**.

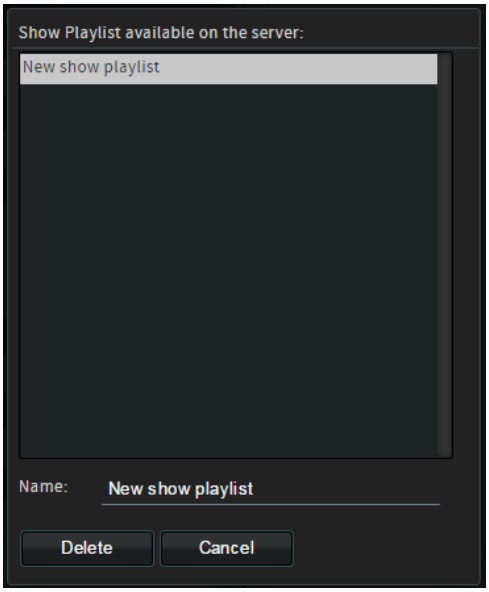

Figure 8-2 Deleting an SPL

8.2 Using the CineLister scheduler

You have the capability of scheduling an SPL to play at a specified time, as well as deleting a schedule.

8.2.1 Creating a new schedule

You can create a new schedule on the Dolby IMS3000.

To create a new schedule:

1. In the **Status** window, click **CineLister.**
2. Click **CineLister Scheduler**.
3. Click **New**.

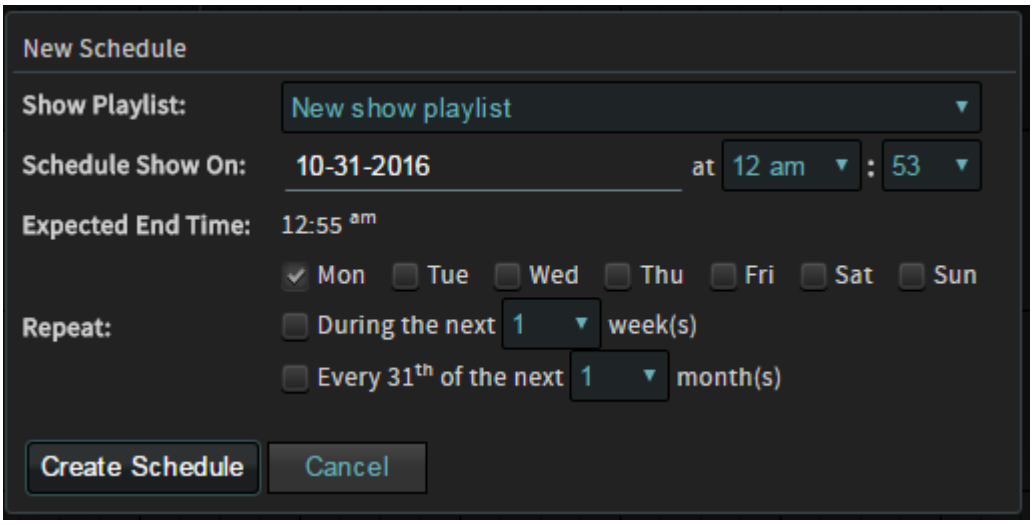

Figure 8-3 New schedule window

4. Select the drop-down menu in the **Show Playlist** section, and then select the SPL to schedule**.**
5. In the **Schedule Show On** section, select when to schedule the SPL.
6. In the **Repeat** section, select the time and days for the SPL to repeat.
7. Click **Create Schedule**.

   The schedule appears in the calendar. You can change the view of the calendar by clicking **View** and selecting **Calendar View** or **List View.**

8.2.2 Deleting a schedule

You can delete a schedule on the Dolby IMS3000.

To delete a schedule:

1. In the **Status** window, click **Cinelister.**
2. Click **Cinelister Scheduler**.
3. Hover over the schedule, and then click **Delete**.
4. Click **Delete**.

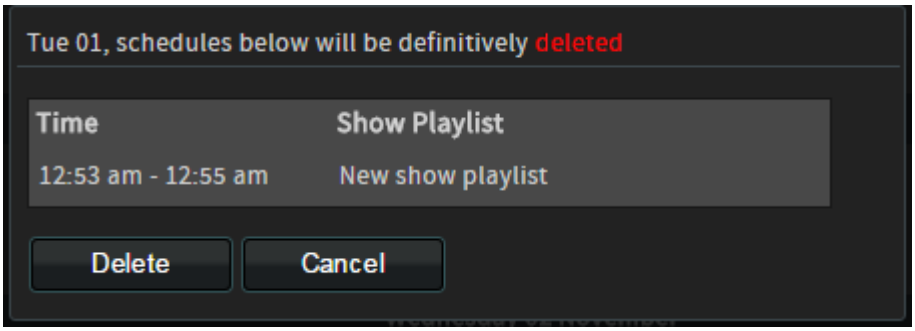

Figure 8-4 Delete schedule window

8.3 CineLister Playback

You are able to set CineLister to different playback modes:

- Play: Once the show or clip is finished playing, the system stops.
- Loop: The show or clip is repeated.
- Play then rewind: The show or clip is reselected at the end of playback.
- Play then eject: The show or clip is deselected at the end of playback.

The show playlist selected in the **CineLister editor** window is the same SPL played.

You also have the option of setting the playback to **Manual** or **Schedule** mode. In **Manual** mode, you manually select and control the SPL.

In **Schedule** mode, the SPL is selected and started according to the schedule set on the Dolby IMS3000. Refer to Section 8.2.

8.3.1 Playing a show playlist

You can play an SPL from the Dolby IMS3000.

Use pause, eject, fast forward, and rewind to control playback.

To play the SPL:

1. In the **Status** window, click **CineLister.**
2. Click **CineLister Playback**.
3. Select **Manual** or **Schedule**.

   Playback is set to **Manual** mode by default. In Schedule mode, you cannot change the playback mode.
4. Select the playback mode.
5. Click **Play**.

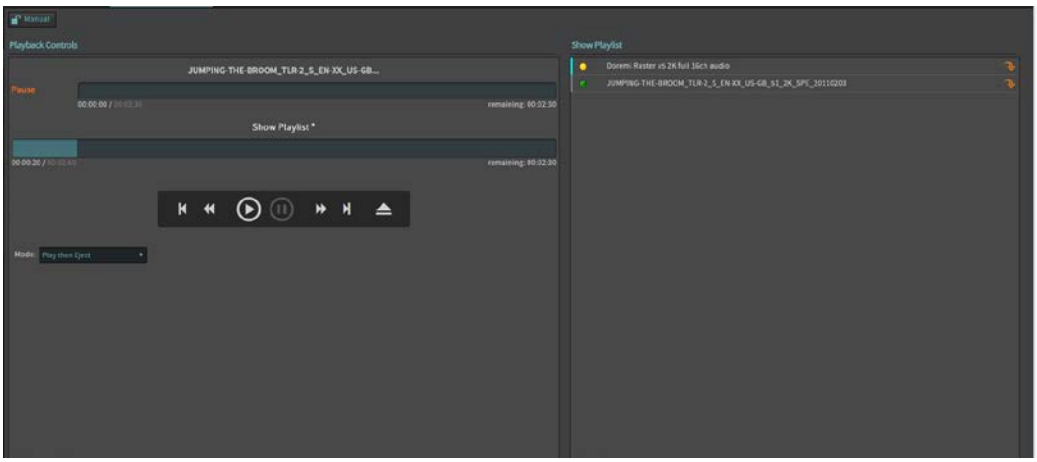

Figure 8-5 CineLister

Configuring cinema audio on the Dolby IMS3000

The Dolby IMS3000 contains a cinema audio processor. This processor has basic 5.1 and Dolby Surround 7.1 functionality. With a license you can unlock and configure the Dolby IMS3000 for Dolby Atmos audio.

The Dolby IMS3000 can be configured using Dolby Atmos Designer v3.1 for Auto EQ and AES67 output to Dolby DAC3202, Dolby Multichannel Amplifier, or other compliant devices.

Note: The Dolby DAC3201 uses a different protocol and is not supported for use with the Dolby IMS3000.

9.1 Default audio configuration

You can configure the default audio settings on the Dolby IMS3000.

You need SuperUser privileges to complete the operations performed in this chapter. You need administrator or installer privileges to configure the equalizer (EQ) settings.

9.1.1 Configuring the DCP default audio configuration

You can configure the internal default audio configuration on the Dolby IMS3000.

To configure the internal default audio configuration:

1. In the **Status** window, click **Cinema Audio**.
2. Click **Default Audio Configuration**.
3. Use the up and down arrows to adjust the audio delay value.
4. Select the **EQ Preset** drop-down menu, and select an available preset. This selection is AutoEQ by default.

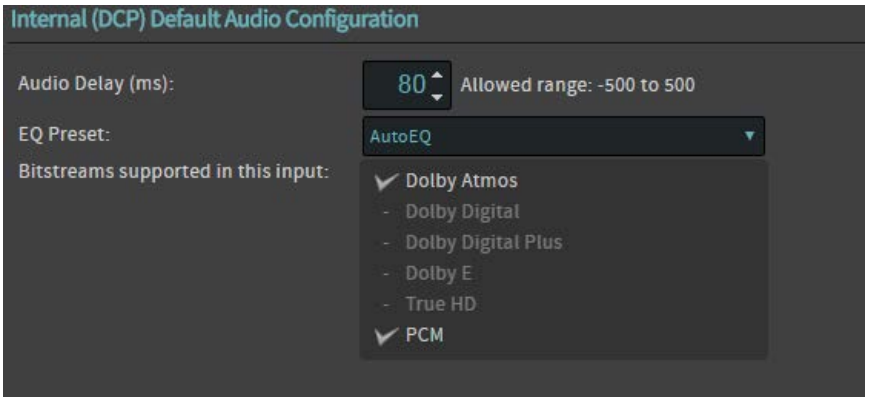

Figure 9-1 DCP default audio configuration section

5. Click **Save All**.

9.1.2 Configuring the HDMI default audio

You can configure the HDMI default audio configuration on the Dolby IMS3000.

To set the HDMI default audio configuration:

1. In the **Status** window, click **Cinema Audio**.
2. Click **Default Audio Configuration**.
3. Use the up and down arrows to adjust the audio delay value.
4. Select the **EQ Preset** drop-down menu, and select an available preset.
5. Use the bar to adjust the surround processing between discrete and one of the available upmix levels.
6. Select the **Derive LFE** drop-down menu, and select **On** or **Off**. **On** indicates that the system uses logic to create an LFE (Low Frequency Effects) channel on a 2 channel input.

Figure 9-2 HDMI default audio configuration section

7. Click **Save All**.

9.1.3 Configuring the SDI default audio configuration

You can configure the SDI default audio on the Dolby IMS3000.

To set the SDI default audio configuration:

1. In the **Status** window, click **Cinema Audio**.
2. Click **Default Audio Configuration**.
3. Use the up and down arrows to adjust the audio delay value.
4. Select the **EQ Preset** drop-down menu, and select an available preset.
5. Use the bar to adjust the surround processing between discrete and one of the available upmix levels.
6. Select the **Derive LFE** drop-down menu, and select **On** or **Off**. **On** indicates that the system uses logic to create an LFE (Low Frequency Effects) channel on a 2 channel input.

Figure 9-3 SDI default audio configuration section

7. Click **Save All**.

9.1.4 Configuring the nonsync default audio

You can configure the nonsync default audio configuration on the Dolby IMS3000.

To set the nonsync default audio configuration:

1. In the **Status** window, click **Cinema Audio**.
2. Click **Default Audio Configuration**.
3. Use the up and down arrows to adjust the audio delay value.
4. Select the **EQ Preset** drop-down menu, and select an available preset.
5. Use the bar to adjust the surround processing between discrete and one of the available upmix levels.
6. Select the **Derive LFE** drop-down menu, and select **On** or **Off**. **On** indicates that the system uses logic to create an LFE (Low Frequency Effects) channel on a 2 channel input.

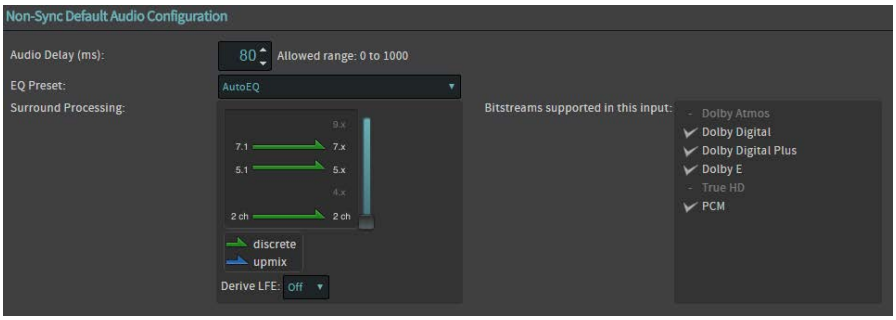

Figure 9-4 Nonsync default audio configuration section

7. Click **Save All**.

9.1.5 Configuring the streamit default audio

You can configure the streamit default audio configuration on the Dolby IMS3000.

To set the Streamit default audio configuration:

1. In the **Status** window, click **Cinema Audio**.
2. Click **Default Audio Configuration**.
3. Use the up and down arrows to adjust the audio delay value.
4. Select the **EQ Preset** drop-down menu, and select an available preset.
5. Use the bar to adjust the surround processing between discrete and one of the available upmix levels.
6. Select the **Derive LFE** drop-down menu, and select **On** or **Off**. **On** indicates that the system uses logic to create an LFE (Low Frequency Effects) channel on a 2 channel input.

Figure 9-5 Streamit default audio configuration section

7. Click **Save All**.

9.2 Configuring AES inputs and outputs

The Dolby IMS3000 **AUX AES** connector supports AES digital audio input and output. The **AUX AES** input supports AES3-EBU (balanced), or S/PDIF (unbalanced). There are no analog inputs or outputs on the Dolby IMS3000.

If the input source is analog, use an analog-to-digital converter. If analog output is required, use a digital-to-analog converter.

Refer to the *Dolby IMS3000 installation manual* for instructions on operating the Dolby IMS3000.

9.2.1 Configuring AES inputs

You can configure the AES input configuration on the Dolby IMS3000.

To configure the AES inputs:

1. In the **Status** window, click **Cinema Audio**.
2. Click **AES Inputs/Ouputs**.
3. Select the **AES Input 1** drop-down menu, and then select the input device.
   If necessary, select the **Balanced** check box.
4. Select the **AES Input 2** drop down-menu, and then select the input device.
   If necessary, select the **Balanced** check box.
5. Click **Save**.

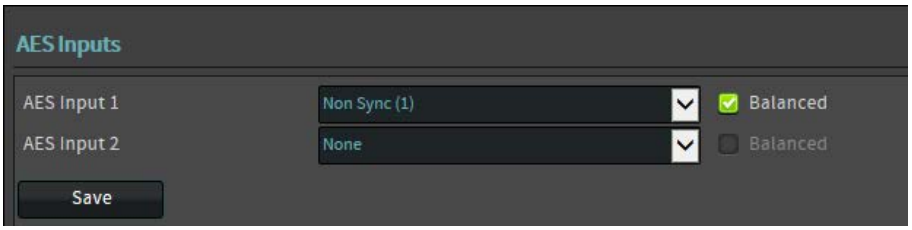

Figure 9-6 AES input section

9.2.2 Configuring AES outputs

You can configure the AES outputs on the Dolby IMS3000.

To configure the AES outputs:

1. In the **Status** window, click **Cinema Audio**.
2. Click **AES Inputs/Ouputs**.
3. Select the **AES Output 1 Ch 1** drop-down menu, and select the device.
4. Select the **AES Output 1 Ch 2** drop-down menu, and select the device.
5. Select the **AES Output 2 Ch 1** drop-down menu, and select the device.
6. Select the **AES Output 2 Ch 2** drop-down menu, and select the device.
7. Click **Save**.

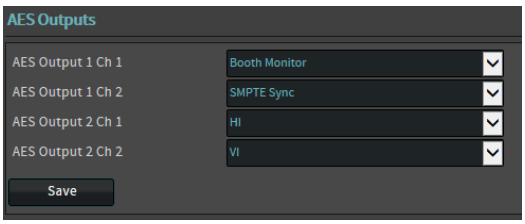

Figure 9-7 AES output section

9.3 Configuring the microphone

You can configure the microphone on the Dolby IMS3000.

To configure the microphone:

1. In the **Status** window, click **Cinema Audio**.
2. Click **Microphone**.
3. Adjust the gain value using the up and down arrows in the **Gain** section.
4. Adjust the audio delay value using the up and down arrows in the **Audio Delay (ms)** section.
5. Select the **EQ Preset** drop-down menu, and select an available preset.
6. Select the **Output Channels** drop-down menu, and then select the output location.

Figure 9-8 Microphone audio configuration window

7. Click **Save**.

9.4 Configuring equalization settings

You need administrator or installer privileges to access the **Equalization** tab of the **Cinema Audio** section.

In the **Equalization** screen, the installer can adjust the equalization settings for each speaker and array.

Note: You cannot edit the AutoEQ preset parameters. However, you can save a copy of these parameters under a different name, and make changes to the copy.

Figure 9-9 Automatic equalization screen

9.4.1 Adding an equalization preset

To add a new equalization preset:

1. Select the drop-down menu, and select the automatic EQ (**AutoEQ**) preset or a copy of a previously created customized preset.
2. Enter a name for your new preset, and then click **Ok** to save your new preset.
3. Click **Edit**.

   The equalization parameters are now activated for editing.
4. Configure the desired parameters in the equalization screen.

   After configuring the desired parameters, click **Save** to create your new preset.

   You can delete a customized preset by clicking **delete**.

Figure 9-10 EQ preset

9.4.2 Loading or editing an equalization preset

To load an existing preset:

1. Select the desired preset in the EQ presets menu.

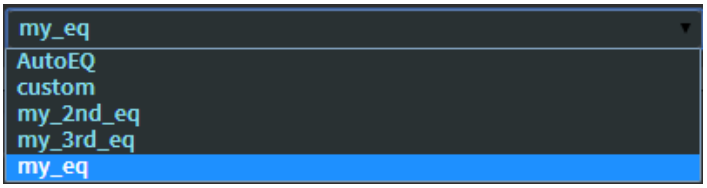

Figure 9-11 Load an EQ preset

You can use the loaded preset for equalization, or you can edit the parameters for one of your customized presets, as described next.

If you want to edit one of your customized presets, select the preset and click **Edit**. You cannot edit the **AutoEQ** preset. You can make a copy and save it under a different name.

After you click **edit**, a warning message appears.

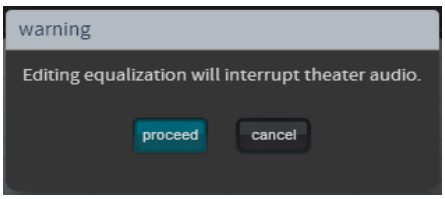

Figure 9-12 Editing equalization warning message

2. Click **proceed** to edit your preset.

   The equalization parameters are now activated for editing.

Figure 9-13 Equalization parameters activated for editing

3. Configure the desired parameters in the **equalization** screen.

4. After configuring the desired parameters, click **Save** to finalize your changes to the existing preset.

Note: You can delete a customized preset by clicking **delete**. You cannot delete the **AutoEQ** preset.

9.4.3 Equalization parameters

Following is a detailed description of all the parameters that appear in the **equalization** screen. You can configure these parameters for customized presets when you click **edit**.

Generating a test signal

1. Select the test signal you want the system to play.
2. Choose the **Speakers** or **Array** that you want the test signal to be output. You can select from the drop-down menu or use the arrow buttons to scroll through the list.

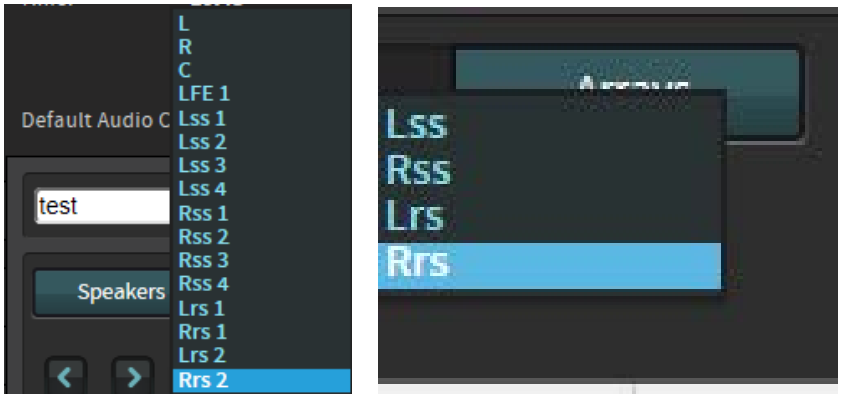

Figure 9-14 Speaker and array feeds

1. Select **on** or **off** to enable the playback of the test signal.

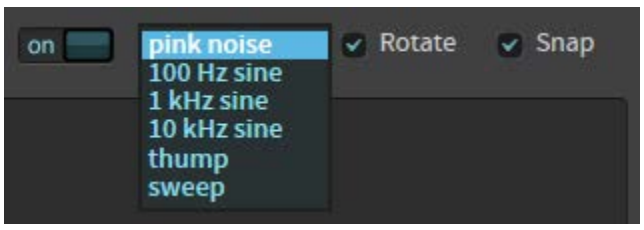

Figure 9-15 Test signal generator

When you click **on**/**off** to enable the signal generator and select **pink noise**, you can configure the system to automatically pan pink noise through each channel sequentially using the **Rotate** and **Snap** options:

- **Rotate**: Pans the signal through each channel sequentially, maintaining a continuous panning volume. As the signal in one channel starts to end, the signal in the next channel begins, so the signals overlap in a smooth fashion.
- **Snap**: Pans the signal through each channel sequentially, one channel at a time, with only one signal present at any time. After one signal ends, the next signal begins.

The default output level for pink noise, as well as for the thump and sine signal tones, is –30 dBFS. The default output level for the sweep signal tone is –40 dBFS.

Speakers and array feeds

Select a speaker or array to edit the EQ Parameters of that output.

Bypass equalizer

This parameter specifies that the system bypasses the automatic EQ parameters and uses the default preset. You can select **on**/**off** to enable or disable this parameter.

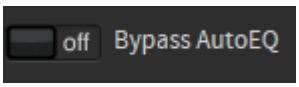

Figure 9-16 Bypass AutoEQ

Note: When you select **on**, the system bypasses automatic EQ only for the speaker or array you are currently using (as specified in the speaker/array feeds drop-down menus.)

All output levels

In the **All output levels** screen, you can adjust the output levels for each speaker or array in your preset EQ. Select an individual speaker or array by clicking on it. You can move the slider with the mouse or use the up and down arrow keys to specify output levels. In addition, you can generate signals in this screen.

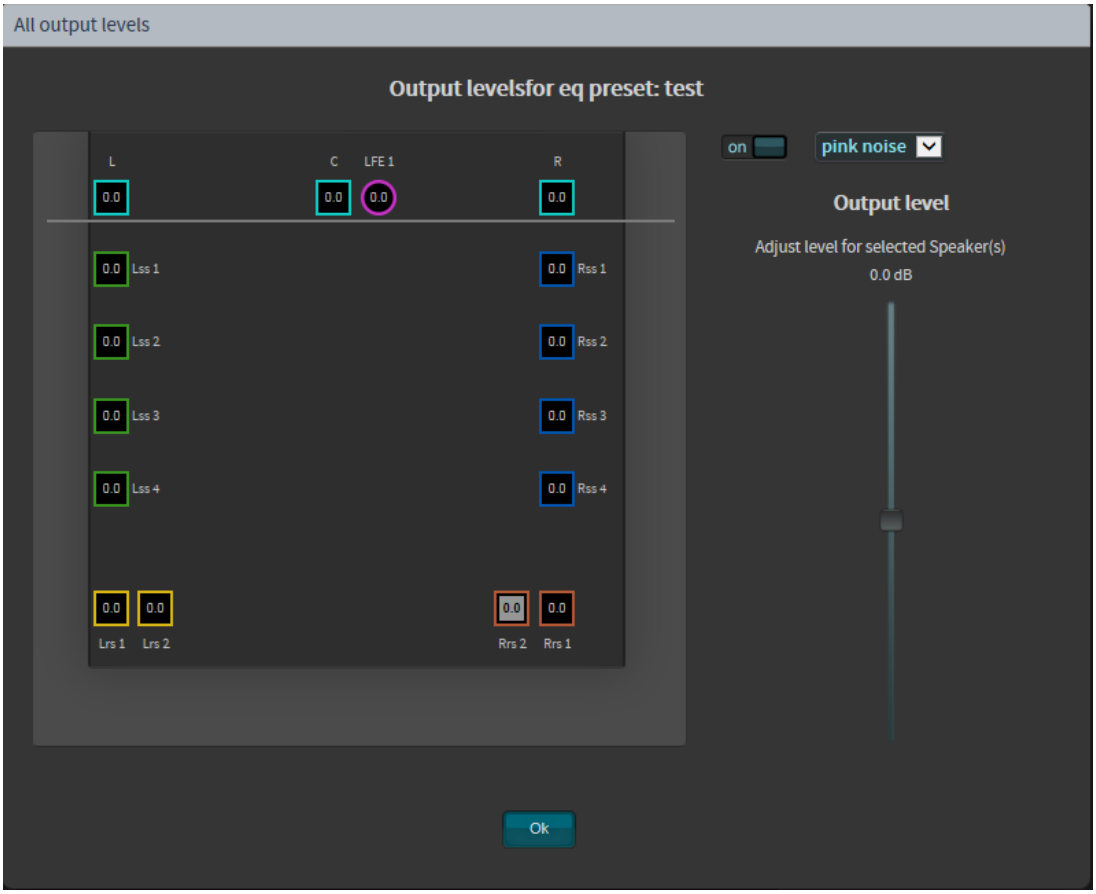

Figure 9-17 All output levels screen (speakers and arrays)

Copy speaker equalizer

In the **Copy speaker eq,** screen you can copy manual speaker EQ settings from one source to one or more destinations.

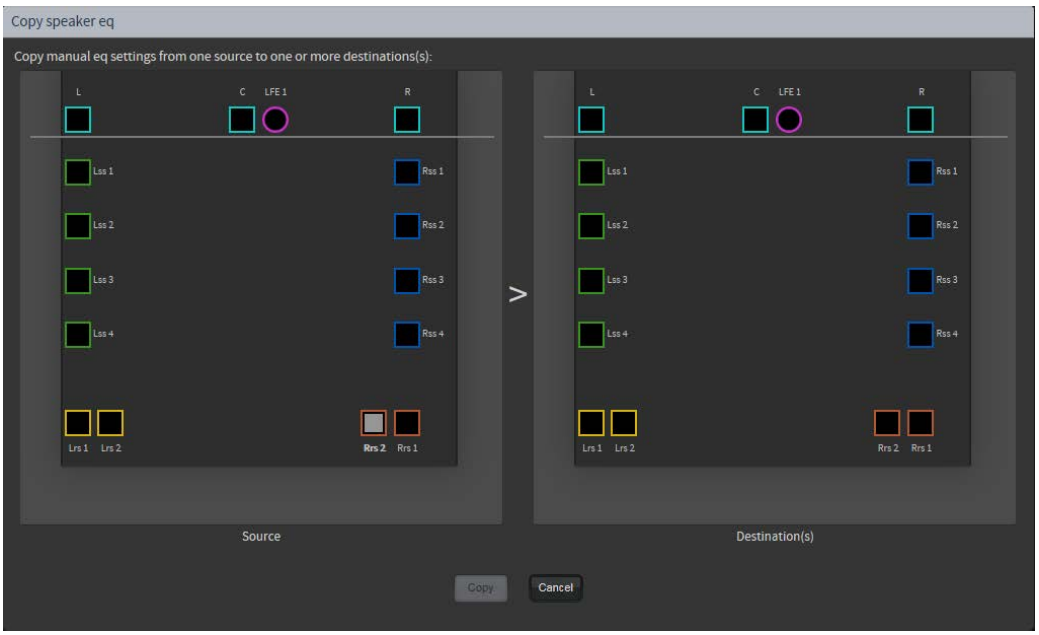

Figure 9-18 Manual speaker EQ

Real-time analyzer equalizer display slider

You can use the slider or the up and down arrows to change the scale of the Real-time analyzer display.

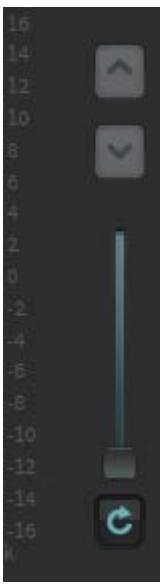

Figure 9-19 Manual speaker EQ

Graphic equalizer

The Graphic equalizer is a standard 1/3 Octave control. Use each slider in the graphic equalizer screen to adjust the gain throughout the range of frequencies, as shown on the real-time analyzer EQ display. Select **flatten** to flatten the curve.

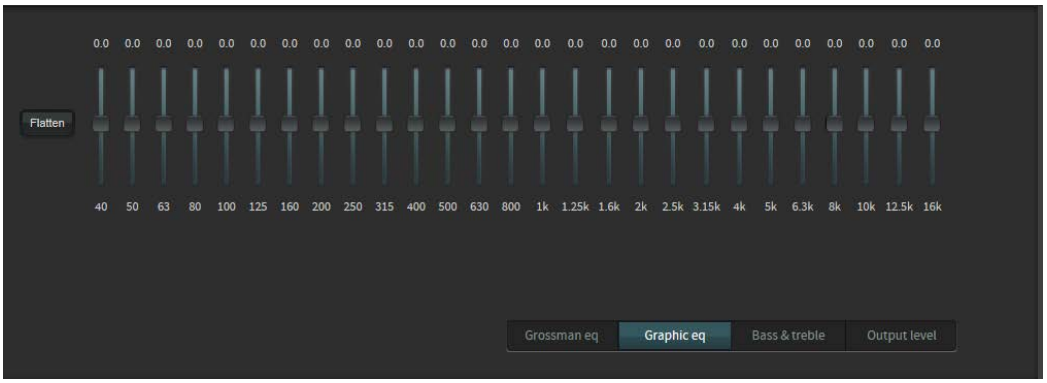

Figure 9-20 Graphic equalizer

Bass and treble

Use the **Bass** and **Treble** sliders to adjust the settings. Click **Flatten** to flatten the selected curve.

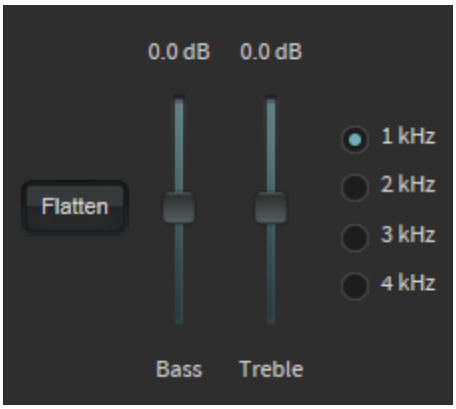

Figure 9-21 Bass and treble

Output level

Use the output-level slider to adjust the output level. Select **flatten** to flatten the output level.

Figure 9-22 Output level

Grossman equalizer

The Grossman equalizer is a new function available in the Dolby IMS3000 that allows more accurate control of frequencies. At the top of the box is a slider that can be used to zoom in and out as needed to configure down to a 1/12 octave level. Use each slider in the Grossman equalizer screen to adjust the gain throughout the range of frequencies, as shown on the real-time analyzer EQ display. Select **Flatten** to flatten the curve.

Figure 9-23 Grossman equalizer

9.5 Auditorium audio configuration summary

In the **Auditorium** tab of the **Cinema Audio** window, you can view the summary of the audio configuration in the auditorium. This information is entered via Dolby Atmos Designer software (3.1 or later).

Speakers are displayed according to their x and y coordinates.

Figure 9-24 Auditorium configuration display (room view)

Figure 9-25 Auditorium configuration display (room view with crossovers)

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 carrying the low frequency information) if bass management is applied.

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

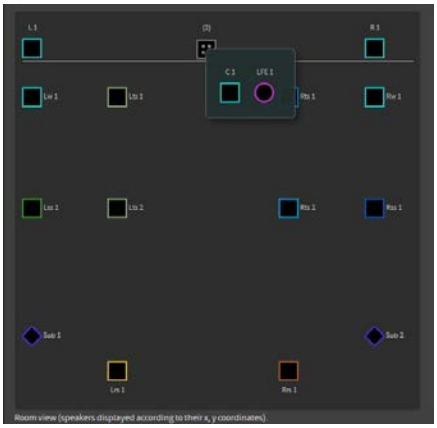

Figure 9-26 Hover mouse to display additional information

9.6 Routing configuration summary

In the **Routing** tab of the **Cinema Audio** window, you can view the summary of the routing configuration.

The routing screen appears. In this screen, the output routing channel is identified within each icon. Only digital outputs are supported on the Dolby® IMS3000. AES67 outputs or AES3 outputs can be used.

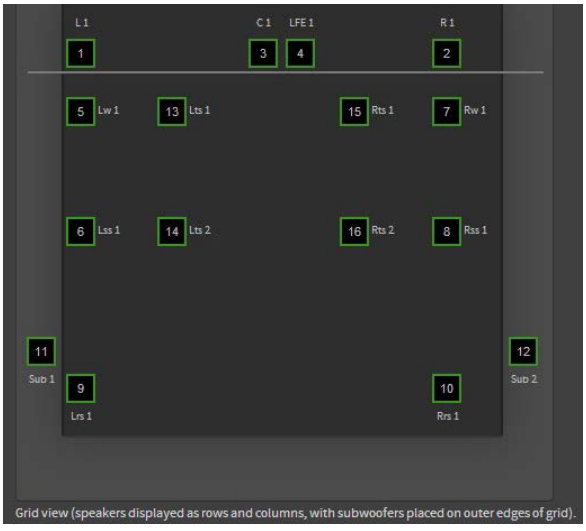

Figure 9-27 Routing screen

When you hover your mouse on any of the 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.

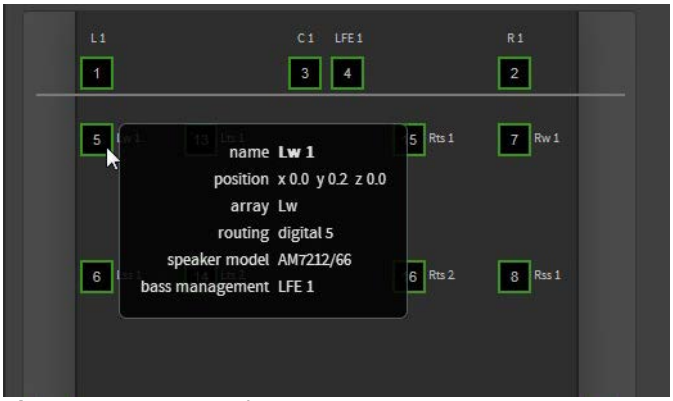

Figure 9-28 Routing screen

9.7 Array delays configuration summary

In the **Array Delays** tab of the **Cinema Audio** window, you can view the summary of the array delays configuration.

The **surround speaker array delays** screen appears. When used, the Dolby Atmos Designer software automatically creates the surround delay values. If you are manually configuring the EQ without the use of Dolby Atmos Designer, you need to put in surround array delays manually.

If you place a check mark in the **use configuration file values** box, the system uses the automatic EQ values. When this box is not checked, you can enter the desired delay values and then click **apply**.

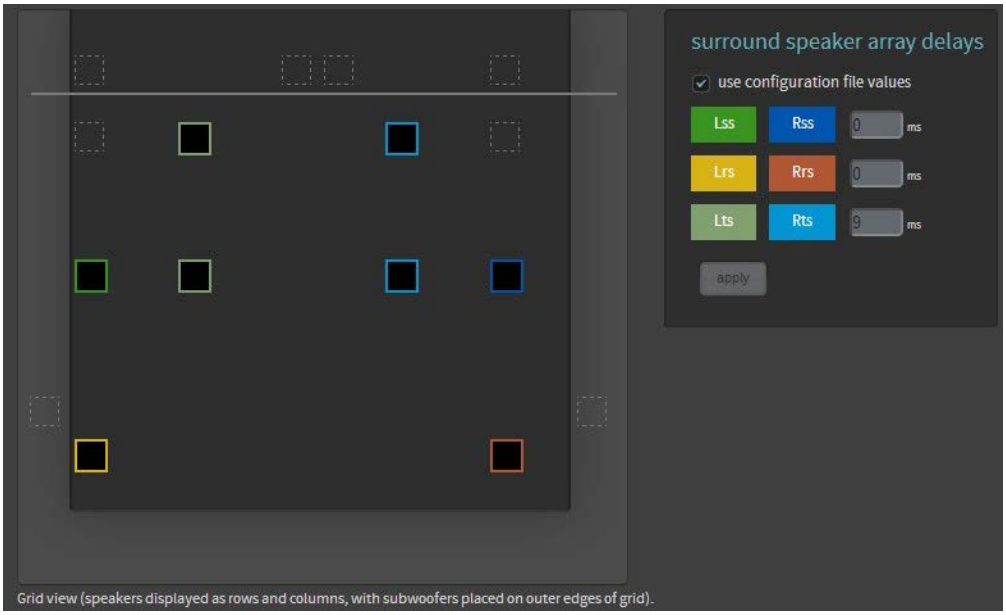

Figure 9-29 Array delays summary window

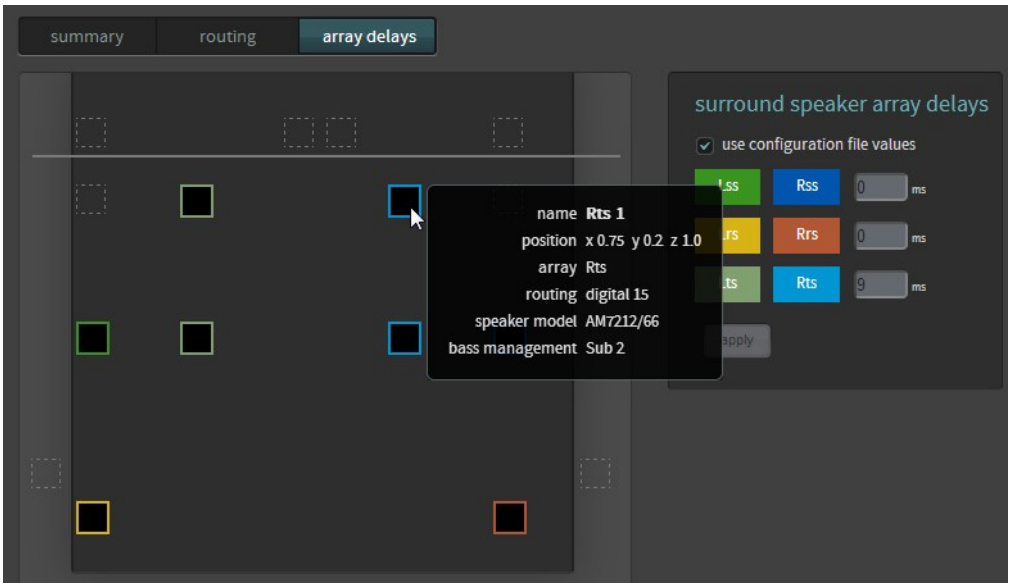

Figure 9-30 Hover mouse to display

Working with the diagnostics tool

The diagnostics tool application allows you to view information about the hardware versions, networking, product information, and software versions on the Dolby IMS3000. You can also generate a detailed report.

10.1 Viewing the Dolby IMS3000 diagnostics

You can view the Dolby IMS3000 diagnostics.

To view the diagnostics of the Dolby IMS3000:

1. In the **Status** window, click **Diagnostics**.
2. Click **Hardware Versions** to view information about the hardware.
3. Click the **Networking** tab to view the IP addresses of **eth0**, **eth1**, and **eth2**.
4. Click **Product Information** to view this product information:
   - Product name
   - Serial number
   - Main software version
   - Main firmware version
   - Web UI version
   - Bundle version
5. Click **Software Versions** to view the current Dolby IMS30000 software version.

10.2 Generating a detailed report

A detailed report contains information about the Dolby IMS3000 and any errors that may have occurred. The detailed report can be reviewed by the user, or provided to Dolby Cinema Technical Support, which uses this information to analyze and provide solutions to problems.

To generate a detailed report:

1. In the **Status** window, click **Diagnostics**.
2. Click **Detailed Report**.
3. Click **OK.**

   The report is saved to a location on your computer.

Working with the log viewer

The Log Viewer allows you to view various notifications and records about the system, such as package installations, playback, maintenance, errors, and more.

11.1 Viewing the last package logs

The **Last Packages Logs** tab allows you to view each step in the installation process of the last package. In case of a failure, the **Last Packages Logs** tab indicates where a failure occurred.

To view the **Last Packages Logs** tab:

- Click **Log Viewer**.

Figure 11-1 Last packages logs window

11.2 Viewing log records

The **Log Records** tab allows you to search through past events on the system. You can also filter the logs by **Class** or **Date**, or use the **Advanced Filtering** option.

To view the **Logs Records** tab:

- Click **Log Viewer**.

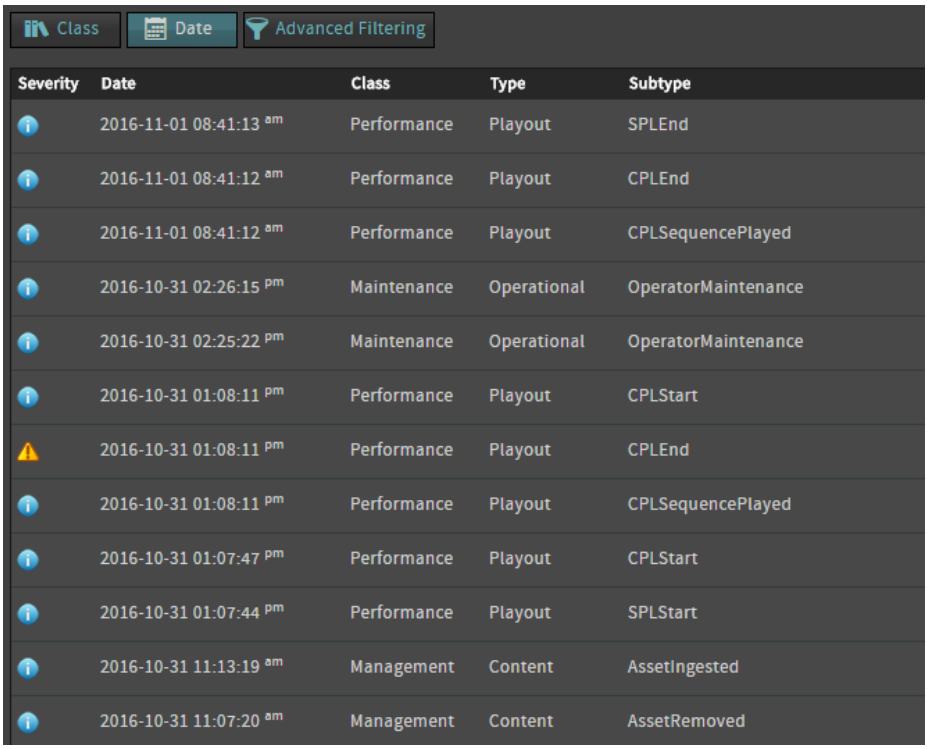

Figure 11-2 Log records window

11.2.1 Filtering the logs by class

Use the **Log Viewer** to filter the logs by class.

To filter the logs by class:

1. In the **Status** window, click **Log Viewer**.
2. Click **Log Records**.
3. Click **Class**.
4. Select the **Class** drop-down menu, and then select the class.
5. Select the **Type** drop-down menu, and select the type.
6. Select the **Subtype** drop-down menu, and select the subtype.
7. Click **Ok**.

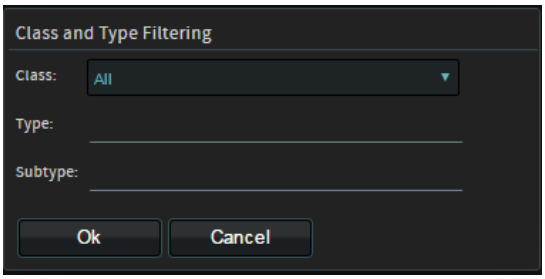

Figure 11-3 Class and Type Filtering window

11.2.2 Filtering the logs by date

Use the **Log Viewer** to filter the logs by date.

To filter the logs by date:

1. In the **Status** window, click **Log Viewer**.
2. Click **Log Records**.
3. Click **Date**.
4. Select the **Date Range** drop-down menu, and then select the starting date and ending date.
5. Click **Ok**.

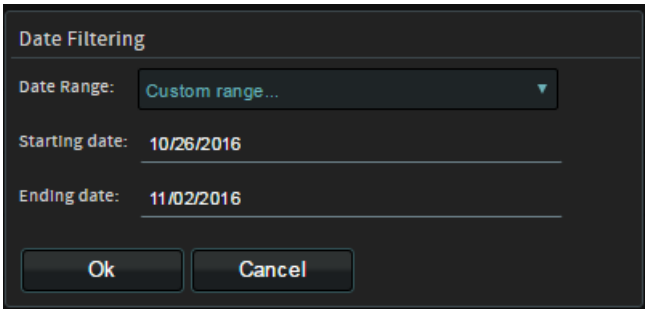

Figure 11-4 Date filtering window

11.2.3 Using advanced filtering

Use the **Log Viewer** for advanced filtering.

To use the advanced filtering option:

1. In the **Status** window, click **Log Viewer**.
2. Click **Log Records**.
3. Click **Advanced Filtering**.
4. Select the **Database** drop-down menu, and then select the database.
5. Select the **Severity** drop-down menu, and then select the severity level.
6. Enter the **Low record Id** in the **Id Range** field.
7. Enter the **High record Id** in the **Id Range** field.
8. Enter the creator in the **Creator** field.
9. Enter a keyword in the **Keyword** field.
10. Enter the device ID in the **Device Id** field.
11. Click **Ok.**

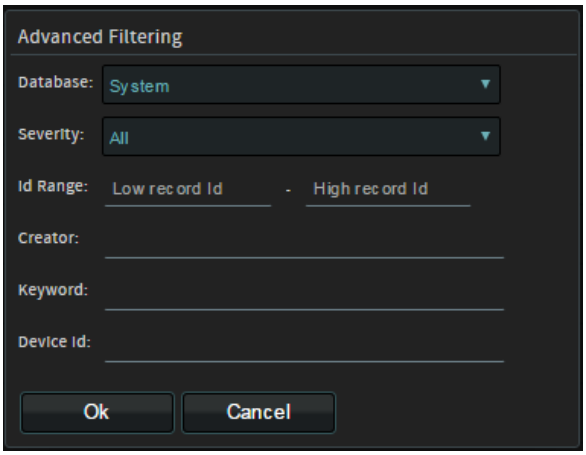

Figure 11-5 Advanced filtering window

11.3 Downloading logs

The **Log Download** tab allows you to download the logs from the Dolby IMS3000.

You need manager privileges to download logs:

1. In the **Status** window, click **Log Viewer**.
2. Click **Log Download**.
3. Click **New**.

   If necessary, enter the title of the log in the **Log Title** field.
4. Select the **Database** drop-down menu, and then select the database from which to download the log.
5. Select the starting date and ending date.

   If necessary, select the **CPL Id** or **KDM Id** drop-down menu, and then select the CPL or KDM from the list.
6. Click **Create**.
7. Hover over the log file, and click on the download icon to download the file, or click on the delete icon to delete the file.

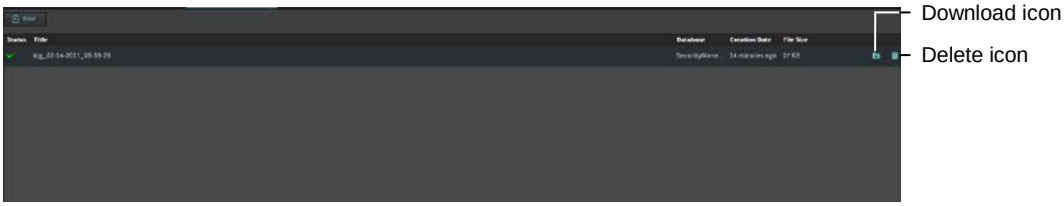

Figure 11-6 Log download

11.4 Viewing notifications

The **Notifications** tab allows you to view the notifications on the Dolby IMS3000.

1. In the **Status** window, click **Log Viewer**.
2. Click **Notifications**.

   If necessary, select the notification and click **Mark as Read**. To select all notifications, select the **Select all** check box.

Figure 11-7 Notifications

Maintaining the Dolby IMS3000

The Dolby IMS3000 has several tools that help you maintain the system and recover from failures by backing up and restoring settings.

You need SuperUser privileges to complete the operations performed in this chapter.

12.1 Configuring the automatic log upload manager

The automatic log upload manager allows you to set a time for the Dolby IMS3000 to upload system logs to a remote location over the network.

To configure the automatic log upload manager:

1. In the **Status** window, click **Setup and Maintenance**.
2. Click **Maintenance**.
3. Click **Add**.
4. Enter the name of the server where the logs are uploaded to in the **Name** field.
5. Enter the Universal Resource Locater (URL) of the server where the logs are uploaded to in the **URL** field.
6. Enter the user name and password associated with the server the logs are uploaded to in the **Username** and **Password** fields.
7. Select the types of logs to upload to the server.
8. Select the frequency and time to automatically upload logs.
9. Select the file name.

   The default naming convention is set. You can change the naming convention by selecting **Custom** from the drop-down menu and entering the naming convention you prefer.
10. Click **Save**.

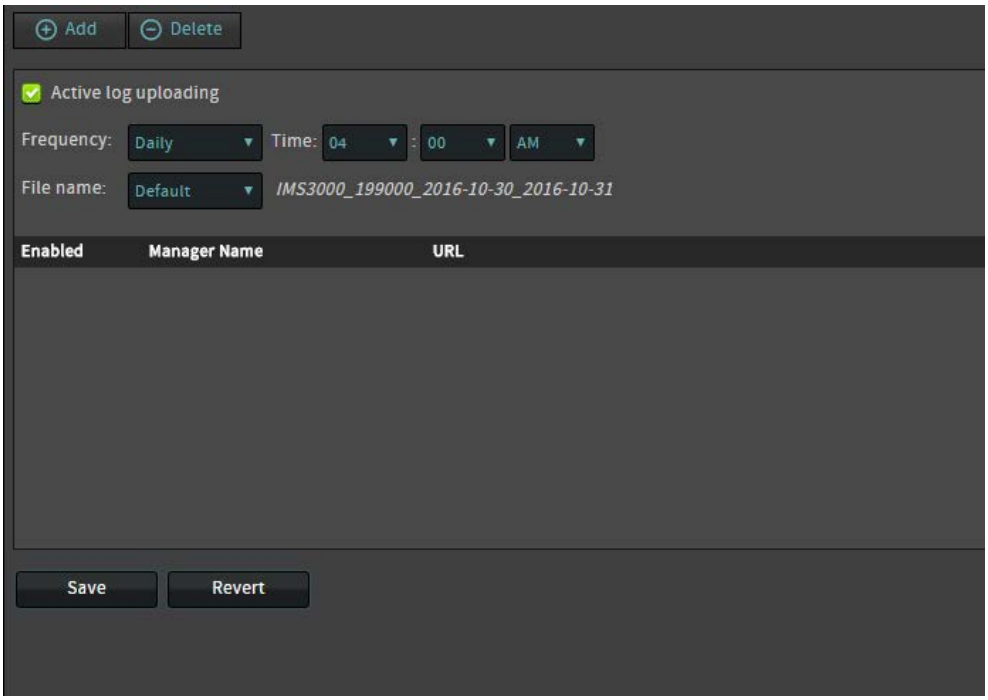

Figure 12-1 Automatic log upload manager window

12.2 Configuring the backup manager

The Backup Manager allows you to generate a new backup file to a specified location on the local storage of the Dolby IMS3000 or external device (USB or eSATA).

Note: The Backup Manager only generates a backup file for the SMS functions of the Dolby IMS3000. Backup and restoration of the cinema audio processor is shown in Section 12.3.

12.2.1 Generating a backup file

Use the Backup Manager to generate a backup file.

To generate a backup file:

1. In the **Status** window, click **Setup and Maintenance**.
2. Click **Maintenance**.
3. Click **Backup Manager**.
4. Click **Generate,** and then select the location to upload the file.

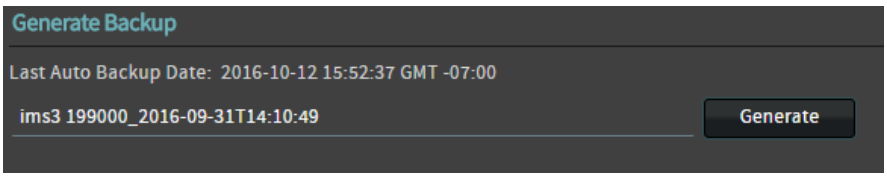

Figure 12-2 Generate backup file window

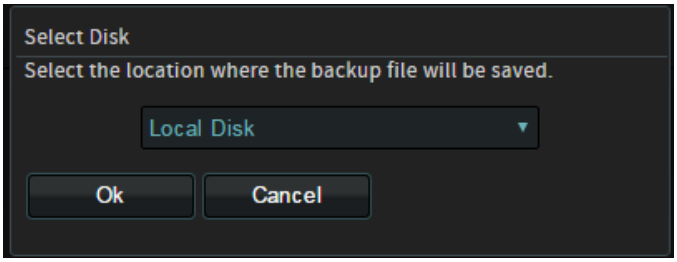

Figure 12-3 Location selection window

5. Click **Ok.**
6. Click **Close**.

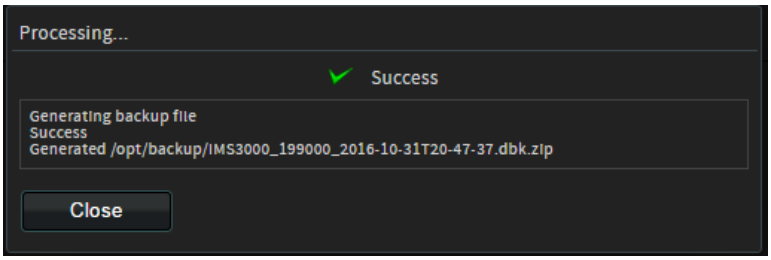

Figure 12-4 Backup generation window

12.2.2 Restoring a backup file

Use the Backup Manager to restore a backup file.

To restore a backup file:

1. In the **Status** window, click **Setup and Maintenance**.
2. Click **Maintenance**.
3. Click **Backup Manager**.

   If necessary, select the **Location** drop-down menu, and then select the location where the backup file is stored.
4. Hover over the backup file, and then click **Restore this backup** file to restore.

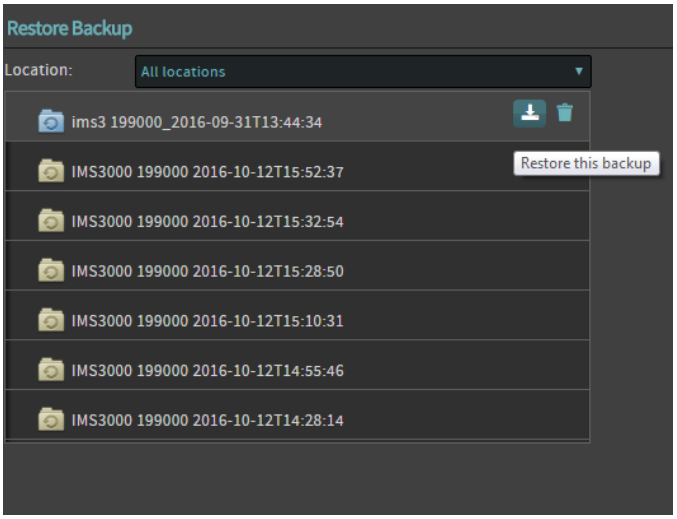

Figure 12-5 Restore backup window

5. Select the categories from the backup file to restore to the system.

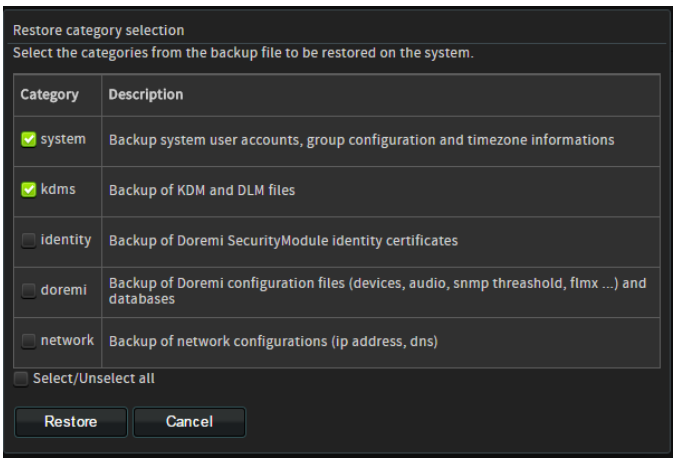

Figure 12-6 Category selection window

6. Click **Restore**.
7. Click **Close.**
8. Reboot the Dolby IMS3000 to apply the changes.

12.2.3 Deleting a backup file

Use the backup manager to delete a backup file.

To delete a backup file:

1. In the **Status** window, click **Setup and Maintenance**.
2. Click **Maintenance**.
3. Click **Backup Manager**.
4. If necessary, select the location where the backup file is stored.
5. Hover over the backup file to delete, and then click **Delete**.

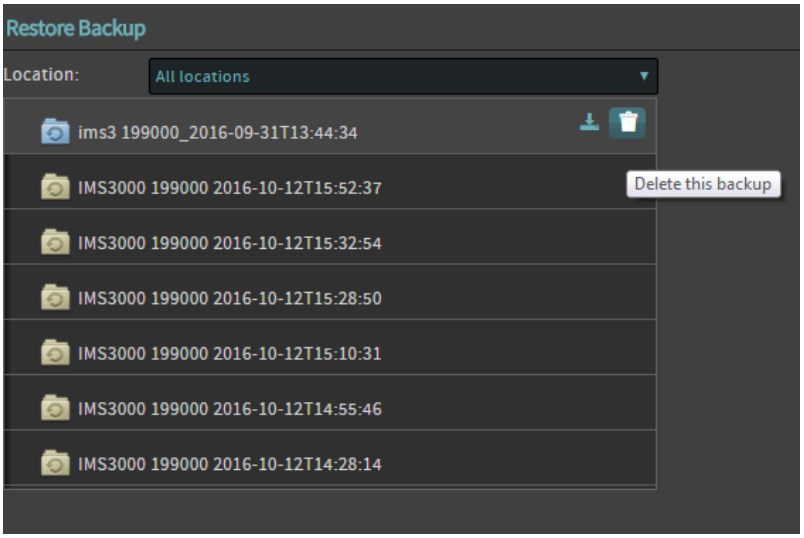

Figure 12-7 Backup files window

6. Click **Ok**.

12.3 CP backup manager

You need administrator or installer privileges to access the **CP Backup Manager** tab of the **Maintenance** section.

The CP backup manager allows you to back up, restore, and reset the audio processor settings of your Dolby IMS3000.

Note:	The CP Backup Manager only generates a backup file for the cinema audio processor. Backup and restoration of the SMS functions is shown in Section 12.2.

12.3.1 Creating a backup file

1. In the **Status** window, click **Setup and Maintenance**.
2. Click **Maintenance**.
3. Click **CP Backup Manager**.
4. You can add additional text to the name of the file.

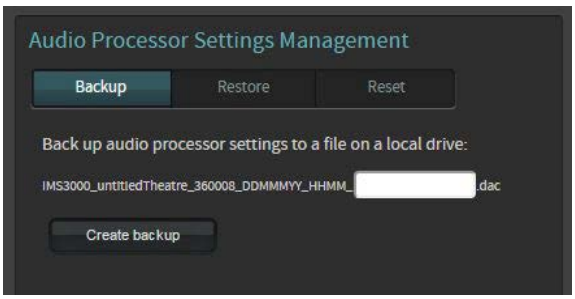

Figure 12-8 CP backup window

5. Click **Create backup** to generate the file

12.3.2 Restoring a backup file

1. In the **Status** window, click **Setup and Maintenance**.
2. Click **Maintenance**.
3. Click **CP Backup Manager**.
4. Click **Restore.**
5. Click **Chose File** to select the restoration file from your computer.
6. Once a valid file is uploaded to the system, you can select the settings you wish to restore.

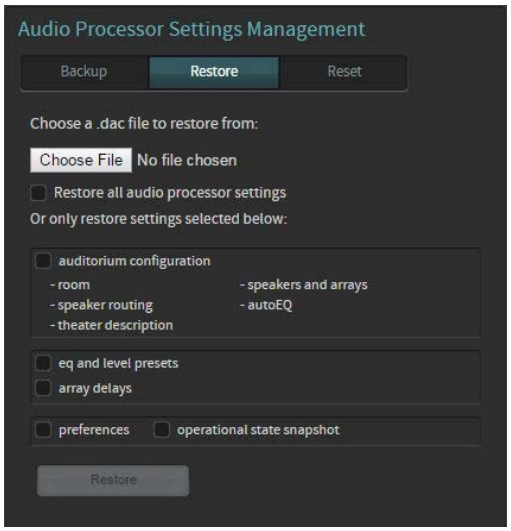

Figure 12-9 CP backup restore window

7. After your selections are made, click **Restore**.

12.3.3 Resetting settings on the Cinema Processor

1. In the **Status** window, click **Setup and Maintenance**.
2. Click **Maintenance**.
3. Click **CP Backup Manager**.
4. Click **Reset.**
5. Select the settings that you want to reset.

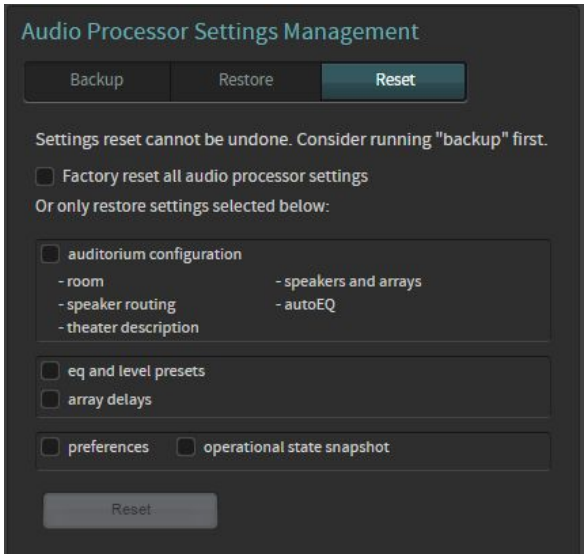

Figure 12-10 CP reset window

6. Click **Reset** to restore the settings back to factory default.

12.4 Recording a maintenance log

The Dolby IMS3000 can create an event log when maintenance is performed and track annual maintenance operations to help you maintain your system.

To record a maintenance log:

1. In the **Status** window, click **Setup and Maintenance**.
2. Click **Maintenance**.
3. Click **Log Operator Maintenance**.
4. Click **New**.
5. Select the subject, and use the **Comment** section to add comments concerning the maintenance performed.
6. Click **Record**.

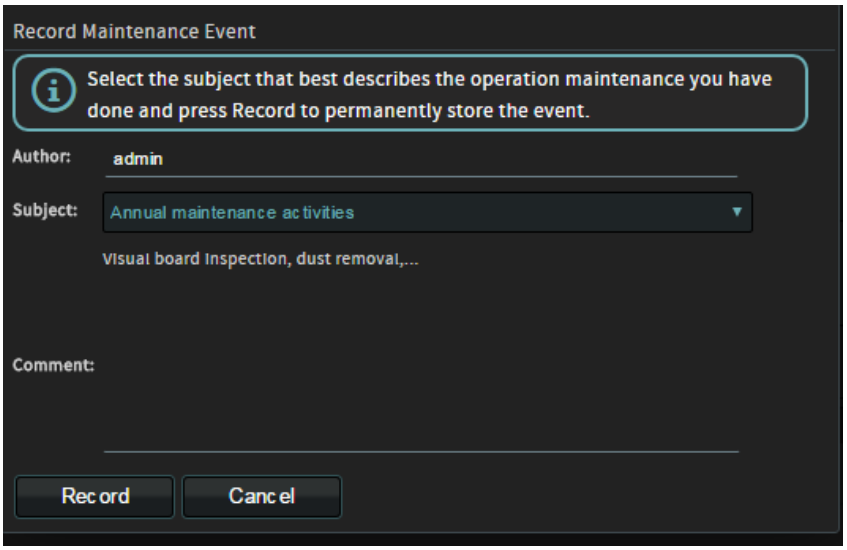

Figure 12-11 Record maintenance event window

12.5 Configuring the threshold manager

The Threshold Manager allows you to configure thresholds for temperatures, voltages, and counters.

12.5.1 Configuring temperatures

Use the Threshold Manager to set the temperatures.

To set the temperatures:

1. In the **Status** window, click **Setup and Maintenance**.
2. Click **Maintenance**.
3. Click **Threshold Manager**.
4. Click **Temperatures**.
5. Adjust the values as desired.
6. Click **Save**.

12.5.2 Configuring voltages

Use the Threshold Manager to set the voltages.

To set the voltages:

1. In the **Status** window, click **Setup and Maintenance**.
2. Click **Maintenance**.
3. Click **Threshold Manager**.
4. Click **Voltages**.
5. Adjust the values as desired.
6. Click **Save**.

12.5.3 Configuring counters

Use the Threshold Manager to set the counters.

To set the counters:

1. In the **Status** window, click **Setup and Maintenance**.
2. Click **Maintenance**.
3. Click **Threshold Manager**.
4. Click **Counters**.
5. Adjust the values as desired.
6. Click **Save**.

12.5.4 Resetting the threshold manager to default settings

Use the threshold manager to reset to default settings.

To reset the threshold manager to the default settings:

1. In the **Status** window, click **Setup and Maintenance**.
2. Click **Maintenance**.
3. Click **Threshold Manager**.
4. Click **Reset to Default**.
5. Click **Reset all values to default**.
6. Click **Ok**.
7. Click **Save**.

Glossary

This table defines the terms used in this documentation.

Table 13-1 Terms

Term	Definition
CPL	Composition playlist
DCI	Digital Cinema Initiatives
DHCP	Dynamic Host Configuration Protocol
EQ	Equalizer
FTP	File Transfer Protocol
GPI	General-purpose input
GPO	General-purpose output
HDCP	High Bandwidth Digital Content Protection
IP	Internet protocol
KDM	Key delivery message
LFE	Low frequency effects
LVDS	Low voltage differential signaling
MXF	Material exchange format
NAS	Network-attached storage
RTC	Real time clock
SNMP	Simple Network Management Protocol
SMPTE	Society of Motion Picture and Television Engineers
SPL	Show playlist
TMS	Theatre Management System
UI	User interface
USB	Universal Serial Bus

Documentation revision history

This table provides the documentation revision history.

Table 14-1 Documentation revision history

Date	Issue	Description
03/16/2017	Issue 1	Initial release