



# Dolby Atmos Production Suite

## Release notes

Software version 2.5.1  
21 April 2017  
Confidential information

## 1 Introduction to the release notes

This documentation covers installation steps, software changes, and known issues for Dolby Atmos Production Suite v2.5.1.

- [About this documentation](#)
- [About Dolby Atmos Production Suite v2.5.1](#)
- [Contacting Dolby](#)

### 1.1 About this documentation

This documentation is for engineers, sound designers, and others who install or use Dolby Atmos software to author sound for digital home theater or VR, and who create Dolby Atmos masters.

For complete information, see the *Dolby Atmos Production Suite guide*.

For a complete list of suite components, see the *Dolby Atmos Production Suite guide* or *Dolby Atmos Production Suite quick start guide*.

### 1.2 About Dolby Atmos Production Suite v2.5.1

This release of Dolby Atmos Production Suite includes new features, improvements, and fixes for using Dolby Atmos Renderer software to author content in Dolby Atmos.

Dolby Atmos Production Suite release highlights:

- First release of the Dolby Atmos Renderer, Dolby Atmos Monitor application, and supporting panner plug-ins under the product name Dolby Atmos Production Suite.

- First standalone Renderer for home theater workflows. (Previously, Renderer v2.2.x and its panner plug-in supported VR workflows only.)
- Includes three panner plug-ins for specific workflows.

*Table 1: Dolby Atmos Production Suite panner plug-ins*

Panner plug-in	Description
Dolby Atmos Panner plug-in	Plug-in that lets you position audio objects for a Dolby Atmos home theater mix. This panner plug-in lets you position audio objects in a three-dimensional audio field.
Dolby Atmos VR Spherical Panner plug-in	One of two plug-ins that let you position audio objects for a Dolby Atmos VR mix. This panner plug-in lets you position objects using a polar coordinate system.
Dolby Atmos VR XYZ Panner plug-in	One of two plug-ins that let you position audio objects for a Dolby Atmos VR mix. This panner plug-in lets you position objects in a three-dimensional audio field.

## 1.3 Contacting Dolby

You can contact Dolby regarding documentation.

If you have questions or comments about this document, please send an email to [documentation@dolby.com](mailto:documentation@dolby.com).

# 2 Installing the Dolby Atmos Production Suite main components

Install the Dolby Atmos Production Suite main components on your Pro Tools workstation. The installer includes the Dolby Atmos Renderer, Dolby Atmos plug-ins, and the Dolby Atmos Monitor application.

- [System requirements](#)
- [Activating your Dolby Atmos Rendering and Mastering license](#)
- [Installing the Dolby Atmos Production Suite required components](#)
- [Establishing communication between the Dolby Atmos Renderer and Pro Tools](#)
- [Launching the Dolby Atmos Renderer and supporting software](#)
- [Selecting an operation mode](#)
- [Considerations when opening Pro Tools sessions authored with older panner plug-ins](#)
- [Workflows for converting home theater and VR mixes](#)

## 2.1 System requirements

Before installing Dolby Atmos Production Suite, ensure that your system configuration meets the requirements.

Dolby Atmos Production Suite has been tested in these configurations:

Pro Tools version	Mac OS X system
12.7	10.12
12.5.2	10.11.6

## 2.2 Activating your Dolby Atmos Rendering and Mastering license

Activate your Dolby Rendering and Mastering license to use the Dolby Atmos Production Suite. We recommend that you activate your license before you install the Production Suite.

### Prerequisites

- Download the iLok License Manager from [www.ilok.com](http://www.ilok.com).
- Ensure that you have iLok authorization for Dolby Rendering and Mastering.

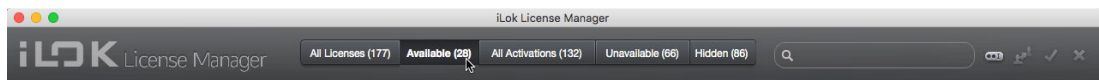
### About this task

This task is performed in the iLok License Manager.

The Dolby Rendering and Mastering license includes an authorization for the Dolby Atmos Renderer software, and the Dolby Renderer Send and Return plug-ins.

### Procedure

1. Launch the **iLok License Manager**.
2. In the iLok License Manager window, sign in to your account, and then click (highlight) your account name in the navigation bar.  
Your account name is shown in the upper-left panel. Your host machine and iLok Universal Serial Bus (USB) devices are shown as icons in the panel below your account information.
3. Click the **Available** tab in the iLok License Manager header.



If you do not see the Available tab, widen the application window until the tab is visible in the header.

The available licenses are shown under the tabs.

4. Locate your license for Dolby Rendering and Mastering, and then drag and drop it to your host machine icon or to the iLok device icon on the left.

## 2.3 Installing the Dolby Atmos Production Suite required components

Install the Dolby Atmos Production Suite required components on a computer running a supported version of Pro Tools software. The installer also includes session templates and supporting documentation.

### Prerequisites

- Ensure that Pro Tools is installed.

- Ensure that the machine meets system requirements.
- Activate your license for Dolby Rendering and Mastering.

### About this task

The installer package includes required applications and plug-ins, as well as a choice for which panner plug-ins you install. Choose panner plug-ins based on your workflow:

- Dolby Atmos Panner plug-in (64-bit .aax file) for Pro Tools that is required for home theater workflows.
- Dolby Atmos VR panner plug-ins (64-bit .aax files) for Pro Tools that are required for VR workflows. This choice installs both the Dolby Atmos VR Spherical Panner and Dolby Atmos VR XYZ Panner.

### Procedure

1. Quit Pro Tools if it is running.
2. If updating Dolby Atmos Renderer and supporting software, ensure the Dolby Atmos Monitor application and the Dolby Atmos Renderer are not running.
3. Double-click the Dolby Atmos Production Suite installer package (Dolby Atmos Production Suite-2.5.1.pkg).
4. Follow the onscreen instructions.
5. Complete installation.

### Results

- All items selected for installation are installed.
- When you install the Dolby Atmos Renderer, templates automatically install in the Pro Tools session templates folder:
  - Home theater templates: ~/Documents/Pro Tools/Session Templates/Dolby Atmos Production Suite
  - VR templates: ~/Documents/Pro Tools/Session Templates/Dolby Atmos VR Production Suite
- When you install documentation, the documentation set is installed on your local drive at ~/Documents/Dolby/Dolby Atmos Renderer Production Suite.

### What to do next

- Establish communication between the Dolby Atmos Renderer and Pro Tools.
- If you are planning to work with VR content, install the Dolby Atmos VR Player on a qualified device. Refer to documentation included with the player. You can download the Dolby Atmos VR Player installer along with the Dolby Atmos VR Player guide from [www.dolby.com/vrtools](http://www.dolby.com/vrtools).

## 2.4 Establishing communication between the Dolby Atmos Renderer and Pro Tools

Start and configure the Dolby Atmos Monitor application to enable communication between the Dolby Atmos Renderer and Pro Tools.

### About this task

You only need to perform this task the first time you use the Dolby Atmos Renderer and Monitor application (or if you subsequently change the Internet Protocol (IP) address or host name in the Dolby Atmos Monitor).

The Dolby Atmos Renderer and the Dolby Atmos Monitor application are located in the Applications/Dolby folder.

### Procedure

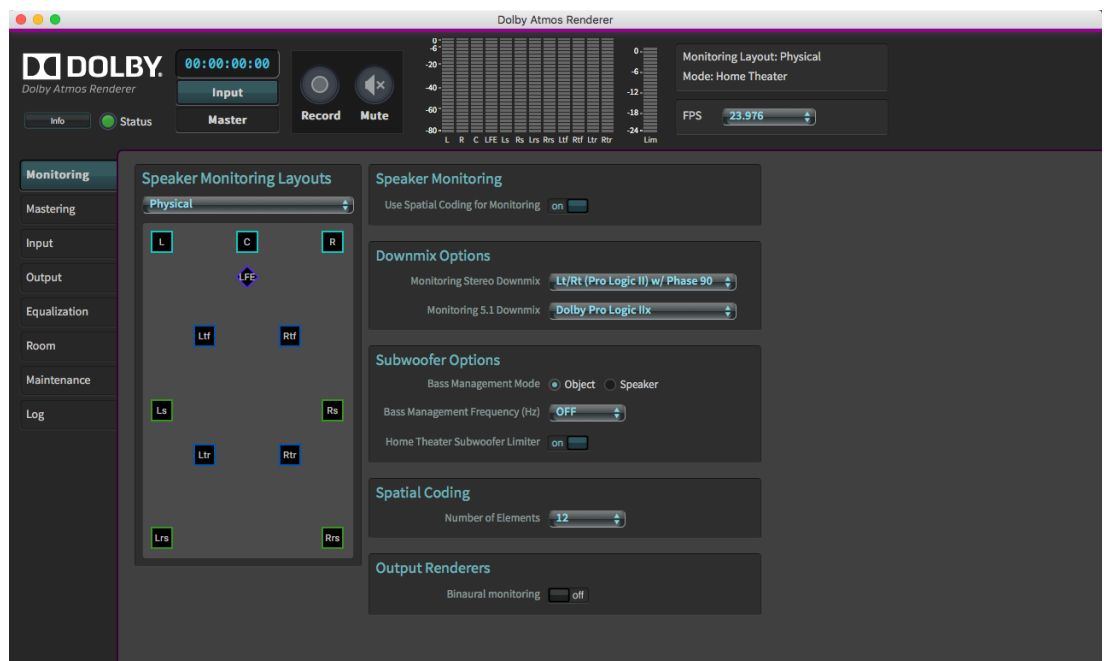
1. Click the Dolby Atmos Renderer icon to launch the renderer.



Dolby Atmos  
Renderer

The Renderer window appears.

Figure 1: Dolby Atmos Renderer window

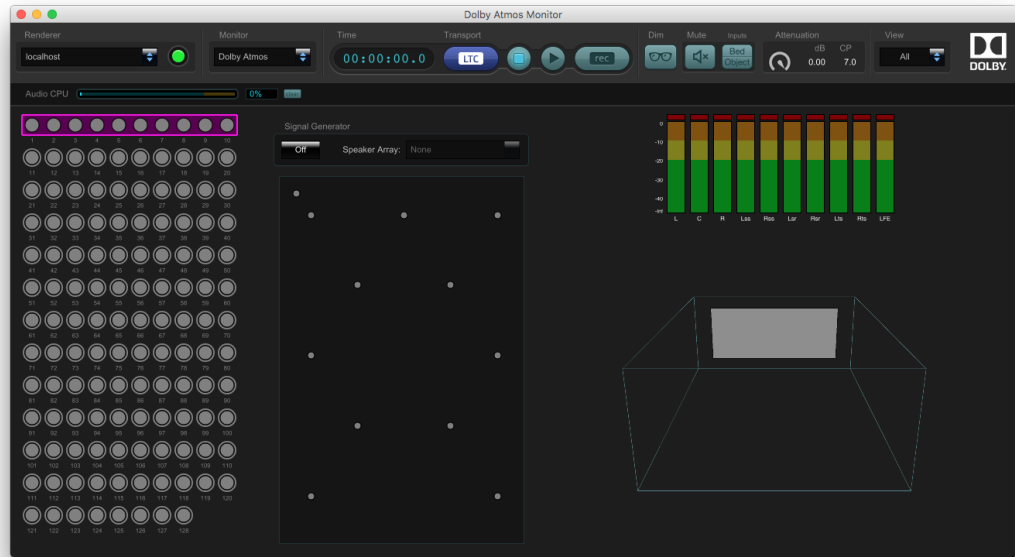


2. Click the Dolby Atmos Monitor icon to launch the Monitor application.



Dolby Atmos  
Monitor


The Monitor application appears.

*Figure 2: Dolby Atmos Monitor window*

3. In the **Renderer** section, ensure that the IP address or host name field is set to your local host (typically, localhost).

### Results

The status indicators turn green on both the Dolby Atmos Monitor application and the Renderer window, and the room configuration displays in the center of the Dolby Atmos Monitor window. This indicates that the Monitor and the Renderer are connected. The connection enables communication between the Dolby Atmos Renderer and Dolby Atmos plug-ins in Pro Tools.


 **Note:** The Monitor application does not need to be open for subsequent use of the Dolby Atmos authoring software.

## 2.5 Launching the Dolby Atmos Renderer and supporting software

Power up your computer, and then launch the Dolby Atmos Renderer and Pro Tools to ensure communication between the Renderer and Dolby Atmos plug-ins in Pro Tools.

### Prerequisites

In the Dolby Atmos Monitor application, the IP address or host name is set to localhost.

 **Note:** The Dolby Atmos Monitor application does not need to be open for the Renderer to communicate with Dolby Atmos plug-ins in Pro Tools.

### Procedure

1. Power on the Pro Tools machine.
2. Launch the Renderer.

The Dolby Atmos Renderer application is located in the Applications/Dolby folder.

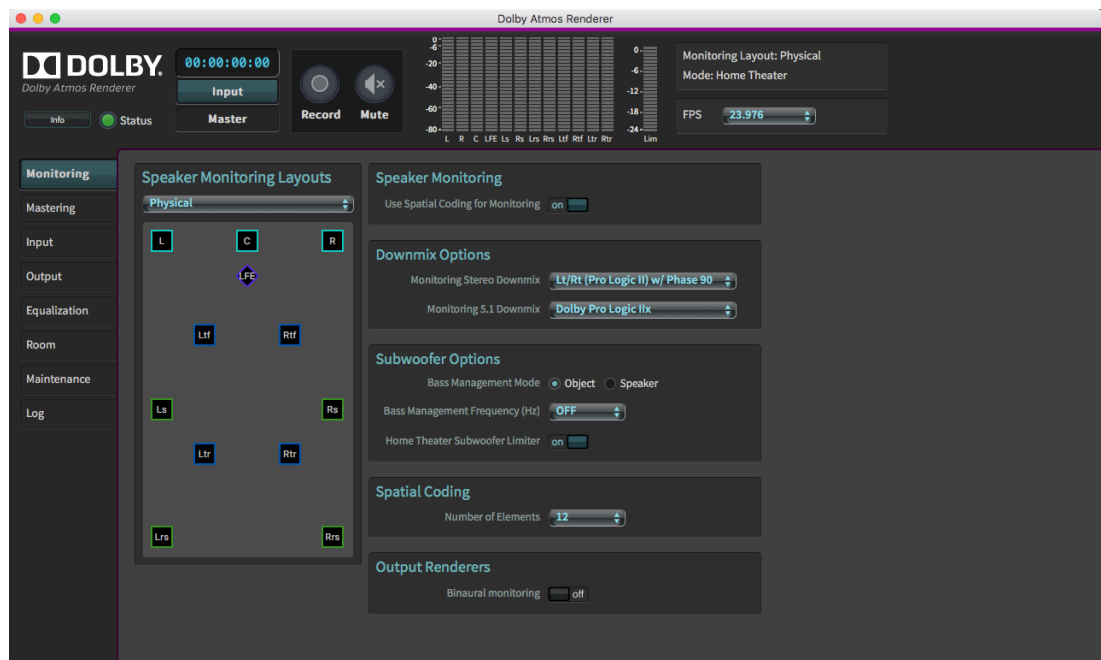
You can click the Dolby Atmos Renderer icon to launch the Renderer.



Dolby Atmos  
Renderer

The Renderer window appears.

*Figure 3: Dolby Atmos Renderer window*



3. Launch Pro Tools.

### What to do next

1. Select an operation mode.
2. Open or create a Pro Tools session configured for Dolby Atmos.

## 2.6 Selecting an operation mode

After launching the Renderer, you can choose the operating mode for your content creation workflow: VR or home theater. Each mode includes features and controls specific to their workflow.

### About this task

Changing modes replaces your current settings with the default settings for the new mode.

### Procedure

1. Choose **Maintenance** in the navigation bar to open the maintenance screen.
2. In the **Mode** section, perform one of these steps:
  - For VR content creation, click (check) **VR**.

- For home theater content creation, click (check) **Home Theater**.
3. For access to the **Settings** menu and additional **Monitoring** controls, click **Expert**.

## 2.7 Considerations when opening Pro Tools sessions authored with older panner plug-ins

When you open a Pro Tools session that was authored with versions of panner plug-ins prior to Dolby Atmos Production Suite panner plug-ins, how the session opens is dependent on the version of the older plug-in, as well as which Dolby Atmos Production Suite panner plug-ins are installed on your system.

*Table 2: Session behavior and panner usage when opening sessions authored with older panner plug-ins*

Panner used in original authoring session	Panners installed with Dolby Atmos Production Suite	Session behavior and panner usage when session is opened with Dolby Atmos Production Suite
Dolby Atmos Panner v1.6.3 or earlier (that is, for a non-VR session)	Dolby Atmos Panner or all three Production Suite panner plug-ins	Opens using a newer version of the Dolby Atmos Panner.
Dolby Atmos Panner v1.6.3 or earlier (that is, for a non-VR session)	Dolby Atmos VR panners	Opens using the Dolby Atmos VR XYZ Panner in top-down cube view, and maps the X, Y, and Z parameters to the X, Y, and Z parameters in the Dolby Atmos VR XYZ Panner. Dolby Atmos VR XYZ Panner automation data that cannot be mapped is removed. Additionally, an error dialog appears in the Renderer, alerting you that some metadata is being ignored due to the change in plug-ins.
Dolby Atmos Panner v2.3 or v2.2.1 (that is, for a VR session)	Dolby Atmos Panner or all three Production Suite panners.	Opens using the Dolby Atmos Panner, and maps X, Y, and Z parameters from the Dolby Atmos VR XYZ Panner to the X, Y, and Z parameters in the Dolby Atmos Panner. Additionally, any object with a Z value of 0 will update to a Z value of 50.
Dolby Atmos Panner v2.3 or v2.2.1 (that is, for a VR session)	Dolby Atmos VR panners	Opens using the Dolby Atmos VR XYZ Panner in top-down cube view, and maps the old X, Y, and Z parameters to the X, Y, and Z parameters in the Dolby Atmos VR XYZ Panner. Installing Dolby Atmos VR panners only ensures that the Dolby Atmos VR XYZ Panner is used.



## 2.8 Workflows for converting home theater and VR mixes

Home theater sessions (which use Dolby Atmos Panner plug-ins) and VR sessions using Dolby Atmos VR XYZ Panner plug-ins support interoperability. You can convert all of the panner plug-ins of one type in a session to the other panner plug-in type.

There is no interoperability between home theater sessions and VR session using the Dolby Atmos VR Spherical Panner.

### 2.8.1 Converting a home theater session to a VR session that uses the Dolby Atmos VR XYZ Panner

You can author a session with the Dolby Atmos Panner, and subsequently do a VR mix of it, using VR metadata. To do this, you must first convert the home theater session to a VR session that uses the Dolby Atmos VR XYZ Panner.

#### About this task

If you do this task and then save the session, you will lose the speaker metadata not supported by the Dolby Atmos VR XYZ Panner (such as snap, zones, size, and so on). We recommend that you do a **Save As** of the Pro Tools session prior to converting the plug-ins.

#### Procedure

1. Close the session.
2. Move the Dolby Atmos Panner plug-in from the plug-ins folder to the unused plug-ins folder.
3. Ensure the VR panners are installed.
4. Reopen the session.  
The session opens with the X, Y, and Z parameters of Dolby Atmos Panner plug-ins mapped to the X, Y, and Z parameters in Dolby Atmos VR XYZ Panner plug-ins. The panner displays in top-down cube view.
5. Review each plug-in and add VR specific metadata, as desired.
6. Change the operation mode in the Renderer from **Home Theater** to **VR**.

### 2.8.2 Converting a VR session that uses the Dolby Atmos VR XYZ Panner to a home theater session

You can author a session with the Dolby Atmos VR XYZ Panner, and subsequently do a home theater (speaker) mix of it, using speaker metadata. To do this, you must first convert the VR session to a home theater session that uses the Dolby Atmos Panner plug-in.

#### About this task

If you do this task and then save the session, you will lose the speaker metadata not supported by the Dolby Atmos Panner plug-in (such as binaural and head-tracking settings). We recommend that you do a **Save As** of the Pro Tools session prior to converting the plug-ins.

## Procedure

1. Close the session.
2. Move the Dolby Atmos VR XYZ Panner plug-in from the plug-ins folder to the unused plug-ins folder.
3. Ensure the Dolby Atmos Panner is installed.
4. Reopen the session.  
The session opens with the X, Y, and Z parameters of Dolby Atmos VR XYZ Panner plug-ins mapped to the X, Y, and Z parameters in Dolby Atmos Panner plug-ins.
5. Review each plug-in and add home theater specific metadata, as desired.
6. Change the operation mode in the Renderer from **VR** to **Home Theater**.

# 3 Known issues

This release has some known issues, for which we provide workarounds, comments, and solutions.

- The Dolby Atmos Renderer does not support upper case master file extensions (such as .ATMOS) in its input fields. Files with upper case file extensions fail to load. Change extensions manually to lower case to load them into the Renderer. [DACT-5983]
- Dolby Atmos Renderer drop-down history menus in available input text fields include invalid paths that were previously loaded and not cleared. [DACT-4754]
- Cut, copy and paste keyboard shortcuts are not supported in the Dolby Atmos Renderer text fields. To copy or paste text, select the desired text, right-click, and then select the Copy or Paste option, as needed. [DACT-5733]
- When the main time scale in the Pro Tools session is set to **Bars | Beats**, the Pro Tools transport provides incorrect data to the Renderer and it is not possible to play back, record, or punch in and out of a Dolby Atmos master. [DACT-6242]
- When using Pro Tools with the Dolby Atmos Production Suite, using a hardware buffer size that is lower than 1024 can compromise rendered audio, especially when working with large sessions. If unexpected audio is rendered, try increasing your Pro Tools hardware buffer size to 1024 samples or higher. [DACT-5933]
- Pro Tools offline bounce is not supported with the Dolby Atmos Production Suite. Attempting an offline bounce on Pro Tools HDX systems can cause a crash. Attempting an offline bounce on a Pro Tools native system can cause significant metadata loss. [DACT-6053], [DACT-5743]
- Pro Tools Aggregate and built-in output audio devices can intermittently, and without warning, change the sampling rate to 44.1 kHz (typically, after a central processing unit (CPU) overload). This sample rate change causes rendered audio to be jittery. As a workaround, open the Mac OS X Audio MIDI Setup application and select the 48 kHz sample rate. If 48 kHz is already selected, unselect it, and then reselect it. [DACT-5484]
- If a Dolby Atmos Pro Tools session is open and the Dolby Atmos Renderer is opened before the Monitor application, the input configuration in the Renderer does not get updated to the current session object status. To update the object status in the Renderer, reset the Renderer connection from the Monitor application, or close the Renderer and Monitor application, and then reopen the Monitor before opening the Renderer. DACT-5968

- The Pro Tools scrubber tool is not supported when monitoring a Dolby Atmos master file. [DACT-5859]
- A .dac system settings file created with Dolby Atmos Renderer 2.2.x or earlier is unsupported and cannot be imported into Dolby Atmos Renderer version 2.5. [DACT-5483]
- Binaural monitoring (VR and home theater mode) is 3 dB higher than Speaker monitoring (VR mode, or home theater mode with expert mode enabled). [DACT-5512]
- If you manually type in the master file you want to record to, and then add an extension, the extension must be .atmos. If you add an unsupported extension (such as .mxf, .damf, or .wav), the Renderer loads the file in Write mode, and then lets you arm and record an invalid file. This file is empty and can be deleted from your system. [DACT-5237]
- If you assign an input channel to a bed (in the input screen of the Dolby Atmos Renderer), and that channel in Pro Tools has the Production Suite panner plug-in assigned to it, you will not be able to record a master due to an invalid configuration. During the steps to record a master, the **Record** button in the Renderer will not be available, and the log will show repeated errors. Remove the panner plug-in in Pro Tools, or change the assignment on the input screen back to an object for the channel with the panner plug-in. [DACT-5101]
- During recording, changing any available parameter that requires a reinitialization of the Dolby Atmos Renderer automatically disarms and stops the master file recording. To resume, perform a punch-in recording from the point where the disarm occurred. Include one frame of pre-roll. [DACT-5764]
- During a punch in and out of a master recording at set points workflow, incoming audio mutes after you press the **Record** button and start playback, and then unmutes when the out point is reached. [DACT-5972]
- A recorded master file offset from a free range recording may not be sample accurate due to a small timecode latency. This can result in audio loss if preset at the transport start position. Avoid losing any audio by adding one frame of pre-roll to any recording, or using a bounded recording. [DACT-4934]
- In the **Offline Re-rendering** section of the mastering screen, the drop-down menu for **Re-render file output location** does not retain a history of file paths. [DACT-5729]
- The Equalization speaker drop-down menu can display speaker feeds that cannot be selected. Selection in the drop-down menu is limited to the monitoring layout that was active upon launching the Dolby Atmos Renderer. While you can still use the drop-down menu to select those active speaker feeds, you can use the left and right arrow buttons next to the speaker drop-down menu to scroll through active speaker feeds only. The arrow buttons effectively skip the speaker feeds that could not be selected. [DACT-5765]
- Disabling re-renders in the output screen of the Renderer will disable the meter display in the Monitor application. [DACT-5980]
- Multiple speaker signal generation produced by the Dolby Atmos Monitor application or from the equalization (EQ) screen in the Dolby Atmos Renderer is not supported. [DACT-5546], [DACT-5973], [DACT-5978]
- The delay reported by processing plug-ins on tracks being sent to the Dolby Atmos Renderer is not compensated for by Pro Tools. This affects the rendered output and also the recorded master file. Avoid this delay by equalizing and controlling the delay applied to all tracks before being routed to the auxiliary tracks that have Dolby Atmos Renderer Send plug-ins inserted on them. [DACT-4789]
- The **Recorder mode** button in the Dolby Atmos Panner plug-in does not work with Dolby Atmos Production Suite. This means that metadata cannot be recorded from one Pro Tools system to another system using plug-in communication. If you need to perform

source-to-destination recording of metadata, use a Dolby Atmos Rendering and Mastering Unit as your renderer. [DACT-4983]

- The stereo version of the Dolby Atmos VR Spherical Panner plug-in does not support **Copy** or **Mirrored** mode when moving the object with the mouse. Automation is not recorded for the object on the other channel. As a workaround, use the spherical sliders to record automation on both objects when in **Copy** or **Mirrored** mode. [DACT-5854]
- Using Dolby Atmos Conversion Tool version 1.7.2 and earlier to process a Dolby Atmos master with VR metadata results in removal of the VR metadata. Avoid conversion, if possible. As a workaround, you can add VR metadata manually. [DACT-5630]

## Glossary

### ASCII

American Standard Code for Information Interchange.

### B-format

A speaker-independent representation of a soundfield.

### container

A formatted file (such as an MP4 file) comprising one or more multiplexed elementary streams and including format-specific metadata. A container demultiplexer uses container metadata to extract the constituent elementary streams, but this metadata is generally not sufficient to decode these streams. A container format is a specification (such as MPEG-4) describing the architecture of a container.

### CPU

Central processing unit.

### dBFS

Decibels full scale. The amplitude of a signal relative to a digital full-scale signal.

### Dolby Digital Plus

An advanced perceptual audio-coding system that expands and improves Dolby Digital coding technology, with higher bandwidth efficiencies, support for additional channels, and enhanced metadata capabilities.

### DSP

Digital signal processor. A specialized microprocessor optimized for digital signal processing.

### EQ

Equalization. The adjustment of audio frequency responses for practical or aesthetic reasons.

### FFOA

First frame of action. The point on a film reel or corresponding file at which the program content begins.

### fps

Frames per second. The number of unique consecutive images (frames) an imaging device produces in one second.

**frame**

In audio, a series of PCM samples or encoded audio data representing the same time interval for all channels in the configuration. Metadata pertaining to the frame can be carried within the frame or separately, depending on context.

**HDMI**

High-Definition Multimedia Interface. A high-speed, high-capacity format for transferring digital information and the specific hardware interface for the format.

**IP address**

Internet Protocol address. A numerical identifier assigned to a device that is a member of a network that uses the Internet Protocol for communication.

**LTC**

Linear timecode. A timecode developed by the Society of Motion Picture and Television Engineers (SMPTE) that provides a time reference for editing, synchronization, and identification.

**LFE**

Low-Frequency Effects. A band-limited channel specifically intended for deep, low-pitched sounds.

**MADI**

Multichannel Audio Digital Interface. A communications protocol for an interface that carries multiple channels of digital audio, defined by the Audio Engineering Society. Also known as AES10.

**object**

An audio signal plus associated object audio metadata.

**PCM**

Pulse code modulation. A standard method used to digitally represent sampled analog signals. PCM is the standard form of digital audio in computers, compact discs, digital telephones, and other digital audio applications.

**playlist**

An extended .m3u8 file that contains one or more uniform resource identifiers (URIs). A URI can point to another playlist or to a media file.

**rendering**

Processing of audio content to adapt it to specific speaker layouts, such as 5.1- and 7.1-speaker feeds, or headphones and sound bars.

**SDDS**

Sony Dynamic Digital Sound. A cinema sound system developed by Sony Corporation.

**UI**

User interface.

**USB**

Universal Serial Bus. A standard that defines the cables, connectors, and communications protocols used in connections between computers and electronic devices.

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