Christie Vive Audio SKA-3D

User Manual

020-101056-02

CHRISTIE®

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NOTICES

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The product has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the product is operated in a commercial environment. The product generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of the product in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at the user's own expense.
CAN ICES-3 (A) / NMB-3 (A)
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The product is designed and manufactured with high-quality materials and components that can be recycled and reused. This symbol

 means that electrical and electronic equipment, at their end-of-life, should be disposed of separately from regular waste. Please dispose of the product appropriately and according to local regulations. In the European Union, there are separate collection systems for used electrical and electronic products. Please help us to conserve the environment we live in.
Canadian manufacturing facility is ISO 9001 and 14001 certified.

GENERAL WARRANTY STATEMENTS

For complete information about Christie's limited warranty, see the Christie website (*www.christiedigital.com*) or contact your Christie dealer. In addition to the limitations that may be specified in Christie's limited warranty, the warranty does not cover:

a. Problems or damage occurring during shipment, in either direction.
b. Projector lamps (See Christie's separate lamp program policy).
c. Problems or damage caused by use of a projector lamp beyond the recommended lamp life, or use of a lamp supplied by a supplier other than Christie or an authorized distributor of Christie lamps.
d. Problems or damage caused by combination of a Product with non-Christie equipment, such as distribution systems, cameras, DVD players, etc., or use of a Product with any non-Christie interface device.
e. Problems or damage caused by the use of any lamp, replacement part or component purchased or obtained from an unauthorized distributor of Christie lamps, replacement parts or components including, without limitation, any distributor offering Christie lamps, replacement parts or components through the internet (confirmation of authorized distributors may be obtained from Christie).
f. Problems or damage caused by misuse, improper power source, accident, fire, flood, lightening, earthquake or other natural disaster.
g. Problems or damage caused by improper installation/alignment, or by equipment modification, if by other than Christie service personnel or a Christie authorized repair service provider.
h. Problems or damage caused by use of a Product on a motion platform or other movable device where such Product has not been designed, modified or approved by Christie for such use.
i. Problems or damage caused by use of a projector in the presence of an oil-based fog machine or laser-based lighting that is unrelated to the projector.
j. For LCD projectors, the warranty period applies only where the LCD projector is in "normal use." "Normal use" means the LCD projector is not used more than 8 hours a day, 5 days a week.
k. Except where the Product is designed for outdoor use, problems or damage caused by use of the Product outdoors unless (i) such Product is protected from precipitation or other adverse weather or environmental conditions and the ambient temperature is within the recommended ambient temperature set forth in the specifications for such Product and (ii) if the Product is an LCD flat panel, such LCD flat panel is not exposed to direct sunlight.
l. Image retention on LCD flat panels.
m. Defects caused by normal wear and tear or otherwise due to normal aging of a Product.
n. Products where the serial number has been removed or obliterated.
o. Products sold by a Reseller to an End User outside of the country where the Reseller is located unless (i) Christie has an office in the country where the End User is located or (ii) the required international warranty fee has been paid.
p. Products when there is failure to perform maintenance as required and in accordance with the maintenance schedule.
q. This warranty does not obligate Christie to provide any on site warranty service at the Product site location.

PREVENTATIVE MAINTENANCE

Preventative maintenance is an important part of the continued and proper operation of your product. Please see the Maintenance section for specific maintenance items as they relate to your product. Failure to perform maintenance as required, and in accordance with the maintenance schedule specified by Christie, will void the warranty.

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Important Safety Information

Read this information thoroughly and completely before installing, or operating the SKA-3D.

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer.
- Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- To reduce the risk of electric shock, disconnect AC power cord to completely remove power from the unit before repair or maintenance.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- Utstyr som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkoplet utstyr og er tilkoplet et kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkopling av utstyret til kabel-TV nettet installeres en galvanisk isolator mellom utstyret og kabel-TV nettet.
- Laite on liitettävä suojamaadoituskoskettimilla varustettuun pistorasiaan.
- Utrustning som är kopplad till skyddsjord via jordat vägguttag och/eller via annan utrustning och samtidigt är kopplad till kabel-TV nät kan i vissa fall medföra risk för brand. För att undvika detta skall vid anslutning av utrustningen till kabel-TV nät galvanisk isolator finnas mellan utrustningen och kabel-TV nätet.

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Introduction

This user manual provides information about SKA-3D controls, installation, operation, troubleshooting, and specifications.

Overview

The SKA-3D is a professional audio and video processor and video scaler. It accepts audio and video signals on multiple inputs and in multiple formats and outputs a selected combination of audio and video.

See *Supported Audio Formats* on page 86 for a complete list of supported audio and video inputs and outputs.

Features

- Converts multiple audio and video inputs into a common output
- Supports video formats of up to 1080p/2K 60Hz
- Allows a maximum of 16 DCI-AES input channels from a cinema server or integrated media block (IMB)
- Five 2-way crossover channels: 3 screen channels, and 2 surround channels
- 31 band graphic equalizer
- Hearing-impaired and visually-impaired narrative audio support
- Supports Ethernet, RS232, 8 contact closure inputs, and 4 contact closure outputs for automation

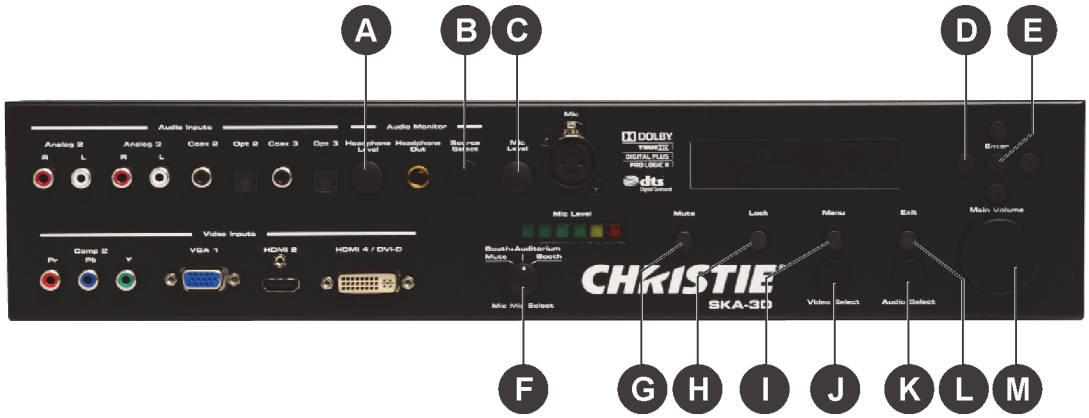
What's in the Box?

Quantity	Description	Part Number
1	SKA-3D	108-446105-XX
1	Region-specific power cord	N/A
1	Pair of rack ears	N/A
2	Rack ear screws	N/A
1	16-pin Phoenix connector	N/A
1	8-pin Phoenix connector	N/A
7	3-pin Phoenix connectors	N/A

Controls

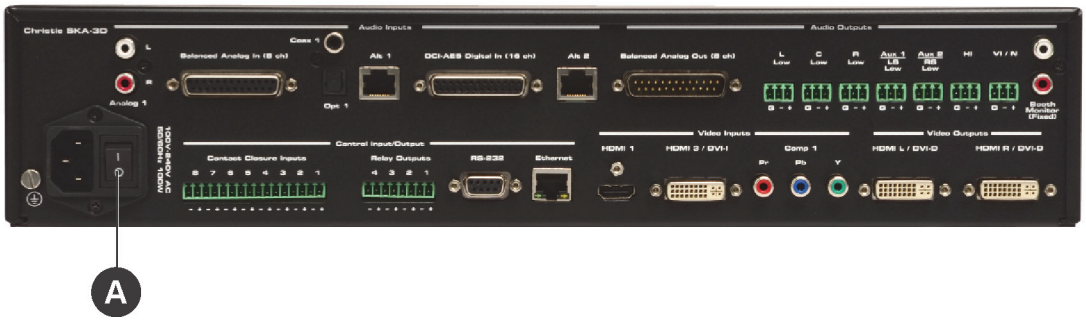
This section describes the SKA-3D controls.

Front Panel



Ref.	Item	Description
A	Headphone level	Adjusts the headphone volume.
B	Source select	Adjusts the audio source for headphone monitoring.
C	Mic level	Adjusts the microphone listening level. This control does not change the main output amplitude.
D	Navigation buttons	Provides left, right, up, and down buttons for menu system navigation.
E	Enter	Saves menu system changes.
F	Mic mix select	Selects between Mute, Booth+Auditorium, and Booth.
G	Mute	Mutes the master volume.
H	Lock	Locks the front-panel controls to prevent accidental changes.
I	Menu	Accesses the menu.
J	Video select	Selects the input video source.
K	Audio select	Selects the audio input source.
L	Exit	Exits the menu.
M	Main volume	Adjusts the main output volume level.

Rear Panel



Ref.	Item	Description
A	AC power switch	Turns the power on and off.

Indicators

This section describes the SKA-3D indicators.

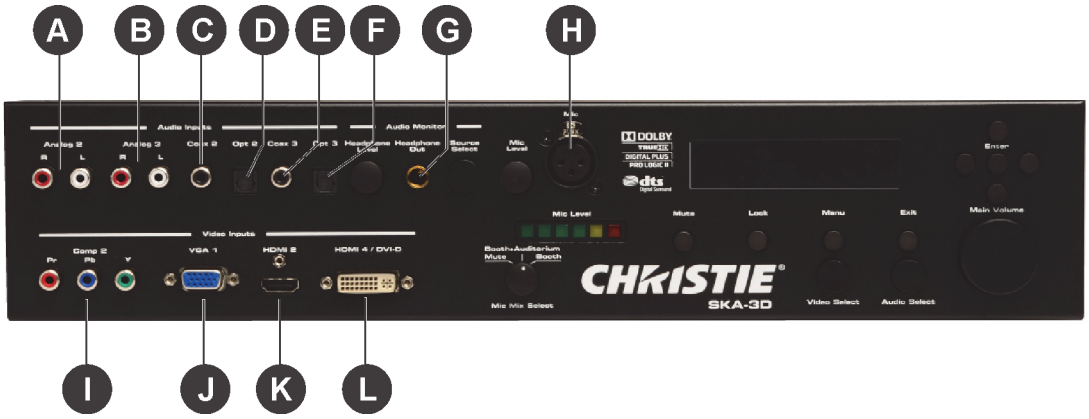
Ref.	Item	Description
A	Mic level	Indicates the microphone input level. From left to right, the LED lights represent these input levels: • Green - -40 dB • Green - -30 dB • Green - -20 dB • Green - -10 dB • Yellow - -5 dB • Red - Clip

Ref.	Item	Description
B	Liquid crystal matrix (LCM) display	Indicates the status of the scaler. The display provides a 19-character, two-line display in this display format: [VIDEO_INPUT] [AUDIO_FORMAT] [AUDIO_INPUT] [3D_FORMAT] [OUTPUT_RESOLUTION] [MASTER_VOLUME_IN_DB] To change the settings: • VIDEO_INPUT - the current video input. See *Select a Video Input* on page 12. • AUDIO_FORMAT - the current audio format. • AUDIO_INPUT - the current audio input. See *Select an Audio Input* on page 12. • 3D_FORMAT - the current 3D format. See *Adjust 3D Mode* on page 16. • OUTPUT_RESOLUTION - the current output resolution. See *Adjust the Output Resolution* on page 16. • MASTER_VOLUME - the current master volume level (dB). To change the volume, adjust the **Main Volume** or press **Mute**.

Connections

This section describes the SKA-3D front and rear connections.

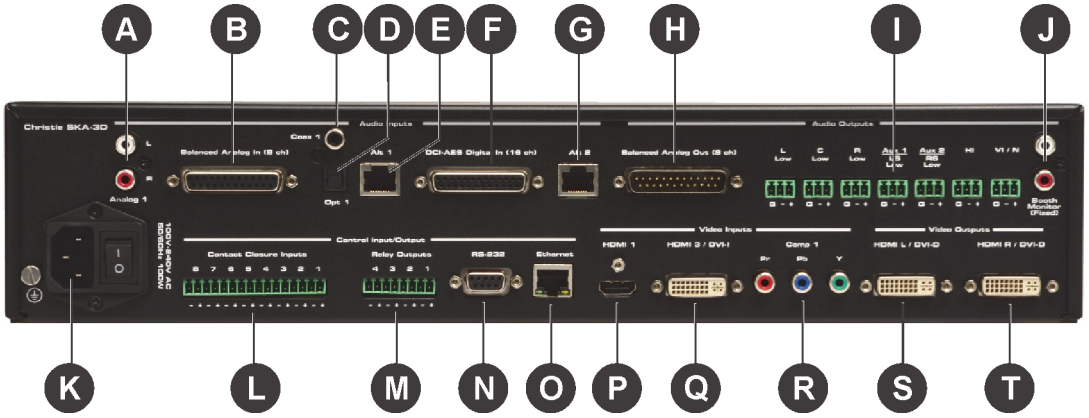
Front Panel



Ref.	Item	Description
A	Analog 2	Accepts 2-channel analog audio using one pair of RCA-type connectors.
B	Analog 3	Accepts 2-channel analog audio using one pair of RCA-type connectors.
C	Coax 2	Accepts multichannel digital audio (DTS® and Dolby® Digital) and two-channel Linear PCM using a cable with an RCA-type connector.
D	Opt 2	Accepts multichannel digital audio (DTS® and Dolby® Digital) and two-channel Linear PCM using a cable with an optical cable with a TOSLINK connector.
E	Coax 3	Accepts multichannel digital audio (DTS® and Dolby® Digital) and two-channel Linear PCM using a cable with an RCA-type connector.

Ref.	Item	Description
F	Opt 3	Accepts multichannel digital audio (DTS® and Dolby® Digital) and two-channel Linear PCM using a cable with an optical cable with a TOSLINK connector.
G	Headphone out	Accepts a pair of stereo headphones using a 1/4” TRS jack.
H	Mic	Accepts a microphone using a balanced XLR connector.
I	Comp 2	Accepts three Component (YPbPr) video cables from the source to these RCA-type connectors.
J	VGA 1	Accepts an a VGA (RGBHV) cable from the source to this HD-15 connector.
K	HDMI 2	Accepts an HDMI cable from the source to this HDMI connector.
L	HDMI 4 / DVI-D	Accepts a DVI-D or HDMI-to-DVI cable from the source to this DVI connector. This input also accepts HDMI audio.

Rear Panel



Ref.	Item	Description
A	Analog 1	Accepts 2-channel analog audio using one pair of RCA-type connectors.
B	Balanced Analog In (8 ch)	Accepts a DB-25 type connector and up to eight channels of multichannel analog audio.
C	Coax 1	Accepts multichannel digital audio (DTS® and Dolby® Digital) and two-channel Linear PCM using a cable with an RCA-type connector.
D	Opt 1	Accepts multichannel digital audio (DTS® and Dolby® Digital) and two-channel Linear PCM using a cable with an optical cable with a TOSLINK connector.
E	Alt 1	Accepts the RJ-45 connector from a DB-25-to-RJ-45 cable that carries digital audio. This input receives the first eight channels (1-8) of digital audio.
F	DCI-AES Digital In (16 ch)	Accepts a DB-25 type connector for up to 16 channels of multichannel digital audio.
G	Alt 2	Accepts the RJ-45 connector from a DB-25-to-RJ-45 cable that carries digital audio. This input receives the second eight channels (9-16) of digital audio.
H	Balanced Analog Out (8 ch)	Accepts a DB-25 type connector and handle up to eight channels of multichannel analog audio

Ref.	Item	Description
I	Phoenix connectors (Audio Out)	Accepts single audio channel outputs: L Low, C Low, R Low, Aux 1 LS Low, Aux 2 RS Low, HI, VI / N. These can be configured using the web interface or serial control commands.
J	Booth Monitor (Fixed)	Accepts an L/R RCA-type cable for the projection booth monitors output. The audio output level is fixed and is controlled by the external amplification device / monitors.
K	AC power inlet	Accepts an AC power cord.
L	Contact Closure Inputs (1-8)	Accepts Phoenix-type connectors for control of devices using contact closure.
M	Relay Outputs (1-4)	Accepts up to four controlled device inputs to these trigger outputs to control screens, drapes, lights, or other devices. Connect trigger wires to removable terminal block plugs.
N	RS-232	Accepts an RS-232 serial connector to control other devices.
O	Ethernet	Accepts an Ethernet connection, to connect the A/V Cinema Scaler 3D to a network in order to use IP control.
P	HDMI 1	Accepts an HDMI cable from the source to this HDMI connector.
Q	HDMI 3 / DVI-I	Accepts a DVI (analog or digital) cable from the source to this DVI connector. This input also accepts HDMI audio.
R	Comp 1	Accepts three Component (YPbPr) video cables from the source to these RCA-type connectors.
S	HDMI L / DVI-D	Outputs the left-eye video signal from a 3D source.
T	HDMI R / DVI-D	Outputs the right-eye video signal from a 3D source.

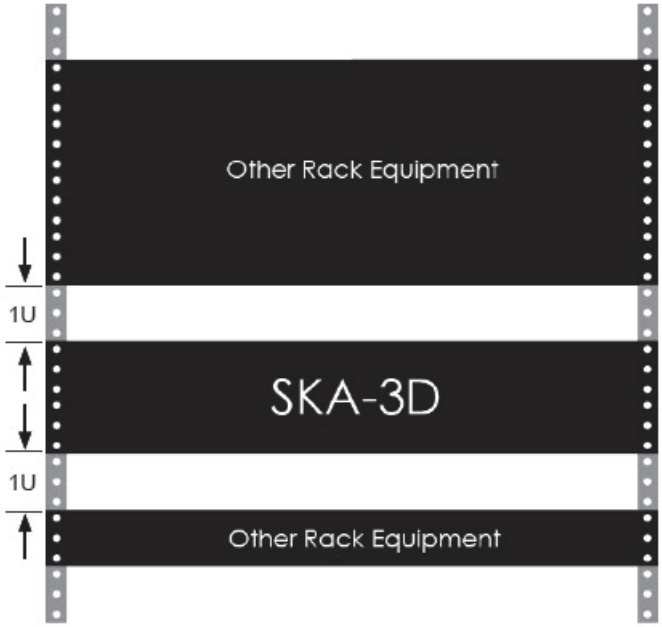
Installation

⚠WARNING An incorrect power setup creates a fire and shock hazard. Do not operate the SKA-3D unless the power cord, power socket, and power plug meet the appropriate local rating standards. Have a certified electrician install a permanent single-phase connection from the amplifier to the AC supply for correct installation. Failure to comply could result in death or serious injury.

NOTICE Make sure the SKA-3D is properly ventilated. Provide 1U of space above and below the SKA-3D. Make sure that vents are not blocked and that air can flow freely through the unit. Do not place the SKA-3D directly above or below a heat source such as a power amplifier or server. If the SKA-3D is not rack-mounted, never place another piece of equipment (or heat source) on top or below the SKA-3D.

1. Slide the SKA-3D into your rack.

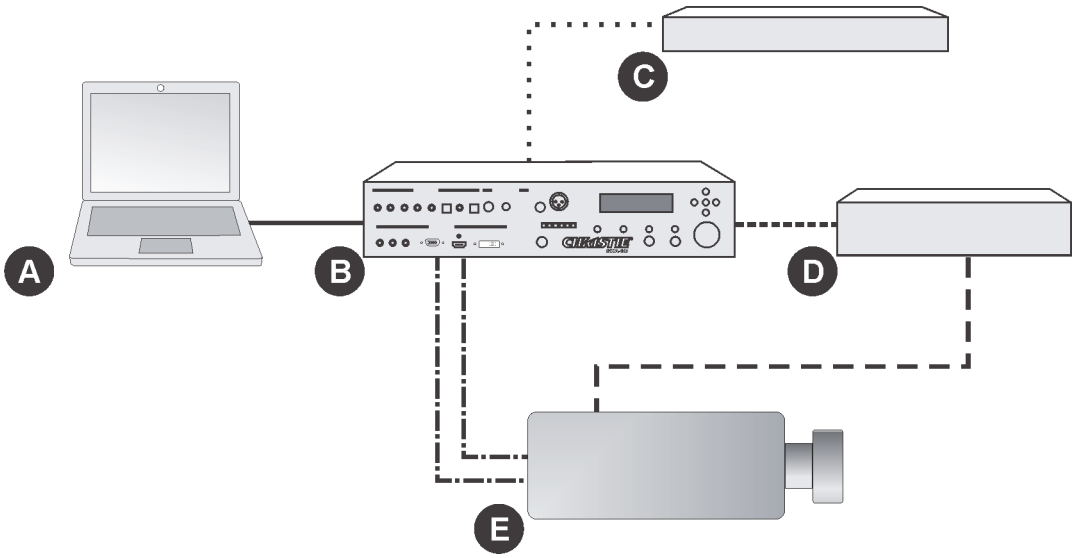
   Provide 1U of space above and below the SKA-3D. Do not place the SKA-3D directly above or below a heat source such as a power amplifier or server. If the SKA-3D is not rack-mounted, never place another piece of equipment (or heat source) above or below the SKA-3D.



2. Install the SKA-3D rack ears.
3. While holding the SKA-3D in position, insert a screw through each of the rack mounting ears.
4. Tighten the screws to secure the SKA-3D to the rack.
5. Connect one end of the power cord to the AC power inlet and the other end to a power outlet.
6. Connect the output and input connectors.

   See *Connections* on page 6 for connection locations.

For example,



A	Computer	**D**	Automation Controller
B	SKA-3D	**E**	Projector
C	Blue Ray Player	▪▪▪▪▪▪▪	Ethernet, General-purpose input/ output (GPIO), or RS-232
———	VGA or HDMI	▬ ▬ ▬	Ethernet or GPIO
. . . .	HDMI, or an optical/audio connection and component	▬·▬·▬	DVI-D

7. Turn the power on.

   See *Turn the Power On* on page 11.

Operation

This section provides procedures and information for operating the SKA-3D.

Turn the Power On

⚠WARNING An incorrect power setup creates a fire and shock hazard. Do not operate the SKA-3D unless the power cord, power socket, and power plug meet the appropriate local rating standards. Have a certified electrician install a permanent single-phase connection from the amplifier to the AC supply for correct installation. Failure to comply could result in death or serious injury.

NOTICE Never try to hold the AC power switch in the on position if it does not stay there itself. Failure to comply may result in equipment or property damage.

1. Make sure the power cord is connected.
2. Move the AC power switch to the on position.

Turn the Power Off

Move the AC power switch to the off position.

Manage Firmware

The SKA-3D ships with the latest firmware. This section describes how to view the current firmware version and how to update the firmware.

Display the Firmware Version

1. Press the up or down navigation button to display **Christie Digital SKA-3D**.
2. Press the right navigation button to display the current firmware and boot code.
3. Press **Exit** to return the status screen.

Update the Firmware

Save the current system settings before updating the firmware. From the web interface, open the **System Configuration** screen and click **Backup** in the System Settings pane.

1. Turn the SKA-3D power on.

   See *Turn the Power On* on page 11.

2. Connect one end of the Ethernet cable to the Ethernet port on the SKA-3D and then connect the other end of the cable to the Ethernet port on the computer running the web interface.

   See *Access the SKA-3D Web Interface* on page 71.

3. Click the **System Configuration** tab.

   See *System Configuration Screen* on page 81.

4. Click **Browse** in the **Firmware Upgrade** pane.
5. Click **OK** when the LCM prompts you to verify that you want to overwrite the current firmware.

   The web interface is disabled during the firmware upgrade.

6. Wait for the SKA-3D to reboot or press **Lock** to bypass the reboot countdown.

   The SKA-3D reboots.

7. If required, click **Reset** to reset the SKA-3D to its default settings.
8. If required, click **Restore** to load the system settings file.

Select a Video Input

Press **Video Select** to select a video input:

- **HDMI 1**
- **HDMI 2**
- **HDMI 3**
- **HDMI 4**
- **Comp 1**
- **Comp 2**
- **VGA**
- **NONE**

The LCM displays the current video input.

Select an Audio Input

Press **Audio Select** to select an audio input:

- **16CH**
- **8CH**
- **HDMI**
- **OPT1**
- **OPT2**
- **OPT3**

- **COAX1**
- **COAX2**
- **COAX3**
- **ANA1**
- **ANA2**
- **ANA3**
- **MIC**
- **NONE**

The LCM displays the current audio input.

Adjust the Outputs

Press and hold the up or down navigation button to quickly scroll through items.

1. Press the up or down navigation button to select the required output menu:
   - **Audio Proc. Mode**

     See *Adjust the Audio Processing Mode* on page 14.
   - **Auto Preset Select**

     See *Adjust the Auto Preset Select* on page 14.
   - **Dolby True HD DRC**

     See *Adjust Dolby True HD Dynamic Range Compression* on page 15.
   - **Dolby D & DD+ DRC**

     See *Adjust Dolby Digital and Dolby Digital Plus Dynamic Range Compression* on page 15.
   - **Reference Level**

     See *Adjust the Reference Level* on page 15.
   - **Video Output**

     See *Adjust the Output Resolution* on page 16.

     See *Adjust 3D Mode* on page 16.

     See *Adjust the DVI Output Color Depth* on page 17.
   - **Audio Monitor Ch**

     See *Adjust the Audio Monitor Channel* on page 17.
   - **IP Configuration**

     See *Adjust the IP Address, Subnet, Gateway, Port, or Telnet Port* on page 18.

- **Christie Digital SKA-3D**

  See *Display the Firmware Version* on page 11.

2. Press **Enter**.

   The current output menu item is displayed in the LCM display.

Adjust the Audio Processing Mode

When the processing mode is set to **Mono** in **Consumer** mode, all channels are down-mixed to the center channel. In **Professional** mode, only the center channel is active.

Auto Detect and **Dolby PLII** processing modes are only available when the audio input is set to HDMI, TOSLINK, COAX, or Analog.

1. Press the up or down navigation button to display **Audio Proc. Mode <>**.
2. Press the left or right navigation button to select the audio processing mode:
   - **<DCI 8Ch Map>** (Professional application)
   - **<DCI 6Ch map>** (Professional application)
   - **<Dolby Surr 7.1>** (Professional application)
   - **<Auto Detect>** (Consumer application)
   - **<Dolby PLII>** (Consumer application)
   - **<Stereo>** (Consumer application)
   - **<Mono>** (Consumer application)
3. Press **Enter**.
4. Press **Exit** to return to the status screen.

Adjust the Auto Preset Select

1. Press the up or down navigation button to display **Auto Preset Select**.
2. Press the left or right navigation button to select an auto preset:

   1 - PresetName...**10 - PresetName**
3. Press **Enter**.
4. Press **Exit** to return to the status screen.

Adjust Dolby True HD Dynamic Range Compression

Dynamic Range Compression (DRC) provides compression of Dolby True HD audio formats. Compression reduces the volume of loud sounds and amplifies quiet sounds by minimizing the dynamic range of the audio signal.

1. Press the up or down navigation button to display **Dolby True HD DRC**.
2. Press the left or right navigation button to select the compression setting:
   - **<ON>** - enables dynamic range compression.
   - **<OFF>** - disables dynamic range compression.
   - **<AUTO>** - for use with Dolby True HD content only. Metadata in Dolby True HD source material configures DRC automatically to match the intention of the original sound design.
3. Press **Enter**.
4. Press **Exit** to return to the status screen.

Adjust Dolby Digital and Dolby Digital Plus Dynamic Range Compression

1. Press the up or down navigation button to display **Dolby D & DD+ DRC**.
2. Press the left or right navigation button to select the compression setting:
   - **<ON>** - enables compression of Dolby Digital and Dolby Digital Plus audio formats. Compression reduces the volume of loud sounds and amplifies quiet sounds by minimizing the dynamic range of the audio signal.
   - **<OFF>** - disables dynamic range compression.
3. Press **Enter**.
4. Press **Exit** to return to the status screen.

Adjust the Reference Level

1. Press the up or down navigation button to display **Reference Level**.
2. Press the left or right navigation button to select a reference level:
   - **<ON>** - applies a -3dB gain to the front right, front left, and center channels.
   - **<OFF>** - disables reference level compensation**.**
3. Press **Enter**.
4. Press **Exit** to return to the status screen.

Adjust the Output Resolution

The SKA-3D does not have frame rate conversion. The video output frame rate follows the input video frame rate.

1. Press the up or down navigation button to display **Video Output**.
2. Press **Enter**.
3. Press the up or down navigation button to display **OUTPUT RES**.
4. Press the left or right navigation button to select an output resolution:
   - **<1080P>**
   - **<2K>**
   - **<BY PASS>**[1]
5. Press **Enter**.
6. Press **Exit** until you return to the status screen.

Adjust 3D Mode

The SKA-3D supports the following 3D formats: side-by-side (half) at 1080i60 resolution, frame packing (top/bottom) at 720p60 resolution, and frame packing (top/bottom) at 1080p24 resolution.

1. Press the up or down navigation button to display **Video Output**.
2. Press **Enter**.
3. Press the up or down navigation button to display **3D MODE**.
4. Press the left or right navigation button to select the 3D mode:
   - **<SEQENTIAL>** - sequential left and right eye 3D signal over a single output (Series 1 projectors). Use the HDMI L output when using this mode.
   - **<DUAL-OUT>** - separate left and right eye 3D signal using HDMI L output for the left eye and HDMI R output for the right eye (Series 2 projectors).
5. Press **Enter**.
6. Press **Exit** until you return to the status screen.

1.Bypass mode bypasses all video scaling. Use Bypass mode if the projector will perform all video processing. Video output resolution will be the same as the input resolution.

Adjust the DVI Output Color Depth

1. Press the up or down navigation button to display **Video Output**.
2. Press **Enter**.
3. Press the up or down navigation button to display **DVI OUT COLOR**.
4. Press the left or right navigation button to select the DVI output color depth:
   - **<8-BIT>** - standard setting for HDMI and RGB color ranges from 0-255 (4:4:4 color sampling). This setting is recommended for Series-1 projectors that only support HDMI on the video inputs.
   - **<10-BIT>** - used for HDMI with RGB color ranges from 0-1023 (4:4:4 color sampling). This setting is recommended for Series-2 projectors that have the HDMI 1.3 receiver chip and can support high-color depth signals.
5. Press **Enter**.
6. Press **Exit** until you return to the status screen.

Adjust the Audio Monitor Channel

1. Connect a set of stereo headphones to the **Headphone Out** jack or the **Booth Monitor (Fixed)** connectors on the back.
2. Turn the **Headphone Level** knob, to control the headphone volume.
3. Press the **Source Select** button until the required channel for monitoring is displayed.

   OR

1. Connect a set of stereo headphones to the **Headphone Out** jack or the **Booth Monitor (Fixed)** connectors on the back.
2. Press the up or down navigation button to display **Audio Monitor Ch**.
3. Press the left or right navigation button to select the audio monitor channel:
   - **MIX**
   - **LEFT**
   - **RIGHT**
   - **CENTER**
   - **LFE**
   - **LEFT SURROUND**
   - **RIGHT SURROUND**
   - **BACK LEFT SURROUND**
   - **BACK RIGHT SURROUND**
   - **LEFT CENTER**

- **RIGHT CENTER**
- **HI (Hearing Impaired)**
- **VI/N (Visually Impaired / Narrative)**

4. Press **ENTER**.
5. Press **Exit** until you return to the status screen.

Adjust the IP Address, Subnet, Gateway, Port, or Telnet Port

1. Press the up or down navigation button to display **IP Configuration**.
2. Press **Enter**.
3. Press the up or down navigation button and select the network parameter to configure:
   - **IP ADDRESS (###.###.###.###)**
   - **SUBNET (###.###.###.###)**
   - **GATEWAY (###.###.###.###)**
   - **PORT (##)**
   - **TELNET PORT (##)**
4. Press **ENTER**.

   A flashing cursor displays in the number field.
5. Press the up or down navigation button to set the numbers, and left or right navigation button to move the cursor.
6. Press **Exit** until you return to the status screen.

Navigate the Main Menu System

Press and hold the right or left navigation button to quickly scroll through options at a faster rate.

1. Press **Menu.**
2. Press the right or left navigation button to scroll through the main menu:
   - **Video Settings**

     See *Adjust Video Settings* on page 20.

     See *Adjust the Video Size* on page 20.

     See *Adjust the Test Pattern* on page 21.
   - **Audio Settings**

     See *Adjust the Channel Level* on page 21.

     See *Adjust the Speaker Distance* on page 22.

     See *Adjust the Lipsync Delay* on page 23.

     See *Adjust the Phantom Power* on page 23.
   - **Adv. Audio Settings**

     See *Adjust the Speaker Configuration* on page 24.

     See *Adjust the BI-AMP LCR* on page 25.

     See *Adjust the BI-Amp LCR Crossover Frequency* on page 25.

     See *Adjust the BI-Amp LC & RC to Aux 1/2* on page 25.

     See *Adjust the BI-Amp LC & RC to Aux 1/2 Crossover Frequency* on page 26.

     See *Adjust the BI-Amp LS & RS to Aux 1/2* on page 26.

     See *Adjust the BI-AMP LS & RS Crossover Frequency* on page 26.
   - **Automation Settings**

     See *Manage Presets* on page 27.

     See *Manage Trigger Inputs* on page 30.

     See *Manage Trigger Outputs* on page 31.

   The LCM displays the selected menu item.

Adjust Video Settings

This section describes how to adjust the picture settings, video size, and test pattern.

Adjust the Picture Settings

1. Press **Menu**.
2. Press the left or right navigation button to display **Video Settings**.
3. Press **Enter**.
4. Press the up or down navigation button to display **Picture Settings**.
5. Press **Enter**.
6. Press the up or down navigation button and select the picture setting to adjust:
   - **Contrast <0-100%>**
   - **Brightness <0-100%>**
   - **Color Temp <5500K, 9600K, or 6500K>**
7. Press the left or right navigation button to adjust the setting.
8. Press **Exit** until you return to the status screen.

Adjust the Video Size

1. Press **Menu**.
2. Press the left or right navigation button to display **Video Settings**.
3. Press **Enter**.
4. Press the up or down navigation button to display **Resize**.
5. Press **Enter**.
6. Press the left or right navigation button and select the video size:
   - **Resize <NATIVE>** - uses the resolution of the original file.
   - **Resize <FULL SIZE>** - resizes the image to fill the entire screen. If this setting is applied to a 4:3 image on a 16:9 display, the image is horizontally and vertically stretched to fill the entire screen.
   - **Resize <FULL WIDTH>** - resizes the image to fill the full width of the screen. The image height is preserved.
   - **Resize <FULL HEIGHT>** - resizes the image to fill the full height of the screen. The image width is preserved.
   - **Resize <ANAMORPHIC>** - displays content that was filmed in anamorphic format in the original aspect ratio.

- **Resize <OVERSCAN>** - resizes the image 5% beyond the normal display area. This feature is useful in correcting an image that is "underscanned".
- **Resize <UNDERSCAN>** - scales the image within 5% of the normal display area. this feature is useful for correcting an image that is "overscanned".
- **Resize <LETTERBOX>** - stretches the image horizontally while preserving the original aspect ratio of the image.
- **Resize <PANSCAN>** - Scales the original content to 4:3, while maintaining the original aspect ratio of the image.
- **Resize <ADVANCED>** - allows individual cropping, sizing, and positioning of the image.

7. Press **Exit** until you return to the status screen.

Adjust the Test Pattern

The test pattern is output at 2K resolution, regardless of the selected video output resolution.

1. Press **Menu**.
2. Press the left or right navigation button to display **Video Settings**.
3. Press **Enter**.
4. Press the up or down navigation button to display **Test Pattern**.
5. Press **Enter**.
6. Press the left or right navigation button and enable or disable the test pattern:
   - **<ENABLE>** - enables the test pattern on output.
   - **<DISABLE>** - disables the test pattern on output.
7. Press **Exit** until you return to the status screen.

Adjust the Audio Settings

This section describes how to adjust the audio settings including, channel level, speaker distance, lipsync delay, and phantom power.

Adjust the Channel Level

1. Press **Menu**.
2. Press the left or right navigation button to display **Audio Settings**.
3. Press **Enter**.
4. Press the up or down navigation button to display **Channel Level**.

5. Press **Enter**.
6. Press the up or down navigation button and select the audio channel to configure:
   - **C <0.0dB>**
   - **L <0.0dB>**
   - **R <0.0dB>**
   - **LS <0.0dB>**
   - **RS <0.0dB>**
   - **BLS <0.0dB>**
   - **BRS <0.0dB>**
   - **LC <0.0dB>**
   - **RC <0.0dB>**
   - **LFE <0.0dB>**
7. Press the left or right navigation button to configure the audio channel level.

   Each channel level can be adjusted from -20.0 dB to 0.0 dB in 0.5 increments.
8. Press **Exit** until you return to the status screen.

Adjust the Speaker Distance

Use this procedure to set the individual speaker distances in meters or feet from the listening position. The SKA-3D identifies the longest distance between all speakers and then references all other speakers to this number. A delay is calculated for all speakers, except for the speaker with the greatest distance.

1. Press **Menu**.
2. Press the left or right navigation button to display **Audio Settings**.
3. Press **Enter**.
4. Press the up or down navigation button to display **Speaker Distance <Feet or Meters>**.

   If required, press the left or right navigation button to alternate between **SPEAKER DISTANCE <FEET> or SPEAKER DISTANCE <METERS>**.
5. Press **Enter**.
6. Press the up or down navigation button and select the audio speaker to configure:
   - **C < 00.0>FT**
   - **L < 00.0>FT**
   - **R < 00.0>FT**
   - **LS < 00.0>FT**
   - **RS < 00.0>FT**

- **BLS < 00.0>FT**
- **BRS < 00.0>FT**
- **LC < 00.0>FT**
- **RC < 00.0>FT**
- **LFE < 00.0>FT**

7. Press the left or right navigation button to configure the speaker distance.

   The distance for each speaker can be adjusted from 0-169 ft. (0-51.5 m) in 0.5 (ft. / m) increments.

8. Press **Exit** until you return to the status screen.

Adjust the Lipsync Delay

1. Press **Menu**.
2. Press the left or right navigation button to display **Audio Settings**.
3. Press **Enter**.
4. Press the up or down navigation button to display **Lipsync Delay**.
5. Press **Enter**.
6. Press the up or down navigation button and select the audio lipsync delay to configure:
   - **HDMI 1 < 000ms >**
   - **HDMI 2 < 000ms >**
   - **DVI-I < 000ms >**
   - **DVI-D < 000ms >**
   - **Comp1 < 000ms >**
   - **Comp2 < 000ms >**
   - **VGA < 000ms >**
7. Press the left or right navigation button to configure the delay in milliseconds.
8. Press **Exit** until you return to the status screen.

Adjust the Phantom Power

1. Press **Menu**.
2. Press the left or right navigation button to display **Audio Settings**.
3. Press **Enter**.
4. Press the up or down navigation button to display **Phantom Power**.
5. Press **Enter**.

6. Press the left or right navigation button and turn the phantom power on or off:
   - **<OFF>**
   - **<ON>**
7. Press **Exit** until you return to the status screen.

Adjust Advanced Audio Settings

This section describes how to adjust advanced audio settings; such as, the speaker configuration or bi-amp LCR, LC, and LS settings.

Adjust the Speaker Configuration

1. Press **Menu**.
2. Press the left or right navigation button to display **Adv. Audio Settings**.
3. Press **Enter**.
4. Press the up or down navigation button to display **Speaker Config.**
5. Press the left or right navigation button to select the audio speaker configuration:
   - **<3SCR+2SURR>**
   - **<3SCR+4SURR>**
   - **<5SCR+2SURR>**
   - **<5SCR+4SURR>**
   - **<Mono C>**
   - **<Stereo LR>**
6. Press **Enter**.
7. Press **Exit** until you return to the status screen.

Adjust the BI-AMP LCR

1. Press **Menu**.
2. Press the left or right navigation button to display **Adv. Audio Settings**.
3. Press **Enter**.
4. Press the up or down navigation button to display **BI-AMP LCR.**
5. Press the left or right navigation button and select the bi-amp LCR setting:
   - **<DISABLE>**
   - **<ENABLE>**
6. Press **Enter**.
7. Press **Exit** until you return to the status screen.

Adjust the BI-Amp LCR Crossover Frequency

1. Press **Menu**.
2. Press the left or right navigation button to display **Adv. Audio Settings**.
3. Press **Enter**.
4. Press the up or down navigation button to display **BI-AMP LCR XOVER**.
5. Press the left or right navigation button to adjust the bi-amp LCR crossover frequency:

   <00400Hz>...<4000Hz>

   The crossover frequency is adjustable from 40-4000 Hz in 5 Hz increments.
6. Press **Enter**.
7. Press **Exit** until you return to the status screen.

Adjust the BI-Amp LC & RC to Aux 1/2

1. Press **Menu**.
2. Press the left or right navigation button to display **Adv. Audio Settings**.
3. Press **Enter**.
4. Press the up or down navigation button to display **BI-AMP LC&RC to Aux**.
5. Press the left or right navigation button to select the bi-amp LC and RC to aux 1/2 setting:
   - **<DISABLE>**
   - **<ENABLE>**
6. Press **Enter**.
7. Press **Exit** until you return to the status screen.

Adjust the BI-Amp LC & RC to Aux 1/2 Crossover Frequency

1. Press **Menu**.
2. Press the left or right navigation button to display **Adv. Audio Settings**.
3. Press **Enter**.
4. Press the up or down navigation button to display **BI-AMP LC&RC XOVER**.
5. Press the left or right navigation button and select the bi-amp LC and RC to aux 1/2 crossover frequency:

   <00400Hz>...<4000Hz>

   The crossover frequency is adjustable from 40-4000 Hz in 5 Hz increments.
6. Press **Enter** to save changes.
7. Press **Exit** until you return to the status screen.

Adjust the BI-Amp LS & RS to Aux 1/2

1. Press **Menu**.
2. Press the left or right navigation button to display **Adv. Audio Settings**.
3. Press **Enter**.
4. Press the up or down navigation button to display **BI-AMP LS&RS to Aux**.
5. Press the left or right navigation button and select the bi-amp LS and RS to aux 1/2 setting:
   - **<DISABLE>**
   - **<ENABLE>**
6. Press **Enter** to save changes.
7. Press **Exit** until you return to the status screen.

Adjust the BI-AMP LS & RS Crossover Frequency

1. Press **Menu**.
2. Press the left or right navigation button to display **Adv. Audio Settings**.
3. Press **Enter**.
4. Press the up or down navigation button to display **BI-AMP LS&RS XOVER**.
5. Press the left or right navigation button and select the bi-amp LS and RS crossover frequency:

   <00400Hz>...<4000Hz>

   The crossover frequency is adjustable from 40-4000 Hz in 5 Hz increments.

6. Press **Enter** to save changes.
7. Press **Exit** until you return to the status screen.

Manage Presets

Presets allow you to save configured settings for audio inputs, video inputs, audio modes, and master volume levels. The SKA-3D has 10 presets that can be applied manually or triggered with an event. Event-triggered presets require an automation controller.

Configure Presets

Ten preset are available on the SKA-3D. Presets are numbered 1-9 and then the 10th preset is represented by the letter A.

Configure presets using the web interface or the SKA-3D controls. It is useful to use the web interface when multiple presets are set at one time. Use the SKA-3D controls to change individual preset settings.

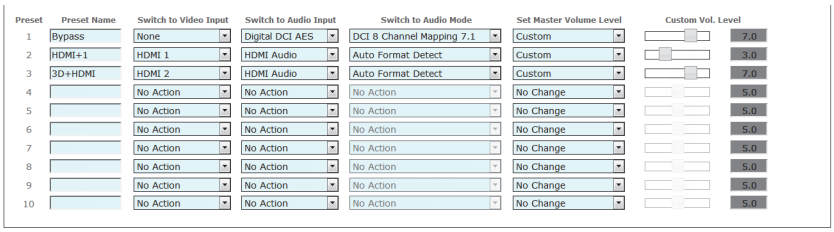
Configure Presets using the Web Interface

1. Open the SKA-3D web interface.

   See *Access the SKA-3D Web Interface* on page 71.
2. Click the **Automation** tab.
3. Click the **Presets** tab.
4. Enter a name for the preset under **Preset Name**.
5. Select the **Switch to Video Input** from the list.
6. Select the **Switch to Audio Input** from the list.
7. Select the **Switch to Audio Mode** from the list.

   Options change depending on the selected audio input.
8. Select the volume setting from the list. If **Custom** is selected, move the slider to the required volume.
9. If required, repeat steps 4 to 8 for the remaining presets.

   For example,



Preset	Preset Name	Switch to Video Input	Switch to Audio Input	Switch to Audio Mode	Set Master Volume Level	Custom Vol. Level
1	Bypass	None	Digital DCI AES	DCI 8 Channel Mapping 7.1	Custom	7.0
2	HDMI+1	HDMI 1	HDMI Audio	Auto Format Detect	Custom	3.0
3	3D+HDMI	HDMI 2	HDMI Audio	Auto Format Detect	Custom	7.0
4		No Action	No Action	No Action	No Change	5.0
5		No Action	No Action	No Action	No Change	5.0
6		No Action	No Action	No Action	No Change	5.0
7		No Action	No Action	No Action	No Change	5.0
8		No Action	No Action	No Action	No Change	5.0
9		No Action	No Action	No Action	No Change	5.0
10		No Action	No Action	No Action	No Change	5.0

10. Click **Save**, and save the presets as an XML file.

Configure Presets using the SKA-3D Controls

1. Press **Menu**.
2. Press the left or right navigation button to display **Automation Settings**.
3. Press **Enter**.
4. Press the up or down navigation button to display **Preset Settings**.
5. Press the left or right navigation button and select the automation preset to configure:

   <1>...<A>
6. Press **Enter**.

   The **SWITCH TO VIDEO** menu displays.
7. Press the left or right navigation button and select the required video input:
   - **Input <DVI 1>**
   - **Input <DVI 2>**
   - **Input <COMP 1>**
   - **Input <COMP 2>**
   - **Input <VGA>**
   - **Input <NONE>**
   - **Input <NO ACTION>**
   - **Input <HDMI 1>**
   - **Input <HDMI 2>**
8. Press the down navigation button to display **SWITCH TO AUDIO**.
9. Press the left or right navigation button to select the required audio input:
   - **INPUT DIG DCI**
   - **Input BAL ANALOG**
   - **Input HDMI**
   - **INPUT OPT 1**
   - **Input OPT 2**
   - **Input OPT 3**
   - **Input COAX 1**
   - **Input COAX 2**
   - **Input COAX 3**
   - **Input ANALOG 1**
   - **Input ANALOG 2**
   - **Input ANALOG 3**
   - **Input MIC**

- **Input NO ACTION**

10. Press the down navigation button to display **SWITCH TO AUDIO Mode**.
11. Press the left or right navigation button to select the required mode:
    - **<AUTO DETECT>**
    - **<DOLBY PLII>**
    - **<Stereo>**
    - **<Mono>**
    - **<DCI 8Ch Map>**
12. Press the down navigation button to display **MASTER VOL LEVEL**.
13. Press the left or right navigation button to select the required volume setting:
    - **No Change** - no changes are made to the master volume.
    - **Custom** - the volume is set between 0.0 and 10.0 dB.
14. If required, press the down navigation button to adjust the **CUSTOM** volume.
15. Press **Exit** until you return to the status screen.

Import Presets from a File

1. Open the SKA-3D web interface.

   See *Access the SKA-3D Web Interface* on page 71.
2. Click the **Automation** tab.
3. Click the **Presets** tab.
4. Click **Browse**, and select the preset XML file to import.
5. Click **Load**.

Manually Apply a Configured Preset

1. Open the SKA-3D web interface.

   See *Access the SKA-3D Web Interface* on page 71.
2. Click the **Input/Output** tab.
3. Click **Apply** beside the automation preset that you want to apply.

Manage Trigger Inputs

Trigger inputs provide communication with automation devices. The SKA-3D has 8 available trigger inputs.

Configure Trigger Inputs

Configure trigger inputs using the web interface or the SKA-3D controls. It is useful to use the web interface when multiple trigger inputs are set at one time. Use the SKA-3D controls to change individual configuration settings.

Configure Trigger Inputs using the Web Interface

1. Open the SKA-3D web interface.

   See *Access the SKA-3D Web Interface* on page 71.
2. Click the **Automation** tab.
3. Click the **Trigger Inputs** tab.
4. Select the **Trigger Input** from the list.
5. Select the **Switch to Preset** from the list.
6. Click **Test** to test the trigger input.
7. Repeat steps 4 to 6 for the remaining trigger inputs.
8. Click **Save**, and save the trigger inputs as an XML file.

Configure Trigger Inputs using the SKA-3D Controls

1. Press **Menu**.
2. Press the left or right navigation button to display **Automation Settings**.
3. Press **Enter**.
4. Press the up or down navigation button to display **Trigger Inputs**.
5. Press the left or right navigation button to select the automation trigger input to configure:

   <1>...<8>
6. Press **Enter** and navigate to **TRIGGER TYPE**.
7. Press the left or right navigation button to configure the automation trigger input:
   - **<NORM HIGH>**
   - **<NORM LOW>**
8. Press the up or down navigation button to display **SWITCH TO PRESET**.
9. Press the left or right navigation button to select the preset to use when the trigger event is called:
   - **<NONE>**

- **<1>...<10>**

10. Press **Exit** until you return to the status screen.

Import Trigger Inputs from a File

1. Open the SKA-3D web interface.

   See *Access the SKA-3D Web Interface* on page 71.
2. Click the **Automation** tab.
3. Click the **Trigger Inputs** tab.
4. Click **Browse**, and select the trigger inputs XML file to import.
5. Click **Load**.

Manage Trigger Outputs

Trigger outputs provide control of automation devices such as lighting systems, curtains, or motorized screens. The SKA-3D has 4 available trigger outputs (1-4).

Configure Trigger Outputs

Configure trigger outputs using the web interface or the SKA-3D controls. It is useful to use the web interface when multiple trigger outputs are set at one time. Use the SKA-3D controls to change individual configuration settings.

Configure Trigger Outputs with the Web Interface

1. Open the SKA-3D web interface.

   See *Access the SKA-3D Web Interface* on page 71.
2. Click the **Automation** tab.
3. Click the **Trigger Outputs** tab.
4. Select the **Event Trigger** from the list.
5. Select the **Output State** from the list.
6. Select the **Action** from the list. If **Pulse** is selected, complete the **Pulse Duration** field.
7. Repeat steps 4 to 6 for the remaining trigger outputs.
8. Click **Save**, and save the trigger outputs as an XML file.

Configure Trigger Outputs with the SKA-3D Controls

1. Press **Menu**.
2. Press the left or right navigation button to display **Automation Settings**.

3. Press **Enter**.
4. Press the up or down navigation button to display **Trigger Outputs**.
5. Press the left or right navigation button to select the automation trigger output to configure:

   <1>...<4>
6. Press **Enter** and navigate to **TRIGGER TYPE**.
7. Press the left or right navigation button to select the required setting:
   - **<NORM OPEN>**
   - **<NORM CLOSE>**
8. Press the up or down navigation button to display **EVENT TRIGGER**.
9. Press the left or right navigation button and display the required trigger event:

Video Inputs	Trigger Inputs
<HDMI 1>...<HDMI 4>	<Trigger In 1>...<Trigger In 8>
<COMP 1>...<COMP 2>	**Video Input Format**
<VGA>	<3D ACTIVE>
<NONE>	**Other**
Audio Inputs	<MUTE>
<DIG DCI>	<NO VIDEO>
<BAL ANALOG>	<NO AUDIO>
<HDMI AUD>	**Active Speaker Output**
<OPT 1>...<OPT 3>	<MONO 1.0>
<COAX 1>...<COAX 3>	<Stereo 2.0>
<ANALOG 1>...<ANALOG 3>	<5.1>
<MIC>	<7.1>
<NONE>	<9.1>

10. Press the up or down navigation button to display **TRIGGER SIGNAL**.
11. Press the left or right navigation button to select the required setting:
    - **<LEVEL>**
    - **<PULSE>**
12. If required, press the up or down navigation button to display **PULSE LENGTH**; otherwise, skip to step 14.

    Pulse adjustments are not required for levels.
13. Press the left or right navigation button to select **<00000ms>**.

    The pulse length can be adjusted from 0-10000 ms (10 seconds) in 10 ms increments.
14. Press **Exit** until you return to the status screen.

Import Trigger Outputs from a File

1. Open the SKA-3D web interface.

   See *Access the SKA-3D Web Interface* on page 71.
2. Click the **Automation** tab.
3. Click the **Trigger Outputs** tab.
4. Click **Browse**, and select the trigger outputs XML file to import.
5. Click **Load**.

Use an External Microphone

1. Connect the microphone to the XLR jack.
2. Turn the **Mic Level** knob to adjust the input gain (9-60 dB).
3. Turn the **Mic Mode Select** knob to set the behavior of the microphone output signal:
   - **Mute** - mutes the output signal.
   - **Booth** - limits the microphone output signal to the booth area (using the Booth Monitor jacks on the back of the SKA-3D)
   - **Booth + Auditorium** - broadcasts the microphone output signal to the booth and the auditorium.
4. Monitor the current input gain of the microphone signal.

   See *Indicators* on page 5.

   Audio distortion can result if the input level is 0 dB or greater.

Monitor an Audio Channel

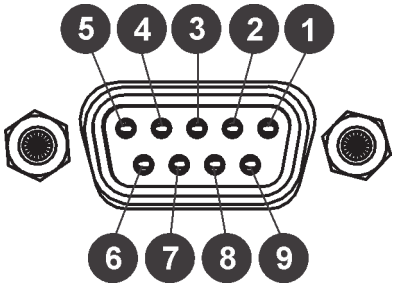
Stereo headphones can be used to monitor an audio channel.

1. Connect a pair of stereo headphones to the **Headphone Out** jack on the front of the SKA-3D.
2. Turn the **Headphone Level** knob to adjust the headphone volume.
3. Press the **Source Select** button to enter the **Audio Monitor Ch** menu.
4. Press the left or right navigation button to select the audio channel to be monitored.

Serial Control

This section describes RS-232 settings and Telnet commands for operating the SKA-3D.

DE-9 Connector Components



DE-9 Connector[a]				
RS-232 Controller	PIN		PIN	SKA-3D
DCD	1	←	1	DCD
RXD	2	←	2	RXD
TXD	3	→	3	TXD
DTR	4	—	4	DTR
GND	5	—	5	GND
DSR	6	←	6	DSR
RTS	7	→	7	RTS
CTS	8	←	8	CTS
R1	9	←	9	R1

a. Only the RXD, TXD, and GND pins are used.

RS-232 Settings

Specification	Setting
Baud rate	115200
Data bits	8
Parity bits	None
Stop bits	1
Flow control	None

Configure the IP Address with RS-232

The SKA-3D supports IP-based control using Telnet or the built-in web interface. Use RS-232 to configure the network settings. This table lists the default network settings for the SKA-3D:

Specification	Setting
IP Address	192.168.206.100
Subnet mask	255.255.255.0
Default Gateway	192.168.206.1
HTTP port	80
Telnet port	23

1. Connect one end of the RS-232 cable to the RS-232 port on the back of the SKA-3D and the other end to the computer port.

   See *Rear Panel* on page 7.

2. Start a terminal emulation program. For example, HyperTerminal.

   Use the *RS-232 Settings* on page 35 to configure the program.

3. Configure the IP address:

   ```
   ipaddr [SKA-3D_IP_Address]
   ```

4. Configure the subnet mask:

   ```
   subnet [SKA-3D_Subnet_Mask]
   ```

5. Configure the gateway (router) IP address:

   ```
   gateway [Gateway_IP_Address]
   ```

6. Configure the telnet listening port:

   ```
   telnetport [Telnet_Listening_Port]
   ```

7. Configure the HTTP listening port:

   ```
   httpport [HTTP_Listening_Port]
   ```

8. Reboot the SKA-3D to reset the IP address changes.

Serial Control Commands

Always use a carriage return (0D hex) at the end of each serial control command, and a single space between the command and the parameter.

This table lists the serial control commands that are available over RS-232 and Telnet.

Command	Description	Syntax	Parameters [p]	Example	Returned Value
audio	Selects the audio input.	s audio [p1]	p1 options: • 0 - Digital DCI / AES • 1 - Balanced Analog Audio • 2 - HDMI 1 or 2 • 3 - Optical 1 • 4 - Optical 2 • 5 - Optical 3 • 6 - Coax 1 • 7 - Coax 2 • 8 - Coax 3 • 9 - Analog 1 • 10 - Analog 2 • 11 - Analog 3 • 12 - Mic • 13 - None	s audio 1	AUDIO 8CH
	Returns the audio input.	r audio	none	r audio	AUDIO 8CH
audiomon	Selects the audio channel to monitor.	s audiomon [p1]	p1 options: • 0 - Mix • 1 - Left • 2 - Right • 3 - Center • 4 - LFE • 5 - Left Surround	s audiomon 9	AUDIOMON LEFT CENTER

Command	Description	Syntax	Parameters [p]	Example	Returned Value
audiomon (cont.)			• 6 - Right Surround • 7 - Back left Surround • 8 - Back Right Surround • 9 - Center Left • 10 - Center Right • 11 - HI • 12 - VI/N		
	Returns the audio channel that is being monitored.	r audiomon	none	r audiomon	AUDIOMON LEFT CENTER
audprccon	Sets the consumer audio processing mode.	s audprccon [p1]	p1 options: • 0 - Auto format detect • 1 - Dolby Pro Logic II • 2 - Stereo 2.0 • 3 - Mono 1.0	s audprccon 2	AUDPRCCON STEREO 2.0
	Returns the consumer audio processing mode.	r audprccon	none	r audprccon	AUDPRCCON STEREO 2.0
audprcpro	Sets the professional audio processing mode.	s audprcpro [p1]	p1 options: • 0 - DCI 8-ch map 7.1 • 1 - DCI 6-ch map 5.1 • 2 - Dolby Surround 7.1 • 3 - Stereo 2.0 • 4 - Mono 1.0	s audprcpro 2	AUDPRCPRO DLBYSUR 7.1
	Returns the current professional audio processing mode.	r audprcpro	none	r audprcpro	AUDPRCPRO DLBYSUR 7.1

Command	Description	Syntax	Parameters [p]	Example	Returned Value
aux1chsrc	Selects the channel to output to AUX 1 and sets the volume to track with the master volume or stay at a fixed output level. Be aware that the "5 Screen and 4 Surround" speaker configuration does not support this type of channel mapping.	s auxlchsrc [p1] [p2]	p1 options: • 0 - Channel, no audio is out put to AUX 1 • 1...16 - Channel • 17 - Channel, audio is down-mixed to Left, Right, and Center (LCR) • 18 - Channel, audio is down-mixed to the left channel • 19 - Channel, audio is down-mixed to the right channel p2 options: • 0 - Fixed level volume control • 1 - Track with master volume	s auxlchsrc 13 0	AUX1CHSRC CH13 FIXD
	Returns the channel and volume information for AUX 1.	r auxlchsrc	none	r auxlchsrc	AUX1CHSRC CH13 FIXD
aux2chsrc	Selects the channel to output to AUX 2 and sets the volume to track with the master volume or stay at a fixed output level.	s aux2chasrc [p1] [p2]	p1 options: • 0 - Channel, no audio is output to AUX 2 • 1...16 - Channel • 17 - Channel, audio is down-mixed to Left, Right, and Center (LCR) • 18 - Channel, audio is down-mixed to the left channel	s aux2chsrc 8 1	AUX2CHSRC CH8 MVOL

Command	Description	Syntax	Parameters [p]	Example	Returned Value
aux2chsrc (cont.)			p1 options (cont.): • 19 - Channel, audio is down-mixed to the right channel p2 options: • 0 - Fixed level volume control • 1 - Track with master volume		
	Returns the channel and volume information for AUX 2.	r aux2chsrc	none	r aux2chsrc	AUX2CHSRC CH8 MVOL
avpair	Sets the default audio/video pair.	s avpair [p1] [p2]	p1 options: • 0 - HDMI 1 • 1 - HDMI 2 • 2 - HDMI 3 / DVI-I • 3 - HDMI 4 / DVI-D • 4 - Component 1 • 5 - Component 2 • 6 - VGA • 7 - None p2 options: • 0 - Digital DCI / AES • 1 - Balanced analog audio • 2 - HDMI Audio • 3 - Optical 1 • 4 - Optical 2 • 5 - Optical 3 • 6 - Coax 1 • 7 - Coax 2	s avpair 2 0	AV PAIR HDMI3 16CH
	Returns the default audio/video setting.	r avpair [p1]		r avpair 2	AV PAIR HDMI3 16CH

Command	Description	Syntax	Parameters [p]	Example	Returned Value
avpair (cont.)			p2 options (cont.): • 8 - Coax 3 • 9 - Analog1 • 10 - Analog2 • 11 - Analog3 • 12 - Mic • 13 - None		
biamplcr	Sets the bi-amp L/C/R configuration to enabled or disabled.	s biamplcr [p1]	p1 options: • 0 - Disable • 1 - Enable, high frequencies go to L/C/R and low frequencies go to the LFR/LFC/LFL outputs based on the crossover settings.	s biamplcr 0	BIAMPLCR IS DISABLED
	Returns the bi-amp L/C/R configuration.	r biamplcr	none	r biamplcr	BIAMPLCR IS DISABLED
biamplcrcaux	Enables or disables the LC and RC to Aux 1/2.	s biamplcrcaux [p1]	p1 options: • 0 - Disable • 1 - Enable	s biamplcrcaux 0	BIAMPLCRCAUX DISABLED
	Returns the bi-amp LC and RC to Aux 1/2 configuration.	r biamplcrcaux	none	r biamplcrcaux	BIAMPLCRCAUX DISABLED
biamplcrcxover	Sets the bi-amp LC and RC to Aux 1/2 crossover freq. The Bi-amp LC and RC to Aux 1/2 must be enabled (biamplcrcaux).	s biamplcrcxover [p1]	p1 options: • 40...4000 - The frequency in Hz	s biamplcrcxover 120	BIAMPLCRCXOVER 120
	Returns the bi-amp LC and RC to Aux 1/2 crossover frequency.	r biamplcrcxover	none	r biamplcrcxover	BIAMPLCRCXOVER 120

Command	Description	Syntax	Parameters [p]	Example	Returned Value
biamplflvl	Sets the output level of the low-frequency bi-amp output. The Bi-amp L/C/R configuration must be enabled (biamplcr) before setting the LV Bi-amp output.	s biamplflvl [p1] [p2]	p1 options: • 0 - Center • 1 - Front Left • 2 - Front Right • 3 - Surround Left • 4 - Surround Right • 5 - Surround Back Left • 6 - Surround Back Right • 7 - Center Left • 8 - Center Right p2 options: • -20...0 - Level in dB	s biamplflvl 7 -10	BIAMPLFLVL RCTR -10.0
	Returns the output level of the low-frequency bi-amp output.	r biamplflvl [p1]		r biamplflvl 7	BIAMPLFLVL RCTR -10.0
biamplfphs	Sets the phase of the low-frequency bi-amp output.	s biamplfphs [p1] [p2]	p1 options: • 0 - Center • 1 - Front Left • 2 - Front Right • 3 - Surround Left • 4 - Surround Right • 5 - Surround Back Left • 6 - Surround Back Right • 7 - Center Left • 8 - Center Right p2 options: • -180...180 - Phase (deg)	s biamplfphs 2 10	BIAMPLFPHS FR 10
	Returns the phase of the low-frequency bi-amp output.	r biamplfphs [p1]		r biamplfphs 2	BIAMPLFPHS FR 10

Command	Description	Syntax	Parameters [p]	Example	Returned Value
biamplsrsaux	Enables or disables the bi-amp LR surrounds to Aux 1/2.	s biamplsrsaux [p1]	p1 options: • 0 - Disable • 1 - Enable	s biamplsrsaux 1	BIAMPLSRSAUX ENABLED
	Returns the current bi-amp LR surrounds to Aux 1/2 setting.	r biamplsrsaux	none	r biamplsrsaux	BIAMPLSRSAUX ENABLED
biamplsrsxover	Sets the bi-amp LS and RS to Aux 1/2 crossover frequency in increments of 1 Hz. The bi-amp LS and RS to Aux 1/2 crossover must be enabled (biamplsrsaux) before using this command.	s biamplsrsxover [p1]	p1 options: • 40...4000 - The frequency in Hz	s biamplsrsxover 300	BIAMPLSRSXOVER 300
	Returns the bi-amp LS / RS crossover frequency.	r biamplsrsxover	none	r biamplsrsxover	BIAMPLSRSXOVER 300
biampxover	Sets the crossover frequency when Bi-amp is enabled. The bi-amp L/C/R configuration must be enabled (biamplcr) before setting the crossover frequency.	s biampxover [p1]	p1 options: • 40...4000 - The frequency in Hz	s biampxover 250	BIAMPXOVER 250
	Returns the crossover frequency when bi-amp is enabled.	r biampxover	none	r biampxover	BIAMPXOVER 250

Command	Description	Syntax	Parameters [p]	Example	Returned Value
brightness	Sets the picture brightness.	s brightness [p1] [p2]	p1 options: • 0 - HDMI 1 • 1 - HDMI 2 • 2 - HDMI 3 / DVI-I • 3 - HDMI 4 / DVI-D • 4 - Component 1 • 5 - Component 2 • 6 - VGA p2 options: • 0...100 - Brightness value. The default is 50.	s brightness 1 60 s brightness	BRIGHTNESS FOR HDMI2 :60
	Returns the picture brightness.	r brightness [p1]		r brightness 1	BRIGHTNESS FOR HDMI2 :60
btmcrop	Sets the percentage of picture crop from the bottom of the picture. Resize (resize) must be set to Advanced before using this command.	s btmcrop [p1] [p2]	p1 options: • 0 - HDMI 1 • 1 - HDMI 2 • 2 - HDMI 3 / DVI-I • 3 - HDMI 4 / DVI-D • 4 - Component 1 • 5 - Component 2 • 6 - VGA p2 options: • 0...100 - Crop (%) of the horizontal resolution	s btmcrop 1 30	HDMI2 BTMCROP IS SET TO 30
	Returns the percentage of bottom picture crop.	r btmcrop [p1]		r btmcrop 1	HDMI2 BTMCROP IS SET TO 30

Command	Description	Syntax	Parameters [p]	Example	Returned Value
colortemp	Sets color temperature of the picture.	s colortemp [p1] [p2]	p1 options: • 0 - HDMI 1 • 1 - HDMI 2 • 2 - HDMI 3 / DVI-I • 3 - HDMI 4 / DVI-D • 4 - Component 1 • 5 - Component 2 • 6 - VGA p2 options: • 0 - 6500K • 1 - 5500K • 2 - 9600K	s colortemp 0 1	COLORTEMP IS SET TO HDMI1 :<5500K>
	Returns the color temperature of the picture.	r colortemp [p1]		r colortemp 0	COLORTEMP IS SET TO HDMI1 :<5500K>
contrast	Sets picture contrast.	s contrast [p1] [p2]	p1 options: • 0 - HDMI 1 • 1 - HDMI 2 • 2 - HDMI 3 / DVI-I • 3 - HDMI 4 / DVI-D • 4 - Component 1 • 5 - Component 2 • 6 - VGA p2 options: • 0...100 - Contrast setting.	s contrast 4 25	CONTRAST IS SET TO Comp1 :25
	Returns the picture contrast value.	r contrast [p1]		r contrast 4	CONTRAST IS SET TO Comp1 :25
copytovidin	Applies the current video settings preset to the specified input. This command has no query command.	s copytovidin [p1]	p1 options: • 0 - HDMI 1 • 1 - HDMI 2 • 2 - HDMI 3 / DVI-I • 3 - HDMI 4 / DVI-D • 4 - Component 1 • 5 - Component 2 • 6 - VGA	s copytovidin 5	COPYTOVIDIN HDMI1 TO Comp2

Command	Description	Syntax	Parameters [p]	Example	Returned Value
disptelwel	Enables or disables the Telnet welcome message. When enabled, the TELNET WELCOME!! message displays.	s disptelwel [p1]	p1 options: • 0 - Disable • 1 - Enable	s disptelwel 1	TELNET WEOCOME DISPLAY IS ENABLED
	Returns the Telnet welcome message setting.	r disptelwel	none	r disptelwel	TELNET WEOCOME DISPLAY IS ENABLED
drcdd	Turns dynamic range control (DRC) for Dolby Digital and Dolby Digital Plus audio formats on or off.	s drc [p1]	p1 options: • 0 - Off • 1 - On	s drcdd 1	DRC for Dolby Digital and Dolby Digital Plus is set to ON
	Returns the current dynamic range control setting.	r drc	none	r drcdd	DRC for Dolby TrueHD is set to OFF
drctruehd	Enables or disables dynamic range control (DRC) for the Dolby TrueHD auto format. This feature reduces the volume of loud sounds and amplifies quiet sounds by compressing the dynamic range of the audio signal.	s drctruehd [p1]	p1 options: • 0 - Disable • 1 - Enable • 2 - Auto	s drctruehd 1	DRC for Dolby TrueHD is set to ON
	Returns the DRC status.	r drctruehd	none	r drctruehd	DRC for Dolby TrueHD is set to ON

Command	Description	Syntax	Parameters [p]	Example	Returned Value
dviclrdpth	Sets the HDMI color depth.	s dviclrdpth [p1]	p1 options: • 0 - 8-bit • 1 - 10-bit	s dviclrdpth 1	DVICLRDPTH 10BIT
	Returns the HDMI color depth.	r dviclrdpth	none	r dviclrdpth	DVICLRDPTH 10BIT
eq	Sets the EQ adjustment for each speaker using the specified center frequency.	s eq [p1] [p2] [p3]	p1 options: • 0 - Center • 1 - Front Left • 2 - Front Right • 3 - Surround Left • 4 - Surround Right • 5 - Surround Back Left • 6 - Surround Back Right • 7 - Center Left • 8 - Center Right p2 options: • 0 - 20 Hz • 1 - 25 Hz • 2 - 32 Hz • 3 - 40 Hz • 4 - 50 Hz • 5 - 63 Hz • 6 - 80 Hz • 7 - 100 Hz • 8 - 125 Hz • 9 - 160 Hz • 10 - 200 Hz • 11 - 250 Hz • 12 - 315 Hz	s eq 2 18 -5	FR EQ1250 IS SET TO -5.0
	Returns the equalizer adjustment values for the specified speaker.	r eq [p1] r eq [p1] [p2]		r eq 2	FR EQ20 IS SET TO 0.0 FR EQ25 IS SET TO 0.0 FR EQ32 IS SET TO 0.0 FR EQ40 IS SET TO 0.0 FR EQ50 IS SET TO 0.0 FR EQ63 IS SET TO 0.0 FR EQ80 IS SET TO 0.0 FR EQ100 IS SET TO 0.0 FR EQ125 IS SET TO 0.0 FR EQ160 IS SET TO 0.0 FR EQ200 IS SET TO 0.0 FR EQ250 IS SET TO 0.0

Command	Description	Syntax	Parameters [p]	Example	Returned Value
eq (cont.)			p2 options (cont.): • 13 - 400 Hz • 14 - 500 Hz • 15 - 630 Hz • 16 - 800 Hz • 17 - 1000 Hz • 18 - 1250 Hz • 19 - 1600 Hz • 20 - 2000 Hz • 21 - 2500 Hz • 22 - 3150 Hz • 23 - 4000 Hz • 24 - 5000 Hz • 25 - 6300 Hz • 26 - 8000 Hz • 27 - 10000 Hz • 28 - 12500 Hz • 29 - 16000 Hz • 30 - 20000 Hz p3 options: • -12...12 - dB Level		FR EQ315 IS SET TO 0.0 FR EQ400 IS SET TO 0.0 FR EQ500 IS SET TO 0.0 FR EQ630 IS SET TO 0.0 FR EQ800 IS SET TO 0.0 FR EQ1000 IS SET TO 0.0 FR EQ1250 IS SET TO -5.0 FR EQ1600 IS SET TO 0.0 FR EQ2000 IS SET TO 0.0 FR EQ2500 IS SET TO 0.0 FR EQ3150 IS SET TO 0.0 FR EQ4000 IS SET TO 0.0 FR EQ5000 IS SET TO 0.0 FR EQ6300 IS SET TO 0.0 FR EQ8000 IS SET TO 0.0 FR EQ10000 IS SET TO 0.0 FR EQ12500 IS SET TO 0.0 FR EQ16000 IS SET TO 0.0

Command	Description	Syntax	Parameters [p]	Example	Returned Value
eq (cont.)					FR EQ20000 IS SET TO 0.0
				r eq 2 18	FR EQ1250 IS SET TO -5.0
gateway	Sets the gateway (router) IP address.	s gateway [p1]	p1 is the gateway IP address using a dot-decimal notation. Each number must be within the range of 0-255. The default gateway is 192.168.206.1.	s gateway 192.168.206.1	GATEWAY 192.168.206.1
	Returns the gateway (router) IP address.	r gateway	none	r gateway	GATEWAY 192.168.206.1
help	Displays a list of serial control commands or displays help comments for the specified command when [p1] is provided.	help or help [p1]	p1 is any command listed in this table.	help source	VIDEO INPUT SOURCE SELECT S SOURCE P1 >SOURCE P1 P1 - INPUT (0 - 7) 0=HDMI1, 1=HDMI2, 2=HDMI3/DVI-I, 3=HDMI4/DVI-D, 4=Component1, 5=Component2, 6=VGA, 7=NONE

Command	Description	Syntax	Parameters [p]	Example	Returned Value
hichsrc	Selects the hearing impaired channel source and sets the volume control.	s hichsrc [p1] [p2]	p1 options: • 0 - Channel; no audio is sent to the hearing impaired output • 1...16 - Channel • 17 - Channel; audio is down-mixed to left, right, and center (LCR) • 18 - Channel; audio is down-mixed to the left channel • 19 - Channel; audio is down-mixed to the right channel p2 options: • 0 - Fixed level • 1 - Track with master volume	s hichsrc 3 1	HICHSRC CH3 MVOL
	Returns the hearing impaired output channel.	r hichsrc [p1]		r hichsrc 3	HICHSRC CH3 MVOL
hposition	Sets the horizontal position of the output image after it is cropped. Resize (resize) must be set to Advanced before using this command.	s hposition [p1] [p2]	p1 options: • 0 - HDMI 1 • 1 - HDMI 2 • 2 - HDMI 3 / DVI-I • 3 - HDMI 4 / DVI-D • 4 - Component 1 • 5 - Component 2 • 6 - VGA p2 options: • -50...50 - Horizontal position.	s hposition 3 20	HDMI4 HPOSITION IS SET TO 20
	Returns the horizontal position of the output image.	r hposition [p1]		r hposition 3	HDMI4 HPOSITION IS SET TO 20

Command	Description	Syntax	Parameters [p]	Example	Returned Value
hstretch	Sets the percentage of horizontal picture stretch. Resize (resize) must be set to Advanced before using this command.	s hstretch [p1] [p2]	p1 options: • 0 - HDMI 1 • 1 - HDMI 2 • 2 - HDMI 3 / DVI-I • 3 - HDMI 4 / DVI-D • 4 - Component 1 • 5 - Component 2 • 6 - VGA p2 options: • -50...50 - Horizontal stretch.	s hstretch 1 -30	HDMI2 HSTRETCH IS SET TO -30
	Returns the percentage of horizontal picture stretch.	r hstretch [p1]		r hstretch 1	HDMI2 HSTRETCH IS SET TO -30
httpport	Sets the web server listening port. The default port setting is 80.	s httpport [p1]	p1 options: • 0...65535 - HTTP listening port.	s httpport 80	HTTP PORT 80
	Returns the web server listening port.	r httpport	none	r httppport	HTTP PORT 80
info	Returns the currently-installed firmware version.	r info	none	r info	SKA-3D Version : V1.4Et19 Aug 27 2013 20:11:37
ipaddr	Sets the IP address of the SKA-3D.	s ipaddr [p1]	p1 is the IP address of the SKA-3D using a dot-decimal notation. Each number must be within the range of 0-255.	s ipaddr 192.168.1.239	IPADDR : 192.168.1.239
	Returns the IP address of the SKA-3D.	r ipaddr	none	r ipaddr	IPADDR : 192.168.1.239

Command	Description	Syntax	Parameters [p]	Example	Returned Value
ipconfig	Returns the current TCP/IP settings of the SKA-3D (r).	r ipconfig	none	r ipconfig	IP 192.168.1.239 SUBNET 255.255.255.0 GATEWAY 192.168.206.1 PORT 80 TELNET PORT 23
lfephs	Adjusts the phase of the LFE output.	s lfephs [p1]	p1 options: • -180...180 - Phase of the LFE output.	s lfephs -90	LFEPHS -90
	Returns the phase of the LFE output.	r lfephs	none	r lfephs	LFEPHS -90
lftcrop	Sets the percentage of picture crop from the left side of the picture. Resize (resize) must be set to Advanced before using this command.	s lftcrop [p1] [p2]	p1 options: • 0 - HDMI 1 • 1 - HDMI 2 • 2 - HDMI 3 / DVI-I • 3 - HDMI 4 / DVI-D • 4 - Component 1 • 5 - Component 2 • 6 - VGA	s lftcrop 6 30	VGA LFTCROP IS SET TO 30
	Returns the percentage of left side picture crop.	r lftcrop [p1]	p2 options: • 0...100 - Percentage of left side crop.	r lftcrop 3	VGA LFTCROP IS SET TO 30

Command	Description	Syntax	Parameters [p]	Example	Returned Value
lipsync	Sets the lip sync (audio delay) for the specified source.	s lipsync [p1] [p2]	p1 options: • 0 - HDMI 1 • 1 - HDMI 2 • 2 - HDMI 3 / DVI-I • 3 - HDMI 4 / DVI-D • 4 - Component 1 • 5 - Component 2 • 6 - VGA p2 options: • 0...250 - Specifies the lip sync delay in milliseconds.	s lipsync 1 50	HDMI2 LIPSYNC SET TO 50
	Returns the lip sync delay.	r lipsync [p1]		r lipsync 1	HDMI2 LIPSYNC SET TO 50
mainfrq	Sets the main high-pass filter frequency value. The high-pass filter (mainhp) must be enabled before using this command.	s mainfrq [p1] [p2]	p1 options: • 0 - Center • 1 - Front Left • 2 - Front Right • 3 - Surround Left • 4 - Surround Right • 5 - Surround Back Left • 6 - Surround Back Right • 7 - Center Left • 8 - Center Right p2 options: • 5...150 - Frequency in Hz	s mainfrq 0 150	MAINFRQ CTR:150
	Returns the main high-pass filter frequency value for the specified speaker.	r mainfrq [p1]		r mainfrq 0	MAINFRQ CTR:150

Command	Description	Syntax	Parameters [p]	Example	Returned Value
mainhp	Enables or disables the main high-pass filter for the specified speaker.	s mainhp [p1] [p2]	p1 options: • 0 - Center • 1 - Front Left • 2 - Front Right • 3 - Surround Left • 4 - Surround Right • 5 - Surround Back Left • 6 - Surround Back Right • 7 - Center Left • 8 - Center Right p2 options: • 0 - Disable • 1 - Enable	s mainhp 5 1	MAIN HP BLS:ON
	Returns the main high-pass filter setting for the specified speaker.	r mainhp [p1]		r mainhp 5	MAIN HP BLS:ON
micpower	Enables or disables the phantom power for the microphone.	s micpower [p1]	p1 options include: • 0 - Disable • 1 - Enable	s micpower 1	MIC phantom power is ON
	Returns the phantom power microphone setting.	r micpower	none	r micpower	MIC phantom power is ON
mode3d	Sets the 3D mode of the DVI output.	s mode3d [p1]	p1 options: • 0 - Sequential • 1 - Dual	s mode3d 0	3DMODE IS SEQ
	Returns the 3D mode of the DVI output.	r mode3d	none	r mode3d	3DMODE IS SEQ

Command	Description	Syntax	Parameters [p]	Example	Returned Value
mstervol	Sets the master volume level. The Web interface is immediately updated to reflect the master volume change. The minimum volume increment is 0.1.	s mstervol [p1]	p1 options: • 0.0...10.0 - Volume level in dB	s mstervol 3.4	MSTERVOL 3.4
	Returns the master volume level.	r mstervol	none	r mstervol	MSTERVOL 3.4
mute	Mutes or un-mutes the master volume level.	s mute [p1]	p1 options: • 0 - Un-mute • 1 - Mute	s mute 1	VOLUME IS MUTE
	Returns the current mute status.	r mute	none	r mute	VOLUME IS MUTE
output	Sets the output resolution.	s output [p1]	p1 options: • 0 - Bypass, the output resolution is the same as the input resolution. • 1 - 1920 x 1080P • 2 - 2K	s output 1	OUTPUT 1080P
	Returns the output resolution.	r output	none	r output	OUTPUT 1080P

Command	Description	Syntax	Parameters [p]	Example	Returned Value
phase	Sets the phase adjustment for the specified video input. Adjustment is not applicable to HDMI 1, HDMI 3, and HDMI 4 / DVI-D inputs.	s phase [p1] [p2]	p1 options: • 0 - HDMI 1 (n/a) • 1 - HDMI 2 (n/a) • 2 - HDMI 3 / DVI-I • 3 - HDMI 4 / DVI-D (n/a) • 4 - Component 1 • 5 - Component 2 • 6 - VGA p2 options: • 0...100 - Phase adjustment	s phase 2 75	HDMI3 PHASE IS SET TO 75
	Returns the phase adjustment for the specified video input.	r phase [p1]		r phase 2	HDMI3 PHASE IS SET TO 75
preset	Defines the specified preset with the desired video/audio input, audio mode, and master volume definition.	s preset [p1] [p2] [p3] [p4] [p5] [p6]	p1 options: • 1...10 - Preset number p2 options for video input: • -1 - No action, the parameter is ignored. • 0 - HDMI 1 • 1 - HDMI 2 • 2 - HDMI 3 / DVI-I • 3 - HDMI 4 / DVI-D • 4 - Component 1 • 5 - Component 2 • 6 - VGA • 7 - None p3 options for audio input: • -1 - No action, the parameter is ignored. • 0 - Digital DCI • 1 - Balanced analog • 2 - HDMI	s preset 1 1 0 2 1 7.5	PRESET1: HDMI 2 DIG DCI Dolby Surr 7.1 CUSTOM 7.5

Command	Description	Syntax	Parameters [p]	Example	Returned Value
preset (cont.)			p3 options (continued):		
	Applies the defined preset to the SKA-3D.	r preset [p1]	• 3 - Optical 1 • 4 - Optical 2 • 5 - Optical 3 • 6 - Coax 1 • 7 - Coax 2 • 8 - Coax 3 • 9 - Analog 1 • 10 - Analog 2 • 11 - Analog 3 • 12 - Mic • 13 - None p4 options for audio mode: • -1 - No action, the parameter is ignored. • 0 - DCI 8Ch mapping • 1 - DCI 6Ch mapping • 2 - Dolby surround 7.1 • 3 - Stereo 2.0 • 4 - Mono 1.0 p5 options for master volume type: • 0 - Fixed • 1 - Custom p6 options: • 1.0...10.0 - Master volume in dB.	r preset 1	PRESET1: HDMI 2 DIG DCI Dolby Surr 7.1 CUSTOM 7.5

Command	Description	Syntax	Parameters [p]	Example	Returned Value
reboot	Performs a soft-boot on SKA-3D. All changes are finalized or parameters are reset. Network settings are preserved. This command has no query command.	s reboot	none	s reboot	Reboot now... SKA-3D Version : V1.4Et05 Jun 10 2013 15:28:24 Boot Version: V1.4
resize	Re-sizes the output video signal to the specified setting.	s resize [p1] [p2]	p1 options include: • 0 - HDMI 1 • 1 - HDMI 2 • 2 - HDMI 3 / DVI-I • 3 - HDMI 4 / DVI-D • 4 - Component 1 • 5 - Component 2 • 6 - VGA p2 options include: • 0 - Native • 1 - Full Size • 2 - Full Width • 3 - Full Height • 4 - Anamorphic • 5 - Overscan • 6 - Underscan • 7 - Letterbox • 8 - Panscan • 9 - Advanced	s resize 3 1	RESIZE FOR HDMI4 :<FULL SIZE>
	Returns the output video signal size.	r resize [p1]		r resize 3	RESIZE FOR HDMI4 :<FULL SIZE>

Command	Description	Syntax	Parameters [p]	Example	Returned Value
ritcrop	Sets the percentage of picture cropping on the right side of the screen.	s ritcrop [p1] [p2]	p1 options include: • 0 - HDMI 1 • 1 - HDMI 2 • 2 - HDMI 3 / DVI-I • 3 - HDMI 4 / DVI-D • 4 - Component 1 • 5 - Component 2 • 6 - VGA p2 options include: • 0...100 - Percentage of right side crop.	s ritcrop 6 30	VGA RITCROP IS SET TO 30
	Returns the percentage of right side picture cropping.	r ritcrop [p1]		r ritcrop 6	VGA RITCROP IS SET TO 30
rlc	Enables or disables the reference level compensation (RLC).	s rlc [p1]	p1 options include: • 0 - Disable • 1 - Enable	s rlc 0	RLC IS DISABLED
	Returns the reference level compensation (RLC) setting.	r rlc	none	r rlc	RLC IS DISABLED
source	Selects the video input.	s source [p1]	p1 options include: • 0 - HDMI 1 • 1 - HDMI 2 • 2 - HDMI 3 / DVI-I • 3 - HDMI 4 / DVI-D • 4 - Component 1 • 5 - Component 2 • 6 - VGA • 7 - None	s source 3	SOURCE HDMI4
	Returns the video input.	r source	none	r source	SOURCE HDMI4

Command	Description	Syntax	Parameters [p]	Example	Returned Value
spkrconf	Sets the speaker configuration.	s spkrconf [p1]	p1 options include: • 0 - Mono center • 1 - Stereo left/right • 2 - 3 screen + 2 surrounds • 3 - 3 screen + 4 surrounds • 4 - 5 screen + 2 surrounds • 5 - 5 screen + 4 surrounds	s spkrconf 2	SPKRCONF 3-Screen + 2-Surrounds
	Returns the speaker configuration.	r spkrconf	none	r spkrconf	SPKRCONF 3-Screen + 2-Surrounds
spkrdlay	Sets the audio delay for the specified speaker.	s spkrdlay [p1] [p2]	p1 options: • 0 - Center • 1 - Front Left • 2 - Front Right • 3 - Surround Left • 4 - Surround Right • 5 - Surround Back Left • 6 - Surround Back Right • 7 - Center Left • 8 - Center Right • 9 - Low Frequency Effects (LFE) p2 options: • 0...169 - Delay in milliseconds.	s spkrdlay 8 10	SPKRDLAY RCTR 10.0
	Returns the audio delay for the specified speaker.	r spkrdlay [p1]		r spkrdlay 8	SPKRDLAY RCTR 10.0

Command	Description	Syntax	Parameters [p]	Example	Returned Value
spkrlvl	Sets the audio level for the specified speaker.	s spkrlvl [p1] [p2]	p1 options: • 0 - Center • 1 - Front Left • 2 - Front Right • 3 - Surround Left • 4 - Surround Right • 5 - Surround Back Left • 6 - Surround Back Right • 7 - Center Left • 8 - Center Right p2 options: • -20...0 - Speaker audio level in dB.	s spkrlvl 3 -9	SPKRLVL SL -9
	Returns the speaker audio level.	r spkrlvl [p1]		r spkrlvl 3	SPKRLVL SL -9
subbnd1fo	Sets the center frequency for band 1 of the LFE parametric EQ.	s subbndlfo [p1]	p1 options: • 10...250 - Band frequency (Hz)	s subbndlfo 125	SUBBND1FO 125
	Returns the center frequency for band 1 of the LFE parametric EQ.	r subbndlfo	none	r subbndlfo	SUBBND1FO 125
subbnd2fo	Sets the center frequency for band 2 of the LFE parametric EQ.	s subbnd2fo [p1]	p1 options: • 10...250 - Band frequency (Hz)	s subbnd2fo 75	SUBBND2FO 75
	Returns the center frequency for band 2 of the LFE parametric EQ.	r subbnd2fo	none	r subbnd2fo	SUBBND2FO 75

Command	Description	Syntax	Parameters [p]	Example	Returned Value
subbnd3fo	Sets the center frequency for band 3 of the LFE parametric EQ.	s subbnd3fo [p1]	p1 options: • 10...250 - Band frequency (Hz)	s subbnd3fo 195	SUBBND3FO 195
	Returns the center frequency for band 3 of the LFE parametric EQ.	r subbnd3fo	none	r subbnd3fo	SUBBND3FO 195
subbnd4fo	Sets the center frequency for band 4 of the LFE parametric EQ.	s subbnd4fo [p1]	p1 options: • 10...250 - Band frequency (Hz)	s subbnd4fo 20	SUBBND4FO 20
	Returns the center frequency for band 4 of the LFE parametric EQ.	r subbnd4fo	none	r subbnd4fo	SUBBND4FO 20
subbndbw	Sets the bandwidth of each of the four bands for the LFE parametric EQ.	s subbndbw [p1] [p2]	p1 options: • 1...4 - Band p2 options: • 5...60 - Bandwidth (Hz)	s subbndbw 2 25	SUBBNDBW2 25
	Returns the bandwidth of each of the four bands for the LFE parametric EQ.	r subbndbw [p1]		r subbndbw 2	SUBBNDBW2 25
subbndlvl	Sets the level of each of the four bands for the LFE parametric EQ.	s subbndlvl [p1] [p2]	p1 options: • 1...4 - Band p2 options: • -12...12 - Level (dB)	s subbndlvl 3 -8	SUBBNDLVL3 -8.0
	Returns the level of the specified band for the LFE parametric EQ.	r subbndlvl [p1]		r subbndlvl 3	SUBBNDLVL3 -8.0

Command	Description	Syntax	Parameters [p]	Example	Returned Value
subhp	Enables or disables the LFE high-pass filter.	s subhp [p1]	p1 options: • 0 - Off • 1 - On	s subhp 1	SUBHP ON
	Returns the LFE high-pass filter setting.	r subhp	none	r subhp	SUBHP ON
subhpfrq	Sets the LFE high-pass frequency.	s subhpfrq [p1]	p1 options: • 5...40 - Frequency in Hz.	s subhpfrq 10	SUBHPFRQ 10
	Returns the LFE high-pass frequency.	r subhpfrq	none	r subhpfrq	SUBHPFRQ 10
sublp	Enables or disables the LFE low-pass filter.	s sublp [p1]	p1 options: • 0 - Off • 1 - On	s sublp 1	SUBLP ON
	Returns the LFE low-pass filter setting.	r sublp	none	r sublp	SUBLP ON
sublpfrq	Sets the LFE low-pass frequency.	s sublpfrq [p1]	p1 options: • 100...250 - Frequency in Hz.	s sublpfrq 120	SUBLPFRQ 120
	Returns the LFE low-pass frequency.	r sublpfrq	none	r sublpfrq	SUBLPFRQ 120
subnet	Sets the SKA-3D subnet mask.	s subnet [p1]	p1 is the subnet mask of the SKA-3D using a dot-decimal notation. The default subnet mask setting is 255.255.255.0.	s subnet 255.255.255.0	SUBNET : 255.255.255.0
	Returns the SKA-3D subnet mask.	r subnet	none	r subnet	SUBNET : 255.255.255.0

Command	Description	Syntax	Parameters [p]	Example	Returned Value
telnetport	Sets the telnet listening port.	s telnetport [p1]	p1 options: • 0...65535 - the Telnet listening port. The default value is 23.	s telnetport 26	Close telnet user... TELNET PORT 26
	Returns the telnet listening port.	r telnetport	none	r telnetport	TELNET PORT 26
testnoise	Sets the pink noise test signal for the specified speaker to enabled or disabled.	s testnoise [p1] [p2]	p1 options: • 0 - Center • 1 - Front Left • 2 - Front Right • 3 - Surround Left • 4 - Surround Right • 5 - Surround Back Left • 6 - Surround Back Right • 7 - Center Left • 8 - Center Right • 9 - Low Frequency Effects (LFE) p2 options: • 0 - Off • 1 - On	s testnoise 1 1	TESTNOISE FL :ON
	Returns the pink noise test signal setting.	r testnoise [p1]		r testnoise 1	TESTNOISE FL :ON

Command	Description	Syntax	Parameters [p]	Example	Returned Value
testvideo	Enables or disables the test image for picture adjustment. The test pattern is output at 2K resolution, regardless of the selected video output resolution.	s testvideo [p1]	p1 options: • 0 - Disable • 1 - Enable	s testvideo 1	VIDEO TEST PATTERN IS ENABLED
	Returns the test image setting for picture adjustment.	r testvideo	none	r testvideo	VIDEO TEST PATTERN IS ENABLED
topcrop	Sets the percentage of picture crop from the top of the picture. Resize (resize) must be set to Advanced before using this command.	s topcrop [p1] [p2]	p1 options include: • 0 - HDMI 1 • 1 - HDMI 2 • 2 - HDMI 3 / DVI-I • 3 - HDMI 4 / DVI-D • 4 - Component 1 • 5 - Component 2 • 6 - VGA p2 options include: • 0...100 - Percentage of top crop.	s topcrop 1 15	TOPCROP HDMI2 TOPCROP IS SET TO 15
	Returns the percentage of top picture crop.	r topcrop [p1]		r topcrop 1	TOPCROP HDMI2 TOPCROP IS SET TO 15
trgrin	Sets the trigger input to respond to selected events.	s trgrin [p1] [p2] [p3]	p1 options include: • 1...8 - Trigger p2 options include: • 0 - Normally low state • 1 - Normally high state p3 options include: • 0 - Assigns the preset to none • 1...10 - Preset	s trgrin 2 1 4	TRGRIN 2 NH PRESET4 PRESET4 is applied SOURCE HDMI1 AUDIO 16CH AUDPRCPRO DCI 8
	Returns selected events for which a trigger input is set to respond.	r trgrin [p1]		r trgrin 2	TRGRIN 2 NH PRESET4

Command	Description	Syntax	Parameters [p]	Example	Returned Value
trgrintst	Tests the specified trigger input for proper operation. This command has no query command.	s trgrintst [p1]	p1 options include: • 1...8 - Trigger	s trgrintst 2	PRESET1 is applied SOURCE HDMI1 AUDIO OPT3 AUDPRCCON STEREO 2.0 MSTERVOL 9.0
trgrout	Sets the trigger input to respond to selected events.	s trgrout [p1] [p2] [p3] [p4] [p5]	p1 options: • 1...4 - Trigger p2 video input event options: • 1 - HDMI 1 • 2 - HDMI 2 • 3 - HDMI 3 / DVI-I • 4 - HDMI 4 / DVI-D • 5 - Component 1 • 6 - Component 2 • 7 - VGA • 8 - None p2 audio input event options: • 9 - Digital DCI AES • 10 - Balanced Analog • 11 - HDMI Audio • 12 - Optical 1 • 13 - Optical 2 • 14 - Optical 3 • 15 - Coax 1 • 16 - Coax 2 • 17 - Coax 3 • 18 - Analog 1 • 19 - Analog 2 • 20 - Analog 3	s trgrout 3 13 0 1 1250	TRGROUT 3 <OPT 2> <NORM OPEN> <PULSE> 1250
	Returns the events that a trigger input is set to respond to.	r trgrout [p1]		r trgrout 3	TRGROUT 3 <OPT 2> <NORM OPEN> <PULSE> 1250

Command	Description	Syntax	Parameters [p]	Example	Returned Value
`trgrout` (cont.)			p2 audio input event options (cont): • `21` - Mic • `22` - None p2 trigger input event options: • `23` - Trigger in 1 • `24` - Trigger in 2 • `25` - Trigger in 3 • `26` - Trigger in 4 • `27` - Trigger in 5 • `28` - Trigger in 6 • `29` - Trigger in 7 • `30` - Trigger in 8 p2 other event options: • `31` - Mute • `32` - No video signal • `33` - No audio signal p2 active speaker output event options: • `34` - Mono 1.0 • `35` - Stereo 2.0 • `36` - Multi-channel 5.1 • `37` - Multi-channel 7.1 • `38` - Multi-channel 9.1 p2 video input event options: • `39` - 3D Active p3 output state event options: • `0` - Normally open • `1` - Normally closed		

Command	Description	Syntax	Parameters [p]	Example	Returned Value
trgrout (cont.)			p4 action event options: • 0 - Level • 1 - Pulse p5 options: • 0...10000 - Pulse duration in milliseconds		
username	Sets the telnet username.	s username [p1]	p1 is the case-sensitive Telnet username. The maximum length of is 20 characters.	s username flynn	USERNAME IS "flynn"
	Returns the telnet username.	r username	none	r username	USERNAME IS "flynn"
vichsrc	Selects the visually-impaired channel source and sets the volume control.	s vichsrc [p1] [p2]	p1 options: • 0 - Channel, no audio is output to the hearing impaired output • 1...16 - Channel • 17 - Channel, audio is down-mixed to Left, Right, and Center (LCR) • 18 - Channel, audio is down-mixed to the left channel • 19 - Channel, audio is down-mixed to the right channel p2 options: • 0 - Fixed level • 1 - Track with master volume	s vichsrc 4 0	VICHSRC CH4 FIXD
	Returns the output volume for the specified channel.	r vichsrc [p1]		r vichsrc 4	VICHSRC CH4 FIXD

Command	Description	Syntax	Parameters [p]	Example	Returned Value
vposition	Sets the vertical position of the cropped output image. The default setting is 0 (centered).	s vposition [p1] [p2]	p1 options include: • 0 - HDMI 1 • 1 - HDMI 2 • 2 - HDMI 3 / DVI-I • 3 - HDMI 4 / DVI-D • 4 - Component 1 • 5 - Component 2 • 6 - VGA p2 options include: • -50...50 - Vertical position.	s vposition 1 20	HDMI2 VPOSITION IS SET TO 20
	Returns the vertical position of the cropped output image.	r vposition [p1]		r vposition 1	HDMI2 VPOSITION IS SET TO 20
vstretch	Sets the vertical picture stretch. The default value is 0 (no stretch applied)	s vstretch [p1] [p2]	p1 options include: • 0 - HDMI 1 • 1 - HDMI 2 • 2 - HDMI 3 / DVI-I • 3 - HDMI 4 / DVI-D • 4 - Component 1 • 5 - Component 2 • 6 - VGA p2 options include: • -50...50 - Vertical stretch.	s vstretch 1 -20	HDMI2 VSTRETCH IS SET TO -20
	Returns the vertical picture stretch.	r vstretch [p1]		r vstretch 1	HDMI2 VSTRETCH IS SET TO -20

Send a Serial Ethernet Command from the Christie ACT

Provide the serial string with a trailing carriage return and line feed to the SKA-3Ds IP address and port number.

```
<SKA3D_IP_Address>:<SKA3D_Port_#> <String_+_Parameters>\r\n
```

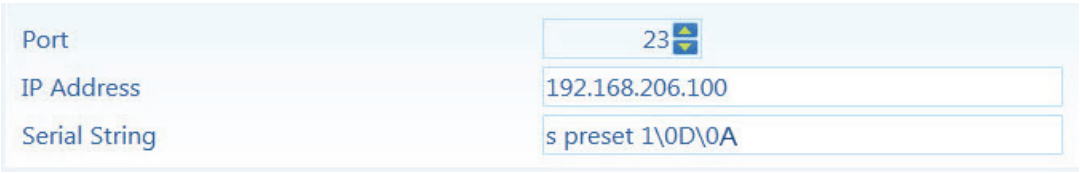
For example;

Send a Serial Ethernet Command from the Christie IMB

Provide a serial string with a trailing carriage return and line feed hexadecimal code to the SKA-3Ds IP address and port number.

```
<SKA3D_IP_Address>:<SKA3D_Port_#> <String_+_Parameters>\0D\0A
```

For example;



Web Interface

This section provides information about the SKA-3D web interface.

Access the SKA-3D Web Interface

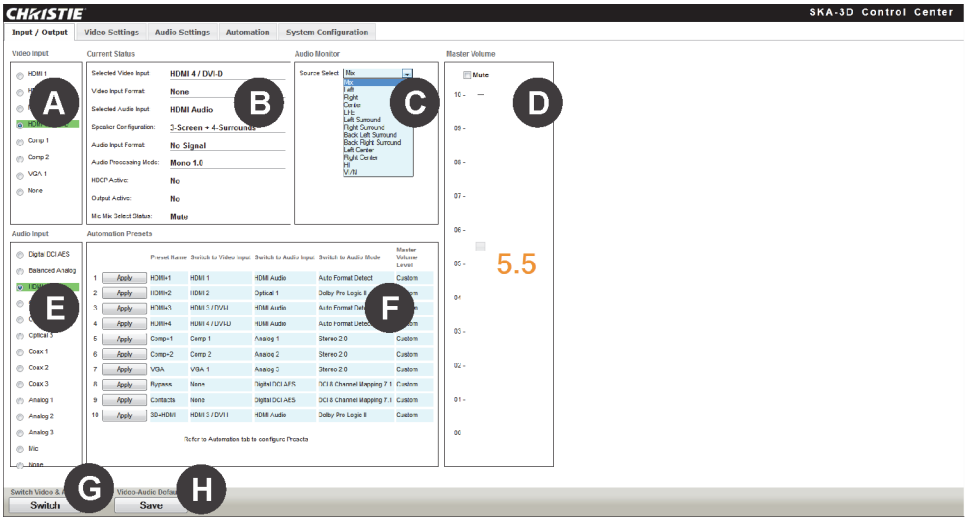
1. Open a web browser.
2. Type the SKA-3D IP address in the navigation bar.

   For example,

   ```
   http://192.168.206.100
   ```

3. Press **Enter**.

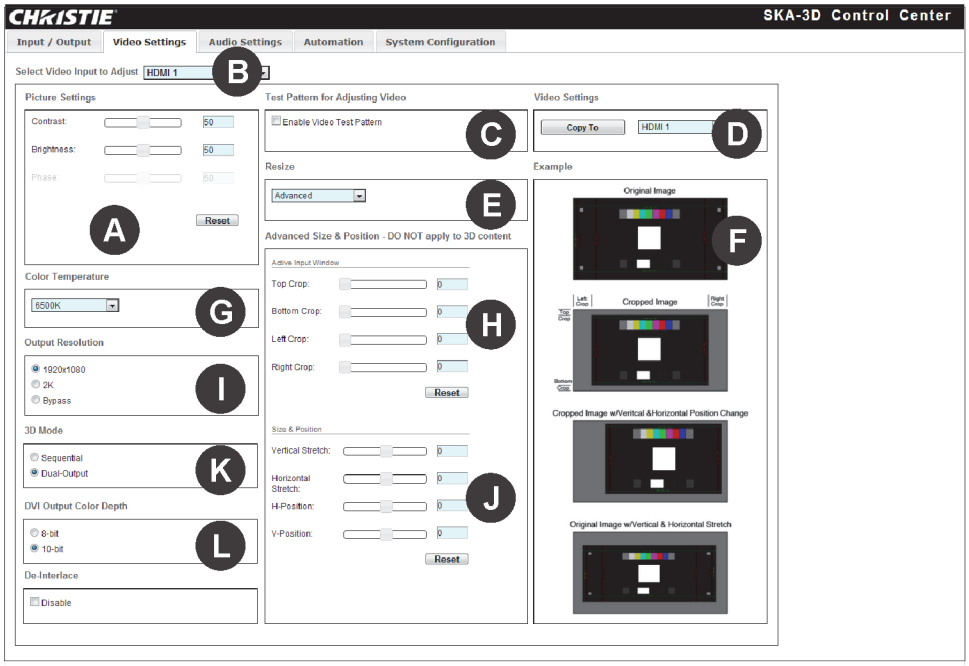
Input / Output Screen



Ref.	Item	Description
A	Video Input	Sets the current video input.
B	Current Status	Displays the current input and output information for both video and audio.
C	Audio Monitor	Sets the audio source to monitor. Available options include: **Mix**, **Left**, **Right**, **Center**, **LFE**, **Left Surround**, **Right Surround**, **Back Left Surround**, **Back Right Surround**, **Left Center**, **Right Center**, **HI**, **VI/N**.
D	Master Volume	Sets the master volume. Move the vertical slider to adjust the volume between 0 and 10 dB. Large orange numbers indicate the current volume. Click **Mute** to mute the output audio signal.
E	Audio Input	Sets the current audio input source.
F	Automation Presets	Lists the automation presets for application. Click **Apply** to load the selected preset from memory.

Ref.	Item	Description
G	Switch	Activates the newly selected audio and video selections.
H	Save	Saves the newly selected video and audio selections.

Video Settings Screen



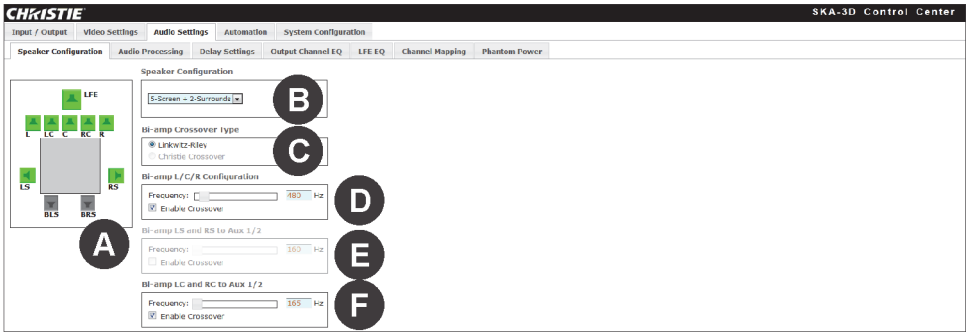
Ref.	Item	Description
A	Picture Settings	Sets the picture settings. Move the Contrast, Brightness, or Phase slider to adjust settings between 0 and 100. Click **Reset** to set all values to 50.
B	Select Video Input to Adjust	Sets the video input to adjust. Available options include: **HDMI 1**, **HDMI 2**, **HDMI 3 /DVI-I**, **HDMI 4 / DVI-D**, **Comp 1**, **Comp 2**, **VGA 1**, and **None**.
C	Test Pattern for Adjusting Video	Enables the video test pattern. Any current video input signal is bypassed when the test pattern is enabled.
D	Video Settings	Sets the video input that the current video settings will be saved to. Available options include: **HDMI 1**, **HDMI 2**, **HDMI 3 /DVI-I**, **HDMI 4 / DVI-D**, **Comp 1**, **Comp 2**, and **VGA 1**. Choose the required video input and click **Copy To**.
E	Resize	Sets the pictures size and type. Available options include: **Native**, **Full Size**, **Full Width**, **Full Height**, **Anamorphic**, **Overscan**, **Underscan**, **Letterbox**, **Pan Scan**, and **Advanced**.
F	Examples	Provides examples of the cropping and position settings. Set Resize to **Advanced** be enable this feature.
G	Color Temperature	Sets the output video signal color temperature. Available options include: **5500k**, **6500k**, and **9600k**.
H	Active Input Window	Sets the image crop (0...100%) to apply before stretching and repositioning the image. Click **Reset** to reset the crop values to 0.

Ref.	Item	Description
I	Output Resolution	Sets the output resolution. The video source frame rate is unaffected. No frame rate conversion takes place.
J	Size & Position	Sets the image horizontal stretch (width), vertical stretch (height), and position. Click **Reset** to reset the size and position values to 0.
K	3D Mode	Sets the 3D output mode. Available options include: • **Sequential** - the left and right eye 3D signals are over a single output. Use the HDMI L output when using this mode. • **Dual-Output (default)**- a separate left and right eye 3D signal is provided. HDMI L is output for the left eye and HDMI R is output for the right eye.
L	HDMI Output Color Depth	Sets the HDMI color depth.

Audio Settings Screen

This section describes the Audio Settings screen tabs.

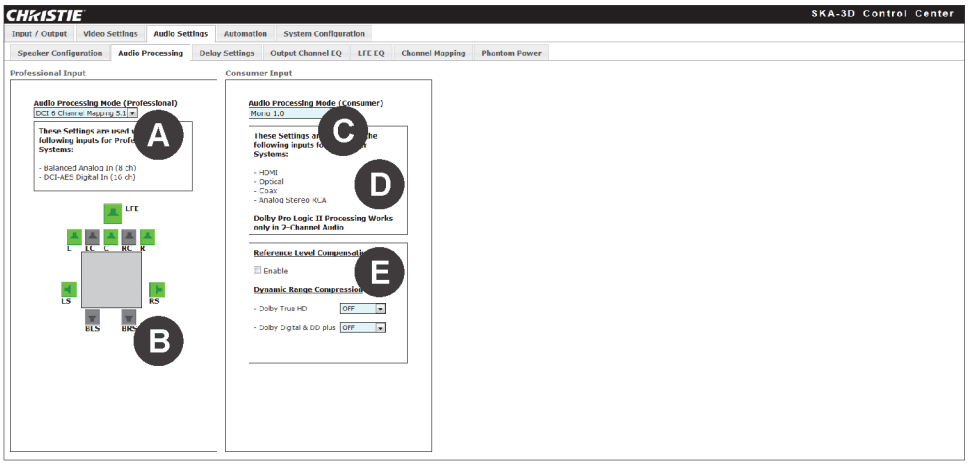
Speaker Configuration Tab



Ref.	Item	Description
A	Speaker Configuration Image	Provides a graphic representation of the current speaker configuration. Speakers used in the speaker configuration are green, speakers not used are gray.
B	Speaker Configuration	Sets the speaker configuration. Available options include: **Mono C**, **Stereo L R**, **3-Screen + 2-Surrounds**, **3-Screen + 4-Surrounds**, **5-Screen + 2-Surrounds**, **5-Screen + 4-Surrounds**.
C	Bi-amp Crossover Type	Sets the bi-amp crossover type. Only the Linkwitz-Riley crossover is available at this time.
D	Bi-amp L/C/R Configuration	Sets the crossover frequency for the left, center, and right speaker configuration. Move the slider to adjust the frequency in 5 Hz increments between 40 and 4000 Hz (4 kHz). Select the **Enable** check box to activate the crossover.
E	Bi-amp LS and RS to Aux 1/2	Sets the crossover frequency for the left and right side speakers to Aux 1/2. Move the slider to adjust the frequency in 5 Hz increments between 40 and 4000 Hz (4 kHz). Select the **Enable** check box to activate the crossover.

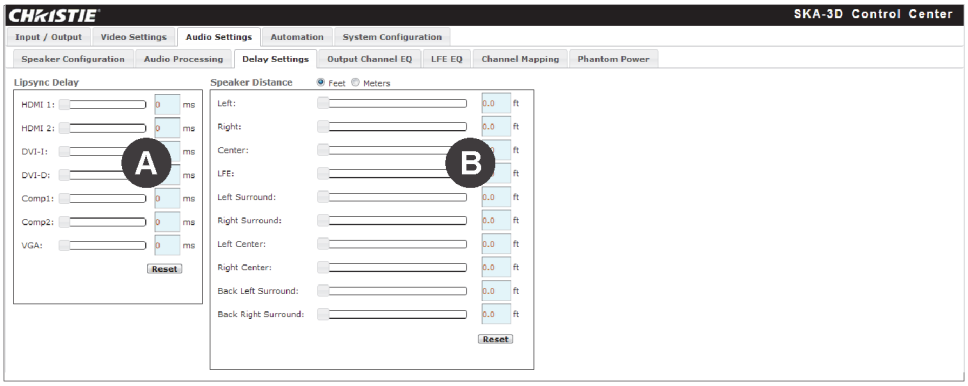
Ref.	Item	Description
F	Bi-amp LC and RC to Aux 1/2	Sets the crossover frequency for the left and right center speakers to Aux 1/2. Move the slider to adjust the frequency in 5 Hz increments between 40 and 4000 Hz (4 kHz). Select the **Enable** check box to activate the crossover. Speaker Configuration must be set to 5-Screen + 2-Surrounds, or 5-Screen + 4-Surrounds to adjust this frequency.

Audio Processing Tab



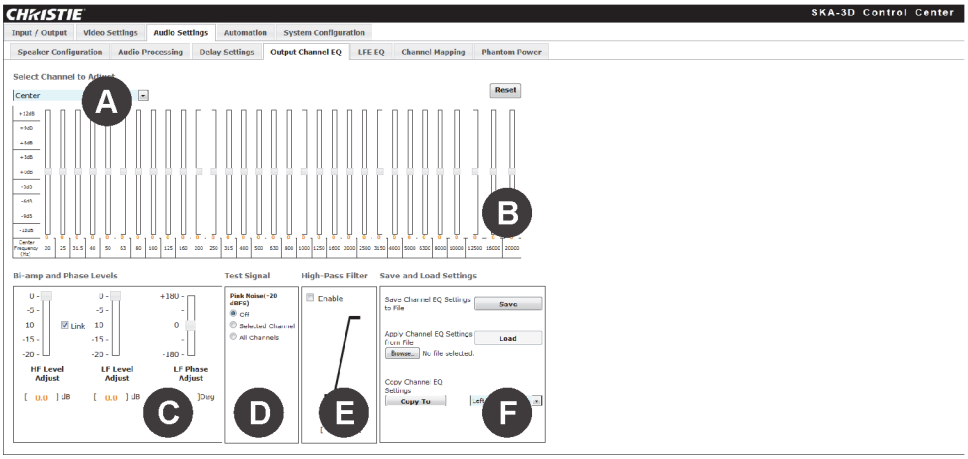
Ref.	Item	Description
A	Audio Processing Mode (Professional)	Sets the audio processing mode for balanced analog 8-channel and digital (DCI-AES) 16-channel audio formats. Available options include: **DCI 8 Channel Mapping 7.1**, **DCI 6 Channel Mapping 5.1**, **Dolby Surround 7.1**, **Stereo 2.0**, and **Mono 1.0**.
B	Channel Configuration Image	Provides a graphic representation of the current speaker configuration. Speakers used in the speaker configuration are green, speakers not used are gray.
C	Audio Processing Mode (Consumer)	Sets the audio processing mode for consumer-based audio applications (HDMI, Optical, Coax, and Analog Stereo RCA). Available options include: **Auto Format Detect**, **Dolby Pro Logic II**, **Stereo 2.0**, and **Mono 1.0**.
D	Reference Level Compensation	Applies a -3dB gain to the front right, left, and center channels when selected.
E	Dynamic Range Compression	Enables or disables dynamic range compression for the **Dolby TrueHD** and **Dolby Digital & DD plus** audio formats. When **Dolby True HD** is set to **ON**, the SKA-3D reduces the volume of loud sounds and amplifies quiet sounds by compressing the dynamic range of the audio signal. In **AUTO** mode, the metadata in the Dolby TrueHD source material configures the settings of DRC automatically to match the intention of the original sound design.

Delay Settings Tab



Ref.	Item	Description
A	Lipsync Delay	Sets the lipsync (audio) delay for each input source. Move the slider to adjust the delay between 0...250 milliseconds. The selected delay is displayed in the box at the right. Click **Reset** to reset all lipsync delay values to zero.
B	Speaker Distance	Sets the distance for each speaker. Select the required measurement: Feet or Meters; then move the slider to adjust the distance. Click **Reset** to reset all speaker distance values to their default setting.

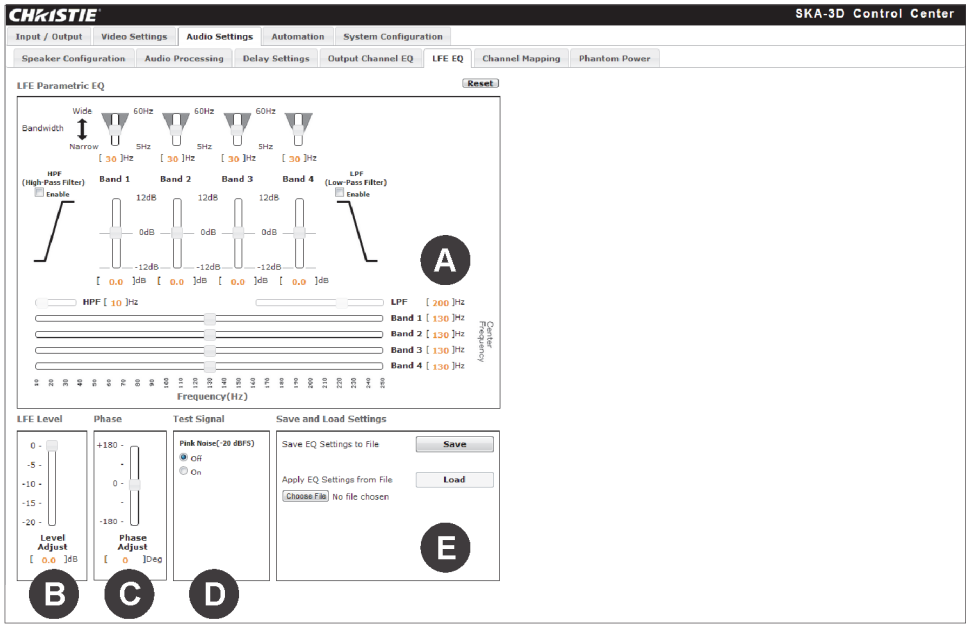
Output Channel EQ Tab



Ref.	Item	Description
A	Select Channel to Adjust	Sets the channel to be adjusted. Available options include: **Left**, **Right**, **Center**, **Left Surround**, **Right Surround**, **Back Left Surround**, **Back Right Surround**, **Left Center**, and **Right Center**. Click **Reset** to reset the currently selected audio channel to the default EQ settings.
B	Output Channel Equalizer	Sets the individual output channels. Move the slider to adjust the value.

Ref.	Item	Description
C	Bi-amp and Phase Levels	Sets the high-frequency (HF) and low-frequency (LF) levels and low-frequency audio phase. Levels range between 0 and -20 dB and the phase range is between 180° and -180°. When Link is selected, the high and low frequencies are adjusted at the same rate. The Bi-amp L/C/R Configuration must be enabled to use this feature.
D	Test Signal	Generates a -20 dBFS pink noise test signal.
E	High-Pass Filter	Sets the high-pass filter frequency in 1 Hz increments between 5 and 150 Hz. Click **Enable** to use this feature.
F	Save and Load Settings	Saves the current settings to a file, imports external settings to apply, or copies settings from one channel to another. Click **Copy To**, to copy the current EQ settings to the channel specified in the list. Available options include: **Left**, **Right**, **Center**, **Left Surround**, **Right Surround**, **Left Center**, and **Right Center**. The channels available for adjustment are dependent on the selected speaker configuration.

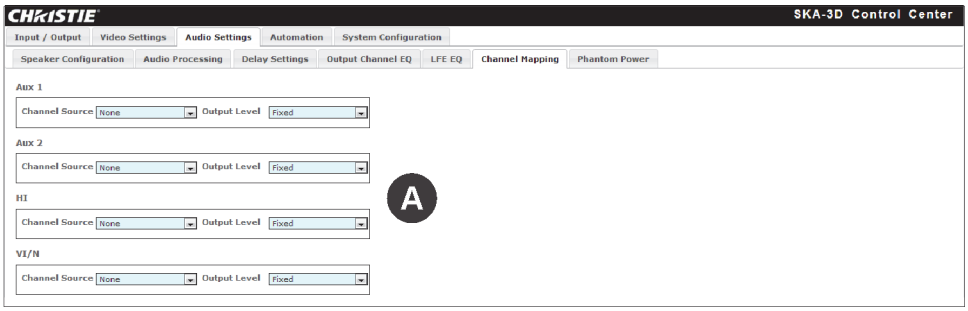
LFE EQ Tab



Ref.	Item	Description
A	LFE Parametric EQ	Sets the low frequency effects. Click **Reset** to reset the currently selected audio channel to the default LFE EQ settings. • **Bandwidth (Band 1 - Band 4)** - move the slider to adjust the bandwidth in 5 Hz increments between 5 and 60 Hz. • **HPF (High-Pass Filter)** - select to enable the high-pass filter. Move the slider to adjust the high-pass filter frequency in 1 Hz increments between 5 and 40 Hz. • **Amplitude (Band 1 - Band 4)** - move the slider to adjust the amplitude from -12 to 12 dB in 0.5 dB increments.

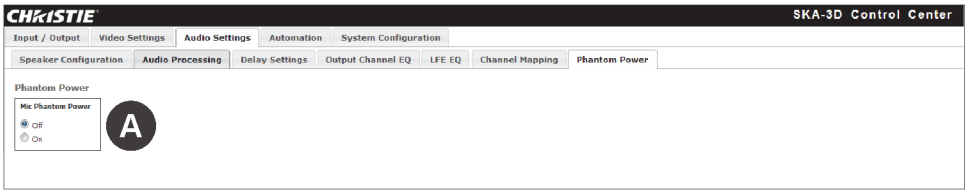
Ref.	Item	Description
A (cont.)	LFE Parametric EQ (cont.)	• **HPF (adjustment)** - move the slider to adjust the high-pass filter frequency between 5 and 40 Hz in 1 Hz increments. The **HPF (High-Pass Filter)** must be enabled to use this control. • **LPF (adjustment)** - move the slider to adjust the low-pass frequency between 100 and 250 Hz in 1 Hz increments. Select **LPF (Low-Pass Filter)** to activate this adjustment. • **Band 1- 4 Center Frequency** - move the sliders to adjust the center frequency between 10 and 250 Hz.
B	LFE Level	Sets the low-frequency envelope level. Move the slider between 0 and -20 dB.
C	Phase	Sets the audio phase. Move the slider to adjust the phase between 180° and -180°.
D	Test Signal	Sends a -20 dBFS pink noise test signal to the subwoofer (LFE).
E	Save and Load Settings	Saves the current equalizer settings, or loads a previously saved LFE EQ file as a preset. Click **Save** to save all settings under the LFE EQ tab. The file can then be loaded as a preset, to quickly configure the SKA-3D. Click **Load** to load a specified LFE EQ file that was previously saved. Click **Browse** to select an EQ settings file.

Channel Mapping Tab



Ref.	Item	Description
A	Channel Mapping Sources and Output Levels	Sets channel mapping sources and allows individual channel output adjustments. Select the channel source for Aux 1, Aux 2, HI, and VI/N from each of the lists. Available options include: **CH 1** to **CH 16**, **Downmix LCR**, **Downmix L**, and **Downmix R**. Select the output level type for Aux 1, Aux 2, HI, and VI/N from each of the lists. Available options include: **Fixed** and **Track w/Master Vol**.

Phantom Power Tab

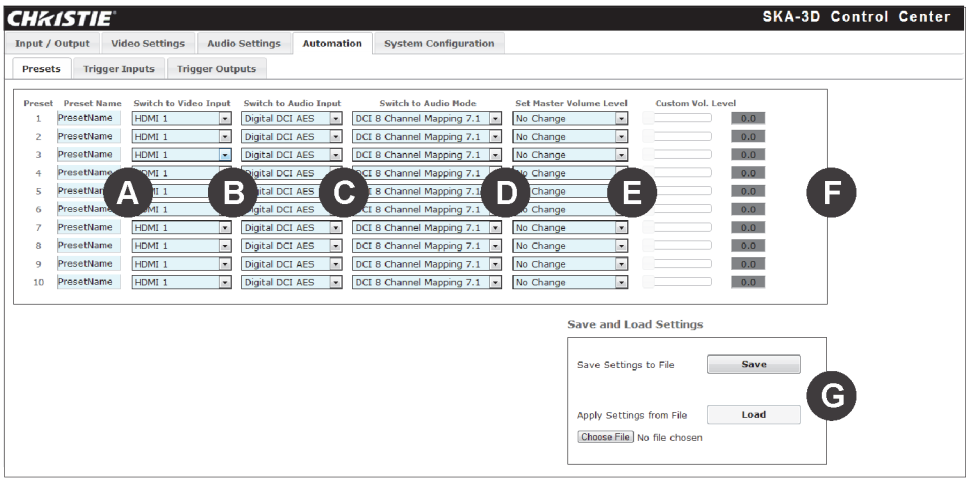


Ref.	Item	Description
A	Mic Phantom Power	Sets the phantom power for the microphone. Available options include **Off** or **On**.

Automation Screen

This section describes the Automation screen tabs.

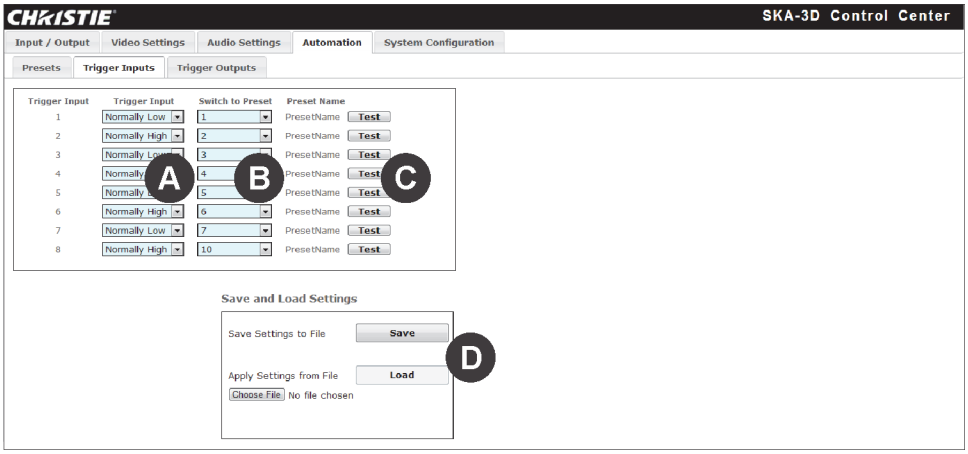
Presets Tab



Ref.	Item	Description
A	Preset and Preset Name	Sets a name for each preset. The preset name must be 15 characters or less.
B	Switch to Video Input	Sets the video input for the specified preset. Available options include: **HDMI 1**, **HDMI 2**, **HDMI 3/ DVI-I**, **HDMI 4 / DVI-D**, **Comp 1**, **Comp 2**, and **VGA 1**.
C	Switch to Audio Input	Sets the audio input for the specified preset. Available options include: **No Action**, **Digital DCI AES**, **Balanced Analog**, **Optical 1**, **Optical 2**, **Optical 3**, **Coax 1**, **Coax 2**, **Coax 3**, **Analog 1**, **Analog 2**, **Analog 3**, **Mic**, and **None**.
D	Switch to Audio Mode	Sets the audio mode for the specified preset. Available options include: **No Action**, **DCI 8 Channel Mapping 7.1**, **DCI 6 Channel Mapping 5.1**, **Dolby Surround 7.1**, **Auto Detect**, **Dolby Pro Logic II**, **Stereo 2.0**, and **Mono 1.0**. Options change depending on the selected audio input.

Ref.	Item	Description
E	Set Master Volume Level	Specifies the type of volume used by the preset. Available options include: **No Change**, and **Custom**.
F	Custom Vol. Level	Sets a custom volume level for the specified preset. Move the slider between 0.0 and 10.0 until the desired volume is obtained. This setting is only available when **Set Master Volume Level** is set to **Custom**. If the **Set Master Volume Level** is set to **No Change**, the sliders cannot be moved.
G	Save and Load Settings	Saves the current preset settings, or loads a previously saved preset file. Click **Save** to save the current settings. Click **Browse** to navigate to a previously saved settings file. Click **Load** to load a previously saved settings file.

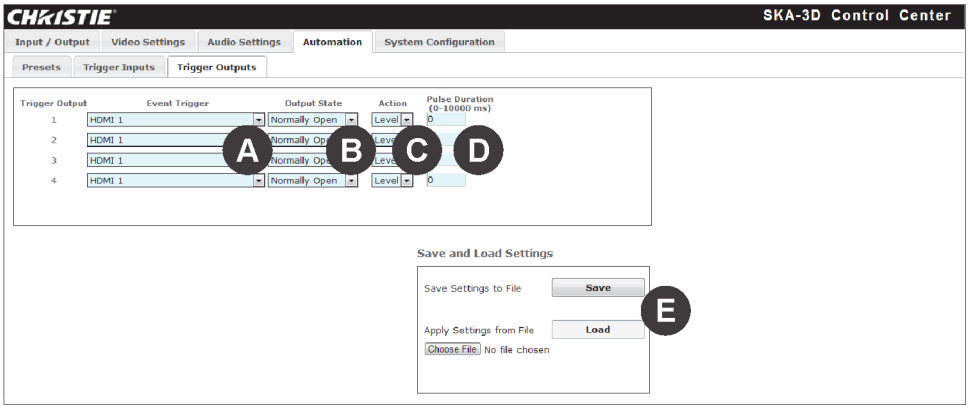
Trigger Inputs Tab



Ref.	Item	Description
A	Trigger Input	Sets the default state of the trigger input. Available options include: **Normally Low**, and **Normally High**.
B	Switch to Preset	Sets the preset to be executed for the specified trigger input. The name of the selected preset is displayed in the Preset Name column. Available options include: **None**, and **1**-**10**.
C	Preset Name	Provides a test button for each of the named presets. Click **Test** to test the desired preset.
D	Save and Load Settings	Saves the current trigger input settings, or loads a previously saved trigger input file. Click **Browse** to select a previously saved trigger input setting.

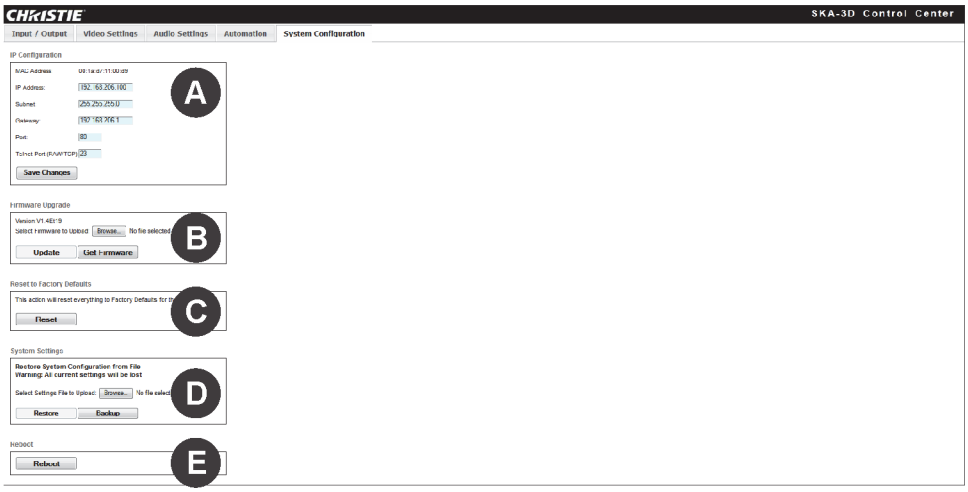
Trigger Outputs Tab

Use the eight 12V triggers to control lighting systems, curtains, motorized screens, or automation devices. Each trigger can be configured separately.



Ref.	Item	Description
A	Event Trigger	Sets the event trigger to be used.
B	Output State	Sets the initial state of the trigger. Available options include: **Normally Open**, and **Normally closed**.
C	Action	Sets the trigger type. Available options include: **Pulse**, and **Level**. Specify **Pulse Duration** if **Pulse** is selected.
D	Pulse Duration	Sets the pulse duration between 0 and 10000 (1000 = 1 second) when **Pulse** is selected from the **Action** list.
E	Save and Load Settings	Saves the current trigger output settings, or loads a previously saved trigger output file. Click **Browse** to select the previously saved trigger output settings.

System Configuration Screen



Ref.	Item	Description
A	IP Configuration	Sets the following: • **MAC Address** - provides the MAC address of the SKA-3D. This information is not editable. • **IP Address** - sets the IP address. This must be valid and unused IP address on your network. The maximum value for each number is 255. • **Subnet** - sets the subnet mask. The default is 255.255.255.0. • **Gateway** - sets the router IP address. The maximum value for each number is 255. • **Port** - Sets the HTTP listening port. Options range from 0-65535. The default port is 80. • **Telnet Port (RAW/TCP)** - sets the telnet listening port. Options range from 0-65535. The default setting is 23. Click **Save Changes** to save the current settings.
B	Firmware Upgrade	Provides firmware upgrade options. The current firmware version is displayed in the top left corner. Click **Get Firmware** to check for and download the latest firmware version. Click **Browse** to select the firmware after it has been downloaded. Click **Update** to update the firmware after it is selected. A settings backup is recommended before you upgrade the firmware.
C	Reset to Factory Defaults	Resets the SKA-3D back to the default factory settings.
D	System Settings	Loads system settings from an existing backup file. Click **Backup** to save the SKA-3D settings to a file on the computer. Click **Browse** to select a file to upload. Click **Restore** to upload the file to the SKA-3D. Use this backup feature before upgrading the firmware.
E	Reboot	Restarts the SKA-3D after making any configuration changes.

Troubleshooting

This section provides information and procedures for resolving common issues with the SKA-3D. If you cannot resolve an issue, contact a Christie representative. See the back cover of this document for the contact information for your region.

Problem	Resolution
Power is not available	• Connect the SKA-3D power cord to an AC outlet. • Turn the power switch on the back panel on. • Verify that the front panel LCM displays the Status Screen.
Video does not work as expected	• Verify that the SKA-3D is correctly connected to the video source. • Wait 30 seconds for video to display after turning the SKA-3D power on. • Check that the video source is connected to the video input that is currently selected. Press Video Select on the front panel to select the video input.
Audio does not work as expected	• Verify that the SKA-3D is correctly connected to the audio source. • Slowly increase the volume by turning the main volume knob on the front panel. • Make sure that "MUTE" is not displayed in the LCM. If it is, press Mute on the front panel. • Check that the audio source is connected to the audio input that is currently selected. Press Audio Select on the front panel to select the audio input.
Video artifacts, such as green sparkles, appear on the screen	• Verify that the video cable between the audio input source and the SKA-3D is correctly connected. Make sure that all connections are secure. • Make sure that none of the cables are damaged. Replace any damaged cables.

Specifications

This section provides the specifications for the SKA-3D.

Supported Video Formats

The SKA-3D supports up to 1080p / 2k 60 Hz video formats.

Format	VGA / DVI-A	Component	HDMI	DVI (Digital)
640 x 480 / 60 Hz	✓		✓	✓
800 x 600 / 60 Hz	✓		✓	✓
1024 x 768 / 60 Hz	✓		✓	✓
1152 x 864 / 60 Hz	✓		✓	✓
1360 x 768 / 60 Hz	✓		✓	✓
1280 x 960 / 60 Hz	✓		✓	✓
1280 x 1024 / 60 Hz	✓		✓	✓
1600 x 1200 / 60 Hz	✓		✓	✓
1280 x 800 / 60 Hz	✓		✓	✓
1920 x 1200 / 60 Hz	✓		✓	✓
1680 x 1050 / 60 Hz	✓		✓	✓
1400 x 1050 / 60 Hz	✓		✓	✓
1440 x 900 / 60 Hz	✓		✓	✓
720 x 480i / 60 Hz	✓		✓	✓
720 x 576i / 50 Hz		✓	✓	✓
720 x 480p / 60 Hz		✓	✓	✓
720 x 576p / 50 Hz	✓	✓	✓	✓
1280 x 720p / 60 Hz	✓	✓	✓	✓
1280 x 720p / 50 Hz	✓	✓	✓	✓
1920 x 1080i / 60 Hz	✓	✓	✓	✓
1920 x 1080i / 60 Hz		✓	✓	✓
1920 x 1080i / 50 Hz		✓	✓	✓
1920 x 1080p / 60 Hz	✓	✓	✓	✓
1920 x 10809 / 50 Hz	✓	✓	✓	✓
1920 x 1080p / 24 Hz			✓	✓
1920 x 1080p / 25 Hz			✓	✓

Format	VGA / DVI-A	Component	HDMI	DVI (Digital)
1920 x 1080p / 30 Hz			✓	✓
2048 x 1080p / 24 Hz			Bypass Only	Bypass Only
2048 x 1080p / 25 Hz			Bypass Only	Bypass Only
2048 x 1080p / 30 Hz			Bypass Only	Bypass Only
2048 x 1080p / 48 Hz			Bypass Only	Bypass Only
2048 x 1080p / 50 Hz			Bypass Only	Bypass Only
2048 x 1080p / 60 Hz			Bypass Only	Bypass Only

Supported Audio Formats

Specification	Value
Audio	• Digital PCM, up to 16 channels • Balanced analog + 4 dB, up to 8 channels • Dolby Digital • Dolby Digital Plus • Dolby TrueHD • DTS • DTS-HD • DTS-HD Master Audio • Dolby Pro Logic II • Unbalanced analog -10 dB, stereo • Microphone, balanced

Power

Specification	Value
Input	100-240VAC, (50/60 Hz), 100W, 0.6A

Control and Network Ports

Specification	Value
Ethernet	RJ-45
RS-232	DB-9
8 Contact Closure Inputs	16-Pin Phoenix
4 Dry Relay Outputs	8-Pin Phoenix

Connections

Specification		
Outputs	Video	• HDMI L / DVI-D (left eye in dual stream 3D mode; active output in sequential 3D mode • HDMI R / DVI-D (right eye in dual stream 3D mode)
	Audio	• 8 x Balanced Analog (DB-25) • L (left) Low, Balanced Analog (3-Pin Phoenix) • C (center) Low, Balanced Analog (3-Pin Phoenix) • R (right) Low, Balanced Analog (3-Pin Phoenix) • Aux 1 / LS (left surround) Low, Balanced Analog (3-Pin Phoenix) • Aux 2 / RS (right surround) Low, Balanced Analog (3-Pin Phoenix) • HI (hearing impaired), Balanced Analog (3-Pin Phoenix) • VI/N (visually impaired / Narrative) • Booth Monitor, Unbalanced Analog (RCA) • Headphone (TRS)
Inputs	Video	• 2 x HDMI (support for embedded audio) • 1 x DVI-D (support for embedded audio) • 1 x DVI-I (does not support audio in analog mode) • 2 x Component (3 x RCA) • VGA (HD15)
	Audio	• 16 x DCI-AES Digital, 8 Pairs (DB-25) • DCI-AES ALT 1 Pairs 1-4 (RJ-45) • DCI-AES ALT2 Pairs 5-8 (RJ-45) • 8 x Balanced Analog (DB-25) • 3 x Analog (RCA) • 3 x Coax SPDIF (RCA) • 3 x Optical SPDIF (Toslink) • 2 x HDMI/DVI (support for embedded audio) • Microphone (XLR)
DB-25, Female, Balanced Analog In		• Reference level: 300 mV (rms) • Maximum input level before clipping: 4 V (rms) • Input impedance: 25 kΩ • Frequency response: ±0.5 dB @20 to 20 kHz ±3.0 dB @ 10 to 38 kHz • THD: <0.001% @ 1 kHz 3 V (rms) • SNR: 110 dB, A-weight, 20 to 20 kHz • Balanced input can be used with unbalanced or balanced sources
Analog Microphone input (XLR)		• Input gain range (control knob): 9 dB to 60 dB • Phantom power support

Specification	
DB-25, Male, Balanced Analog out	• Reference level: 300 mV (rms), 0 dBFS output = 3 V (rms) • Output impedance: <100 Ω • Frequency response: ±0.5 dB @ 20 to 20 kHz ±3.0 dB @ 10 to 38 kHz • THD: <0.001% @ 1 kHz 3 V (rms) • SNR: 110 dB, A-weight, 20 to 20 kHz
Analog Balanced Secondary Output, Phoenix Connector (HI, VI/N)	• Reference level: 150 mV • Frequency response: ±0.5 dB @ 20 to 20 kHz • THD: <0.001% @ 1 kHz 2 V (rms) • SNR: 100 dB, A-weight, 20 to 20 kHz
Analog Unbalanced Variable Level Output (Booth Monitor Headphone)	• Volume control range: -60 dB to 0 dB; 0 dBFS @ 0 dB user-adjustment = 500 mV (rms) • Minimum load: 10 Ω • Frequency response: ±0.5 dB @ 20 to 20 kHz • THD: <0.01% @ 1 kHz 2V (rms) • SNR: 90 dB, A-weight, 20 to 20 kHz (at max. setting)

Physical

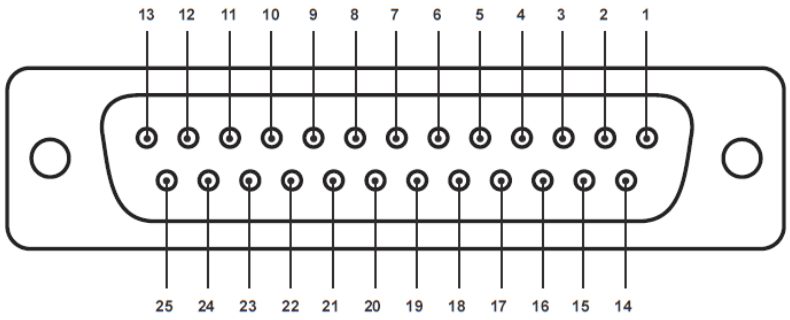
Specification	Value
Dimension (W x H x D)	19 in. x 3.5 in.* x 12 in. (48.3 cm x 30.5 cm* x 8.9 cm) *Height with feet is 4 in. (10.2 cm)
Net Weight	15.1 lb (6.8 Kg)
Weight with packaging	21.7 lb (9.8 Kg)

Connector Pins

This section defines the SKA-3D connector pinouts.

DB-25, Female, Balanced Analog In

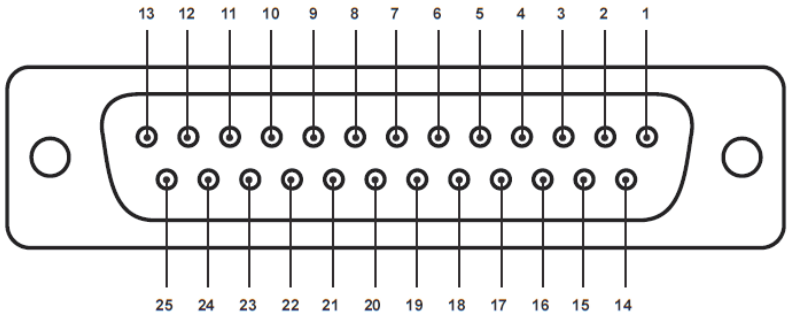
The DB-25 connector conforms to the THX standard.



Pin	Signal	Channel	
1	Shield	1	Left (L)
2	+	1	Left (L)
3	-	7	Back Left/Left Center
4	Shield	3	Center (C)
5	+	3	Center (C)
6	-	8	Back Right/Right Center
7	Shield	2	Right (R)
8	+	2	Right (R)
9	Shield	6	Right Surround (RS)
10	-	5	Left Surround (LS)
11	-	6	Right Surround (RS)
12	-	4	Subwoofer
13	Shield	4	Subwoofer
14	-	1	Left (L)
15	Shield	7	Back Left/Left Center
16	+	7	Back Left/Left Center
17	-	3	Center (C)
18	Shield	8	Back Right/Right Center
19	+	8	Back Right/Right Center
20	-	2	Right (R)

Pin	Signal		Channel
21	Not Used		N/A
22	Shield	5	Left Surround (LS)
23	+	5	Left Surround (LS)
24	+	6	Right Surround (RS)
25	+	4	Subwoofer

DB-25, Female, DCI AES Digital In (8 pairs / 16 ch)

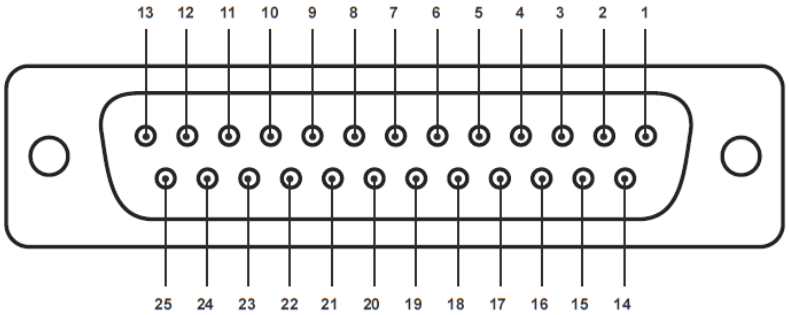


Pin	Signal	Description
1	+	Pair 8
2	Shield	Pair 8
3	-	Pair 7
4	+	Pair 6
5	Shield	Pair 6
6	-	Pair 5
7	+	Pair 4
8	Shield	Pair 4
9	-	Pair 3
10	+	Pair 2
11	Shield	Pair 2
12	-	Pair 1
13	Not Used	N/A
14	-	Pair 8
15	+	Pair 7
16	Shield	Pair 7
17	-	Pair 6
18	+	Pair 5

Pin	Signal	Description
19	Shield	Pair 5
20	-	Pair 4
21	+	Pair 3
22	Shield	Pair 3
23	-	Pair 2
24	+	Pair 1
25	Shield	Pair 1

DB-25, Male, Balanced Analog Out

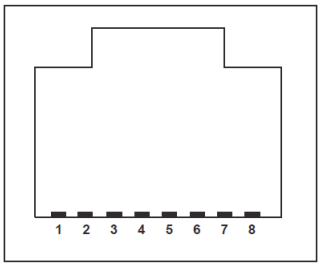
The DB-25 connector conforms to the THX standard.



Pin	Signal	Channel	
1	Shield	1	Left (L)
2	+	1	Left (L)
3	-	7	Back Left/Left Center
4	Shield	3	Center (C)
5	+	3	Center (C)
6	-	8	Back Right/Right Center
7	Shield	2	Right (R)
8	+	2	Right (R)
9	Shield	6	Right Surround (RS)
10	-	5	Left Surround (LS)
11	-	6	Right Surround (RS)
12	-	4	Subwoofer
13	Shield	4	Subwoofer
14	-	1	Left (L)

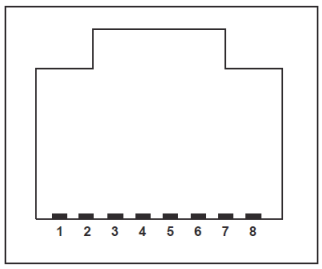
Pin	Signal		Channel
15	Shield	7	Back Left/Left Center
16	+	7	Back Left/Left Center
17	-	3	Center (C)
18	Shield	8	Back Right/Right Center
19	+	8	Back Right/Right Center
20	-	2	Right (R)
21	Not Used		N/A
22	Shield	5	Left Surround (LS)
23	+	5	Left Surround (LS)
24	+	6	Right Surround (RS)
25	+	4	Subwoofer

RJ-45 Pinout (Alt 1)



Pin	Signal	Description
1	+	Pair 1
2	-	Pair 1
3	+	Pair 2
4	+	Pair 3
5	-	Pair 3
6	-	Pair 2
7	+	Pair 4
8	-	Pair 4

RJ-45 Pinout (Alt 2)



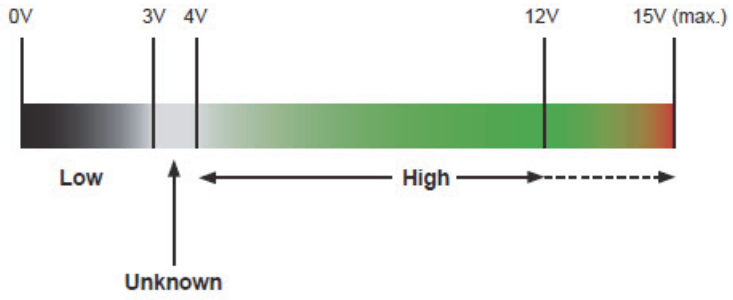
Pin	Signal	Description
1	+	Pair 5
2	-	Pair 5
3	+	Pair 6
4	+	Pair 7
5	-	Pair 7
6	-	Pair 6
7	+	Pair 8
8	-	Pair 8

VI/N Phoenix Connector (VI/N and HI)

Pin	Signal
1	+
2	-
3	Shield

Contact Closure Inputs

The voltage levels for inputs are:



Pin	Signal
1	+
2	-
3	+
4	-
5	+
6	-
7	+
8	-
9	+
10	-
11	+
12	-
13	+
14	-
15	+
16	-

Audio Pins

This section describes the SKA-3D audio pinouts.

DB-25, DCI AES Digital In

Channel	Pin	Channel	Description
1	1	1	Left (L)
2	1	2	Right (R)
3	2	1	Center (C)
4	2	2	Low frequency effects (LFE)
5	3	1	Left Surround (LS)
6	3	2	Right Surround (RS)
7	4	1	Hearing Impaired (HI)
8	4	2	Visually Impaired (VI/N)
9	5	1	Left Center (LC)
10	5	2	Right Center (RC)
11	6	1	Left Rear Surround (LRS)
12	6	2	Right Rear Surround (RRS)
13	7	1	Motion Data (dbox), not used
14	7	2	For Future Expansion
15	8	1	For Future Expansion
16	8	2	For Future Expansion

DB-25, Female, Balanced Analog Audio In

Channel	Description
1	Left (L)
2	Right (R)
3	Center (C)
4	Low frequency effects (LFE)
5	Left Surround (LS)
6	Right Surround (RS)
7	Left Center / Left Back
8	Right Center / Right Back

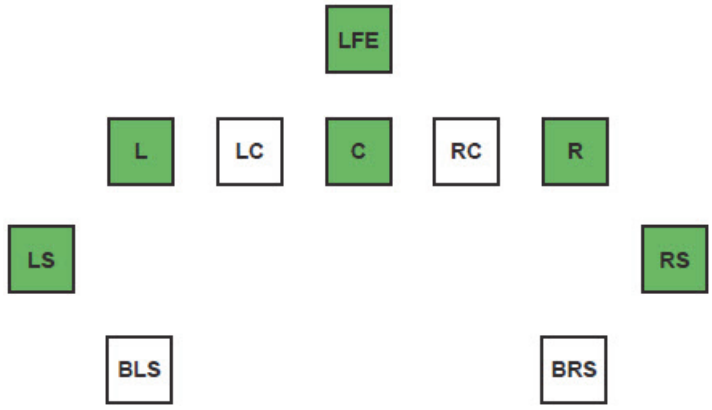
DB-25, Male, Balanced Analog Audio Out

Channel	Description
1	Left (L)
2	Right (R)
3	Center (C)
4	Low frequency effects (LFE)
5	Left Surround (LS)
6	Right Surround (RS)
7	Left Center / Left Back
8	Right Center / Right Back

Channel Mapping

This section describes channel mapping in relation to the SKA-3D audio input signal.

3 Screen Channels and 2 Surround Channels



DCI 6-Channel or Dolby Digital 5.1[1]

Channel	Input	Output
Left (L)	✓	✓
Right (R)	✓	✓
Center (C)	✓	✓
Left surround (LS)	✓	✓
Right surround (RS)	✓	✓

Channel	Input	Output
Bottom left side (BLS)		
Bottom right side (BRS)		
Left center (LC)		
Right center (RC)		
Low frequency effects (LFE)	✓	✓

DCI 8-Channel or SDDS 7.1

Channel	Input	Output
Left (L)	✓	✓
Right (R)	✓	✓
Center (C)	✓	✓
Left surround (LS)	✓	✓
Right surround (RS)	✓	✓
Bottom left side (BLS)		
Bottom right side (BRS)		
Left center (LC)	✓[a]	
Right center (RC)	✓[a]	
Low frequency effects (LFE)	✓	✓

a. Not used.

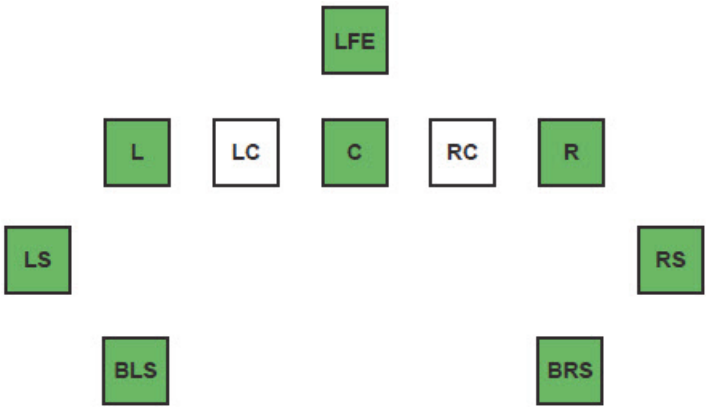
Dolby Surround 7.1

Channel	Input	Output
Left (L)	✓	✓
Right (R)	✓	✓
Center (C)	✓	✓
Left surround (LS)	✓	✓ + BLS
Right surround (RS)	✓	✓ + BRS
Bottom left side (BLS)	✓[a]	
Bottom right side (BRS)	✓[b]	
Left center (LC)		
Right center (RC)		
Low frequency effects (LFE)	✓	✓

1. Straight-through channel mapping.

a. Down-mixed to LS.
b. Down-mixed to RS.

3 Screen Channels and 4 Surround Channels



DCI 6-Channel or Dolby Digital 5.1

Channel	Input	Output
Left (L)	✓	✓
Right (R)	✓	✓
Center (C)	✓	✓
Left surround (LS)	✓	✓
Right surround (RS)	✓	✓
Bottom left side (BLS)		✓[a]
Bottom right side (BRS)		✓[b]
Left center (LC)		
Right center (RC)		
Low frequency effects (LFE)	✓	✓

a. LS is duplicated on BLS.
b. RS is duplicated on BRS.

DCI 8-Channel or SDDS 7.1

Channel	Input	Output
Left (L)	✓	✓
Right (R)	✓	✓
Center (C)	✓	✓
Left surround (LS)	✓	✓

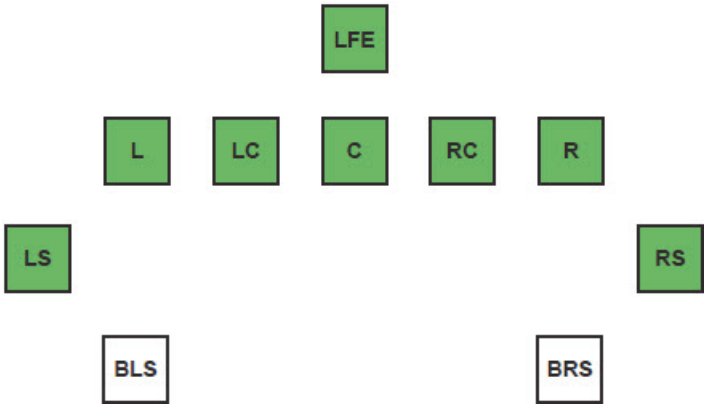
Channel	Input	Output
Right surround (RS)	✓	✓
Bottom left side (BLS)		✓[a]
Bottom right side (BRS)		✓[b]
Left center (LC)	✓[c]	
Right center (RC)	✓[C]	
Low frequency effects (LFE)	✓	✓

a. LS is duplicated on BLS.
b. RS is duplicated on BRS.
c. Not used.

Dolby Surround 7.1[1]

Channel	Input	Output
Left (L)	✓	✓
Right (R)	✓	✓
Center (C)	✓	✓
Left surround (LS)	✓	✓
Right surround (RS)	✓	✓
Bottom left side (BLS)	✓	✓
Bottom right side (BRS)	✓	✓
Left center (LC)		
Right center (RC)		
Low frequency effects (LFE)	✓	✓

5 Screen Channels and 2 Surround Channels



1. Straight-through channel mapping.

DCI 6-Channel or Dolby Digital 5.1

Channel	Input	Output
Left (L)	✓	✓
Right (R)	✓	✓
Center (C)	✓	✓
Left surround (LS)	✓	✓
Right surround (RS)	✓	✓
Bottom left side (BLS)		
Bottom right side (BRS)		
Left center (LC)		✓[a]
Right center (RC)		✓[a]
Low frequency effects (LFE)	✓	✓

a. Not used.

DCI 8-Channel or SDDS 7.1[1]

Channel	Input	Output
Left (L)	✓	✓
Right (R)	✓	✓
Center (C)	✓	✓
Left surround (LS)	✓	✓
Right surround (RS)	✓	✓
Bottom left side (BLS)		
Bottom right side (BRS)		
Left center (LC)	✓	✓
Right center (RC)	✓	✓
Low frequency effects (LFE)	✓	✓

Dolby Surround 7.1

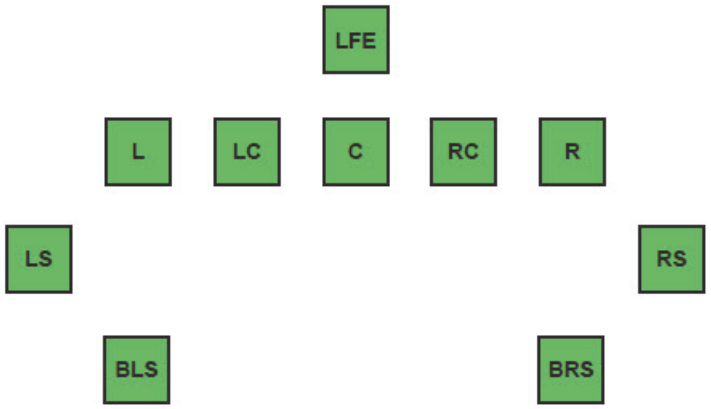
Channel	Input	Output
Left (L)	✓	✓
Right (R)	✓	✓
Center (C)	✓	✓

1. Straight-through channel mapping.

Channel	Input	Output
Left surround (LS)	✓	✓ + BLS
Right surround (RS)	✓	✓ + BRS
Bottom left side (BLS)	✓[a]	
Bottom right side (BRS)	✓[b]	
Left center (LC)		✓[c]
Right center (RC)		✓[c]
Low frequency effects (LFE)	✓	✓

a. Down-mixed to LS.
b. Down-mixed to RS.
c. Not used.

5 Screen Channels and 4 Surround Channels



DCI 6-Channel or Dolby Digital 5.1

Channel	Input	Output
Left (L)	✓	✓
Right (R)	✓	✓
Center (C)	✓	✓
Left surround (LS)	✓	✓
Right surround (RS)	✓	✓
Bottom left side (BLS)		✓[a]
Bottom right side (BRS)		✓[a]
Left center (LC)		✓[a]
Right center (RC)		✓[a]

Channel	Input	Output
Low frequency effects (LFE)	✓	✓

a. Not used.

DCI 8-Channel or SDDS 7.1

Channel	Input	Output
Left (L)	✓	✓
Right (R)	✓	✓
Center (C)	✓	✓
Left surround (LS)	✓	✓
Right surround (RS)	✓	✓
Bottom left side (BLS)		✓[a]
Bottom right side (BRS)		✓[b]
Left center (LC)	✓	✓
Right center (RC)	✓	✓
Low frequency effects (LFE)	✓	✓

a. LS is duplicated on BLS.
b. RS is duplicated on BRS.

Dolby Surround 7.1

Channel	Input	Output
Left (L)	✓	✓
Right (R)	✓	✓
Center (C)	✓	✓
Left surround (LS)	✓	✓
Right surround (RS)	✓	✓
Bottom left side (BLS)	✓	✓
Bottom right side (BRS)	✓	✓
Left center (LC)		✓[a]
Right center (RC)		✓[a]
Low frequency effects (LFE)	✓	✓

a. Not used.

Default Settings

This section provides the default SKA-3D settings that are used with the web interface.

Input / Output Settings

Setting	Default Value
Video Input	HDMI 1
Audio Input	Digital DCI AES
Source Select	Mix
Master Volume	7.0

Video Settings

Setting	Default Value
Select Video Input to Adjust	HDMI 1
Contrast	50
Brightness	50
Phase	50
Color Temperature	6500K
Output Resolution	1920 x 1200
3D Mode	Dual-Output
HDMI Output Color Depth	10-Bit
De-Interlace	Disabled
Enable Video Test Pattern	Disabled
Resize	Native
Video Settings (Copy To)	HDMI 1

Audio Settings

This section describes the default audio settings.

Speaker Configuration

Setting	Default Value
Speaker Configuration	3-Screen + 2-Surrounds
Bi-amp L/C/R Configuration	Disabled Frequency: 160 Hz
Bi-amp LS and RS to Aux 1/2	Disabled Frequency: 160 Hz
Bi-amp LC and RC to Aux 1.2	Disabled Frequency: 160 Hz

Audio Processing

Setting	Default Value
Audio Processing Mode (Professional)	DCI 6 Channel Mapping 5.1
Audio Processing Mode (Consumer)	Auto Format Detect
Reference Level Compensation	Disabled
Dynamic Range Compression (Dolby True HD)	OFF
Dynamic Range Compression (Dolby Digital & DD plus)	OFF

Delay Settings

Setting	Default Value
Lipsync Delay	HDMI 1: 0 ms
	HDMI 2: 0 ms
	HDMI 3 / DVI-I: 0 ms
	HDMI 4 / DVI-D: 0 ms
	Comp1: 0 ms
	Comp2: 0 ms
	VGA: 0 ms
Speaker Distance (Feet / Meters)	Feet

Setting	Default Value
Speaker Distance	Left: 0.0 ft
	Right: 0.0 ft
	Center: 0.0 ft
	Low frequency effects (LFE): 0.0 ft
	Left Surround: 0.0 ft
	Right Surround: 0.0 ft
	Left Center: 0.0 ft
	Right Center: 0.0 ft
	Back Left Surround: 0.0 ft
	Back Right Surround: 0.0 ft

Output Channel EQ

Setting	Default Value
Select Channel to Adjust	Center
Channel Level (db)	0.0
Bi-amp LF Level (dB) / Phase (Deg)	0.0 / 0
Test Signal (Pink Noise)	Off
High-Pass Filter	Disabled
	Frequency (Hz): 15
Copy Channel EQ Settings (Copy To)	Left
Center Frequency (Hz): Level (dB)	20:0
	25:0
	31.5:0
	40:0
	50:0
	60:0
	80:0
	100:0
	125:0
	160:0
	200:0
	250:0
	315:0
	400:0

Setting	Default Value
Center Frequency (Hz): Level (dB) (cont.)	500:0
	630:0
	800:0
	1000:0
	1250:0
	1600:0
	2000:0
	2500:0
	3150:0
	4000:0
	5000:0
	6300:0
	8000:0
	10000:0
	12500:0
	16000:0
	20000:0

LFE EQ

Setting	Default Value
Bandwidth (Band: Frequency)	Band 1: 30 Hz
	Band 2: 30 Hz
	Band 3: 30 Hz
	Band 4: 30 Hz
HPF (High-Pass Filter)	Disabled
Band (Level)	Band 1: 0.0 dB
	Band 2: 0.0 dB
	Band 3: 0.0 dB
	Band 4: 0.0 dB
LPF (Low-Pass Filter)	Disabled
HPF (Hz)	10
LPF (Hz)	200

Setting	Default Value
Center Frequency	Band 1: 130 Hz
	Band 2: 130 Hz
	Band 3: 130 Hz
	Band 4: 130 Hz
Low frequency effects (LFE) Level (dB)	0.0
Phase (Deg)	0
Test Signal (Pink Noise, -20 dBFS)	Off

Channel Mapping

Setting	Default Value
Aux 1	Channel Source: None Output Level: Fixed
Aux 2	Channel Source: None Output Level: Fixed
HI	Channel Source: None Output Level: Fixed
VI/N	Channel Source: None Output Level: Fixed

Phantom Power

Setting	Default Value
Phantom power	Off

Automation Settings

This section provides the default automation settings.

Presets

Setting	Default Value
Preset 1...Preset 10	Preset name: PresetName Switch to Video Input: HDMI 1 Switch to Audio Input: Digital DCI AES Switch to Audio Mode: DCI 8 Channel Mapping 7.1 Set Master Volume Level: No Change Custom Vol. Level: 0.0

Trigger Inputs

Setting	Default Value
Trigger Input 1...Trigger Input 8	Trigger input: Normally low Switch to Preset: None Preset Name: None

Trigger Outputs

Setting	Default Value
Trigger Output 1...Trigger Output 4	Event Trigger: HDMI 1 Output State: Normally Open Action: Level Pulse Duration: 0

System Configuration Settings

This section provides the default system configuration settings.

IP Configuration

Setting	Default Value
MAC Address	(Unit-Dependant)
IP Address	192.168.206.100
Subnet Mask	255.255.255.0
Gateway	192.168.206.1
HTTP Port	80
Telnet Port	23

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