

IMPORTANT:
Go to www.extron.com for the complete user guide, installation instructions, and specifications before connecting the product to the power source.

This guide provides quick start instructions for an experienced installer to set up and operate the Extron ISS 608 Integration Seamless Switcher, a seamless, scaling, video and audio switcher. The ISS 608 features six HDMI inputs, two DisplayPort inputs, and two HDMI outputs. The inputs and outputs are HDCP 2.2 compliant and support resolutions up to 4096x2160 at 60 Hz.

Installation and Cabling Features

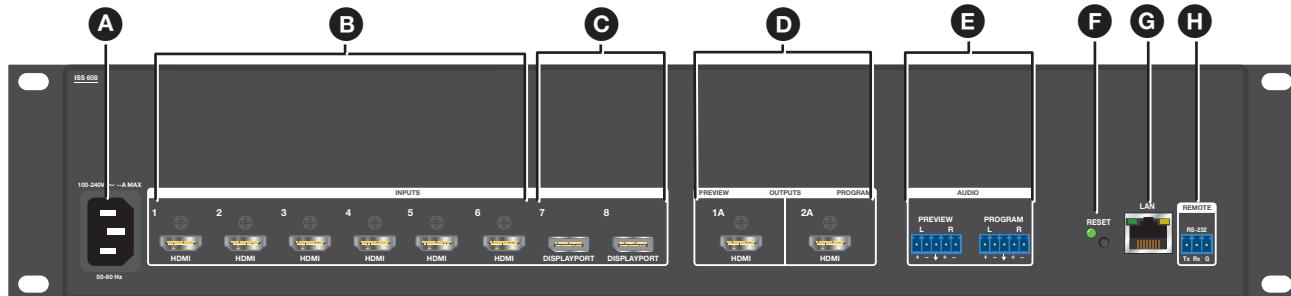


Figure 1. ISS 608 Rear Panel

A AC power connector	E Analog audio output connectors
B HDMI input connectors	F Reset button and LED
C DisplayPort input connectors	G LAN connector
D HDMI output connectors	H Remote RS-232 connector

Connections

Step 1 — Mounting

Turn off or disconnect all equipment power sources.

- For tabletop use, affix the rubber feet and remove the brackets.
- For optional rack mounting, mount in a rack via the attached brackets (see figure 2).

Step 2 — Video inputs

- HDMI input connectors 1 through 6** — Connect HDMI video to these inputs (see figure 1, **B**).
- DisplayPort input connectors 7 and 8** — Connect DisplayPort video to these inputs (**C**).

Step 3 — Video outputs

HDMI output connectors — Connect displays to the Program and Preview HDMI output connectors (**D**).

Step 4 — Audio outputs

Connect balanced or unbalanced stereo audio or mono audio devices to the program and preview 5-pole captive screw output connectors (**E**) (see figure 3 for wiring).

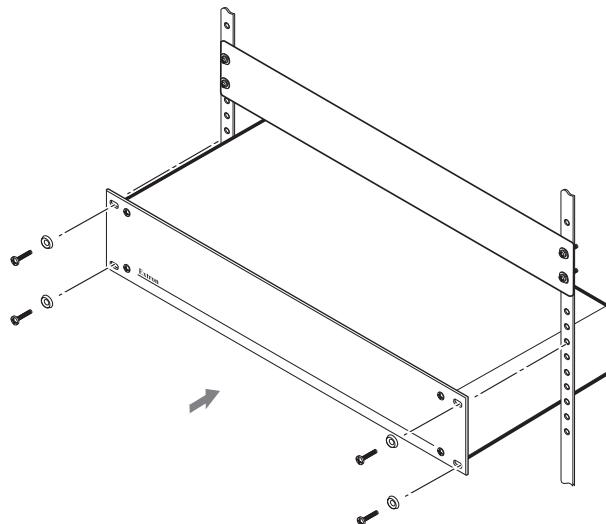


Figure 2. Mounting Diagram

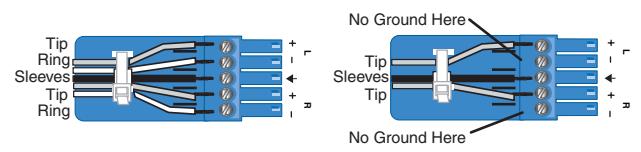


Figure 3. Audio Wiring Configuration

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Step 5 – Connect Control Devices

- **LAN (Ethernet) connector** — (Optional) Connect a network WAN or LAN switch, a control system, or computer to the Ethernet RJ-45 port (see [figure 1](#), **G** on page 1).

Defaults:

- IP address: 192.168.254.254
- Subnet: 255.255.0.0
- Gateway: 0.0.0.0
- DHCP: Off

See [Front Panel Controls](#) on page 4 to view or change the settings.

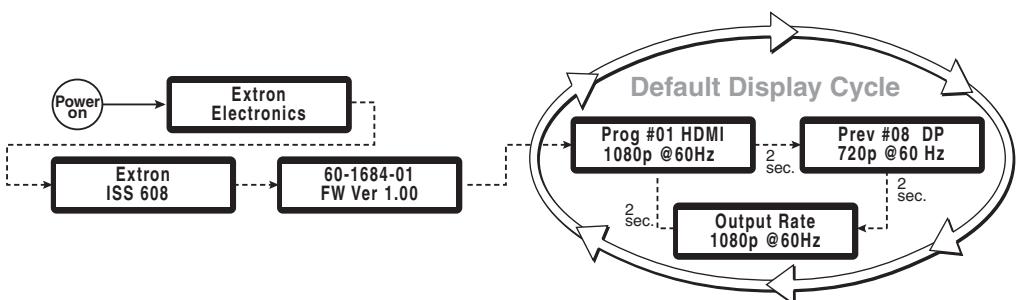
- **Remote RS-232 connector** — (Optional) Connect a control system or computer to the rear panel bidirectional RS-232 serial port (see [figure 1](#), **H**). The default baud rate is 9600.
- **USB Config connector** — (Optional) Connect a computer to the front panel USB mini-B port (see [figure 4](#), **F**).

Step 6 – Power

AC power connector — Connect a 100 to 240 VAC, 50 - 60 Hz power source to the AC power connector (see [figure 1](#), **A**).

Power Up

Apply power by connecting the power cord to an AC source. The switcher performs a self-test that displays the model name and the firmware version in the LCD screen. After approximately 2 seconds, the LCD screen reverts to its default display cycle, alternating between three displays: two showing the selected program and preview inputs and their rates, and the third showing the selected output rate.



Front Panel Operations

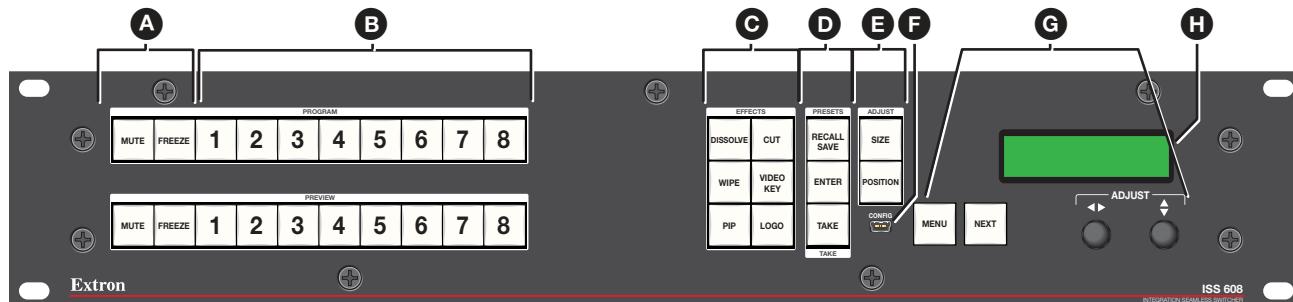


Figure 4. ISS 608 and ISS 612 Front Panels

A MUTE and FREEZE buttons	C Effects buttons	E Adjust buttons	G Menu navigation controls
B Input selection buttons	D Presets and TAKE buttons	F USB Config port	H LCD screen

Select an Input

Press and release the desired **PROGRAM** or **PREVIEW** input selection button (see [figure 4](#), **B**). The button lights and the selected input displays on the program or preview monitor. Press the **MUTE** or **FREEZE** buttons (**A**) to mute or freeze the **PROGRAM** or **PREVIEW** output video.

Configure an Effect

Select and configure an effect to accompany the switch. To configure an effect, press one of the following **EFFECTS** buttons (C).

- **CUT** — This effect does not need to be configured. When used, the image instantly swaps between the preview output and the program output without any effect.
- **DISSOLVE** — The previous program output fades out while the image from the preview output fades into the program output using the user-defined duration. To configure:
 1. Select the **DISSOLVE** button to go to the Effect Duration submenu.
 2. Rotate the **ADJUST** knobs to select the length of time for the image to dissolve. Choose from **0.1** to **5.0** seconds (0.1 second increments, default = 0.5 seconds).
- **WIPE** — The image in the preview output “unrolls” over the top of the program output using the user-defined duration and sub-effect. To configure:
 1. Select the **WIPE** button to go to the Wipe Direction submenu.
 2. Rotate the **ADJUST** knobs to select the wipe effect. Available options are: **Soft Up**, **Soft Down**, **Soft Right**, **Soft Left**, **Hard Up**, **Hard Down**, **Hard Right**, or **Hard Left**.
 3. Select the **NEXT** button to go to the Effect Duration submenu.
 4. Rotate the **ADJUST** knobs to select the length of time for the image to unroll. Choose from **0.1** to **5.0** seconds (0.1 second increments, default = 0.5 seconds).
- **PIP** — The image in the preview output appears in the program output as a picture-in-picture window using a dissolve effect and the user-defined effect duration.

To recall a PIP preset:

- 1. Select the **PIP** button to go to the Recall PIP Preset submenu.
- 2. Rotate the **ADJUST** knobs to select a preset (1 through 16) with the image and window size and position preconfigured.
- 3. Select the **NEXT** button to recall the selected preset.

- **VIDEO KEY** — Video on the preview bus can be keyed to appear over the existing video on the program bus, using an RGB key, a luminosity level key, or a transparency effect. To configure:
 1. Select the **VIDEO KEY** button to go to the Video Key Effect submenu.
 2. Rotate the **ADJUST** knobs to select the key effect. Available options are: **Transparency**, **RGB**, or **Level**.
 3. Select the **NEXT** button to go to the Video Key Effect submenu and the option previously chosen.
 4. Rotate the **ADJUST** knobs to adjust the setting. Available options are: **Transparency**, **Level Key**, or **Color Key**.

NOTE: Effect Duration setting affects all effects and is not set individually for each effect.

Switch the Preview Output to the Program Output

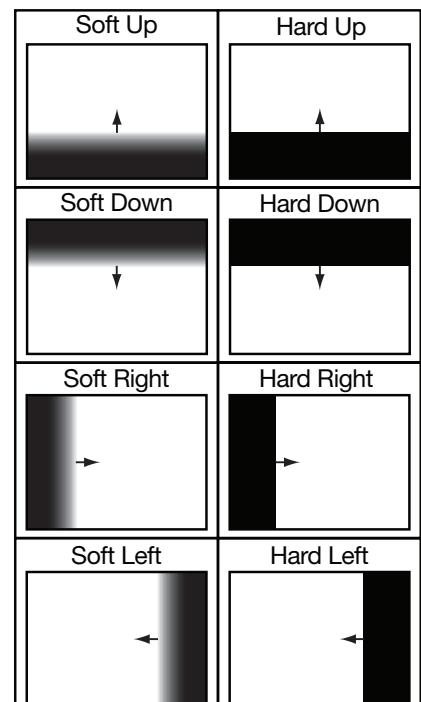
NOTE: Select the switch effect and duration using the Effects Configuration menu.

1. For an effect to accompany the switch, press one of the **EFFECTS** buttons (see **figure 4**, C on page 2).
 - **CUT**
 - **DISSOLVE**
 - **WIPE**
 - **PIP**
 - **VIDEO KEY**
2. Press the **TAKE** button (D) to execute the selected effect.
 - If **CUT**, **DISSOLVE** or **WIPE** is selected, the preview output switches to the program output with the effect selected.
 - If **PIP** is selected, the preview output appears on top of the program output as a PIP window, with the dissolve effect and user-defined effect duration.
 - If **VIDEO KEY** is selected, the preview output appears on top of the program output, using a cut transition.

NOTE: The **PIP** and **VIDEO KEY** buttons blink when the effect is live on the program output.

3. For **PIP** and **VIDEO KEY** effects only, press the **TAKE** button a second time to remove the preview content from the program output.

NOTE: No other effect can be selected while **PIP** or **VIDEO KEY** is active on the program output.



For more details on using **EFFECTS** buttons, see the *ISS 608 User Guide*, available at www.extron.com.

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Configure and Recall a Logo Preset

NOTE: User images must first be uploaded via Extron Product Configuration Software (PCS) available at www.extron.com.

To configure a logo preset (see [figure 4](#) on page 2):

1. Press the **MENU** button (C) to go to the Background/Logo Configuration menu.
2. Press the **NEXT** button (C) to go to the Logo Select submenu.
3. Rotate the **ADJUST** $\blacktriangleleft\triangleright$ knob (G) to select the logo preset to configure.
4. If needed, rotate the **ADJUST** $\blacktriangleup\blacktriangledown$ knob (G) to change the assigned image file (the image file shows on the preview output).
5. Press the **NEXT** button to adjust the position of the logo.
6. Rotate the **ADJUST** $\blacktriangleleft\triangleright$ knob to adjust the horizontal (H) position and rotate the **ADJUST** $\blacktriangleup\blacktriangledown$ knob to adjust the vertical (V) position.
7. Press the **NEXT** button to select a Logo Key Effect, if desired.
8. Rotate the left and right **ADJUST** knobs to select the Logo Key Effect (Transparency, RGB, Level, or Alpha).

To recall a logo preset:

1. Press the **LOGO** button (if no logo preset was previously selected, Logo Error shows on the LCD screen for 2 seconds).
2. Rotate the **ADJUST** $\blacktriangleleft\triangleright$ knob to select the logo preset.
3. Wait a second or press the **NEXT** button and the logo preset is recalled onto the preview output.
4. Press the **TAKE** button to switch the preview output, with the included logo preset, to the program output using the selected effect, displaying the logo preset on the program output.
 - A different logo preset can be recalled or removed on the preview output by pressing the **LOGO** button again.
5. Press the **TAKE** button again to switch the preview output to the program output.
 - If a different logo preset was recalled on the preview output, the new logo preset is displayed on the program output.
 - If no logo preset is on the preview output, the logo on the program output is removed.

NOTE: The **LOGO** button lights solid if there is a logo on preview output but not on program output. The **LOGO** button blinks if there is a logo on program output whether there is a logo on preview output or not.

Recall Layout Presets

Layout presets are used to preconfigure a presentation prior to going live. This minimizes missed cues or incorrect video layout. A layout preset captures transition effect settings, a logo preset, the input channel, and any picture control adjustments made to the preview output. When recalled, layout presets apply the settings to the preview output to review the configuration before **TAKE** is pressed to make it live on the program output.

1. Press the **RECALL/SAVE** button (see [figure 4](#), D on page 2) to go to the Recall Layout menu.
2. Rotate either **ADJUST** knobs to select a saved Layout Preset.
3. Press the **ENTER** button to recall the selected preset to the preview output.

Adjust the size and position of the Program or Preview

The size and position of the program or preview can be adjusted using the **ADJUST SIZE** and **POSITION** buttons (E).

- Press **SIZE** or **POSITION** buttons to toggle between the PREVIEW image and the PROGRAM image adjustments.
- When the **PIP** (C) effect is selected, the **SIZE** and **POSITION** buttons cycle through the PIP window, PIP image, and program image adjustments.

ISS 608 Configuration

To configure the ISS 608 switcher, available methods include front panel controls, Extron Product Configuration Software (PCS), and Simple Instruction Set (SIS) Commands.

- **Front Panel Controls**

To configure network settings using the front panel controls:

1. Press **MENU** (G) repeatedly to access the View Comm Settings submenu.
2. Press and hold **NEXT** for approximately 5 seconds until the submenu changes to Edit Comm Settings.

3. Press **Next** to page through the submenu.

- **Serial Port and MAC address**— Remains view only.
- **DHCP** — Rotate either knob to select **On** or **Off**.
- **IP Address, Subnet Mask, and Gateway Address** — Rotate the **ADJUST** **►** knob to select an octet (blinking) and the **ADJUST** **▼** knob to change the selected octet.
- **PCS** — To configure using PCS, install the software (available at www.extron.com) to a PC connected to the switcher via Ethernet or the front panel USB Config port. For full instructions, connect to the device and click the arrow in the ISS 608 tab, then select the **ISS 608 Help File** from the drop-down list.
- **Basic SIS Commands** — To configure using SIS commands via an RS-232, USB, or Ethernet connection, use the Extron DataViewer utility or a control system to send and receive SIS commands. The following table lists common SIS commands and the symbol definitions. For a full list of SIS commands and variables, see the *ISS 608 User Guide* at www.extron.com.

NOTE: For commands and examples of computer or device responses used in this guide, the character “0” is the number zero and “O” is the capital letter “o.”

Command	SIS Command (Host to Device)	Response (Device to Host)	Additional Description
Input switch			
Tie input to output (audio and video)	X1 * X2 !	Out X2 •In X1 •All \leftarrow	Tie input X1 to output X2 (All)
Tie input to output (video only)	X1 * X2 %	Out X2 •In X1 •Vid \leftarrow	Tie input X1 to output X2 (Vid)
Tie input to output (audio only)	X1 * X2 \$	Out X2 •In X1 •Aud \leftarrow	Tie input X1 to output X2 (Aud)
KEY: X1 = Input number 1 – 8 (two-digit response with 0 padding) X2 = Output number 1 = Preview 2 = Program			
Take effect select			
Set Take effect	Esc O1* X19 SWEF \leftarrow	SwefO1* X19 \leftarrow	Sets the Take effect to X19
View setting	Esc O1SWEF \leftarrow	X19 \leftarrow	View current setting (Default = 0)
KEY: X19 = Take video effect 0 = Cut 1 = Dissolve 2 = Wipe 3 = PIP 4 = Video Key			
Take (with Cut, Dissolve, or Wipe effect selected)			
Take	%	Tke \leftarrow	Switch the previous and program outputs per the preview switch setting
		Bsy1 \leftarrow	Effect is underway
		Bsy0 \leftarrow	Effect is complete
Take (with PIP or Video Key effect selected)			
Begin effect	%	Tke \leftarrow	Enables PIP or Video Key on Program output
		Bsy1 \leftarrow	Effect is active
End effect	%	Tke \leftarrow	Ends effect and removes PIP or Video Key from the program output
		Bsy0 \leftarrow	Effect is complete
Audio mute (digital and analog - persists beyond a power cycle)			
Enable global audio mute	1Z	Amt1 \leftarrow	Mutes all audio outputs
Disable global audio mute	0Z	Amt0 \leftarrow	Unmutes all audio outputs
Enable/disable discrete mute	X2 * X10 Z	Amt X2 * X10 \leftarrow	Set mute of audio output X2 to X10
View discrete mute	X2 *Z	X10 \leftarrow	View mute status X10 of audio output X2
View all mute status	Z Verbose mode 2/3	X10 • X10 •0• X10 • X10 •0 \leftarrow Amt X10 • X10 •0• X10 • X10 •0 \leftarrow	View audio mute status (Preview: HDMI, analog; Program: HDMI, analog)
Example:		Amt<HDMI Preview>*<Analog Preview>*0*<HDMI Program>*<Analog Program>*0	
KEY: X2 = Output selection 1 = HDMI Preview 2 = HDMI Program 5 = Analog Preview 6 = Analog Program X10 = Enable/Disable 0 = Off/disable 1 = On/enable			

Command	SIS Command (Host to Device)	Response (Device to Host)	Additional Description
Executive mode			
Enable (mode 1)	1X	Exe1 \leftarrow	Lock out entire front panel
Enable (mode 2)	2X	Exe2 \leftarrow	Limited front panel adjustments
Enable (mode 3)	3X	Exe3 \leftarrow	Program lockout
Disable	0X	Exe0 \leftarrow	All adjustments allowed
View status	X	X29 \leftarrow	Show executive mode status
KEY: X29 = Executive mode status 0 = Off/disabled (Default) 1 = Exe Mode 1 - Complete front panel lockout 2 = Exe Mode 2 - Partial front panel lockout (Menu and Next buttons disabled) 3 = Exe Mode 3 - Program lockout (all changes to Program are locked out)			
LAN/IP Configuration and Setup			
Set DHCP mode	Esc X10 DH \leftarrow	I dh \bullet X10 \leftarrow	
Set IP address	Esc X91 CI \leftarrow	I pi \bullet X91 \leftarrow	Default = 192.168.254.254
Set subnet mask	Esc X92 CS \leftarrow	I ps \bullet X92 \leftarrow	Default = 255.255.0.0
Set gateway IP address	Esc X91 CG \leftarrow	I pg \bullet X91 \leftarrow	Default = 0.0.0.0
Set DNS server IP address	Esc X91 DI \leftarrow	I pd \bullet X91 \leftarrow	Default = 0.0.0.0
KEY: X10 = Off/On 0 = Off 1 = On X91 = IP Address (xxx.xxx.xxx.xxx) Leading zeros in each of the 4 fields are optional in setting values and are expressed in returned values: Factory Default IP address: 192.168.254.254, Default Gateway IP address: 0.0.0.0 Default DNS Server IP address: 0.0.0.0. X92 = Subnet mask (xxx.xxx.xxx.xxx). Leading zeros in each of the 4 fields are optional in setting values and are expressed in returned values. Default subnet mask: 255.255.0.0.			

Firmware Updates

Download firmware updates from the Extron website and upload them via the internal web pages, PCS, or the Extron Firmware Loader program.

For information on safety guidelines, regulatory compliances, EMI/EMF compatibility, accessibility, and related topics, see the [Extron Safety and Regulatory Compliance Guide](#) on the Extron website.