

The Extron SSP 200 is a high-performance surround sound processor that automatically decodes Dolby®, DTS®, and PCM formats from digital input sources to discrete audio outputs. Providing up to ten built-in balanced analog outputs, the SSP 200 provides the flexibility needed for pro A/V applications in corporate, commercial, and education environments. It supports the latest immersive formats of Dolby Atmos and DTS:X plus legacy Dolby and DTS formats. An upmix function synthesizes exceptional multichannel audio from stereo content. The SSP 200 features an HDMI input with loop through, coaxial and optical digital inputs, and an analog stereo input. It is designed for integration into pro A/V installations, featuring a compact, half-rack metal enclosure, RS-232 serial and LAN control, and balanced line level outputs.

This guide provides instructions for an experienced user to set up and configure the SSP 200. It covers how to connect other devices and perform basic operations using rear panel connections and the front panel controls. For full operation and configuration through Extron Product Configuration Software (PCS), internal web pages, and Simple Instruction Set (SIS™) commands, see the *SSP 200 User Guide*.

NOTE: For information while using PCS, see the *SSP 200 PCS Help File*.

Rear Panel Connectors

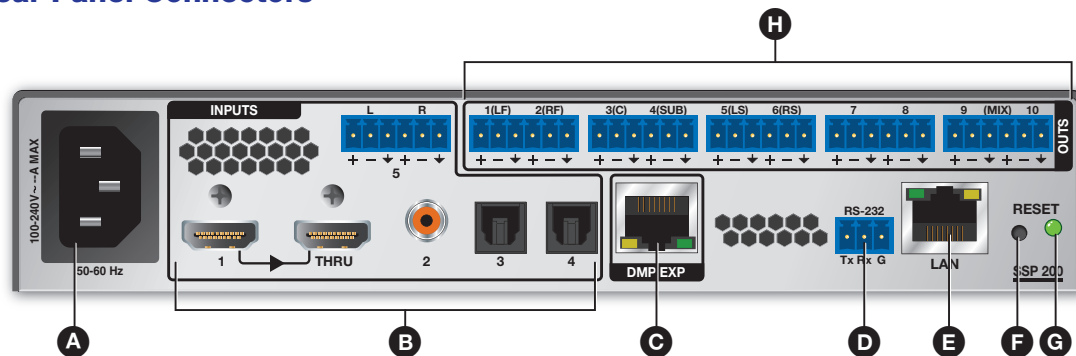


Figure 1. Rear Panel Connectors

- | | | |
|-----------------------------|-----------------------|-------------------------|
| A AC power connector | D RS-232 port | G Status light |
| B Audio inputs | E LAN port | H Analog outputs |
| C DMP expansion port | F Reset button | |

The SSP 200 (**A**) uses an IEC power cable to connect to a 100-240 VAC, 50-60 Hz, power source.

The SSP 200 (**B**) accepts one HDMI input with embedded audio, three digital inputs, and one analog input. In addition, there is an HDMI loop out (through) connector.

- Input 1 accepts digital signals through an HDMI cable, supporting HDMI version 2.0 with HDCP version 2.3 compliance.
- Input 2 accepts a 75 ohm unbalanced digital coaxial S/PDIF input.
- Inputs 3 and 4 accept digital signals through S/PDIF optical (TOSLINK®) cables.
- Input 5 accepts a balanced or unbalanced, stereo or mono, analog input through a 6-pole captive screw connector.

Connect an EXP-enabled device to the DMP expansion port (**C**) for a digital audio connection using Extron proprietary protocol. Use the included one-foot long shielded CAT6 cable to connect the SSP 200 to a Primary EXP-enabled device (see the *SSP 200 User Guide* for EXP bus operation details).

The ten outputs (**H**) are balanced or unbalanced, line level, analog signals made available through captive screw connectors providing outputs for the following surround sound channels.

Number	Abbreviation	Channel Description
1	LF	Left front
2	RF	Right front
3	C	Center
4	SUB	Subwoofer
5	LS	Left surround

Number	Abbreviation	Channel Description
6	RS	Right surround
7	See note below	
8	See note below	
9	See note below	
10	See note below	

NOTE: Numbers 7 through 10 are configurable as back, height, or downmix channels using PCS.

By default, the SSP 200 is set to 7.1 with downmix enabled with all ten analog outputs enabled. Outputs in this configuration are 7 – Left Back, 8 – Right Back, 9 – Downmix Left, and 10 – Downmix Right.

SSP 200 • Setup Guide (Continued)

Mounting and Cabling

Step 1 — Mount the device

- Turn off or disconnect all equipment power sources.
- Mount the SSP 200 using optional rack and under-furniture mounting kits (available at www.extron.com), or place on a table using the provided rubber feet. The SSP 200 is housed in a 1U-high, 8.5 inch deep, half-rack wide enclosure.

Step 2 — Connect inputs

Make the following input connections as needed (see [figure 1](#), [B](#), on the previous page):

- Connect digital sources to Inputs 1 through 4 depending on connector type.
- Connect balanced or unbalanced analog audio sources to Input 5 through the 6-pole input connector.

Step 3 — Connect outputs

Make the following output connections as needed:

- Connect balanced or unbalanced analog audio output devices to the captive screw output connector ([H](#)). Refer to [Audio Wiring](#) on the next page for more information. A representative application diagram is shown below.

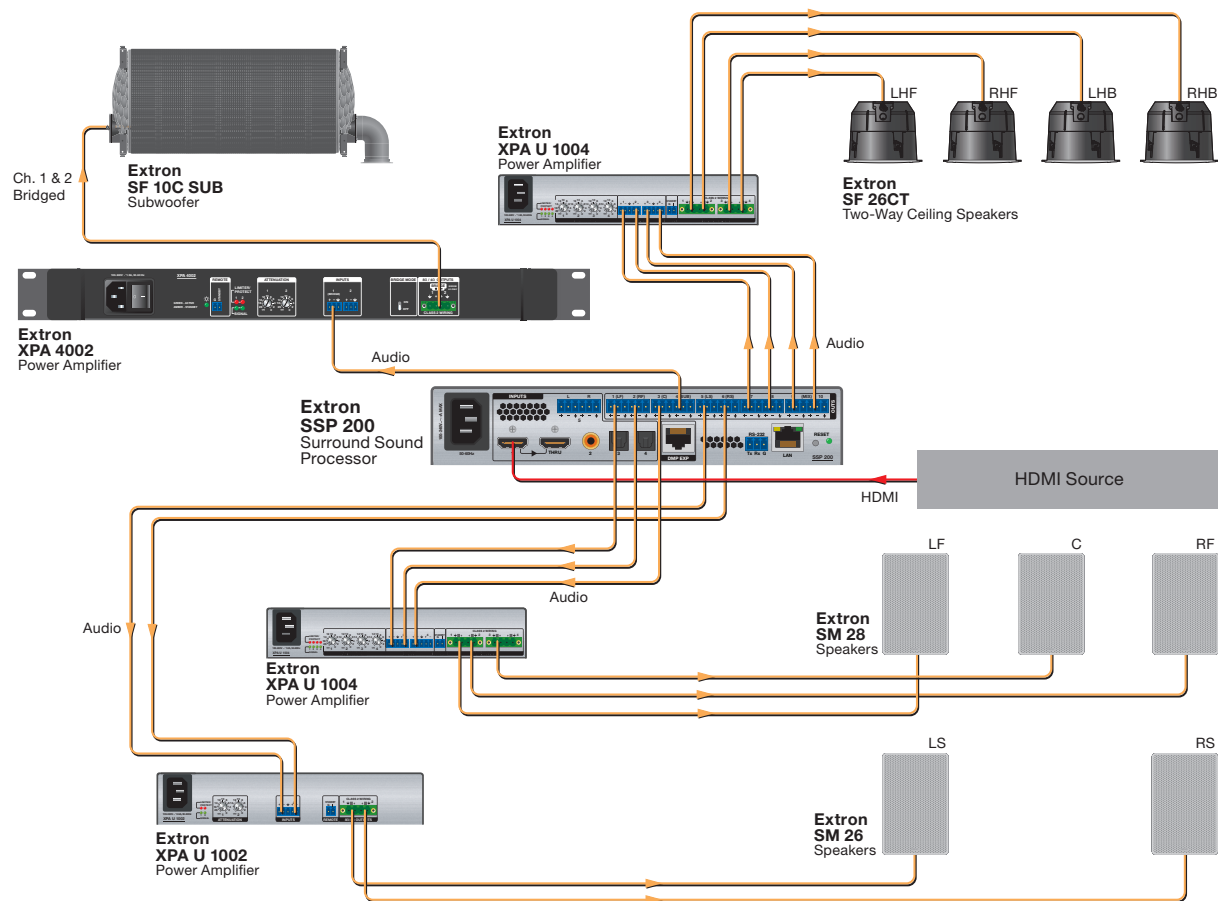


Figure 2. Typical Application Diagram for a 5.1.4 Speaker Setup

Step 4 — Connect control devices

- To control the SSP 200 through Ethernet, connect a LAN or WAN to the LAN connector ([E](#)).
- For serial RS-232 control, connect a host device to the 3-pole captive screw connector ([D](#)). The default baud rate is 9600.
- For control through USB, connect a host device to the front panel USB mini-B port (see [figure 3](#), [B](#), on the next page).

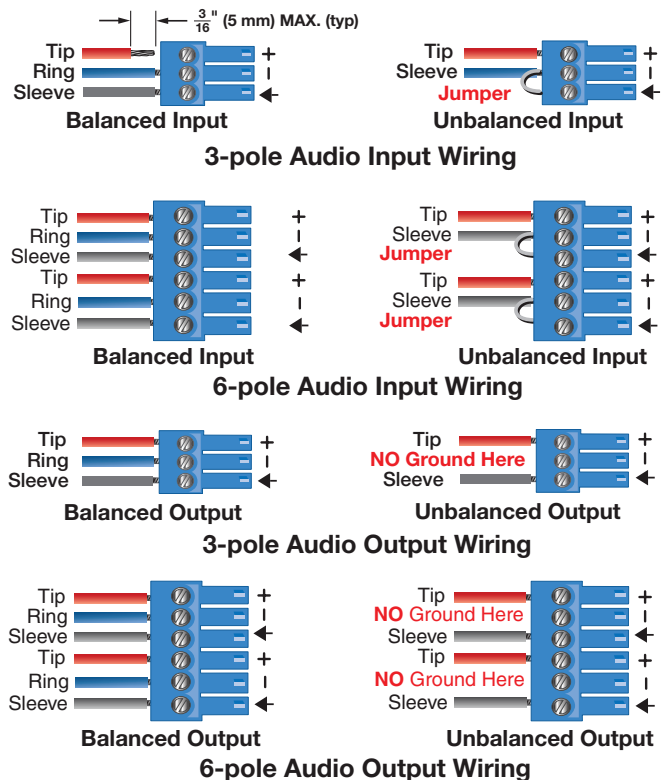
Step 6 — Connect power

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

Audio Wiring

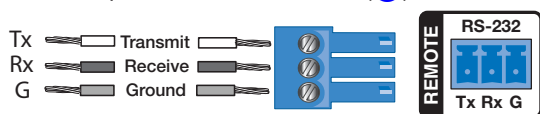
Wire the audio input and output connectors as shown at right. Use the supplied tie wrap to strap the audio cable to the extended tail of the connector.

NOTE: The length of exposed wires is important. The ideal length is 3/16 inch (5 mm).



RS-232 Port Wiring

To transmit and receive IR signals, connect a control device to the three-pole RS-232 connector (D) as shown below.



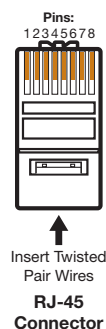
RS-232 protocol defaults

- 9600 baud
- no parity
- 1 stop bit
- 8 data bits
- no flow control

Ethernet Connection

The Ethernet cable can be terminated as a straight-through cable or a crossover cable and must be properly terminated for your application as shown at right.

- **Crossover cable** — Direct connection between the computer and the SSP.
- **Patch (straight) cable** — Connection of the SSP to an Ethernet LAN.



Crossover Cable (for direct connection to a PC)			
Pin	End 1 Wire Color	Pin	End 2 Wire Color
1	white-orange	1	white-green
2	orange	2	green
3	white-green	3	white-orange
4	blue	4	blue
5	white-blue	5	white-blue
6	green	6	orange
7	white-brown	7	white-brown
8	brown	8	brown

T568B **T568A**
A cable that is wired as TIA/EIA T568A at one end and T568B at the other (Tx and Rx pairs reversed) is a "crossover" cable.

Straight-through Cable (for connection to a switch, hub, or router)			
Pin	End 1 Wire Color	Pin	End 2 Wire Color
1	white-orange	1	white-orange
2	orange	2	orange
3	white-green	3	white-green
4	blue	4	blue
5	white-blue	5	white-blue
6	green	6	green
7	white-brown	7	white-brown
8	brown	8	brown

T568B **T568B**
A cable wired the same at both ends is called a "straight-through" cable because no pin/pair assignments are swapped.

Front Panel Features

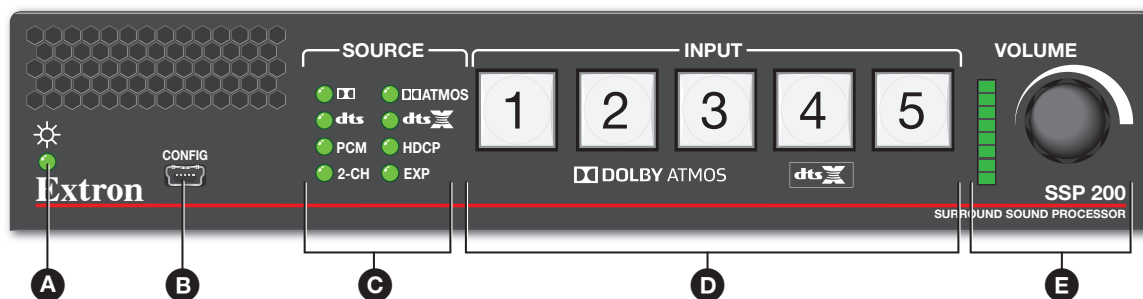


Figure 3. Front Panel Features

- A** Status LED
- B** Configuration port
- C** Input source format indicators
- D** Input selection buttons
- E** Volume adjustment knob and LED bar

- A Status LED** — This LED indicates the current power and boot status of the SSP 200. It lights solid green when operational and solid amber during bootup and reset.

- B Configuration port** — The SSP 200 can be configured through PCS or by using SIS commands through this USB mini-B port or through the LAN and RS-232 ports on the rear panel. In addition, this configuration port is used for firmware updates from a PC.
- C Input Source format indicators** — The bank of eight LEDs identify the format of the audio input.
- D Input selection buttons** — Push one of the buttons to select between the five audio inputs. When a button is selected, the button lights green indicating it is the active input. For digital inputs 1 through 4, the button turns amber when it is selected and the digital clock signal has **not** been detected.
- E Volume adjustment knob and LED bar** — Use the rotary encoder to adjust the output volume from 0 to 100. The default setting is 80.

Configuration and Operation

Extron PCS

To configure and operate the SSP 200 using PCS, install the software (available on the Extron website, www.extron.com) to a PC connected to the processor via Ethernet (using the LAN connection) or the front panel USB configuration port. After the installation, start the program and connect to the device (see the *SSP 200 User Guide* at www.extron.com). For full instructions while operating PCS, press <F1> on the keyboard or click the ? button in the software and select **Help File**.

Toolbelt Software

To manage the SSP 200 using Toolbelt, install the software (available on the Extron website, www.extron.com) to a PC connected to the processor via Ethernet (using the LAN connection). After the installation, start the program and connect to the device by using **Device Discovery** to locate and then select the desired device. For full instructions while operating Toolbelt, press <F1> on the keyboard or click the **Help** button in the software and select **Toolbelt Help**.

Internal Web Pages

To configure the SSP 200 using the factory-installed web pages in a web browser, connect the LAN connector to a LAN or WAN. The default IP address is 192.168.254.254. There is a limited amount of configuration that can be performed with the web pages (see the *SSP 200 User Guide* at www.extron.com).

SIS Commands

To configure the SSP 200 with 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. For a list of SIS commands and variables, see the *SSP 200 User Guide* at www.extron.com.

Firmware Updates

Download firmware updates from www.extron.com to a local computer and upload them via the internal web pages or PCS (see the *SSP 200 User Guide* at www.extron.com).

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.