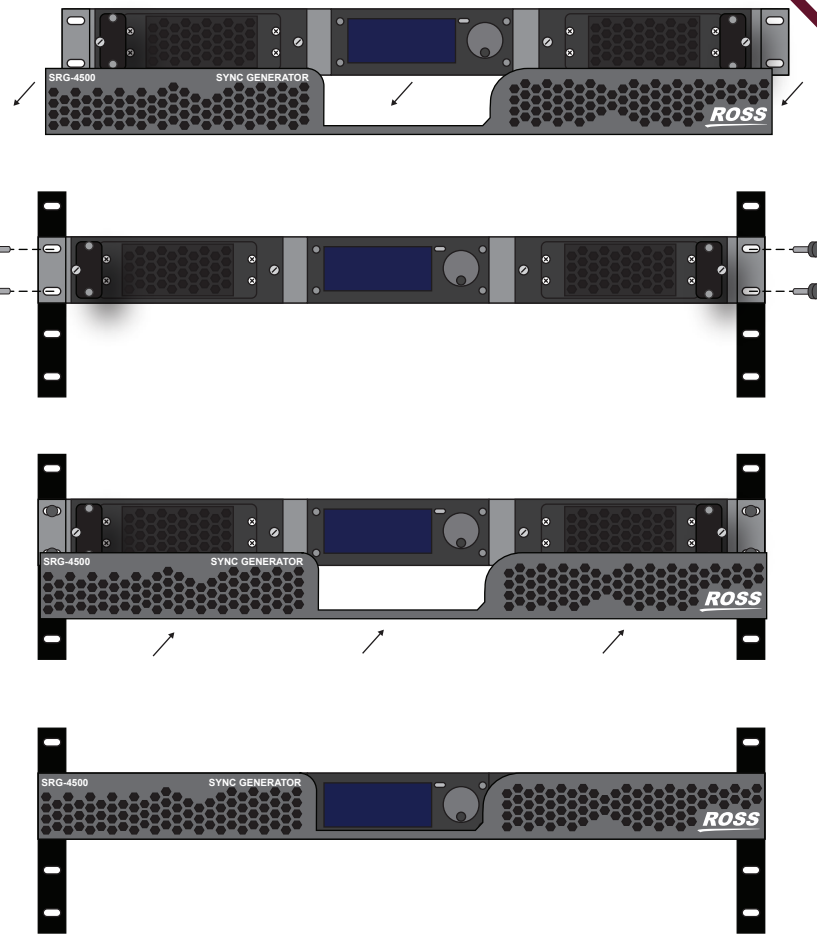# SRG-4500 Installation and Cabling

⚠ **CAUTION**

Before you set up and operate your SRG-4500, see the "Important Safety Instructions" section in the *SRG-4500 User Manual*.

The *SRG-4500 User Manual* is available on the Documentation Disc that shipped with your unit.

Rack Mounting

Rear Support Brackets

Warning: Do not use the support brackets to carry the SRG-4500. The brackets are not primarily designed for this purpose, and property damage or personal injury may result.
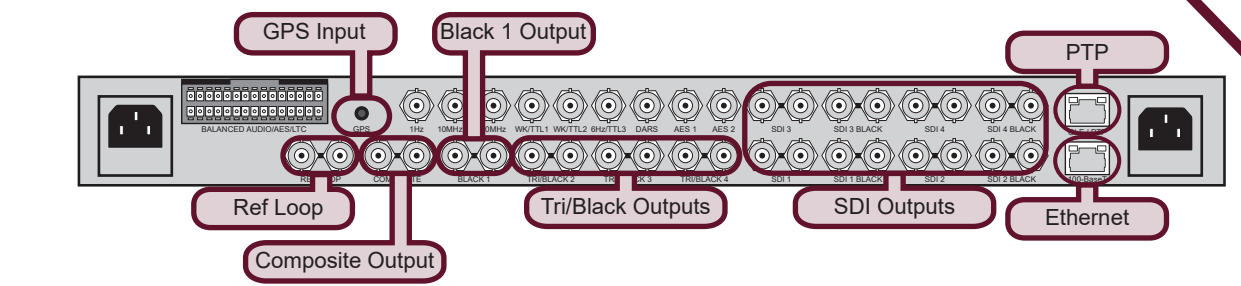
To install the support brackets

1. Select a mounting position that allows rear support bars to slide into slots of the brackets.
2. Choose the position that suits the cabinet depth and gives approximately a 0.5" projection beyond the previously mounted bracket.
3. Using four screws per bracket, attach both bars.

Cabinet Front Vertical Mounting Rail

Cabinet Rear Vertical Mounting Rail

Rear Support Bar

SRG-4500

0.500"
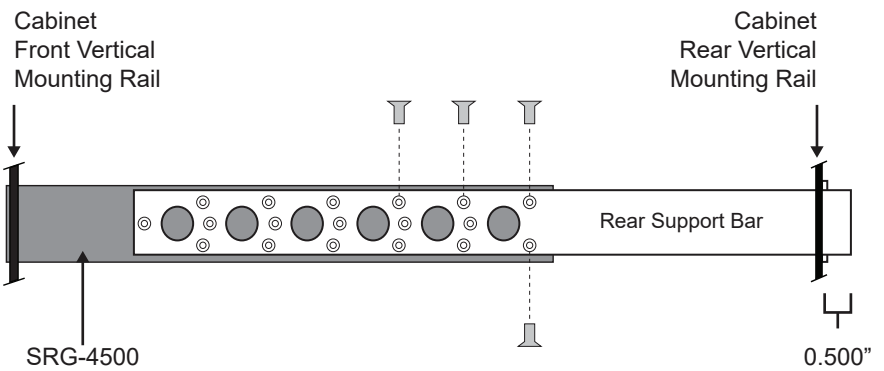
4. Mount the frame to the front rails of the rack cabinet using rack screws.
5. At the rear of the cabinet:
   a) Slide the bracket slots over the rear of the support bars.
   b) Secure to the cabinet rear rails with rack screws.

Cabling

GPS Input | Black 1 Output | PTP | Ref Loop | Composite Output | Tri/Black Outputs | SDI Outputs | Ethernet

Power Connections

Note: The SRG-4500 must have a warm-up period of at least 20 minutes.

Note: The SRG-4500 powers on automatically when the power supply is plugged in.

Power | Power
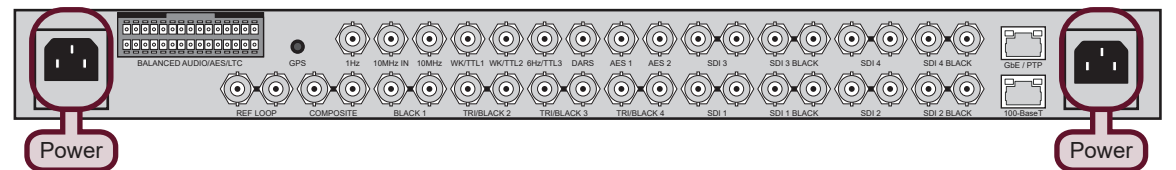
AC Power Source

Operational Voltage Range	120-230VAC 50-60Hz
Absolute Limits Voltage Range	90-264VAC, 47-63Hz
Operational AC Current (each PSU)	<130mA @ 230VAC <210mA @ 120VAC
Surge AC Current (each PSU)	<40A @ 230VAC <20A @ 120VAC
Power Consumption (dual PSU)	46VA (21W)
Switched Mode Power Supply	Single output, AC-DC, 65W 12VDC / 5.4A output

Specifications

Physical Specifications

Clearance	Side: 2.00" (50mm) Rear: 3.00" (75mm)
Height	1.71" (43.5mm)
Width	19.00" (482.5mm)
Depth	15.95" (405mm)
Temperature	Op: 0°C to +40°C Non-op: -20°C to +60°C

SDI Formats

525i/625i (270Mbps)
720p (1.5Gbps)
1035i (1.5Gbps)
1080i (1.5Gbps)
1080p (3Gbps)

Video Reference Inputs

Input Connector Type	2x75ohm BNC
Return Loss	>30dB to 10MHz
Inputs	NTSC Black Burst, 525 Sync, 625 Sync, PAL Black Burst
Pull-in Range	±50ppm
Jitter	Burst: <0.5° Sync: <1ns
Genlock Time Offset	Full color range, <0.5 degree of subcarrier

Frequency Reference Inputs

Input Connector Type	1x50ohm BNC
Return Loss	>30dB to 10MHz
Inputs	10MHz continous wave
Input Requirements	
Amplitude	1Vp-p (nominal), 2.5Vp-p (max.)
S/N Ratio	>40dB

Analog Video Outputs

Connector Type	75ohm BNC
Impedance	75ohm
Return Loss	>30dB to 5MHz
Burst Amp. Accuracy	±5%
Burst Freq. Accuracy	±1Hz
Burst Freq. Long Term	<1ppm/year
Sync Amp. Accuracy	±3%
SCH Phase Accuracy	±5%
Blanking Level	±50mV
Timing Offset	
Range	Full color frame
Resolution (NTSC/PAL)	<0.5 degree of carrier
Resolution (Tri-Sync)	<1/54MHz

LTC Outputs

Connector Type	MicroClasp™ 2mm
Number of Outputs	up to 4 balanced
Impedance	Differential balanced line driver output
Signal Amplitude	5V ±10% Balanced
Rise and Fall Time	5ns> Rise/Fall <44ns

Programmable Pulse Outputs

Connector Type	3 unbalanced BNC
Impedance	75ohm
Signal Amplitude	3.3V ±10%
Rise and Fall Time	5ns> Rise/Fall <44ns
Jitter	8ns
Pulse Types	Burst Gate,Line Drive, Mixed Sync Mixed Blanking, PAL Square,Field Drive, F1/L7 or F1/L10, 6Hz 29.97Hz/30Hz, Word Clock 41/48KHz

GPS Receiver Antenna Input

Input Connector Type	1x50ohm SMB jack
Antenna Voltage	+5.0V ±5%
Antenna Current	Internally limited to 50mA

Ethernet Interface

Connector Type	RJ45 - 8P8C
IEEE Standards Compliance	802.31-1990, 802.3u-1995, 1588-2008

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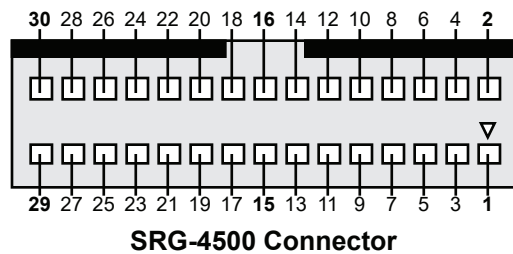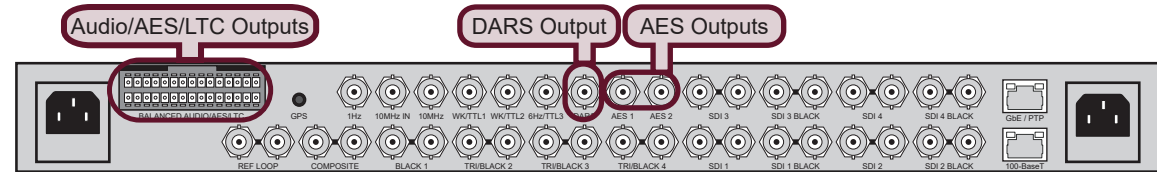⚠️ **CAUTION**

Before you set up and operate your SRG-4500, see the "Important Safety Instructions" section in the *SRG-4500 User Guide*.

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Audio Cabling

Audio/AES/LTC Outputs DARS Output AES Outputs

SRG-4500 Connector

30 28 26 24 22 20 18 **16** 14 12 10 8 6 4 **2**

29 27 25 23 21 19 17 **15** 13 11 9 7 5 3 **1**

Analog Audio Outputs

Number of Outputs	1 x stereo balanced pair
Connector Type	MicroClasp™ 2mm, 30pin
Output Impedance	50ohm ±5%
Termination Impedance	600ohm ±5%
Frequency	1Hz - 20KHz
Amplitude	Silence, -60 to +18dBm
Interruption	Programmable
Harmonic Distortion	<-50dB
DAC Resolution	18bits

AES/EBU Audio Unbalanced Outputs

Number of Outputs	2 x AES3id audio
	1 x AES3id DARS
Connector Type	BNC
Impedance	75ohm
Signal Amplitude	1V ±10%
Rise and Fall Time	5ns> Rise/Fall <44ns
Jitter	8ns
Frequency	20Hz-20kHz
Amplitude	Silence and -60 to 0dBFS
Pre-empahsis	None
Interruption	Programmable
Resolution	24bits

AES/EBU Audio Balanced Outputs

Number of Outputs	Up to 8 balanced AES3
	1 x balanced DARS
Connector Types	Micro-clasp™ 2mm 10-pin
	(Molex #55959-1030)
	Mating connector: Molex
	#51353-1000
Impedance	Differential balanced line
	driver output
Rise and Fall Time	5ns > Rise/Fall <44ns
Jitter	8ns
Frequency	20Hz-20kHz
Amplitude	-60dBFS to 0dBFS
Pre-empahsis	None
Interruption	Programmable
Resolution	24bits

Balanced Audio/AES/LTC (female)

Pin	Signal/Function
1	Ground
2	Ground
3	LTC1-4/AES1-8/DARS/2.048MHz (+)
4	LTC1-4/AES1-8/DARS/2.048MHz (-)
5	LTC1-4/AES1-8/DARS/2.048MHz (+)
6	LTC1-4/AES1-8/DARS/2.048MHz (-)
7	LTC1-4/AES1-8/DARS/2.048MHz (+)
8	LTC1-4/AES1-8/DARS/2.048MHz (-)
9	LTC1-4/AES1-8/DARS/2.048MHz (+)
10	LTC1-4/AES1-8/DARS/2.048MHz (-)
11	LTC1-4/AES1-8/DARS/2.048MHz (+)
12	LTC1-4/AES1-8/DARS/2.048MHz (-)
13	LTC1-4/AES1-8/DARS/2.048MHz (+)
14	LTC1-4/AES1-8/DARS/2.048MHz (-)
15	LTC1-4/AES1-8/DARS/2.048MHz (+)
16	LTC1-4/AES1-8/DARS/2.048MHz (-)
17	LTC1-4/AES1-8/DARS/2.048MHz (+)
18	LTC1-4/AES1-8/DARS/2.048MHz (-)
19	AES2+
20	AES2-
21	AES1+
22	AES1-
23	DARS+
24	DARS-
25	AUD1+LEFT
26	AUD1-LEFT
27	AUD2+RIGHT
28	AUD2-RIGHT
29	Ground
30	Ground

Installing the Breakout PCB
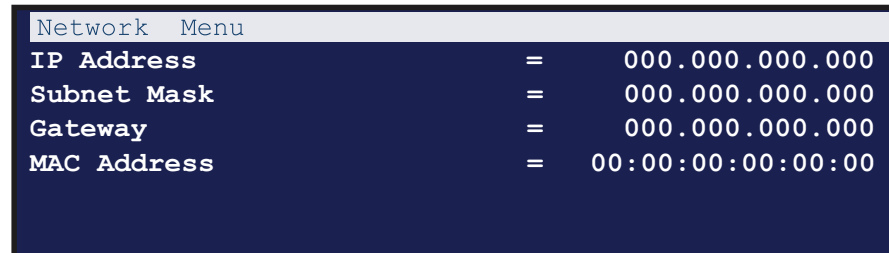
M3 10mm screws

M3 5mm screws
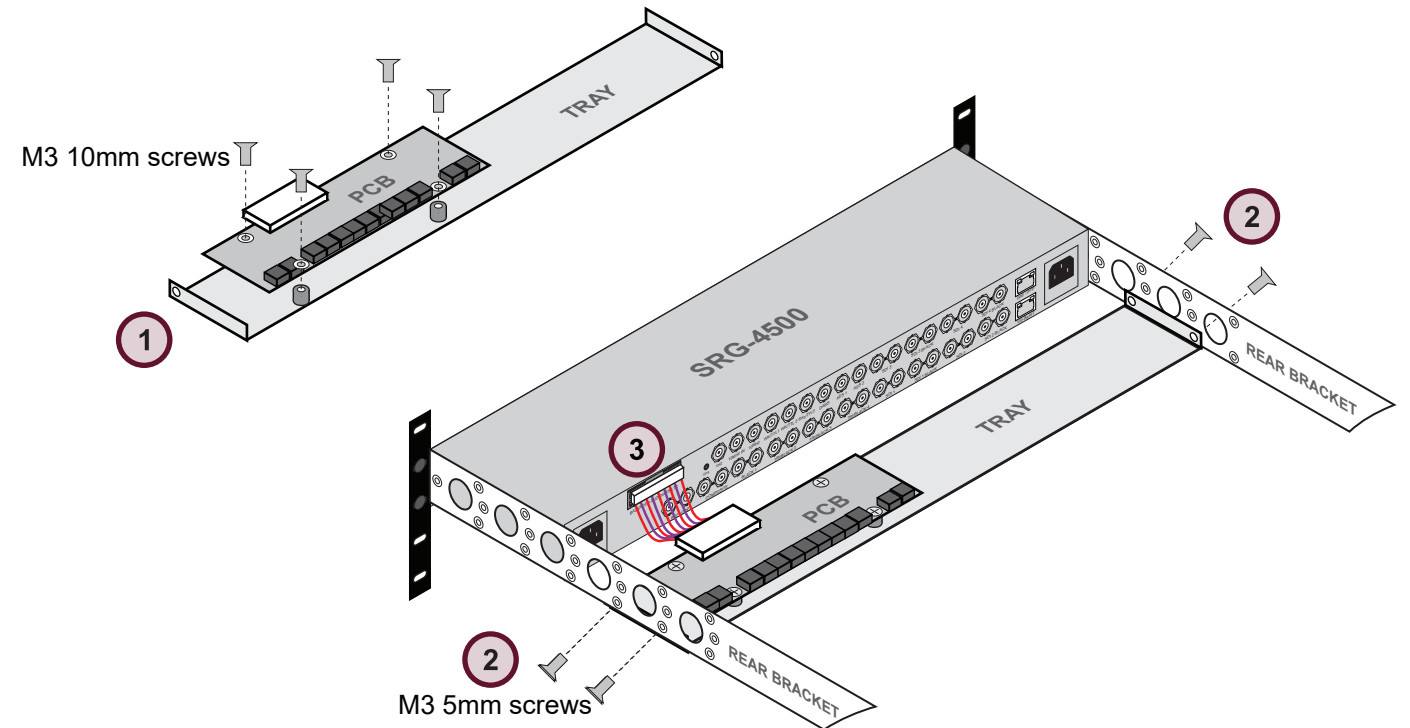
Set the IP Address

Note: You must set the IP address of the SRG-4500 from the front control panel after power up. Contact your facility Network Administrator for the required network settings.

To set the IP Address for the SRG-4500

1. Use the **Rotary/Push Control** dial on the front panel to display the **Network Menu** on the front control panel: Operational Menu > System Menu > Network Menu.

```
Network  Menu
IP Address                      =      000.000.000.000
Subnet Mask                     =      000.000.000.000
Gateway                         =      000.000.000.000
MAC Address                     =      00:00:00:00:00:00
```

2. Use the **Rotary/Push Control** dial to set the IP Address, Subnet Mask, Gateway, and MAC Address for the SRG-4500.
3. Use the **Back** button to return to the Operational Menu.

❓ Having a problem? Call our free, 24-hour technical support hotline to speak with a live product specialist located right here in our facility.

Tel: (+1) 613 • 652 • 4886
Email: techsupport@rossvideo.com

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