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Operation

Operation

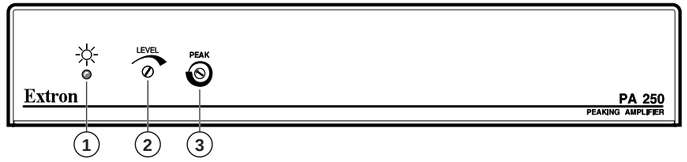


Figure 4 — PA 250 front panel

1 **Power LED —** Lights when the PA 250 is on.

2 **Level control —** Adjusts the amount of compensation for amplitude losses caused by cable resistance.

3 **Peaking control —** Adjusts frequency compensation. It is similar to the sharpness control on a television. It compensates for the effect of capacitance of long cables. Use the symbol at the left as a guide for adjusting the control.



Specifications

Video

Gain adjustment	-4.9dB to 3.0dB
Peaking adjustment	30 MHz to 100 MHz, maximum +8dB
Bandwidth	250 MHz (-3dB)

Video input

Number/signal type	1 analog RGBHV, RGBS, RGsB, RsGsBs
Connectors	5 BNC female
Nominal level(s)	Analog ..... 0.7V p-p
Minimum/maximum level(s)	Analog ..... 0.4V to 2.0V p-p with no offset
Impedance	75 ohms
Horizontal frequency	15 kHz to 150 kHz
Vertical frequency	40 Hz to 140 Hz
Return loss	-37dB @ 5 MHz

Video output

Number/signal type	1 analog RGBHV, RGBS, RGsB
Connectors	5 BNC female
Nominal level	Analog ..... 0.4V to 2.0V p-p
Impedance	75 ohms
Return loss	-20dB @ 5 MHz

Specifications

DC offset	±10mV maximum

Sync

Input type	RGBHV, RGBS, RGsB, RsGsBs
Output type	RGBHV, RGBS, RGsB
Input level	RGBHV, RGBS ..... TTL ..... 5V p-p RGsB, RsGsBs ..... analog ..... 0.3V p-p
Output level	TTL ..... 4V to 5V p-p
Input impedance	510 ohms
Output impedance	75 ohms
Max input voltage	5V p-p
Input sensitivity	0.6V to 5V p-p
Max. propagation delay	130 nS
Max. rise/fall time	4 nS
Polarity	RGBHV, RGBS ..... positive or negative (follows input) RGsB, RsGsBs ..... negative

General

Power	100VAC to 240VAC, 50/60 Hz, 10 watts, internal, auto-switchable
Temperature/humidity	Storage -40° to +158°F (-40° to +70°C) / 10% to 90%, non-condensing Operating +32° to +122°F (0° to +50°C) / 10% to 90%, non-condensing
Rack mount	Yes, with optional rack shelf #60-190-01
Enclosure type	Metal
Enclosure dimensions	1.75" H x 8.75" W x 9.5" D 4.45 cm H x 22.23 cm W x 24.13 cm D
Shipping weight	5 lbs (2.3 kg)
Vibration	NSTA 1A in carton (National Safe Transit Association)
Approvals	UL, CUL, CE
MTBF	30,000 hours
Part number	60-179-01
Warranty	2 years parts and labor

Part number

Part number	60-179-01

NOTE *Specifications are subject to change without notice.*

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User's Guide



PA 250

Peaking Amplifier

68-202-02 A
Printed in the USA
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Introduction

The Extron PA 250 is a long-line peaking amplifier for driving RGB video up to 1,000 feet. It can also be used as a sync stabilizer to eliminate jitter. Other features include:

- RGB video bandwidth of 250 MHz
- Sync combining, boost, and sharpness capabilities
- Automatically strips incoming sync from the red, green, and blue channels.

NOTE *The quality of the image depends on the quality of all of the components in your video system, including the cables.*

Rear Panel Connectors and Controls

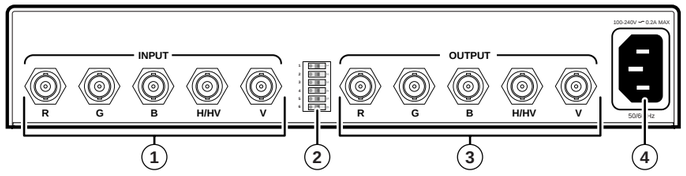


Figure 1 — PA 250 rear panel

(1) **Input BNC connectors —** Attach to the input device.

(2) **DIP switches —** The default for all switches is Off. If switches 1, 2, and 6 are Off, sync output depends on the impedance of the output cables (75 ohm on RGB cables, up to 1 kohm on sync lines).

1 — SOG defeat

On — Sync on green (SOG) is not allowed. This setting prevents the PA 250 from outputting an RGsB signal.

Off — Automatic sync detection is used (default setting).

2 — Force H&V

On — H and V sync are always separated. This setting prevents the PA 250 from outputting an RGBS signal.

Off — Automatic sync detection is used (default setting).

3 — Force negative sync

On — Sync pulses are always negative.

Off — Sync output polarity follows input polarity.

4 — Serration pulse removal

On — Serration pulse are removed from the output vertical sync pulse. LCDs, DLPs and plasma displays must have the serration pulses removed to display properly.

Installation

NOTE *Flagging or bending at the top of the video image is a sign that the serration pulses should be removed.*

Off — Serration pulses pass through the PA 250.

5 — Pulse width

On — Vertical sync pulse width = 500 µseconds.

Off — Vertical sync pulse width = 150 µseconds.

6 — Digital display sync processing™ (DDSP™)

On — LCD (digital display) sync processing is on.

Off — Normal sync processing is active.

(3) **Output BNC connectors —** Attach to the output device.

(4) **AC power input connector —** Attach a standard IEC power cord (100VAC to 240VAC, 50/60 Hz).

Installation Overview

1. Turn all of the equipment off. Ensure that the source device, the PA 250, and the output device are turned off and disconnected from the power source.
2. If desired, mount the PA 250 in a rack. See "Mounting the PA 250" below.
3. Cable the inputs and outputs to the PA 250. See "Cabling" on page 3.
4. Set the rear panel DIP switches. See (2) on page 1.
5. Plug the input device, the PA 250, and the output device into a grounded AC source.
6. Turn on the input and output devices.

Mounting the PA 250

If desired, mount the PA 250 to a rack shelf (Extron part number 60-190-01) as follows:

1. If feet were installed on the bottom of the PA 250, remove them.
2. Mount the PA 250 on the rack shelf, using two 4-40 x 1/8 screws in opposite (diagonal) corners to secure the case to the shelf.
3. Attach the false front panel (provided with the rack shelf) to the unoccupied side of the rack, or install a second half-rack device.
4. Attach the rack shelf to the rack using four 10-32 x 3/4" bolts (provided). Insert the bolts through the #10 beveled washers, then through the holes in the rack ears and rack.

Installation, cont'd

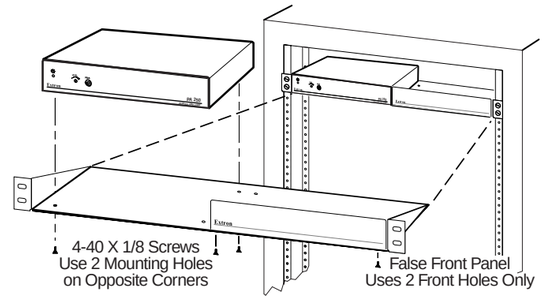


Figure 2 — Rack mounting the PA 250

Cabling

Connect input and output cables to the PA 250 as shown below.



The PA 250 can be attached to an input device, such as an interface connected to a personal computer, and to an output device, such as a large screen projector. The following figure shows a typical application.

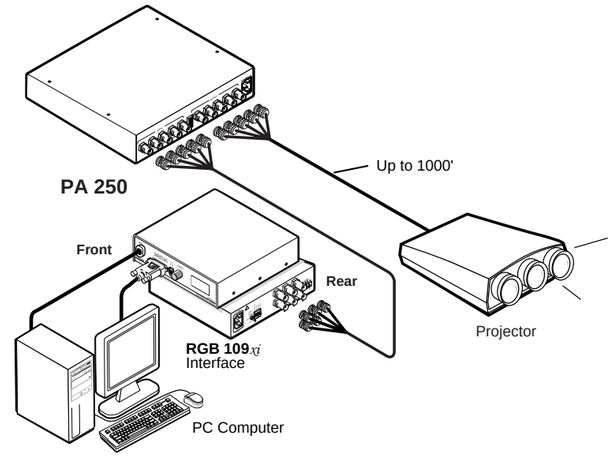


Figure 3 — Typical PA 250 application

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