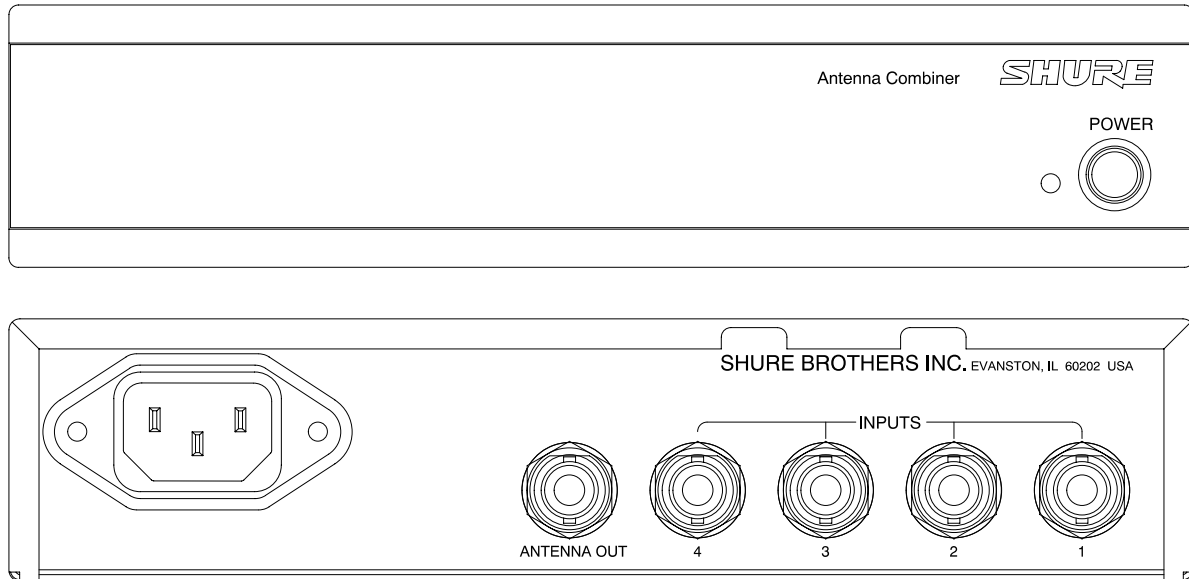


# SHURE®

Shure Brothers Incorporated  
222 Hartrey Avenue  
Evanston IL 60202-3696 U.S.A.  
**PSM™ 700**  
**Wireless Personal Stereo Monitor System**



## PA Series

### Wireless Antenna Combiner User Guide

Guide de l'utilisateur du répartiteur d'antenne sans fil

Bedienungsanleitung für die drahtlose Antennenweiche

Guía del usuario del combinador de antenas inalámbrico

Guida d'uso del combinatore di antenne senza fili

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# TABLE OF CONTENTS

<b>Introduction</b> .....	<b>2</b>
<b>Overview</b> .....	<b>2</b>
<b>Installation</b> .....	<b>3</b>
<b>Appendix A. Specifications</b> .....	<b>4</b>
<b>Appendix B. Rack Mounting Options</b> .....	<b>5</b>

**FCC Statement.** The P7R Receiver complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device does not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

**Licensing Statement.** A user license may be required for operation. Contact the communications authority in your country for more information.

**Modifications to Approved Equipment.** Changes or modifications not expressly approved by Shure Brothers Incorporated could affect compliance with telecommunications standards, thereby voiding the user's authority to operate this product.



This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit.



This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.

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# INTRODUCTION

Shure PA-Series UHF Antenna Combiners are designed to allow up to four PSM wireless transmitters to use a single antenna. The unit combines four PSM wireless transmitters to a single antenna, reducing stage clutter and improving intermodulation distortion performance.

## Features

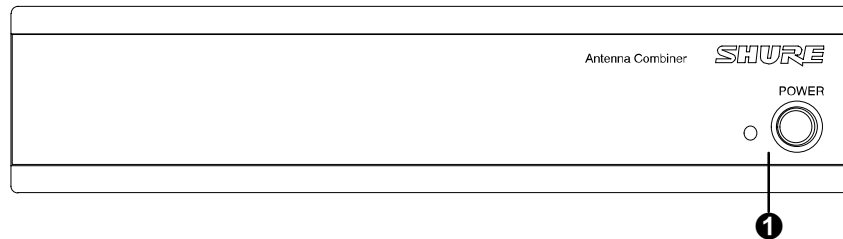
- UHF operation.
- Up to four wireless transmitters can be combined into one transmitting antenna.
- Low noise and intermodulation distortion. The PA Antenna Combiner maintains clean signals with minimal distortion.
- Microstrip technology for signal combining and filtering.
- Four push/pull amplifiers for improved linear performance.
- Front-mounted antenna. The PA Antenna Combiner comes with hardware to front-mount the antenna, which allows for better radio transmission.
- Dual rackmount hardware. The PA Antenna Combiner comes with hardware so that it can be rackmounted with another PA Antenna Combiner or PSM Transmitter into a single rack space.

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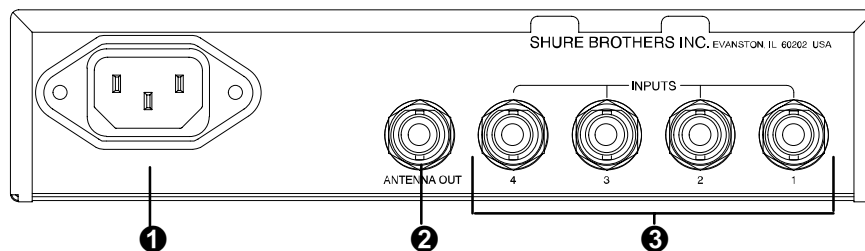
# OVERVIEW

## Front Panel



- 1 Power Switch and LED.** The green LED illuminates when the power is on.

## Rear Panel

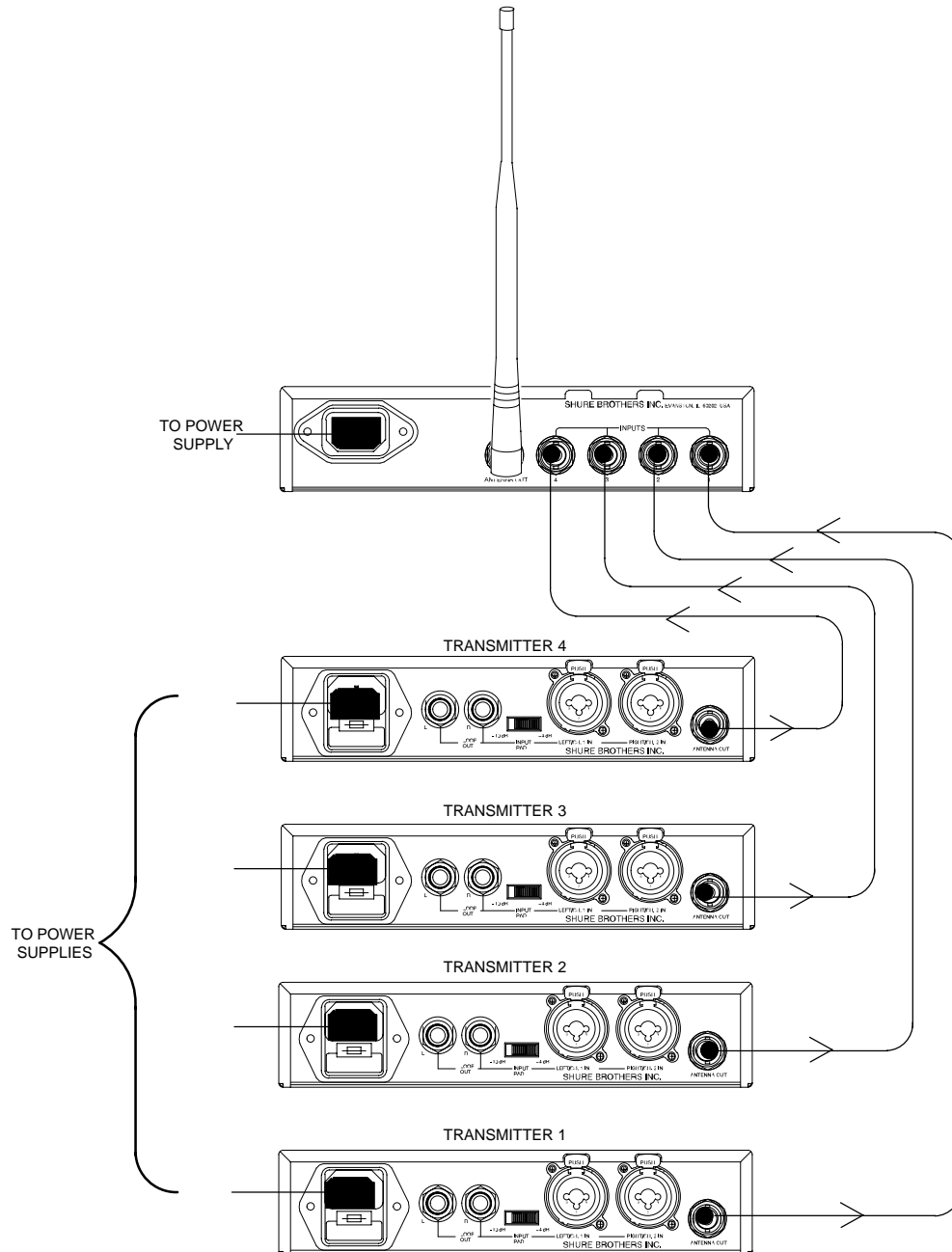


- 1 Power Connector.**
- 2 ANTENNA OUT Connector — 50  $\Omega$ , BNC.**
- 3 INPUT Connectors — 50  $\Omega$ , BNC.** For connecting the unit to up to four wireless transmitters.

# INSTALLATION

## Connection

1. Using the cables supplied with each PSM Transmitter, connect the ANTENNA OUT of each PSM Transmitter to the INPUTS of the PA Antenna Combiner.
2. Attach the antenna (one supplied with each PSM Transmitter), or an optional directional antenna such as the Shure Model PA705, to the ANTENNA OUT connector of the PA Antenna Combiner.
3. Run the supplied power cable from the power connector to a power supply.



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# APPENDIX A. SPECIFICATIONS

## UHF Carrier Frequency Range

Model Number	Frequency Range
PA760	620 to 670 MHz
PA765	800 to 870 MHz
PA770	720 to 750 MHz

## System Gain

0 dB (+2 dB, -4 dB)

## Input/Output Port VSWR

Less than 1.7:1

## Output Port Isolation

Greater than 23 dB

## Third Order Intercept Point (3 OIP)

Greater than 25 dBm

## Input AC Line Voltage

100 to 240 Vac, 50/60 Hz (country dependent)

**NOTE:** This product is not completely disconnected from the mains when the power switch is in OFF position.

## Maximum Input Current

0.5 Aac

## Maximum RF Input Power

+20 dBm (100 mW)

## Impedance

50  $\Omega$  nominal

## Operating Temperature Range

-7° C to +49° C

## Overall Dimensions

44.5 mm high x 197.4 mm wide x 225.6 mm deep (1.75 in. x 7.770 in. x 8.880 in.)

## Net Weight

1.34 Kg (2 lbs, 15.4 oz)

## Input/Output Connector Type

BNC-type (4 input, 1 output)

## Certifications

*PA760, PA770:* Type accepted under FCC Part 74. Certified by IC in Canada under RS 123. UL and cUL listed to UL813 and CSA 22.2 No. 1.

*PA760, PA765, PA770:* Conforms to European Union Low Voltage Directive (73/23/EEC) and EMC Directive (89/336/EEC), eligible to bear CE marking. Meets Low Voltage Requirements: VDE GS-Certified to IEC 60065. Meets EMC Emission and Immunity Requirements: ETS 300 445.

## Furnished Accessories

Rack Mount Kit ..... PA745  
2 ft. Coaxial Cable (RG-58/U) ..... UA802

## Optional Accessories

Unidirectional Antenna (620–870 MHz) ..... PA705  
2 ft. Coaxial Cable (RG-58/U) ..... UA802  
10 ft. Coaxial Cable (RG-58/U) ..... PA725  
25 ft. Coaxial Cable (RG-8/X) ..... UA825  
50 ft. Coaxial Cable (RG-8/X) ..... UA850

## Replacement Parts

Bulkhead Adapters ..... 95A8647  
120 VAC Power Line Cord ..... 95A8389  
230 VAC Power Line Cord ..... 95A8247  
240 VAC Power Line Cord (U.K.) ..... 95A8713

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# APPENDIX B. RACK MOUNTING OPTIONS

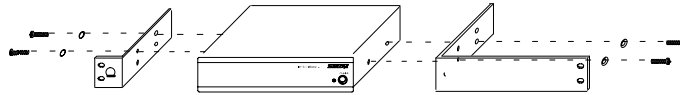
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## Rack Mounting the PA Antenna Combiner

**NOTE: Dual mounting with other Shure products.** The PA Antenna Combiner can also be dual mounted with a Shure SC or LX half-rack wireless receiver. These same instructions apply, but the front panels will not align evenly. The SC and LX receivers must use the SC and LX rack ears. They cannot be mounted with PA Antenna Combiner rack ears. However, the link bars are universal and can be used to connect the PA Antenna Combiner with an LX or SC receiver.

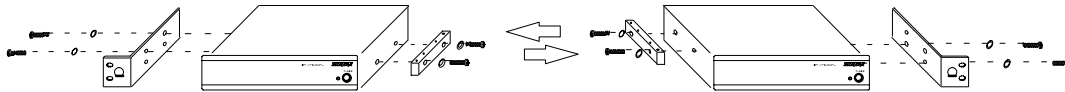
**WARNING:** Do not torque the screws too tightly, or the chassis may be damaged.

### Single Unit

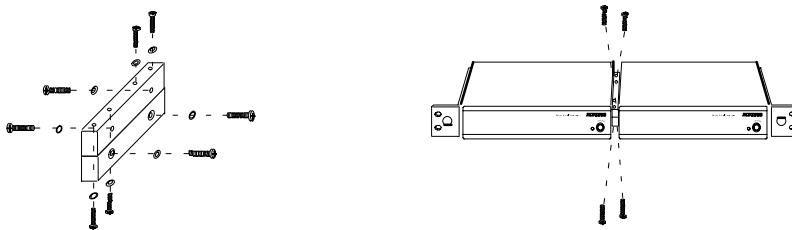


1. Remove the screws and washers from each side of the unit.
2. Align the supplied rackmount brackets over the holes.
3. Using the screws and washers from step 1, fasten the rackmount brackets.

### Dual-Mounted Units



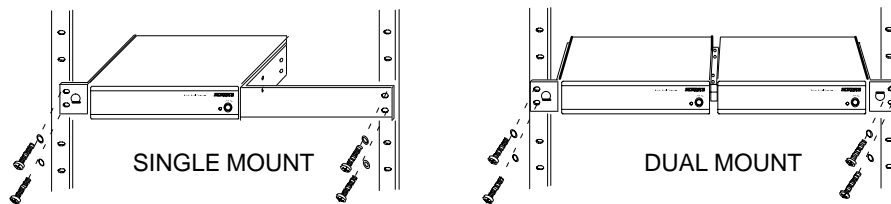
1. Remove the screws and washers on each side of both units.
2. Placing the two units side-by-side, screw the link bars to the inside panels of each unit. The units are designed so that the link bar on the right unit will fit directly on top of the link bar of the left unit (facing front). Use two of the screws and washers from step 1 per link bar to fasten the link bars.
3. Align the rackmount brackets on the outside panels of the units and fasten using four of the screws and washers from step 1.



**NOTE:** The link bars are designed with recesses in the side holes where the screw head and washer fit in. Once the link bars are screwed on properly, the vertical holes will align. Each link bar has two threaded holes and two unthreaded holes. In order to ensure proper fit, stack the link bars so that the unthreaded holes on one bar align with the threaded holes on the other bar. Then, each pair of screws fits in the opposite direction of the other pair, ensuring the stability of the link.

4. Place the two units next to each other so the link bars overlap and the screw holes on the two align.
5. Fasten the link bars together using 4 supplied screws and washers.

## Mounting in an Equipment Rack



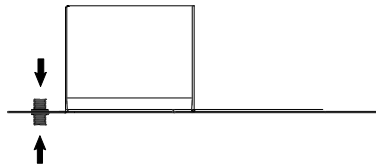
1. Insert the unit(s) into a 19-inch equipment rack.
2. Fasten the unit(s) to the rack using all four of the supplied screws.

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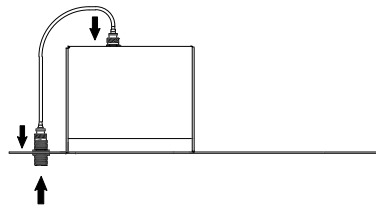
## Front Mounting the Antenna

The PA Antenna Combiner comes equipped so the antenna can be front-mounted. Front-mounting prevents antenna cables from becoming entangled and greatly minimizes RF interference from other cables. When a unit is located in a rack, antennas should be either front- or remote-mounted.

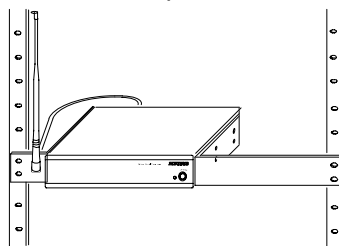
1. Insert the bulkhead adapter through the hole of either mounting bracket, and secure it from the front and the back using the supplied hardware.



2. Connect the supplied antenna cable to the combiner antenna output and bulkhead adapter.



3. Install the antenna on the bulkhead adapter.



**NOTE:** The antenna which comes supplied with the PSM Transmitter can be remote mounted. For remote mounted installations, however, we recommend using the PA705 UHF Directional Antenna.