



Installation and Operation Manual

for the

SM-6 Programmable Stereo Mixer

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SM-6 Programmable Stereo Mixer

INTRODUCTION

Thank you for your purchase of a Broadcast Tools, Inc., SM-6 Programmable Stereo Mixer. We're confident that this product will give you many years of dependable service. This manual is intended to give you all the information needed to install and operate the unit.

 **NOTE:** This manual should be read thoroughly before installation and operation.

SAFETY INFORMATION

Broadcast Tools products should be installed only by qualified personnel. Incorrect or inappropriate use and/or installation could result in a hazardous condition.

Broadcast Tools Products, as any electronic device, can fail without warning. Do not use this product in applications where a life threatening condition could result due to failure.

WHO TO CONTACT FOR HELP

If you have any questions regarding your product, or you need assistance, please *contact your distributor from whom you purchased this equipment.*

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SM-6 Programmable Stereo Mixer

PRODUCT DESCRIPTION

The SM-6 Programmable Stereo Mixer electronically mixes up to 6 balanced stereo inputs into one balanced stereo output. A jumper is provided to sum the output into monaural. Due to the low noise and hi slew rate op-amps employed, distortion and noise are almost non-existent and in no way changes the quality of the signal it is mixing or switching.

FRONT PANEL DESCRIPTION

Source Switches

Each switch represents an input to be mixed to the mixers output. The switches are highly reliable switches, which will give the user years of dependable service. To select a input, simply push in on the desired channel switch. To deselect a channel, press the switch again. A power LED indicates when power is applied to the unit

FUNCTIONAL DESCRIPTION - REAR PANEL CONNECTIONS

The rear panel contains all the input and output connectors. Signal inputs and outputs are routed through pluggable screw terminals.

Power

Power is supplied by a 2.1mm power connector that plugs in the unit and a 16 to 18 volt AC wall transformer that connects to a 120 Vac 50-60 Hz power source.



Note: 220 Vac 50-60 Hz wall transformer is OPTIONAL

Signal Connector

Pluggable screw terminals provide connection of signal (audio) sources.

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INSTALLATION

The SM-6 Programmable Stereo Mixer is very simple to install. The signal inputs and outputs are connected via wire captive terminal strips.

Installation of the SM-6 Programmable Stereo Mixer consists of five steps:

1. Inspect the unit
2. Bench test
3. Mount the unit
4. Connect your equipment
5. Label the Designation Strip

Step 1: Inspect the Unit

Please examine your SM-6 Programmable Stereo Mixer carefully for any damage that may have been sustained during shipping. If any is noted, please notify the shipper immediately. Retain the packaging for inspection by the shipper. The package should contain the SM-6 Programmable Stereo Mixer, 16 volt ac @ 600ma wall power transformer and this manual.

Step 2: Bench Test

Place each unit on a work space and connect power to the unit by connecting the 2.1mm power connector into the unit and the wall transformer into a 120 Vac 50-60 Hz power source. Check to see if the power LED is lit. Connect a audio source to stereo input one and a monitoring device to the output. Push in channel ones channel switch. Verify that audio is present. Repeat the process until each channel's operation has been verified.

Step 3: Mount the Unit

Mount the unit on a rack shelf, such as the Broadcast Tools RM-1, being sure to allow adequate airflow for cooling. Mounting brackets are available if under counter mounting is desire.

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INSTALLATION Continued

Step 4: Connect Your Equipment

The SM-6 Programmable Stereo Mixer interfaces to your equipment (sources and loads) through the rear panel connectors. Follow the legends for Audio input and output connections. The SM-6 interfaces to your equipment (sources and loads) through pluggable rear panel screw terminals. Follow the legends for the desired audio input and output connections. Follow the legends for the desired audio input and output connections, which appear on the rear side of the printed circuit board and also on the layout drawing on the last page of this manual. Remove each screw terminal, strip each conductor, insert the conductor into the terminal and screw down the capture screw. The terminals accommodate wire sizes from 16 - 28 AWG solid or stranded wire.. Rear panel left and right channel input level adjustments may be made. By removing the top cover, output gain for each channel may be adjusted, R-8 for the left channel and R-18 for the right. Jumper JP-1 may be inserted to sum the output to monaural.

Step 5: Label the Designation Strip

The designation strip is provide to write the source descriptions under each source switch. Apply power via the wall transformer to the unit. Your SM-6 Programmable Stereo Mixer is now fully functional.

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SPECIFICATIONS

INPUT LEVELS:	Max, + 27dbu, Stereo balanced, bridging. > 20k Ω .
OUTPUT LEVELS:	Max + 27 dbu, Stereo balanced, @ 100 Ω .
GAIN:	15db.
FREQ RESPONSE:	20 to 20 KHz; + .25 dB / 20 to 30 KHz; + .5 dB
SIGNAL/NOISE RATIO:	>85 dB nominal, unweighted, below +4dbu.
DISTORTION:	Less than 0.01% THD at + 27dbu.
CROSSTALK:	Better than -85 dB @ 1khz / -65 db @ 10 khz from adjacent off channel.
MIX INPUT:	Unbalanced summing inputs @ 10k Ω , 0 dbu.
OPERATION CONTROL:	Front Panel - Push-On / Push-Off switches
INTERFACING:	Removable screw terminals
POWER REQUIREMENTS:	16 to 18 Vac @ 500 ma. 120 Vac 50-60 Hz wall Transformer. 240 Vac 50-60 Hz optional
PHYSICAL DIMENSIONS:	8.5" X 1.75" X 6.0" (WHD)
MOUNTING:	Optional RM-1 rack shelf (1 RU) Optional FP-1 filler panel
WEIGHT:	3.0 lb.
SHIPPING WEIGHT:	4.0 lb.

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LIMITED WARRANTY AND REMEDIES

LIMITED WARRANTY

The term "Buyer" as used in this document refers to and includes both (but only) (a) any person or entity who acquires such an item for the purpose of resale to others (i.e., a dealer or distributor of an item), and (b) the first person or entity who acquires such an item for such person's or entity's own use.

Broadcast Tools warrants to each Buyer of any item manufactured by Broadcast Tools that the item will be free from defects in materials and workmanship at the time its is shipped by Broadcast Tools if the item is properly installed, used and maintained.

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If Broadcast Tools is notified of in writing of a failure of any item manufactured by Broadcast Tools to conform to the foregoing Limited Warranty within one (1) year following the date of the Buyer's acquisition of the item, and if the item is returned in to Broadcast Tools in accordance with Broadcast Tools' instructions for confirmation by inspection of the defect (which at Broadcast Tools' election may include, without limitation, a requirement that the Buyer first obtain a Return Authorization number from Broadcast Tools, that the Buyer furnish proof of purchase in the form of an invoice and/or receipt, and that the Buyer prepay all freight charges associated with any return of the item to Broadcast Tools using such freight service as Broadcast Tools reasonably may specify), Broadcast Tools will repair or replace the defective item, or will refund the purchase price paid by the Buyer for the item. Broadcast Tools shall have the exclusive right to choose between these alternative remedies.

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