

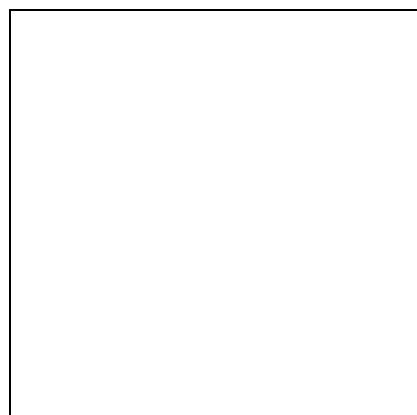
## SM-5 FIVE CHANNEL PRE-AMP/MIXER

### INTRODUCTION

These instructions contain the specifications and guidelines necessary to install, operate, and maintain the SM-5, Five Channel Pre-Amp/Mixer.

The SM-5 Pre-Amp Mixer is used with Clarity mixer-amplifiers when additional inputs are required, or use with the SMB-200 Booster Amplifier where larger power requirements are needed for a paging system.

The SM-5 provides active mixing for up to 4 high or low impedance microphones and 1 high impedance auxiliary input.



### SPECIFICATIONS

#### Applications

- Clarity Paging Systems. Refer to Figure 1 for a block diagram of a typical installation.

#### Features

- High or low impedance switch for each Mic input.
- High impedance auxiliary input.
- Volume control for each input.
- Master volume control.
- Screw terminals for microphone connections.
- RCA jack for auxiliary input.
- Choice of output connections: Terminal strip (600 ohms balanced), XLR connector for mic level output, and RCA jack for high impedance output.
- Power "ON" indicator.
- Shelf mount.

#### Dimensions

- 12"W x 6"D x 3 1/4" H  
(30.5cm W x 15.2cm D x 8.26cm H)
- 4 lbs. (1.8Kg)

#### Specifications

Type of Outputs	600 ohms balanced, mic level or high Z
Frequency Response	20-20KHz
Distortion	less than 1%
Number of inputs	5, 4 high or low microphone inputs and 1 high impedance auxiliary input
Mounting	Shelf Rack Kit (S-RMK) optional
Mic Input Impedance	600 ohm balanced (low Z) 10K (Hi Z)
Sensitivity on Mic Input	0.3Mv RMS
Aux Impedance	10K ohms
600 ohm output	2.45V RMS

#### Power Requirements

Voltage	120 VAC
Current	.03 Amps

#### Environment

Temperature	0 to 50 Degrees C
Humidity	0 to 85% non-precipitating

## DESIGN

The SM-5, Five Channel pre-Amp/Mixer is designed to mix up to 5 inputs. The first four inputs are used as microphone inputs. The fifth input is a high impedance auxiliary input that can be connected to a music source. Each input has its own volume control and a master volume control is provided to adjust the main output of the SM-5.

The mixer provides a choice of outputs, a terminal strip 600 ohm balanced output, an XLR connector for mic level output or an RCA jack for high impedance outputs.

## INSTALLATION

Figure 2 shows volume control locations, Figure 3 shows output terminal strips and switches on the back of the amplifier. Figure 4 shows a typical connecting arrangement.

All connections should be made to the mixer and double-checked prior to connecting the AC power cord.

### **Amplifier Setup**

When setting the system up, it is recommended that the individual gain controls be set 1/4 turn clockwise and that the master volume control be set 1/2 turn clockwise.

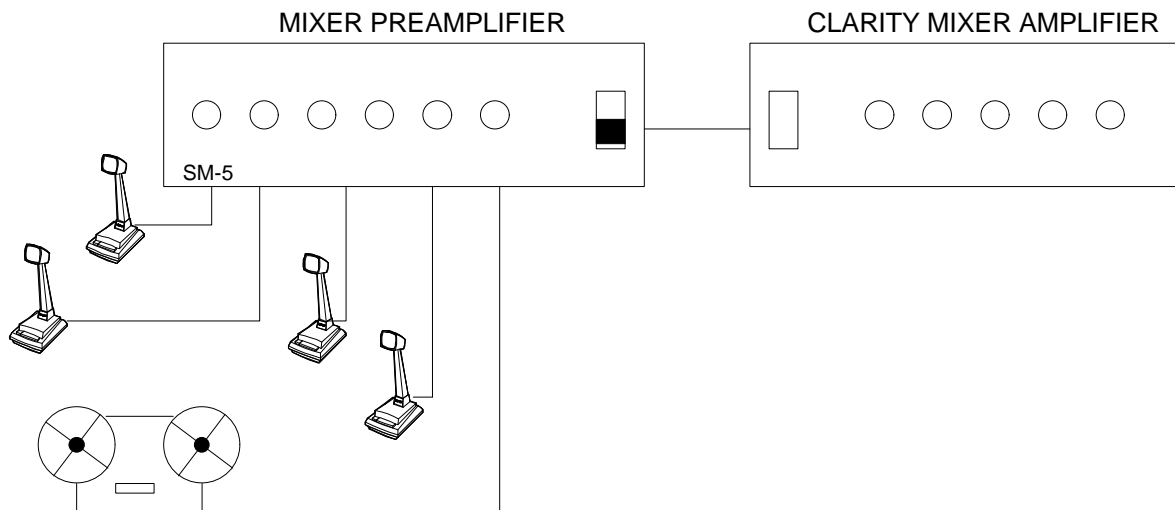
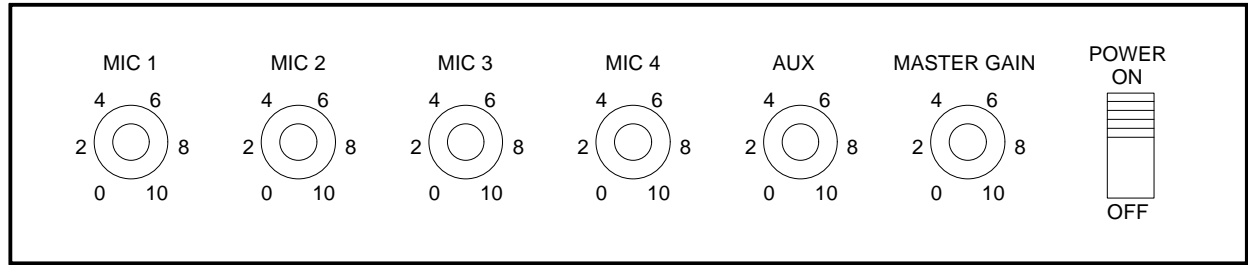
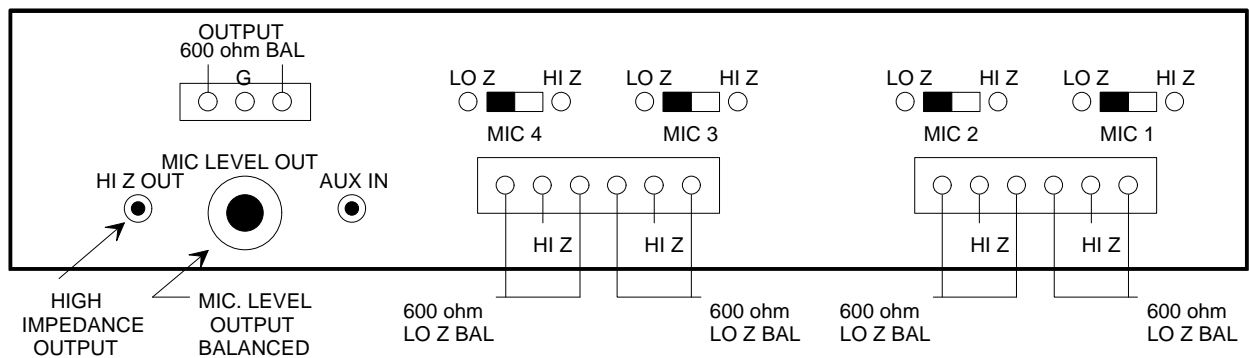


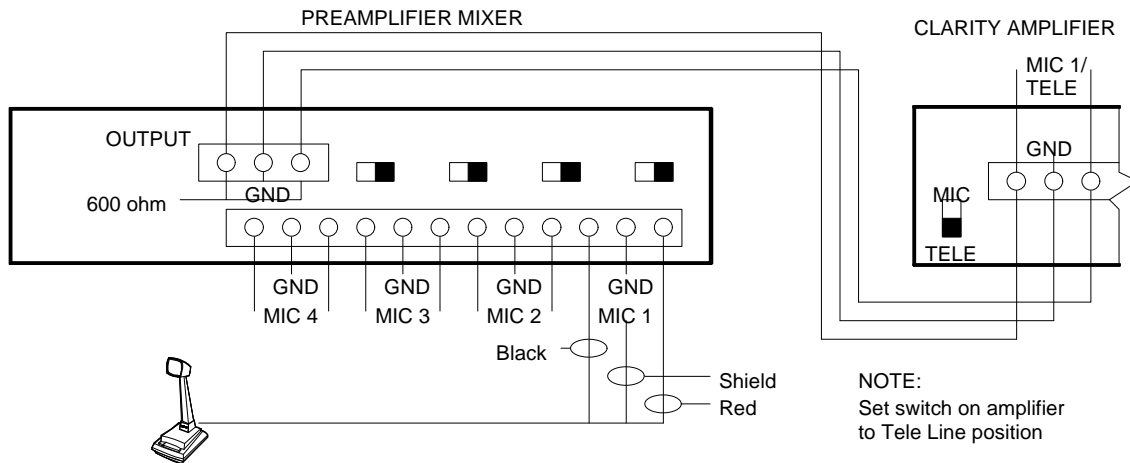
FIGURE 1 - TYPICAL INSTALLATION BLOCK DIAGRAM



**Figure 2 - Volume Control Locations**



**Figure 3 - Terminal and Switch Locations**



**Figure 4 - Connecting Arrangement**

## OPERATION

The SM-5, Five Channel Pre-Amp/Mixer actively mixes any signals present on the input terminals. Each input is equipped with its own volume control to allow blending of the input sources. The unit also has a master volume control to allow a volume level adjustment of all mixed signals. The first four inputs have a slide switch that will allow a low or high impedance input. If the switch is set for a low impedance, the input is balanced. In the high Impedance mode, the input is not balanced. Input 5 is a high impedance input that allows the connection of music sources.

After the input signals are mixed, they are sent to the output of the SM-5. The unit provides three types of outputs and connections, they are:

- 600 ohm output balanced output on a terminal strip
- balanced microphone output on an XLR connector
- high impedance output on an RCA connector

When used with Clarity mixer-amplifiers, the 600 ohm output of the mixer is connected to the Tel input or input one of the amplifier (S-15, SMA-40

through SMA-120). Refer to Figure 4 for a typical connecting arrangement. When used with the SMB-200 Booster Amplifier, the 600 ohm output of the mixer would be connected to the 600 ohm input of the booster amplifier.

**NOTE: For applications involving multiple booster, please contact a Clarity Applications Engineer.**

## TECHNICAL ASSISTANCE

When trouble is reported, verify the unit is turned on and there are no broken connections leading to the unit.

Assistance in troubleshooting is available from the factory. When calling, you should have a VOM available and be calling from the job site. Call (540) 427-3505 and ask for an Applications Engineer.

Clarity equipment is not field repairable. Clarity maintains service facilities in Roanoke, VA. Should repairs be necessary, please call (540) 427-3505 for a Return Authorization Number.

### **LIMITED WARRANTY**

**Clarity** warrants its products to be free from defects in materials and workmanship under conditions of normal use and service for a period of one year from the date of shipment. The obligation under this warranty shall be limited to the replacement, repair or refund of any such defective device within the warranty period, provided that:

1. Inspection by Clarity indicates the validity of the claim;
2. The defect is not the result of damage, misuse, or negligence after the original shipment;
3. The product has not been in any way repaired by others and that factory sealed units are unopened (A service charge plus parts and labor will be applied to units defaced or physically damaged);
4. Freight charges for the return of products to Clarity are prepaid,
5. All units "out of warranty" are subject to a service charge. The service charge will cover minor repairs (Major repairs will be subject to additional charges for parts and labor).

**This warranty is in lieu of and excludes all other warranties, expressed or implied, and in no event shall Clarity be liable for any anticipated profits, consequential damages, loss of time or other losses incurred by the buyer in connection with the purchase, operation, or use of the product.**

This warranty specifically excludes damage incurred in shipment. In the event a product is received in damaged condition, the carrier should be notified immediately. Claims for such damage should be filed with the carrier involved in accordance with the F.O.B. point.