Please follow the instructions in this manual to obtain the optimum results from this unit. We also recommend that you keep this manual handy for future reference.

TOA Corporation
General Description

The TOA M-900MK2 Mixer Preamplifier controls and mixes up to eight independent input signals and delivers up to +20 dBm of output power. Optional plug-in modules are available for use with the M-900MK2 to provide versatility for a wide choice of operating applications. Edge connectors on the rear of the unit permit the selection from a wide range of the TOA plug-in modules.

The mixer preamplifier has a balanced and transformer-isolated output for operation with 600 ohms or 150 ohms loads.

Other features include a tone defeat switch, muting functions, remote master volume control and connections for another mixer preamplifier or mixer power amplifiers A-903MK2, A-906MK2 and A-912MK2.

Features

1. 8-channel mixer preamplifier
2. Wide frequency response: 20~20,000 Hz ± 1 dB
3. Low distortion and noise level
4. Parallel operation of two mixer preamplifiers.
5. Bass and Treble controls
6. Tone defeat switch
7. Remote master volume control
8. A full range of plug-in modules
10. Portable or rack mounting type
### Nomenclature

#### Front Panel

1. **Power Switch**
   - Applies line power. Two-position push button switch for on/off modes.

2. **Power Indicator LED**
   - Green LED lights when the power is switched "ON".

3. **Signal Indicator LED**
   - Green LED lights when more than —30 dB signal level is fed to the inputs by means of the input and master volume controls.

4. **Normal Indicator LED**
   - Yellow LED lights when fed to the proper signal level.

5. **Peak Indicator LED**
   - Red LED lights when amplifier approaches clipping level. If steady lit, the input level control should be turned down until the LED flashes only intermittently.

6. **Protection Indicator LED**
   - Remains lit for about 5 seconds after power switch is turned ON.

7. **Input Volume Controls**
   - Adjust gain of input #1 ~ #8 respectively.

8. **Bass Control**
   - Modifies bass response. Turn clockwise to boost, counter-clockwise to attenuate the bass response. Tone is flat at center.

9. **Treble Control**
   - Modifies treble response. Turn clockwise to boost, counter-clockwise to attenuate the treble response. Tone is flat at center.

10. **Tone Switch**
    - Selects ON/OFF of the BASS and TREBLE controls. When slid to OFF, BASS and TREBLE controls are active. When slid to ON, they become inactive to make tone flat.

11. **Master Volume Control**
    - Adjusts overall gain of the unit.
1. **AC Power Cord**
   Connects to power source.

2. **AC Outlet (Unswitched)**
   Provides AC power for auxiliary equipment with power consumption of up to 500W.

3. **Output terminals**
   Connect to power amplifier.

4. **Module Input Ports**
   Accepts optional PLUG-IN MODULES.
   Module selection is determined by application.
   For details, refer to Plug-in Module Instruction Manual.

5. **AUX Out**
   Provides connections for a booster amplifier or tape recorder.
   The input impedance of the equipment should be of more than 10k ohms.

6. **Bridging Input/Output**
   This terminal is used as a mixing bus. Mixing is achieved when the similar terminal of another amplifier is connected to this terminal. The output level taken from this terminal is independent of Master Volume Control, Bass and Treble Controls so that the terminal can also be used as recording output.
   The input impedances of the equipment to be connected here should be of more than 10k ohms.

7. **Remote Volume Control Terminals**
   Connecting a 10k linear taper potentiometer across these terminals will allow remote control of preamplifier output.

8. **Mute terminals**
   Mutes input signals fed to plug-in modules employing muting function by short-circuiting at these terminals.
**Input Connections**

These are eight INPUT PORTS for PLUG-IN MODULES. Select the desired modules for each application. Plug the modules into the INPUT PORTS. Slide them between the guide rails and secure with two screws.

**CAUTION**: Modules should not be inserted or removed while the amplifier is turned on.

Cover unoccupied INPUT PORTS with blank panels. Secure blank panels with screws.

**Output Connections**

- **Connect power amplifier(s) to the output terminal of M-900MK2.**
  Select 600-ohm or 150-ohm connection, provided at the output terminal to match the input impedance of amplifier(s).

  **[600-ohm connection]**

  ![600-ohm Connection Diagram]

  **[150-ohm connection]**

  ![150-ohm Connection Diagram]

- **AUX Out**
  For this connection, use RCA phone jack with shielded cable.

  ![AUX Out Diagram]

  External equipment such as tape recorder, etc.
### Muting and Remote Volume Control Connection

Remote volume control connection limiting front panel master volume control range.

### Rack Mounting

To mount the amplifier in a standard 19" equipment rack, use the optional MB-25B rack mounting bracket.

- **Remove 4 screws securing case.**
- **Fix the brackets with attached 4 screws. The length of screws should not exceed 12mm (1.2").**

If two or more units are mounted in an equipment rack, provide space for ventilation. The perforated panel PF-511 (optional) is recommended for this purpose.

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**Amplifier**

**PF-511 perforated panel (1-unit size)**
Operation

After all connections are made, turn power switch ON, illuminating the Power Indicator LED. The amplifier comes into operation approximately 5 seconds after the power is turned on.

Volume Adjustment

Obtain desired output level by adjusting the individual input and master volume controls. For normal music playing or announcement, adjust volume using their controls until the normal LED intermittently lights. Sound quality is deteriorated when the peak LED remains lit.

Tone Control Adjustment

Set the tone switch to the OFF position. This activates the bass and treble controls. The frequency response characteristics of each control are flat at center, boost in CW and attenuation in CCW positions. When tone controls are unnecessary, set the tone switch to ON mode.

Installation

Never block ventilation holes. The amplifier should never be placed in areas
• exposed to direct sunlight. • susceptible to vibration.
• with high humidity or dust levels. • with poor ventilation.
• with high ambient temperatures. • adjacent to heat-generating equipment.

CAUTION: Do not remove the case or you may encounter an electric shock.

Servicing

Unpacking
Upon receipt of the amplifier shipment, please inspect for any damage incurred in transit. If damage is found, please notify your local TOA representative and the transportation company immediately. State date, nature of damage, whether any damage was noticed on the shipping container, prior to unpacking. Please give waybill number of shipping order.

Failure
Should amplifier fail, contact your nearest TOA authorized contractor or service center.
## Specifications

<table>
<thead>
<tr>
<th>Type</th>
<th>8-channel mixer preamplifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated Output</td>
<td>+4 dBm, +20 dBm (max.)</td>
</tr>
</tbody>
</table>
| Power Band Width | 30~20,000Hz, +20dBm 0.5% THD  
25~20,000Hz, +18dBm 0.5% THD |
| Frequency Response | 20~20,000 Hz, ± 1 dB |
| Total Harmonic Distortion | 0.01% at 1 kHz, rated output |
| Inputs | Eight Input Ports: Each port accepts any input module. One Bridging Input/Output |
| Input Sensitivity/Impedance | Input Port #1 to #8: 100 mV/10k ohms  
Bridging Input/Output: 100 mV/3.3k ohms |
| Outputs | Main: Balanced, 150/600 ohms  
Aux: Unbalanced, 10k ohms, 0 dBm |
| Output Regulation (1 kHz) | Less than 1.5 dB, no load to full load |
| Signal to Noise Ratio (Band Pass 20~20,000 Hz) | Master volume min: 90 dB  
Master volume max: 77 dB |
| Tone Controls Centered | Bass: ± 10 dB at 100 Hz, Treble: ± 10 dB at 10 kHz |
| Controls | 8 Input gain controls  
1 Bass tone control  
1 Power ON/OFF switch |
| Indicators | 1 Power LED, 1 Protect LED, 1 Signal LED, 1 Normal LED, 1 Peak LED |
| Protection | Self-protection, with AC fuse (inside) |
| Connectors | Card-edge connector  
RCA phono jack  
Screw-terminal strip  
Screw-terminal strip  
SJT, 3-prong type  
3-pin grounding type |
| Power Consumption | 18W |
| Temperature Range | -10°C ~ +60°C (12°F ~ 140°F) |
| Dimensions (W) x (H) x (D) | 420 x 99.1 x 307.5 mm (16.5 x 3.9 x 12.1 in.) |
| Weight | 5.3 kg (11.7 lb.) |
| Color | Black |
| Standard Accessories | 4 Volume control covers (YA-920) |
| Other Features | Output disconnected for approx. 5 seconds after switching power on. |

* Specifications are subject to change without notice.
Appearance

< Front View >

< Rear View >

< Top View >

< Side View >