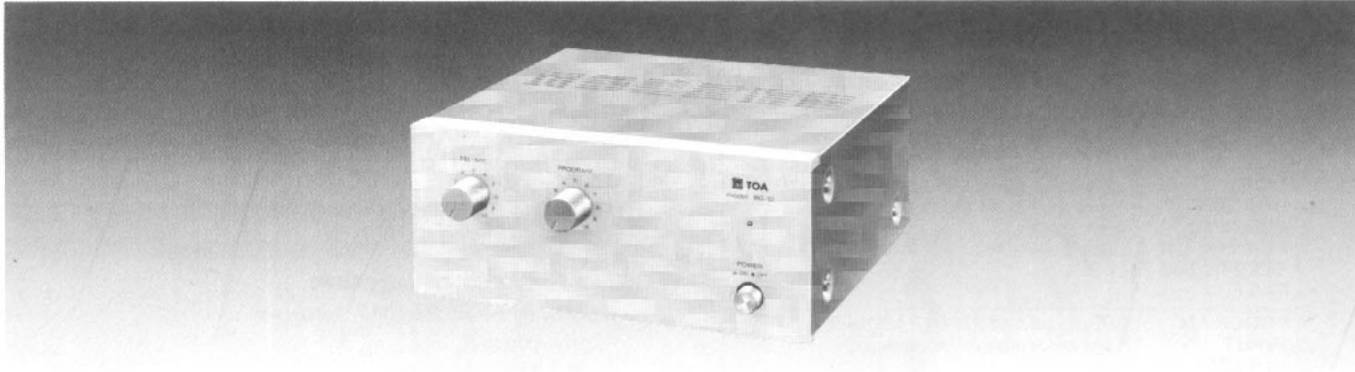


TOA ALL-PURPOSE AMPLIFIER

BG-10



Features

1. 2-channel mixer power amplifier
2. Wide frequency response; 50 — 20,000Hz, ± 1 dB
3. Low distortion and noise level
4. Bass and treble controls on Program Input
5. Built-in muting circuit
6. Balanced Mic/Telephone page Input and Program Input
7. Mic/Telephone page Input (Switchable)
8. Self-protecting circuitry design
9. 4 different output impedances; 4 and 8 ohms, 25 and 70 volts
10. Compact and light weight
11. Desk top or rack-mounted type

General Description

The TOA BG-10 Mixer Power Amplifier controls and mixes up to two independent input signals. Capable of delivering 10 watts rms, the BG-10 has ideal flexibility for small sound reinforcement systems. Any microphone of impedance of less than 600 ohms can be connected to the microphone input of the BG-10.

Changing over a selector switch turns this microphone input into the Telephone page input, and allow the BG-10 to be used as an amplifier for the page made from the telephone. The program input of the BG-10 has a built-in 10k-ohm matching transformer and so, can accept the balanced or unbalanced line.

The BG-10 incorporates the electronic muting circuit. This permits quiet alternate-action muting of the microphone or Telephone page and program input. When short-circuited between the Mute and Ground terminals, the microphone or Telephone page input overrides the program input.

For the program input, independent Bass and Treble controls of boost/attenuation system are provided on the rear panel.

The BG-10 has transformer-isolated output terminals for connection to 4 or 8-ohm speaker systems, or for 25-volt or 70-volt line distribution.

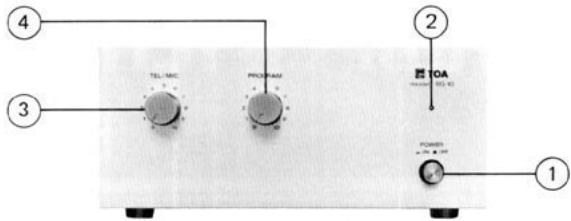
The BG-10 is mountable in an equipment rack using optional rack mounting kits the MB-922 or MB-921 A.



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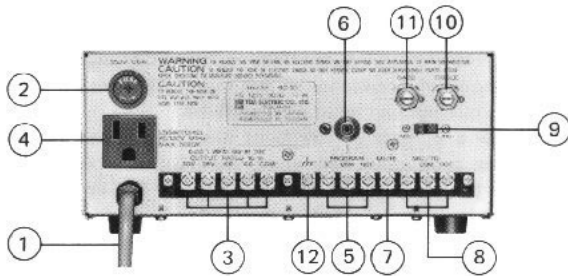
TOA ALL-PURPOSE AMPLIFIER

Front Panel Controls and Features



Item	Name	Function/Description
1	POWER ON-OFF SWITCH	Applies line power. Two-position pushbutton switch for on-off modes.
2	POWER INDICATOR (LED)	Illuminates when power is on. Green light-emitting diode.
3	VOLUME CONTROL FOR MIC OR TELEPHONE PAGE.	Adjusts gain of MIC or TELEPHONE page Input. Turn clockwise to increase gain.
4	PROGRAM INPUT VOLUME CONTROL	Adjusts gain of PROGRAM Input. Turn clockwise to increase gain.

Rear Panel Controls and Features



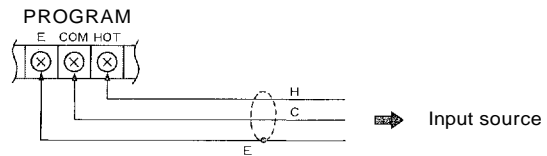
Item	Name	Function/Description
1	AC POWER SUPPLY CORD	Connects to power source.
2	AC FUSE (250V, 0.5A)	Protects amplifier from excessive current drain. Replace only with same type fuse. Refer to qualified service personnel if fuse blows repeatedly.
3	OUTPUT TERMINALS	Provide connections for speakers. (See "Output Connections")
4	AC OUTLET (Unswitched)	Provides AC power to auxiliary equipment having power consumption of up to 500W.
5	PROGRAM INPUT (Screw Terminal)	Balanced Transformer Input. 10k ohms.
6	PROGRAM INPUT (RCA phono jack)	Unbalanced Input. 10k ohms. Serves as auxiliary input to accept SCA tuner, etc. Note: Either of the two program inputs is to be used. Do not use the two inputs at the same time.
7	MUTE	When short-circuited between the Mute and Ground (E) terminals, the microphone or telephone page input overrides the program input. Refer to "Muting for details.
8	MIC/TEL INPUT	Balanced Transformer Input. 600 ohms.

Item	Name	Function/Description
9	MIC/TEL SELECTOR SWITCH	To be selected according to the program source connected to the MIC/TEL input terminals.
10	TREBLE CONTROL	Adjusts treble response on PROGRAM INPUT. MIC/TEL INPUT is not influenced by this treble control. Turn clockwise (CW) to boost and counterclockwise (CCW) to attenuate high frequency. Tone is flat at center.
11	BASS CONTROL	Adjusts bass response on PROGRAM INPUT. MIC/TEL INPUT is not influenced by this bass control. Turn CW to boost and CCW to attenuate low frequency. Tone is flat at center.
12	GROUND (E) TERMINAL	Should be grounded.

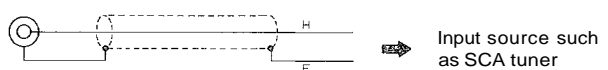
Input Connections

PROGRAM INPUT CONNECTION

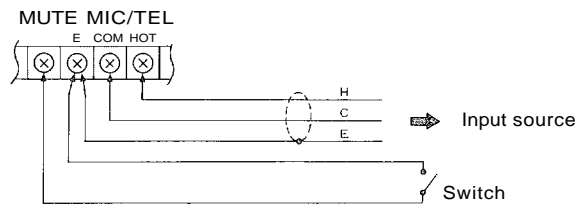
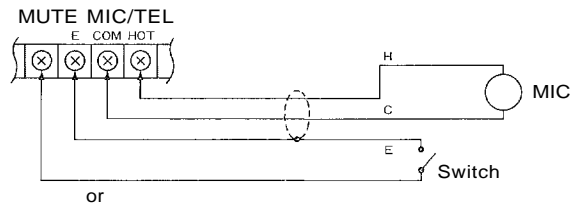
• Screw terminal (10k-ohm, balanced)



• RCA phono plug



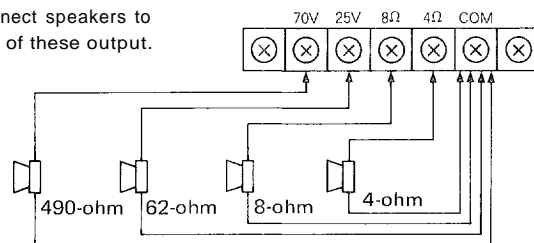
MIC/TEL INPUT and MUTE CONNECTION



Output Connections

Output transformer taps provide connections for 4-ohm and 8-ohm speakers, plus 70-volt (490-ohm) and 25-volt (62-ohm) speaker distribution outlets. Class 2 wiring may be used. Connect to the terminal of desired impedance and COM (common).

Connect speakers to one of these output.



Note: Impedances indicated above imply total speaker system impedances.

Muting

The following muting functions are available from the BG-10. However, no prior internal wiring arrangements are made for these functions when unit is supplied from the factory. By removing the jumper connectors (JC1 and/or JC2) on the printed circuit board, you will get the muting functions that can serve your purpose. You need to use no soldering iron.

O=Channel is ON. X=Signal is muted.

	Mute Terminal Open		Mute Terminal Close	
	MIC/TEL	PROG RAM	MIC/TEL	PROG RAM
JC1 and JC2 inserted	○	○	○	○
only JC1 removed	×	○	○	○
only JC2 removed	○	○	○	×
JC1 and JC2 removed	×	○	○	×

CAUTION:

These servicing instructions are for use by qualified personnel only. To avoid electric shock do not perform any servicing other than that contained in the Operating Instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

Operation

When all connections are completed, turn power switch on. The POWER INDICATOR (LED) lights green.

ADJUSTMENT OF VOLUME

Adjust the individual input volume controls to obtain the desired operating level for respective inputs.

ADJUSTMENT OF TONE QUALITY

The tone quality of MIC/TEL INPUT is unadjustable but that of PROGRAM INPUT is adjustable.

Adjust the tone quality using the BASS and TREBLE CONTROLS (preadjustable) on the rear panel. Each of the controls provides frequency-response characteristics of boost and attenuation. Normal of flat response is obtained at center position. Turn CW to boost response.

Installation

Do not block the cover ventilation holes.

The BG-10 should not be placed in areas;

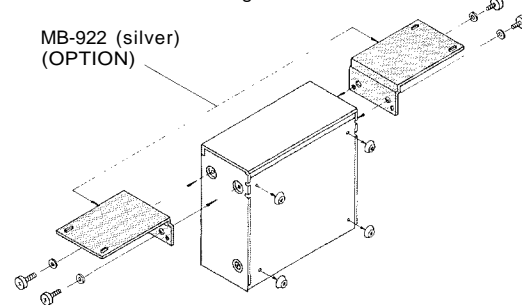
- 1 with poor ventilation.
- 2 exposed to direct sunlight.
- 3 with high ambient temperature or adjacent to heat-generating equipment.
- 4 with high humidity or dusty levels.
- 5 susceptible to vibration.

CAUTION:

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

Rack Mounting

To mount the BG-10 in a standard 19-inch equipment rack, use the optional MB-922 Rack-mounting kit.

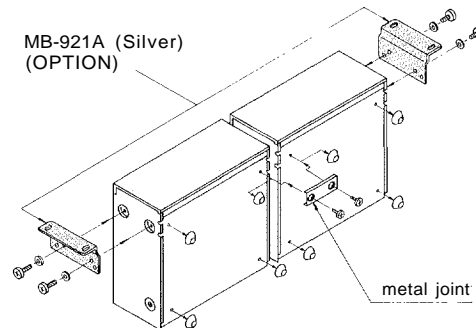


Fix MB-922 with attached 4 screws.

The length of the screws should not exceed 15mm (3/5 inches).

The mounting kit MB-921A is designed for mounting 2 of the BG-10 on the cabinet rack.

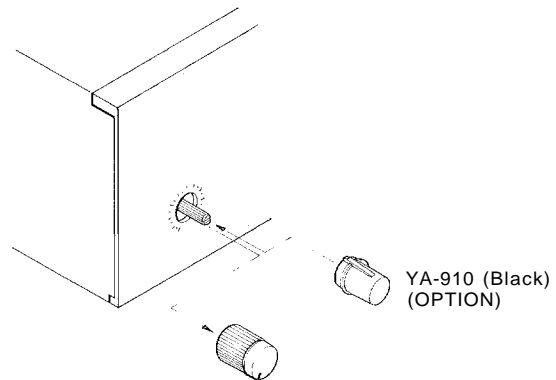
To mount the BG-10, remove four plastic feet provided on the bottom surface of the unit, and place the metal joint as illustrated.



Fix MB-921A with attached 4 screws.

The length of the screws should not exceed 15mm (3/5 inches).

Volume Control Cover



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.

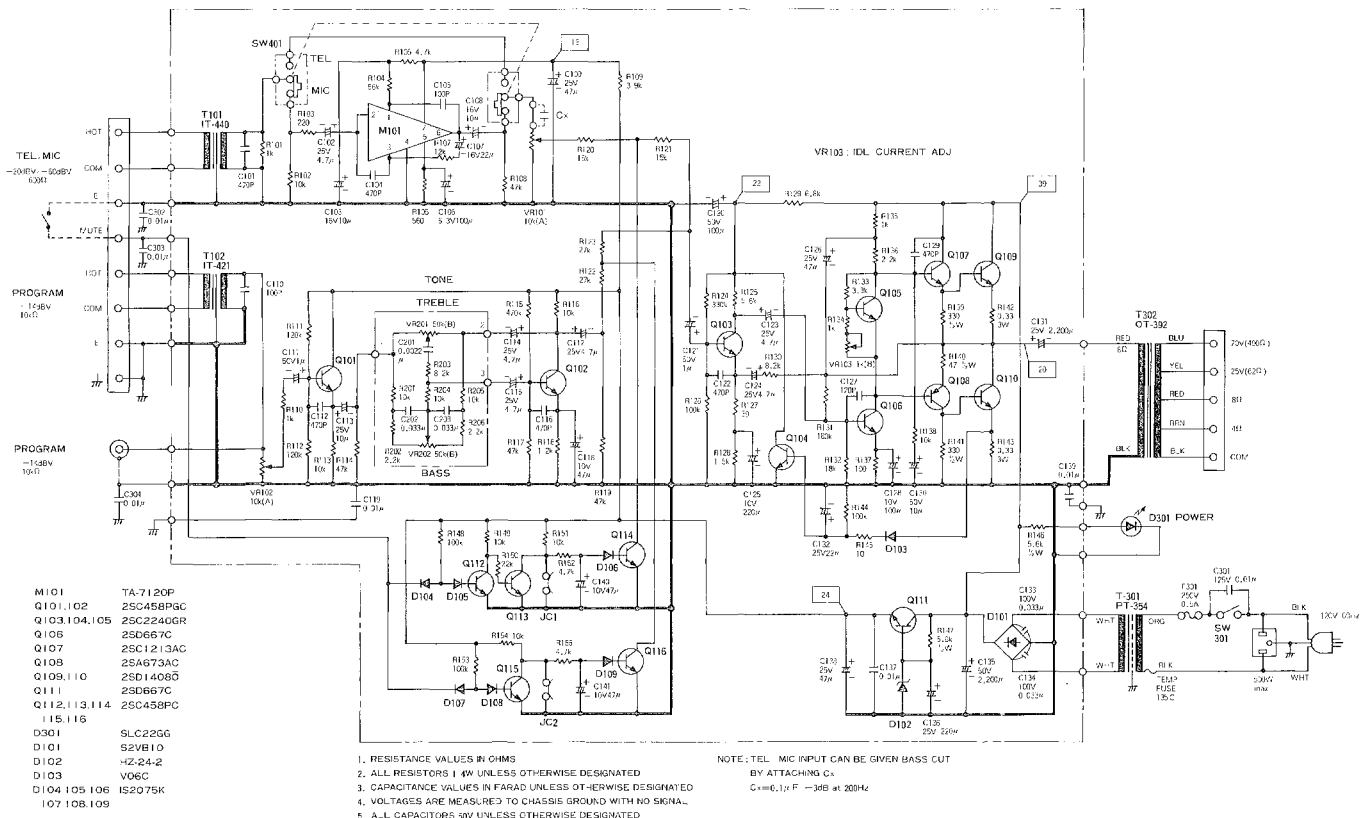
TOA ALL-PURPOSE AMPLIFIER

Specifications

Type	2-channel mixer power amplifier
Output Power	10 watts RMS
Power Band Width	50- 20,000Hz 1%THD
Frequency Response	50- 20,000Hz ±1dB
Total Harmonic Distortion	0.5% or less, at 1 KHz, rated output 0.1% or less, at 1 KHz, 5W output
Inputs	MIC/Telephone Page Input Program Input (Screw terminal strip input and RCA phono jack input) *Note: Two (2) program inputs cannot be used at the same time.
Input Sensitivity/ Impedance	Mic: 1mV (-60dBv)/600 ohms, balanced Telephone Page: 100mV (-20dBv)/600 ohms, balanced. Program: 200mV (-14dBv)/10k ohms, balanced for Screw Terminal, unbalanced for RCA Phono Jack
Outputs (Transformer-isolated)	Balanced 4, 8 ohms, 25 & 70 volts
Output Regulation (1KHz)	Less than 2.0dB, no load to full load.
Signal to Noise Ratio (Band Pass 20-20,000Hz) (Tone Controls Centered)	Mic: 64dB Telephone Page: 77dB Program: 77dB
Tone Controls	Bass: ±10dB at 100Hz, Treble: ±10dB at 10KHz Controls affect only program input.

Controls	1 Mic/Tel gain control 1 Program gain control 1 Bass tone control 1 Treble tone control 1 Power ON/OFF switch 1 Mic/Tel selector switch
Indicators	1 Power LED
Protection	Self protection, with 1 AC fuse
Connectors	MIC/TEL input - Screw terminal strip Program input ---- Screw terminal strip and RCA phono jack Outputs----- Screw terminal strip Mute ----- Screw terminal strip AC power cord/plug --- SVT, 3-prong type AC outlet — 3 pin grounding type
Power Consumption	AC 120 Volts, 60Hz, 17 watts
Temperature Range	-10°C to+60°C (12°F to 140°F)
Dimensions in inches (mm) (high)x(wide)x(deep)	3.68"(93.5)×8.27"(210)×8.9"(226) Rack-mounting space size "2U" (3.46")
Weight	6.5 lbs. (2.95Kg)
Color	Silver
Other Features	Automatic electronic drive limiter Electronic muting

*Specifications are subject to change without notice.



TOA ELECTRIC CO., LTD.
KOBE, JAPAN

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