Operation Instruction Manual

TOA NEW 900 SERIES MIXER PREAMPLIFIER M-900A

Features

1 **6-channel mixer preamplifier**
2 **Wide frequency response; 20 — 20,000Hz, ±1dB**
3 **Low distortion and noise**
4 **Parallel operation of two mixer preamplifiers**
5 **Headphone output**
6 **Bass and treble controls**
7 **Tone defeat switch**
8 **Output on-off switch**
9 **VU meter range switch (selectable 4dBm/18dBm)**
10 **A full range of plug-in modules**
11 **Balanced and transformer-isolated output of 150/600 ohms**
12 **Portable or rack-mounting type**

General Description

The TOA M-900A Mixer Preamplifier controls and mixes up to six independent input signals and delivers up to +20dBm of output power. Optional plug-in modules are available for use with the M-900A to provide versatility for a wide choice of operating applications. Edge connectors in the rear of the unit permit selection from a wide range of TOA plug-in modules: the H-01 series, H-02 series and H-03 series Microphone Preamplifiers, the E-01 and E-11 Mag. Phono Preamplifiers for magnetic phono inputs, the X-01 series and X-11 series Auxiliary Preamplifiers for high-level sources, the B-01 series and B-11 series Bridging Transformers for bridging high-impedance lines, the L-01 series Line Matching Transformers for matching 600-ohm lines, the I-01 Paging Input for combining with TOA Intercom Systems EXES-1000, EXES-5000 and EX-16, T-01 series Line Outputs for matching 600-ohm lines and the S-01, S-02 and S-03 Tone Generators for generating attention-getting signals and 1kHz sine wave for testing within the total system. Sources fed to particular input module accessories are muted by short-circuiting at MUTE TERMINAL on the rear. To perform this function, Module E-11, X-11 series or B-11 series is required.

The TOA M-900A Mixer Preamplifier has a balanced and transformerisolated output for operation with 600-ohm or 150-ohm loads.

Other features include a tone defeat switch, an output on/off switch, connections for parallel coupling of another M-900A or Mixer Power Amplifiers A-903A, A-906A or A-912A, and monitoring by visual and/or audio means.

TOA

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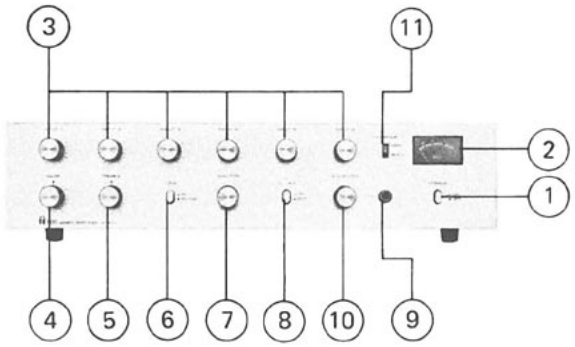
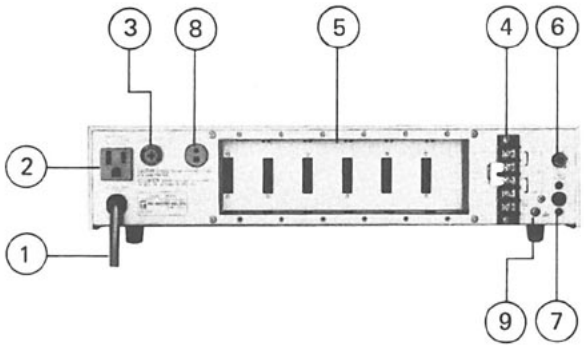
TOA NEW 900 SERIES

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	METER	Indicates the output level of the amplifier. At rated output, it shows 0 VU (continuous sine-wave signal input). When power is turned on, meter illuminates.
3	INPUT VOLUME CONTROLS	Adjust gain of INPUT #1-#6 respectively.
4	BASS CONTROL	Adjust bass response. Turn clockwise (CW) to boost and counterclockwise (CCW) to attenuate the bass response. Tone is flat at center.
5	TREBLE CONTROL	Adjust treble response. Turn CW to boost and CCW to attenuate the treble response. Tone is flat at center.
6	TONE SWITCH	Selects IN/DEFEAT of the BASS and TREBLE CONTROLS. When this button is depressed (▬), the BASS and TREBLE Controls are active. When pressed again (▟), they become inactive to make tone flat. (DEFEAT)
7	MASTER VOLUME CONTROL	Adjusts overall gain of unit.
8	OUTPUT SWITCH	This is an output ON/OFF switch. When pressed (▬), output signal is obtained at the output terminal. When pressed again (▟), no output signal is obtained.
9	HEADPHONE JACK	Connects to headphones with impedance of more than 8Ω.
10	HEADPHONE VOLUME CONTROL	Adjust the volume for headphones. Turn CW to increase.
11	VU RANGE SWITCH	Selects meter-sensitivity. When set to "4dBm" position, the meter shows 0 VU if the output level of amplifier is +4dBm. When set to "18dBm," it shows 0 VU if the output level is +18dBm.
	Usually set the switch to "4dBm" position, since the amplifier's rated output is +4dBm. Place it in "18dBm" position when more output is provided.	

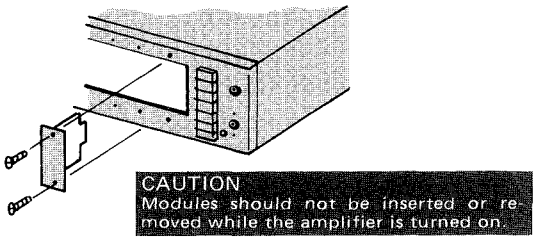
Rear Panel Controls and Features



Item	Name	Function/Description
1	AC POWER SUPPLY CORD	Connects to power source.
2	AC OUTLET (Unswitched)	Provides AC power for auxiliary equipment with power consumption of up to 500W.
3	AC FUSE (250V 0.3A)	Protects amplifier from excessive current drain. Replace only with same type fuse. Refer to qualified service personnel if fuse blows repeatedly.
4	OUTPUT TERMINALS	Connect to power amplifier(s).
5	MODULE INPUT PORTS	Accept PLUG-IN MODULES which are optionally available. Choose the desired modules according to application.
6	AUX OUT	Serves as a sub-output for connecting other equipment having input impedance of more than 10kΩ, such as a tape recorder.
7	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 the 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 10kΩ or higher.
8	MUTE TERMINAL	With modules employing muting function, which are optionally available, the input signals fed to the modules are muted by short-circuiting at this terminal.
9	EARTH TERMINAL	Normally connects to a record player's ground.

Input Connections

- This amplifier has six INPUT PORTS for PLUG-IN MODULES. Select the desired ones for each application.
- Plug the modules into INPUT PORTS, sliding them between the guide rails, and secure each with two screws.



- When not all INPUT PORTS are occupied, cover the vacant PORTS with blank panels, and secure them with screws.
- PLUG-IN MODULES are provided in the following:

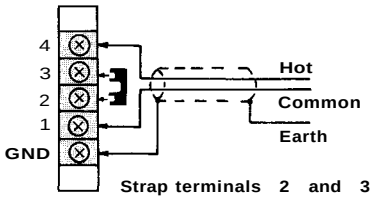
Balanced low impedance microphone preamp module (with presettable low-cut filter, high-cut filter and gain controls) H-01, H-21, H-31
Balanced low impedance microphone preamp module (with presettable low-cut filter and gain controls) H-02,H-22, H-32
Equalized mag. phono preamp. module (with presettable gain control) . . . . . E-01 , E-11
Unbalanced high impedance auxiliary preamp module (with presettable gain control) X-01, X-11, X-21
Balanced 10kΩ bridging transformer module B-01, B-11
Balanced 600Ω line matching transformer module L-01, L-11, L-41
Balanced paging input module (with presettable gain control and MUTE Delay) I-01
Balanced 600Ω line output module (with presettable gain control) T-01
Signal tone generator module (with presettable output level control)
1 kHz sine wave S-01
Yelp and buzzer S-02
One-tone chime and continuous one-tone chime S-03

*With H-21, H-22 and X-21 modules employing volume remote control functions, connecting a potentiometer (10k ohms) to the terminal of any of these modules permits the sound volume to be remotely controlled by means of the connected potentiometer.
* H-31 and H-32 modules incorporate muting functions. If a switch is connected to MUTE TERMINAL on the rear panel of the amplifier and closed, these input signals can be passed through. When the switch is opened, the input signal is muted.
* E-11 , X-11 , B-11 and L-11 modules incorporate muting functions. If a switch is connected to MUTE TERMINAL on the rear panel of the amplifier and closed, these input signals can be muted.
* L-41 incorporates signal activated muting function. Incoming input signal causes mute terminal to be grounded.
* T-01 is used to feed out mixed signals to external equipment.
*T-01 should be inserted only in INPUT PORT *#5* or *#6.*
(See PLUG-IN MODULES for details)

Output Connections

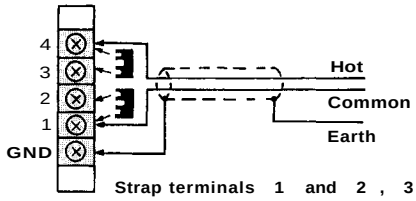
- Connect power amplifier(s) to the output terminal of M-900A. Select 600Ω or 150Ω connection, provided at the output terminal, to match the input impedance of amplifier(s).

600-ohm Connection



Strap terminals 2 and 3 .

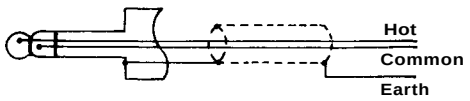
150-ohm Connection



Strap terminals 1 and 2 , 3 and 4 .

- AUX OUT

For this connection, use a Phone Plug (Double pole) with two-wire shielded cable.



External equipment such as tape recorders, etc.

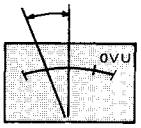
Operation

When all connections are completed, turn power switch on. Then, the meter is illuminated. Approximately 5 seconds after switching power on, the M-900A comes into operation.

VOLUME CONTROL

Set VU RANGE SWITCH to "4dBm" position and place OUTPUT SWITCH in "ON" position. While observing the deflection of the meter, control each input volume and master volume controls to obtain a proper output level.

The swinging range of the pointer on the meter is recommended to be within the range as indicated in the drawing. Also, adjust gain (volume control) of the connected power amplifier to obtain similar reading on the meter of the power amplifier.



[In connecting a power amplifier with lower gain, so that the mixer preamplifier is required to be used with its higher output, the VU RANGE SWITCH shall be set to 18dBm.]

ADJUSTMENT OF TONE QUALITY

When adjusting tone quality, place the TONE SWITCH in "IN" position, thus activating the BASS and TREBLE CONTROLS. Each control provides frequency-response characteristics of flat in center, boost in CW and attenuation in CCW positions.

When tone controls are unnecessary, place the TONE SWITCH in "DEFEAT" mode.

MONITOR

Monitoring is possible by the use of headphones.

Connect the headphones to HEADPHONE JACK, and adjust the monitoring level by using the HEADPHONE VOLUME CONTROL.

OUTPUT ON/OFF SWITCH

ON/OFF status of the output can be controlled by the OUTPUT SWITCH, and output can be obtained at the output terminal and auxiliary output jack after confirming the content of the signal by monitoring with headphones.

Installation

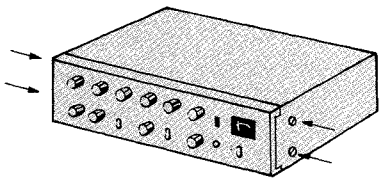
- Do not block cover ventilation holes.
- The M-900A should not be placed in areas;

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.

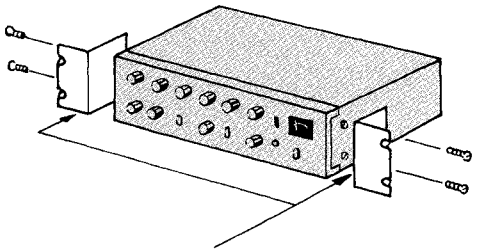
CAUTION:
Do not remove the case or you may encounter an electric shock.

Rack Mounting

To mount the M-900A in a standard 19-inch equipment rack, use the MB-921 Rack-mounting Bracket accessory.



Remove 4 screws securing case.



MB-921 (Silver)
(OPTION)

Fix the MB-921 with attached 4 screws. The length of the screws should not exceed 12mm (1/2 inches).

Servicing

- **Unpacking**

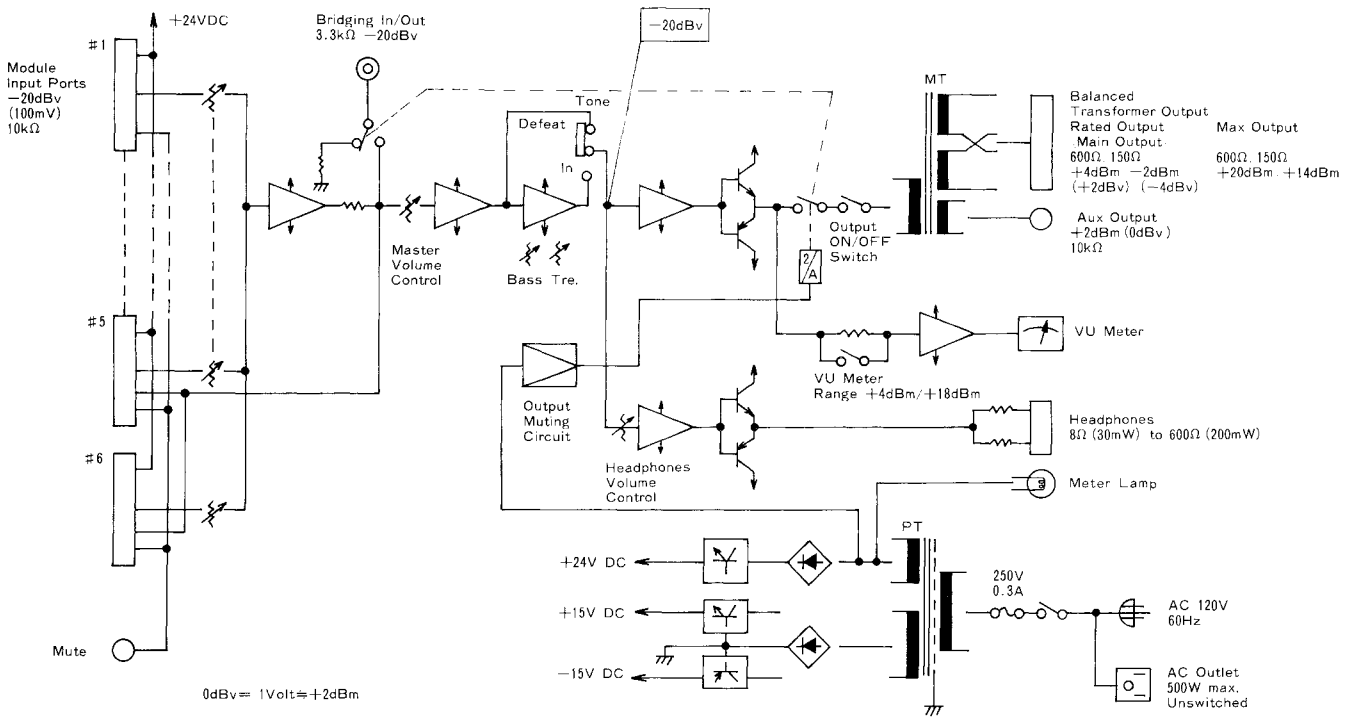
Upon receipt of the amplifier shipment, please inspect for any damage incurred in transit. If damage is found, please notify your local TOA representative and the transportation company immediately.

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.

Block Diagram M-900 A



Specifications M-900A

Type	**6-channel mixer preamplifier**
Output Power	+4 dBm (Rated Output) +20 dBm (max.)
Power Band Width	30 - 20,000 Hz +20 dBm 0.5% THD 25 - 20,000 Hz +18 dBm 0.3% THD
Frequency Response	20 - 20,000 Hz, ±1 dB
Total Harmonic Distortion	0.01% at 1kHz, +20 dBm output
Inputs	Six Input Ports Each port accepts any input module except T-01. Use T-01 only in port #5 or #6. One Bridging Input/Output
Input Sensitivity/Impedance	Input Ports #1 to #6 : 100 mV/10k ohms Bridging Input/Output: 100 mV/3.3k ohms
Outputs	Main : Balanced, 150/600 ohms Phones. Unbalanced, 8 ohms (30 mW) to 600 ohms (200 mW) Aux : Balanced, 10k ohms,+2 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) Tone Controls Centered	Master volume min. : 90 dB Master volume max.: 77 dB
Tone Controls	Bass; ±10dB at 100 Hz: Treble; ±10dB at 10 kHz
Controls	6 Input gain controls 1 Master gain control 1 Bass tone control 1 Treble tone control 1 Headphone volume control 1 Output ON/OFF switch 1 VU meter range switch 1 Tone defeat switch 1 Power ON/OFF switch
Indicator	1 Illuminated VU meter
Protection	Self-protection, with 1 AC fuse
Connectors	Inputs #1 to #6 . . . . . Card-edge connector Bridging . . . . . RCA phono jack Output . . . . . Screw terminal strip Headphone . . . . . Phone jack Aux out . . . . . Phone jack Mute . . . . . 2P socket AC outlet . . . . . 3-pin grounding type AC Power cord/plug . . . . . SJT, 3-prong type
Power Consumption	AC 120 volts, 60 Hz, 13 watts
Temperature Range	-10°C to +60°C (12°F to 140°F)
Dimensions in mm (inches) (high) x (wide) x (deep)	101 (3.98") x 420 (16.54") x 265 (10.43") Rack-mounting space size "2U" (3.46")
Weight (without input modules)	4.4kg (9.7 lbs.)
Color	Silver
Standard Accessories	2 Volume control covers 1 Mute terminal plug
Other Features	Output disconnected for approx. 5 sec after switching power on Muting Function: Accomplished by model E-11, X-11, B-11

*** Specifications are subject to change without notice.**

Plug-in Modules and Accessories

(OPTION)

The TOA PLUG-IN MODULES are suitable for TOA 900 SERIES MIXER POWER AMPLIFIERS A-901A, A-903A, A-906A, and A-912A MIXER PREAMPLIFIER M-900A, and POWER AMPLIFIERS P-906A, P-912A and P-924. Owing to wide selection of MODULES, the desired applications will be obtained. The various types of connectors can also meet the needs of equipment to be connected. MICROPHONE PREAMPLIFIER H-01 series, H-21 and H-31 incorporates controls for high-cut, low-cut and gain, H-02 series, H-22, H-32 and H-03 series controls for low-cut and gain. A gain control is built in MAG. PHONO PREAMPLIFIERS E-01 and E-11 series, AUXILIARY PREAMPLIFIERS X-01 and X-11 series and X-21, PAGING INPUT I-01 and LINE OUTPUT T-01 series. T-01 series is an output module with transformer, serving as a line output for recording, etc..

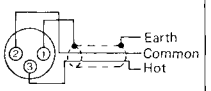
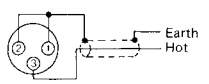
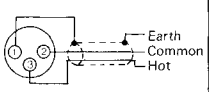
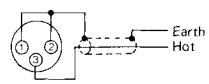
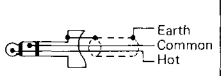
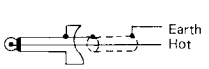
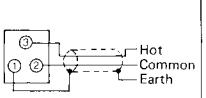
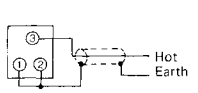
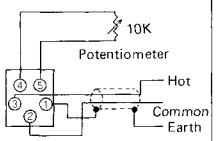
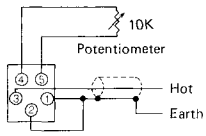
PAGING INPUT I-01 is specially designed to associate with TOA INTERCOM SYSTEMS. It accepts paging signals from the intercom station.

A group of special signal generating modules is also available for catching-attention before announcement and testing within the total system. ALL PLUG-IN MODULES have handles on their front for easy insertion and removal.

Features:

1. Wide dynamic range
2. Low noise and distortion
3. Wide frequency response
4. Built-in remote volume control circuit (available for models having 20's in its model number such as H-21)
5. Built-in muting circuit to mute incoming signal when MUTE TERMINAL is grounded. (available for modules having 10's in its model number such as X-11)
6. Built-in muting circuit to deliver output signal when MUTE TERMINAL is grounded. (available for modules having 30's in its model number such as H-31)
7. Built-in signal activated muting function (L-41)
8. Presettable gain control (except for B-01 , B-11 , L-01 and L-11)
9. Microphone modules furnished with tone controls (H-01 , H-02, H-21, H-22, H-31, H-32 and H-03)

(INPUT CONNECTIONS, T-01 OUTPUT CONNECTION)

MODEL / Connection	PLUG CONNECTIONS	
	Balanced Connection	Unbalanced Connection
	H-01 series H-21 H-02 series H-22 B-01 series H-31 B-11 series H-32 L-01 series L-11 T-01 series L-41	H-03 series E-01 series E-11 series X-01 series X-11 series X-21
CANNON XLR-3-13 (Female) type	 CANNON XLR-3-12 (Male) type	 CANNON XLR-3-12 (Male) type
CANNON XLR-3-14 (Male) type	 CANNON XLR-3-11 (Female) type	 CANNON XLR-3-11 (Female) type
Phone Jack (P)	 Phone Plug (Double Pole)	 Phone Plug (Single Pole)
RCA Phono Jack (R)	—	 RCA Phono Jack
3P Screw Terminal (S)		
5P Screw Terminal (S)		

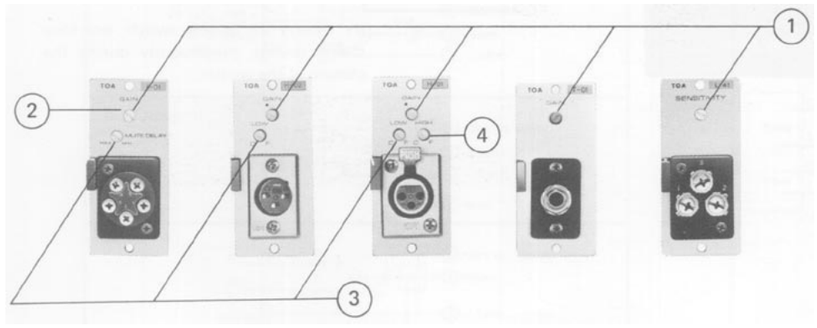
Plug-in Modules

Applications		Module Types	Specifications: Source Impedance	Input Sensitivity for Rated Output (100 mV)	Gain	Max. Before Clip into 10k-ohm load at less than 0.5% THD (1 kHz) [Output Voltage: S-01, S-02, S-03]	Frequency Response ± 1 dB	Noise Level [equivelent input noise or S/N]	Signal Muting Level	Remote volume control range [Use 10k ohms potentiometer]	Controls [pre-settable]	Weight (max.)	Connector: XLR-3-13 (F) Type	XLR-3-14 (M) Type	Phone Jack (P)	RCA Phono Jack (R)	3P Screw Terminal (S)	5P Screw Terminal (S)
Microphone Preamplifier	Low Z MIC with Low & High filters	H-01 series	Baianced 200 ohms	nominal 1.0 mV adjustable 0.25~25 mV	nominal 40 dB adjustable 52~32 dB	6.3 V (+16 dBv)	25~20,000 Hz	−126 dBm 200 ohms terminated	——	——	1-Low cut 1-High cut 1-Gain	105 gr (3.71 oz)	H-01F	H-01M	H-01P	——	H-01S	——
	Low Z MIC with Low & High filters and remote volume control facilities	H-21							——	0~−60 dB		100 gr (3.53 oz)	——	——	——	——	——	H-21S
	Low Z MIC with Low & High filters and MUTE	H-31							60 dB	——		105 gr (3.70 oz)	——	——	——	——	H-31S	——
	Low Z MIC with Low-cut filter	H-02 series							——	——	1-Low cut 1-Gain	100 gr (3.53 oz)	H-02F	H-02M	H-02P	——	H-02S	——
	Low Z MIC with Low-cut filter and remote volume control facilities	H-22							——	0~−60 dB		95 gr (3.35 oz)	——	——	——	——	——	H-22S
	Low Z MIC with Low-cut filter and MUTE	H-32							60 dB	——		105 gr (3.70 oz)	——	——	——	——	H-32S	——
	High Z MIC with Low-cut filter	H-03 series	Unbalanced 50k ohms	nominal 3.2 mV adjustable 0.8~8.0 mV	nominal 30 dB adjustable 42~22 dB	6.3 V (+16 dBv)	20~20,000 Hz	S/N 70dB	——	——	1-Low cut 1-Gain	60 gr (2.12 oz)	——	——	H-03P	H-03R	——	——
Mag. Phono Preamplifier	——	E-01 series	Unbalanced 50k ohms	nominal 3.2 mV adjustable 2.0~5.0 mV	nominal 34 dB adjustable 34~26 dB	6.3 V (+16 dBv)	RIAA Equalized	S/N 70 dB	——	——	1-Gain	50 gr (1.76 oz)	——	——	——	E-01R	E-01S	——
	with MUTE	E-11 series							60 dB			55 gr (1.94 oz)	——	——	——	E-11R	E-11S	——
Auxiliary Preamplifier	——	X-01 series	Unbalanced 220k ohms	nominal 100 mV adjustable 100~3,200 mV	nominal 0 dB adjustable 0~−30 dB	6.3 V (+16 dBv)	20~20,000 Hz	S/N 90 dB	——	——	1-Gain	70 gr (2.47 oz)	X-01F	——	X-01P	X-01R	X-01S	——
	with MUTE	X-11 series							60 dB			75 gr (2.65 oz)	X-11F	——	X-11P	X-11R	X-11S	——
	with remote volume control facilities	X-21							——	0~−60 dB		65 gr (2.29 oz)	——	——	——	——	——	X-21S
Bridging transformer	——	B-01 series	Balanced 10k ohms	125 mV	−1 dB	——	20~20,000 Hz	——	——	——	——	90 gr (3.17 oz)	B-01F	——	B-01P	——	B-01S	——
	with MUTE	B-11 series							60 dB		——	95 gr (3.35 oz)	B-11F	——	B-11P	——	B-11S	——
Line Matching Transformer	——	L-01 series	Balanced 600 ohms	125 mV	−2 dB	——	20~20,000 Hz	——	——	——	——	90 gr (3.17 oz)	L-01F	——	L-01P	——	L-01S	——
	with MUTE	L-11							60 dB		——	95 gr (3.35 oz)	——	——	——	——	L-11S	——
	with Signal Activating Mute	L-41		125m V [Min. 15 mV to activate mute function]					——		1- Sensitivity	95 gr (3.35 oz)	——	——	——	——	L-41S	——
Paging Input		I-01	Balanced 600 ohms	nominal 3.2 V adjustable 3.2~10 V	nominal −30 dB adjustable −30~−40 dB	——	500~20,000 Hz Low-cut 250 Hz	——	——	——	1-Mute 1-Gain	100 gr (3.53 oz)	——	——	——	——	——	I-01S
Line Output		T-01 series	[Output Balanced 600 ohms]	——	nominal 20 dB (1.0 V output) adjustable 20~4 dB (1.0 V~158 mV)	6.3 V (+16 dBv) 4.7 V (+13.4 dBv) into 600-ohm load	30~20,000 Hz	S/N 80 dB	——	——	1-Gain	100 gr (3.53 oz)	——	T-01M	T-01P	——	T-01S	——
Tone Signal Generator	1 kHz Sine Wave	S-01	——	——	——	0.5 V (−6 dBv) 0.5% THD	——	S/N 80 dB	——	——	1-Output	55 gr (1.94 oz)	——	——	——	——	S-01S	——
	Buzzer/Yelp	S-02	——	——	——	1 V peak to peak	——	S/N 80 dB	——	——	1-Output	60 gr (2.12 oz)	——	——	——	——	S-01S	——
	One Tone / Continuous Chime / Chime	S-03	——	——	——	1 V peak to peak	——	S/N 80 dB	——	——	1-Output	70 gr (2.47 oz)	——	——	——	——	S-03S	——

* 0 dBv= 1 volt= + 2 dBm. * Specifications are subject to change without notice.

• FORNT PANEL CONTROLS AND FEATURES

Modules with built-in controls are provided in the following five types.



GAIN CONTROL This adjusts gain. Turn clockwise (CW) to increase and counterclockwise (CCW) to reduce gain.
Set the gain as low as possible, thereby, noise can be reduced, and the maximum permissible input level is raised.

SENSITIVITY CONTROL (L-41S) This adjusts sensitivity for muting other modules having MUTE function. Turn CW to raise and CCW to lower sensitivity. Setting position should depend on the equipment connected with L-41S.

NOMINAL POSITION MARK The left figure shows nominal setting of controls.

LOW-CUT FILTER CONTROL 330Hz, 6dB/oct (max. attenuation) This provides flat characteristics at full CW position and attenuation in low frequency by turning CCW. Adjust it to obtain proper tone quality. With low-cut, tone becomes clear.

MUTE DELAY CONTROL (I-01S) This adjusts MUTE delay time which is the duration from signal input to its output. Turn CW to shorten and CCW to lengthen the time.

HIGH-CUT FILTER CONTROL 4.2kHz, 6dB/oct (max. attenuation) This provides flat characteristics at full CW position and attenuation in high frequency by turning CCW. Adjust it to obtain proper tone quality. With high-cut, tone becomes soft.

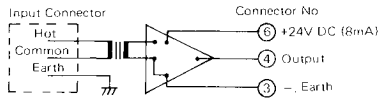
• SPECIFICATIONS IN COMMON

Load impedance : 10k-ohms
Mounting : Card-edge connector
Dimensions in mm (inches) : 78(3.07)x35(1.38)x88(3.46)
(H) x (W) x (D)

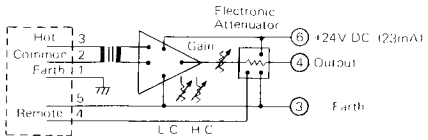
CAUTION:
* Modules model E-11, X-11, B-11, L-11, L-41, H-31, H-32, and T-01 should be used exclusively with model A-903A, A-906A, A-912A and M-900A.

Block Diagrams (Plug-in Modules)

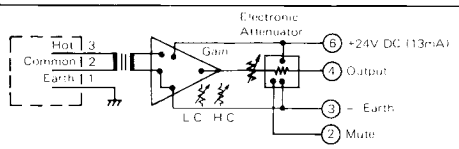
H-01 Series



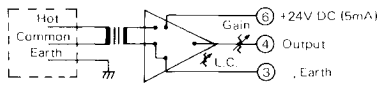
H-21S



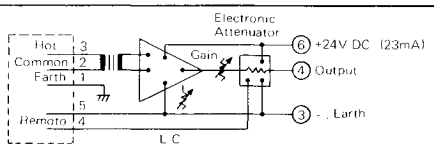
H-31S



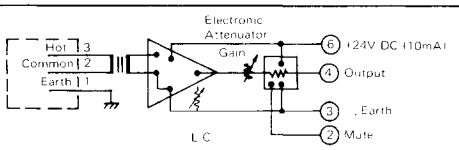
H-02 Series



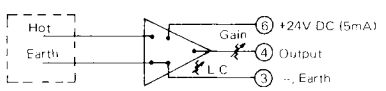
H-22S



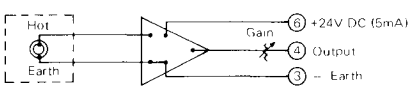
H-32S



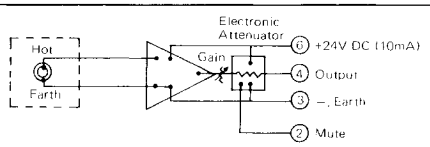
H-03 Series



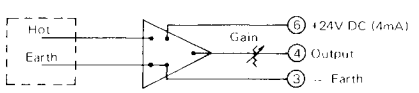
E-01 Series



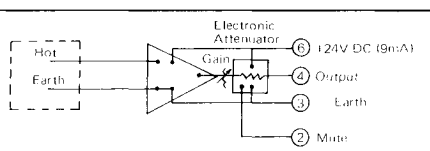
E-11 Series



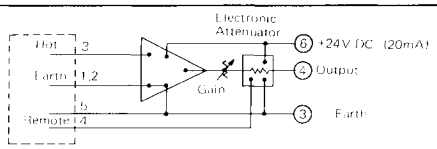
X-01 Series



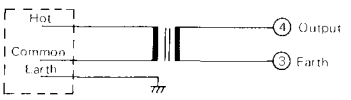
X-11 Series



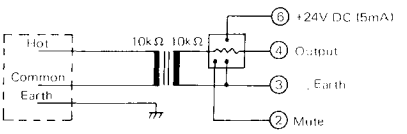
X-21S



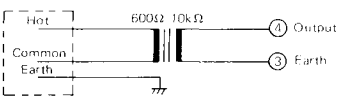
B-01 Sereis



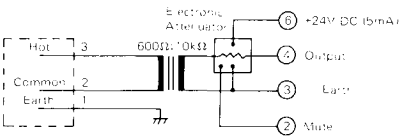
B-11 Series



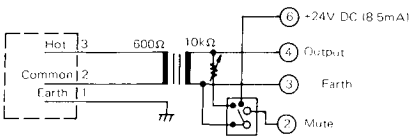
L-01 Series



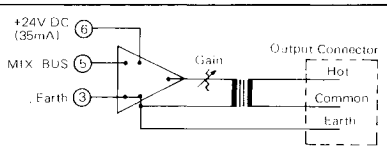
L-11S



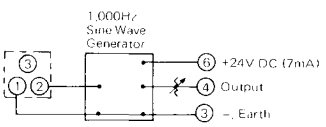
L-41S



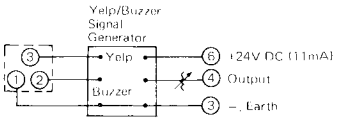
T-01 Series



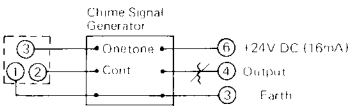
S-01S



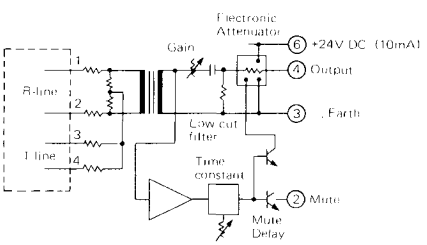
S-02S



S-03S



I-01S

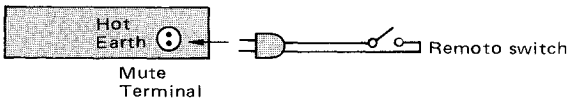


Operation and Connections (Plug-in Modules)

• E-11, X-11, L-11, B-11 Series, H-31 and H-32 (with mute)

Connections

(M-900A, A-903A, A-906A, A-912A)



Operation

When the switch is closed,,

a. the signal fed to E-11, X-11, L-11 and B-11 are attenuated by approx. 60dB. Accordingly a microphone can have a priority at a time of announcement.

b. the signal fed to H-31 and H-32 are delivered to the amplifier. (While the switch is opened, the signals are attenuated.)

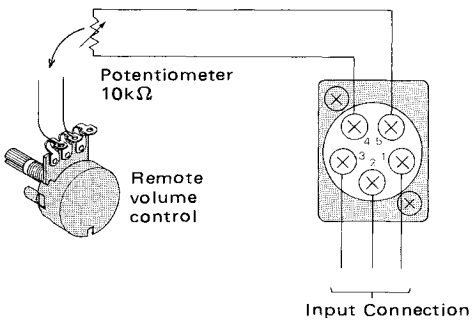
• L-41 (with signal activated muting facilities)

When this module accepts the input signal, the mute terminal is grounded automatically without connection of the remote switch to the MUTE TERMINAL. It causes the other modules with mute function, like X-11, to be muted.

Accordingly the signal fed to the L-41 can have a priority.

• H-21, H-22 and X-21 (Remote volume control facilities)

Connections



Operation

Preset the gain control of module and the input volume control of the corresponding input so that an appropriate sound level may be obtained through the remote volume control.

CAUTION

Use the potentiometer of 10K ohms.
Make wiring lest the interference from external noise should occur.

• T-01 SERIES (BALANCED 600-ohm LINE OUTPUT MODULES)

This series of modules, of rated output level 1 volt, is used for transmitting mixing signals of amplifiers to external equipment and as a REC out.

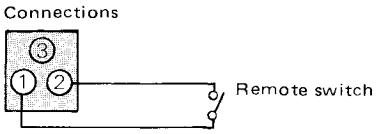
It is provided with a presettable gain control.

T-01 Series should be used exclusively for TOA 900 series, A-903A, A-906A, A-912A and M-900A. Use it only in Input Port #5 or #6 of the above models. It will not operate when connected into other PORTS.

Approx. 5 seconds after power has been supplied to these modules, the output signal is transmitted.

• S-01 (1,000Hz SINE WAVE)

Connections

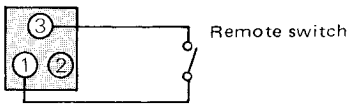


It is operated by closing the remote switch.

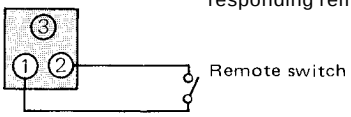
• S-02 (YELP AND BUZZER)

Connections

Yelp signal



Buzzer signal

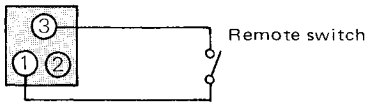


Each signal is generated by closing corresponding remote switch.

• S-03 (ONE-TONE CHIME AND CONTINUOUS ONE-TONE CHIME)

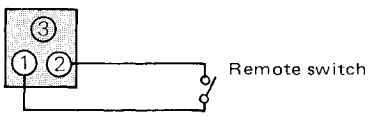
CONNECTIONS

One-tone chime



By closing the remote switch, chime sounds once.

Continuous one-tone chime

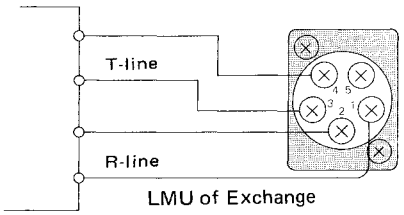


By closing the remote switch, one-tone chime sounds continuously during the closure of the switch.

• I-01S (BALANCED PAGING INPUT MODULE)

This module is used for connecting TOA intercom Systems (EXES) for paging. By connecting this module to the exchange in place of an intercom station, paging is possible. It is provided with a pre-settable gain control. The I-01S is applicable to the TOA EXES-1000, EXES-5000 and EX-16 Intercom Systems.

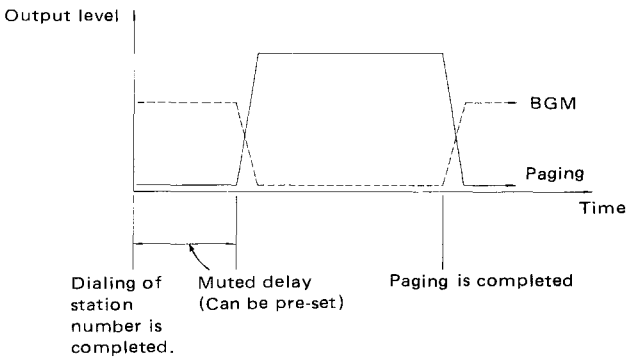
CONNECTIONS



LMU (Line Modem Unit)
This unit is composed of a modulator to receive signals from stations, a demodulator to send signals to the station and a scanning circuit.
Summary Specifications of R and T Lines
R-line: Approx. 9mA DC plus audio signals of +30dBm max.
T-line: Approx. 9mA DC

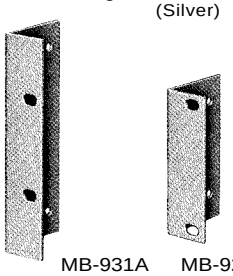
HOW TO USE:

Paging is possible from other station by dialing the station number assigned to this module. To prevent a calling tone from being sounded through the paging speaker, the module is designed to override paging output during a period of time that the calling tone signal is transmitted. The length of time to mute the paging output is adjustable between zero and three seconds. During paging, background music (the input signal fed to E-11, X-11, L-11 or B-11 module) is muted.



Optional Accessories

Rack-mounting Brackets (Silver)



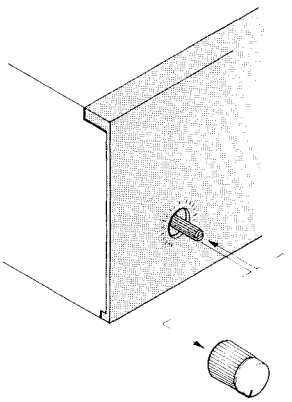
MB-931A MB-921A

(A-906A) (M-900A)
A-912A A-903A
P-906A
P-912A
P-924

Perforated Panel (Silver)

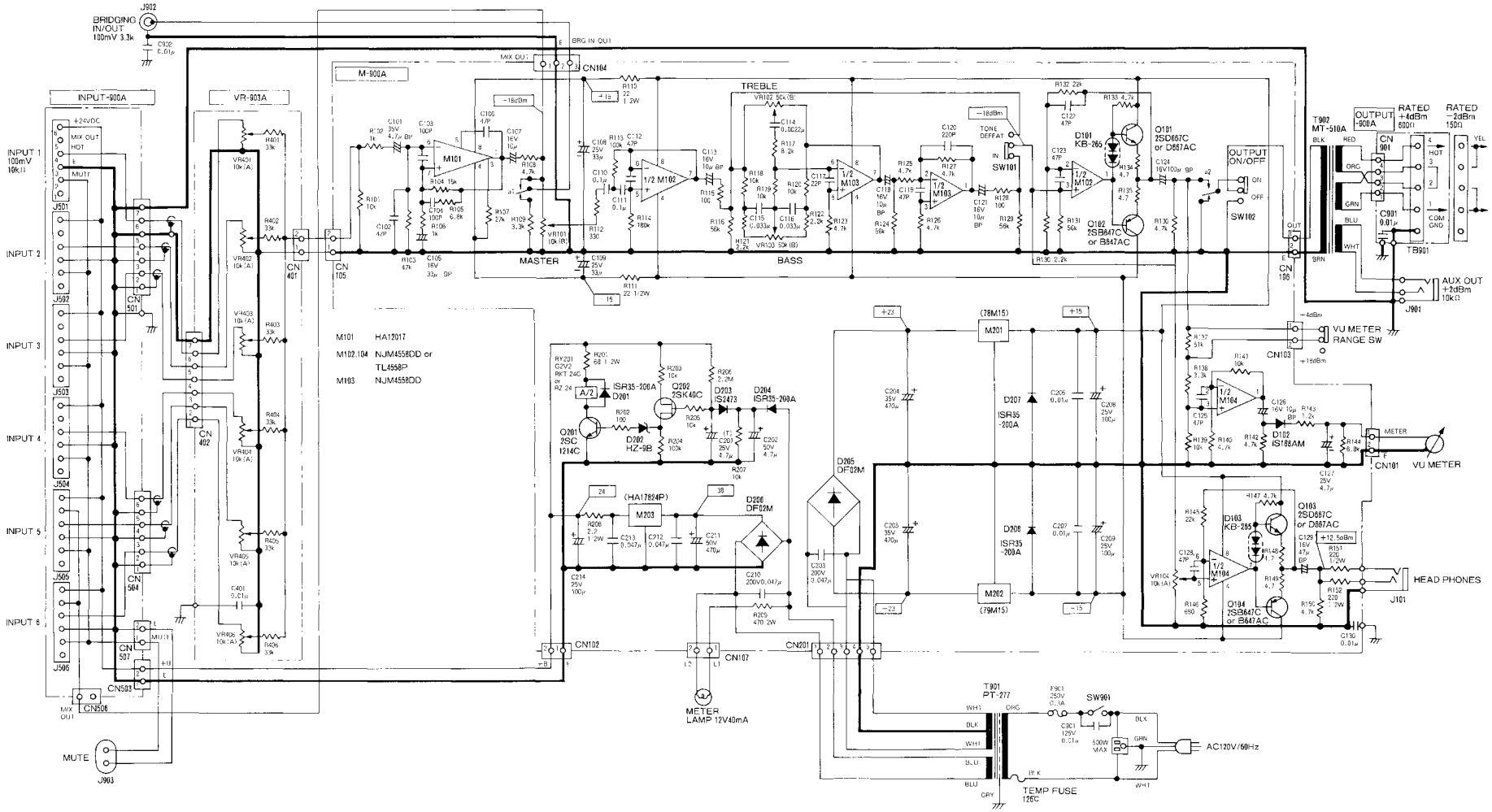
PF-911

Volume Control Cover



YA-910 (BLACK)

Schemiatic M-900 A



1. RESISTANCE VALUES IN OHMS.
2. ALL RESISTORS 1/4W UNLESS OTHERWISE DESIGNATED.
3. CAPACITANCE VALUES IN FARAD UNLESS OTHERWISE DESIGNATED.
4. VOLTAGES ARE MEASURED TO CHASSIS GROUND WITH NO SIGNAL.
5. ALL CAPACITORS 50V UNLESS OTHERWISE DESIGNATED.