

OPERATING INSTRUCTIONS

900 series I MIXER POWER AMPLIFIERS

A-903MK2 A-906MK2 A-912MK2

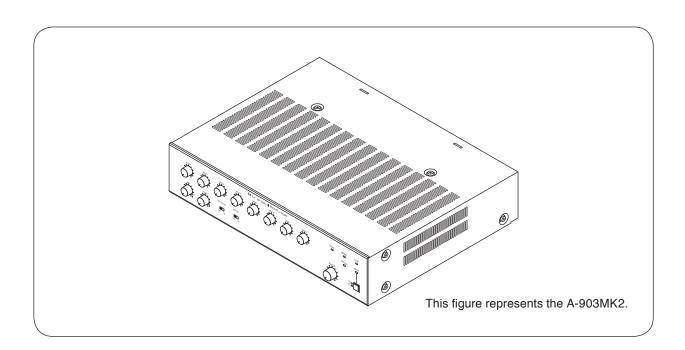


TABLE OF CONTENTS

1. IMPORTANT SAFETY INSTRUCTIONS 2	7. RACK MOUNTING BRACKET ATTACHMENT 12
2. SAFETY PRECAUTIONS 3	8. OPERATION 13
3. GENERAL DESCRIPTION 5	9. VOLUME CONTROL COVER 13
4. FEATURES 5	10. DIMENSIONAL DIAGRAMS
5. NOMENCLATURE AND FUNCTIONS 6	10.1. A-903MK2 14 10.2. A-906MK2, A-912MK2 14
6. INSTALLATION AND CONNECTIONS6.1. Module Installation	11. SPECIFICATIONS 11.1. A-903MK2

1. IMPORTANT SAFETY INSTRUCTIONS

- · Read these instructions.
- · Keep these instructions.
- · Heed all warnings.
- · Follow all instructions.
- · Do not use this apparatus near water.
- · Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer.
- Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

INSTRUCTIONS ESSENTIELLES POUR LA SÉCURITÉ

- · Lire ces instructions.
- Conserver ces instructions pour référence ultérieure.
- · Respecter tous les avertissements.
- · Suivre toutes les instructions.
- Ne pas utiliser cet appareil à proximité d'eau.
- · Nettoyer uniquement à l'aide d'un chiffon sec.
- Ne pas obstruer les orifices de ventilation. Installer conformément aux instructions du fabricant.
- Ne pas installer à proximité de sources de chaleur telles que des radiateurs, des registres thermiques, des chaudières ou d'autres appareils (notamment des amplificateurs) produisant de la chaleur.
- Ne pas contourner la fonction de sécurité de la fiche polarisée ou de mise à la terre. Une fiche polarisée est équipée de deux broches, dont l'une est plus large que l'autre. Une fiche de mise à la terre est équipée de deux broches et d'une troisième pour la mise à la terre. Cette dernière, la plus large, est prévue à des fins de sécurité. Si la fiche fournie ne peut être insérée dans la prise électrique souhaitée, consulter un électricien pour faire remplacer cette dernière.
- Protéger le cordon d'alimentation pour éviter qu'il ne soit piétiné ou pincé, notamment au niveau des fiches, des prises de courant ou de son point de sortie de l'appareil.
- Utiliser uniquement les accessoires spécifiés par le fabricant.
- Utiliser uniquement avec le chariot, support, trépied, la patte de montage ou la table spécifiés par le fabricant ou vendus avec l'appareil. En cas d'utilisation d'un chariot, manipuler la combinaison chariot/appareil pour éviter les blessures dues à un renversement.



- Débrancher cet appareil pendant les orages ainsi que lorsqu'il reste inutilisé pendant une période prolongée.
- La maintenance de l'appareil doit être confiée à un technicien après-vente qualifié. Une maintenance s'avère nécessaire si l'appareil est endommagé (au niveau du cordon d'alimentation ou de la fiche), a été mouillé par un liquide, un objet est tombé à l'intérieur, s'il a été exposé à la pluie ou l'humidité, s'il ne fonctionne pas normalement ou s'il est tombé.

2. SAFETY PRECAUTIONS

- Before installation or use, be sure to carefully read all the instructions in this section for correct and safe operation.
- Be sure to follow all the precautionary instructions in this section, which contain important warnings and/or cautions regarding safety.
- · After reading, keep this manual handy for future reference.

Safety Symbol and Message Conventions

Safety symbols and messages described below are used in this manual to prevent bodily injury and property damage which could result from mishandling. Before operating your product, read this manual first and understand the safety symbols and messages so you are thoroughly aware of the potential safety hazards.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operation and maintenance (servicing) instruction in the literature accompanying the appliance.



Le point d'exclamation à l'intérieur d'un triangle équilatéral avertit l'utilisateur de l'existence d'instructions d'utilisation et d'entretien (réparation) dans la documentation fournie avec l'appareil.



Indicates a potentially hazardous situation which, if mishandled, could result in death or serious personal injury.

When Installing the Unit

- Do not expose the unit to rain or an environment where it may be splashed by water or other liquids, as doing so may result in fire or electric shock.
- Use the unit only with the voltage specified on the unit. Using a voltage higher than that which is specified may result in fire or electric shock.
- Do not cut, kink, otherwise damage nor modify the power supply cord. In addition, avoid using the power cord in close proximity to heaters, and never place heavy objects -- including the unit itself -- on the power cord, as doing so may result in fire or electric shock.
- Be sure to replace the unit's terminal cover after connection completion. Because high voltage is applied to the speaker output terminals, never touch these terminals to avoid electric shock.
- Avoid installing or mounting the unit in unstable locations, such as on a rickety table or a slanted surface. Doing so may result in the unit falling down and causing personal injury and/or property damage.
- External wiring connected to the terminals marked with 4 requires installation by an instructed person.
- The apparatus shall be connected to a mains socket outlet with a protective earthing connection.
- L'appareil doit être branché à une prise d'alimentation avec mise à la terre de protection.
- The socket-outlet shall be installed near the equipment and the plug shall be easily accessible.
- Use the optional Rack mounting bracket MB-25B when mounting the unit in an equipment rack. Remove four M4 x 8 screws on both sides of the unit, and mount the bracket there using the M4 x 16 screws (supplied with the bracket) instead.

When the Unit is in Use

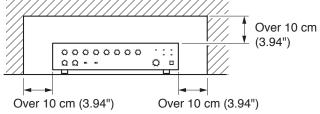
- Should the following irregularity be found during use, immediately switch off the power, disconnect the power supply plug from the AC outlet and contact your nearest TOA dealer. Make no further attempt to operate the unit in this condition as this may cause fire or electric shock.
 - · If you detect smoke or a strange smell coming from the unit
 - · If water or any metallic object gets into the unit
 - · If the unit falls, or the unit case breaks
 - · If the power supply cord is damaged (exposure of the core, disconnection, etc.)
 - · If it is malfunctioning (no tone sounds.)
- To prevent a fire or electric shock, never open nor remove the unit case as there are high voltage components inside the unit. Refer all servicing to your nearest TOA dealer.
- Do not place cups, bowls, or other containers of liquid or metallic objects on top of the unit. If they accidentally spill into the unit, this may cause a fire or electric shock.
- Do not insert nor drop metallic objects or flammable materials in the ventilation slots of the unit's cover, as this may result in fire or electric shock.



Indicates a potentially hazardous situation which, if mishandled, could result in moderate or minor personal injury, and/or property damage.

When Installing the Unit

- Never plug in nor remove the power supply plug with wet hands, as doing so may cause electric shock.
- When unplugging the power supply cord, be sure to grasp the power supply plug; never pull on the cord itself. Operating the unit with a damaged power supply cord may cause a fire or electric shock.
- When moving the unit, be sure to remove its power supply cord from the wall outlet. Moving the unit with the power cord connected to the outlet may cause damage to the power cord, resulting in fire or electric shock. When removing the power cord, be sure to hold its plug to pull.
- Do not block the ventilation slots in the unit's cover. Doing so may cause heat to build up inside the unit and result in fire.
- Avoid installing the unit in humid or dusty locations, in locations exposed to the direct sunlight, near the heaters, or in locations generating sooty smoke or steam as doing otherwise may result in fire or electric shock.
- To avoid electric shocks, be sure to unplug the unit's power supply cord when connecting speakers.
- Be sure to follow the instructions below when rack-mounting the unit. Failure to do so may cause a fire or personal injury.
 - · Install the equipment rack on a stable, hard floor. Fix it with anchor bolts or take other arrangements to prevent it from falling down.
 - · When connecting the unit's power cord to an AC outlet, use the AC outlet with current capacity allowable to the unit.
 - · No rack-mounting screws are supplied with the unit. Separately prepare the appropriate screws for the rack.
- Keep the amplifier over 10 cm (3.94") away from objects that may obstruct air flow to prevent the unit's internal temperature rise.



When the Unit is in Use

- Do not place heavy objects on the unit as this may cause it to fall or break which may result in personal injury and/or property damage. In addition, the object itself may fall off and cause injury and/or damage.
- Make sure that the volume control is set to minimum position before power is switched on. Loud noise produced at high volume when power is switched on can impair hearing.
- Do not operate the unit for an extended period of time with the sound distorting. This is an indication of a malfunction, which in turn can cause heat to generate and result in a fire.
- If dust accumulates on the power supply plug or in the wall AC outlet, a fire may result. Clean it periodically. In addition, insert the plug in the wall outlet securely.
- Switch off the power, and unplug the power supply plug from the AC outlet for safety purposes when cleaning or leaving the unit unused for 10 days or more. Doing otherwise may cause a fire or electric shock.



The lighting flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



L'éclair accompagné d'un symbole représentant une pointe de flèche à l'intérieur d'un triangle équilatéral avertit l'utilisateur de la présence d'une "tension dangereuse" à l'intérieur de l'enceinte du téléviseur, dont la magnitude peut être suffisante pour constituer un risque de choc électrique pour les personnes.

ATTENTION

L'appareil ne doit pas être exposé aux éclaboussures ou écoulements et tous objets remplis de liquide, tels que vases, ne doivent pas être sur l'appareil.

3. GENERAL DESCRIPTION

TOA's A-903MK2, A-906MK2, and A-912MK2 Mixer Power Amplifiers feature 8 input slots that permit the use of various optional plug-in modules. The most appropriate plug-in modules can be selected depending on applications. The Mixer Power Amplifiers are identical except for output power: A-903MK2 (30 W), A-906MK2 (60 W), and A-912MK2 (120 W).

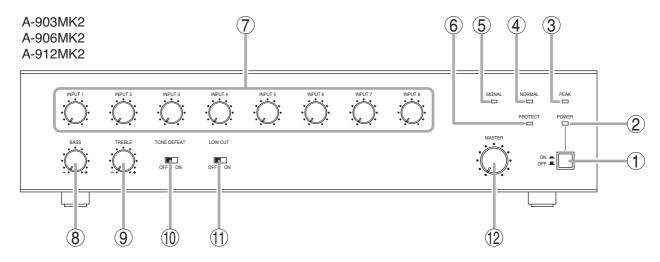
The speaker output terminals are designed to match 25 V or 70 V line, or 4 Ω or 8 Ω speaker systems. Each Mixer Power Amplifier can be mounted in an EIA equipment rack with the addition of the optional MB-25B Rack Mounting Bracket. The optional perforated panel PF-511 provides suitable ventilation, finished in black color to match the Mixer Power Amplifiers.

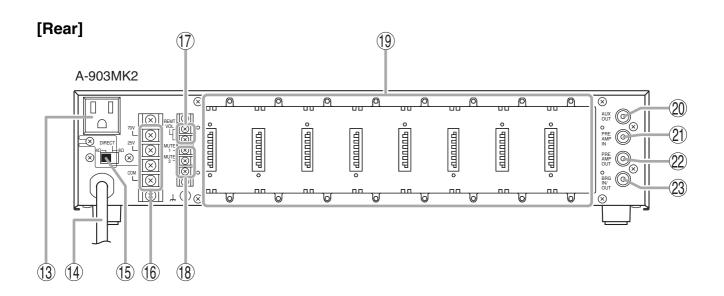
4. FEATURES

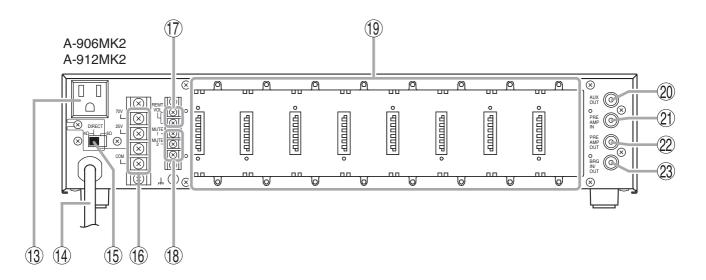
- · Plug-in modular construction
- A wide frequency response of 20 to 20,000 Hz (±1 dB)
- · Low distortion and low noise
- · Remote volume control connection
- · Independent bass and treble controls
- Bridging Input/Output Jack for easy system expansion
- · Built-in protection circuitry
- · Usable a wide range of plug-in optional modules

5. NOMENCLATURE AND FUNCTIONS

[Front]







[Front]

1. Power switch [— ON / — OFF]

Power is switched on and off with each depression of this switch.

2. Power indicator [POWER] (Green)

Lights green when the Power switch (1) is switched on.

3. Peak indicator [PEAK] (Red)

Lights red if input signals approach clipping level. If steady lit, turn down the corresponding Input volume control until the indicator flashes only intermittently.

4. Normal indicator [NORMAL] (Yellow)

Lights yellow when the output sound volume is appropriate.

5. Signal Indicator [SIGNAL] (Green)

Lights green when sound is output from the speaker output terminals.

6. Protection indicator [PROTECT]

Lights red if the built-in protection circuit works due to excessive input signal level.

This indicator remains lit for about 5 seconds after the power has been switched on.

7. Input volume controls [INPUT 1 - 8]

Adjust the input volume of each input channel.

8. Bass control [BASS]

Turn the control knob clockwise to increase the bass level and counterclockwise to decrease it. Bass level is flat at the center position.

9. Treble control [TREBLE]

Turn the control knob clockwise to increase the treble level and counterclockwise to decrease it. Treble level is flat at the center position.

10. Tone defeat switch [TONE DEFEAT ON/OFF]

Bass and treble controls are enabled when this switch is set to the OFF position. Setting this switch to the ON position disables the controls, causing the tones to be flat.

11. Low-cut switch [LOW CUT ON/OFF]

Set this switch to the ON position to cut off unnecessary low frequencies.

12. Master volume control [MASTER]

Adjusts overall gain of all input channels.

[Rear]

13. AC outlet (unswitched)

Provides AC power to auxiliary equipment with power consumption of less than 500 W.

14. AC power cord

Connect this cord to an AC wall outlet.

15. Impedance selector switch [DIRECT]

Placing the switch in the "DIRECT" position enables only unbalanced low-impedance speaker connection. Placing it in another position enables transformer-balanced 25 V, 70 V, or low-impedance speaker connection. For the use of this switch, refer to p. 9, "Speaker Connections."

16. Speaker output terminals

Connect speaker cables to these terminals.

17. Remote volume control terminal [REMT VOL]

Connecting a 10 $k\Omega$ linear taper potentiometer to this terminal allows remote control of the Master volume control.

18. Mute terminals [MUTE 1, MUTE 2, GND]

Activates mute control only to the modules having mute function.

Short-circuiting between MUTE 1 or MUTE 2 and GND terminals mutes the modules set for "mute receive" function activated on MUTE 1 or MUTE 2 bus, respectively. For more information and connection, refer to p. 11, "Mute Control Connection."

19. Module input ports

Accept 900 series plug-in modules. For the selection of the most appropriate modules, refer to Plug-in Module Instruction manual.

20. Auxiliary output jack [AUX OUT]

1 V, 10 k Ω , unbalanced, RCA jack. Connect to the booster amplifier or a recorder with input impedance of 10 k Ω or more.

21. Power amplifier input jack (PWR AMP IN)

1 V, 10 k Ω , unbalanced, RCA jack. Inserting a RCA plug into this jack separates the internal power amplifier section from the preamplifier section. As a normal use, a signal processing device such as a limiter or equalizer is inserted between the Preamplifier output (22) and the Power amplifier input.

22. Preamplifier output jack [PRE OUT]

1 V, 600 Ω , unbalanced, RCA jack. For a normal use of this output, refer to item (21) above.

23. Bridging input/output jack [BRG IN/OUT]

100 mV, 3.3 k Ω , unbalanced, RCA jack. This jack is used as a mixing bus. Connecting this jack to the similar terminal of another amplifier achieves mixing (expansion of input sources). The signals appearing at the jack are independent of Master volume control, and

Bass and Treble controls, so that the jack can be used as recording output.

6. INSTALLATION AND CONNECTIONS

6.1. Module Installation

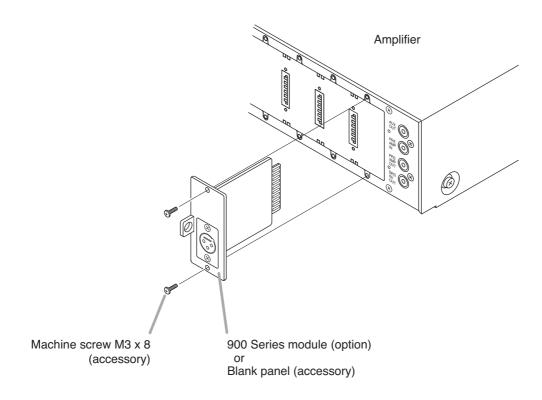
Eight input ports for plug-in modules are provided.

Select the desired modules depending on applications. Plug the modules fully into the input ports by sliding them along the upper and lower guide rails, then secure each with two screws.

Be sure to cover idle slots with the blank panels attached to the unit.

Important

Be sure to switch off the unit's power when inserting or removing the module. Failure to do so may cause the module to fail.



6.2. Speaker Connections

The unit has 25 V and 70 V outputs for constant voltage speaker system and low impedance output for 4 Ω or 8 Ω speaker loads.

Two types of speaker output are available: transformer-balanced output and unbalanced direct output, which can be selected by the Impedance selector switch.

Connect the speaker system to only one of the speaker outputs. Class 2 wiring may be used.

The speaker connection method differs with amplifier models and their applications.

Refer to the following connection diagrams described for each model. Impedances indicated in the diagram mean total speaker load impedance.



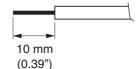
The terminals marked with the symbol $\mbox{\color{$4$}}$ are hazardous live.

The external wiring to these terminals requires installation by an instructed person.

[Connection of speaker cable]

Step 1. Unscrew the terminal cover.

Step 2. Strip 10 mm (0.39") of insulative jacket from the end of the speaker cable, as shown in the figure at right.



Step 3. Connect speaker cables to the speaker output terminals.

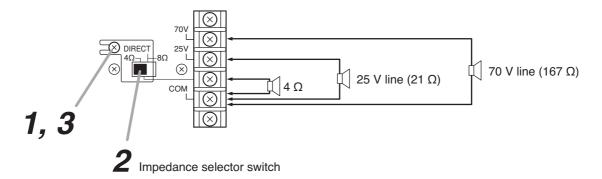
Step 4. Replace the terminal cover.



Be sure to replace the terminal cover after connection completion. Because high voltage is generated at the speaker output terminals, never touch these terminals to avoid electric shock.

6.2.1. A-903MK2: Speaker connection to transformer-balanced output

This type of output allows speaker connection to one of 4 Ω , 25 V, or 70 V terminal.



[Impedance selector switch setting]

Step 1. Loosen the screw.

Step 2. Shift the impedance selector switch to "4 Ω " position.

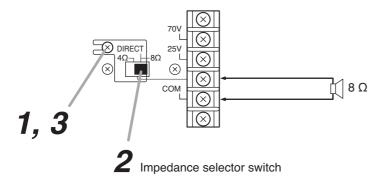
Step 3. Retighten the screw.

[Low-cut switch (on the front panel) setting]

It is highly recommended that the low-cut switch be placed in the ON position to cut off unnecessary low frequency. This is because the built-in transformer cannot produce low frequencies though the unit has flat response even in low-frequency range.

6.2.2. A-903MK2: Speaker connection to unbalanced DIRECT output

This type of output allows speaker connection to 8 Ω terminal only.

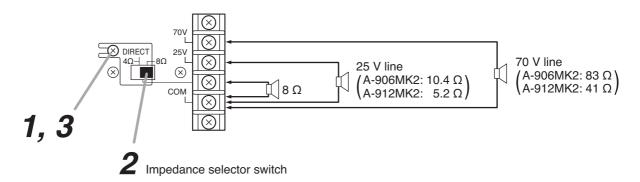


[Impedance selector switch setting]

- Step 1. Loosen the screw.
- **Step 2.** Shift the impedance selector switch to "8 Ω " position.
- Step 3. Retighten the screw.

6.2.3. A-906MK2 and A-912MK2: Speaker connection to transformer-balanced output

This type of output allows speaker connection to one of 8 Ω , 25 V, or 70 V terminal.



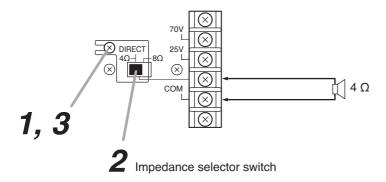
[Impedance selector switch setting]

- Step 1. Loosen the screw.
- **Step 2.** Shift the impedance selector switch to "8 Ω " position.
- Step 3. Retighten the screw.

It is highly recommended that the low-cut switch be placed in the ON position to cut off unnecessary low frequency. This is because the built-in transformer cannot produce low frequencies though the unit has flat response even in low-frequency range.

6.2.4. A-906MK2 and A-912MK2: Speaker connection to unbalanced DIRECT output

This type of output allows speaker connection to 4 Ω terminal only.



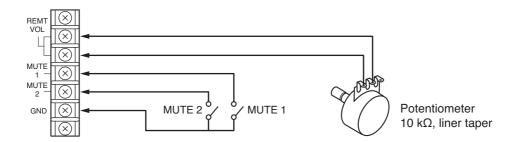
[Impedance selector switch setting]

Step 1. Loosen the screw.

Step 2. Shift the impedance selector switch to "DIRECT 4 Ω " position.

Step 3. Retighten the screw.

6.3. Remote Control Connections



6.3.1. Mute control connection

The Mute control works to mute only the modules having mute function.

Short-circuiting between MUTE 1 and GND terminals mutes the modules set for "mute receive" function activated on the MUTE 1 bus. Likewise, short-circuiting between MUTE 2 and GND terminals mutes such modules on the MUTE 2 bus.

In this case, the modules set for "mute send" function are not muted, having precedence over "mute receive" modules. For details, refer to the module's instruction manual.

6.3.2. Remote volume control connection

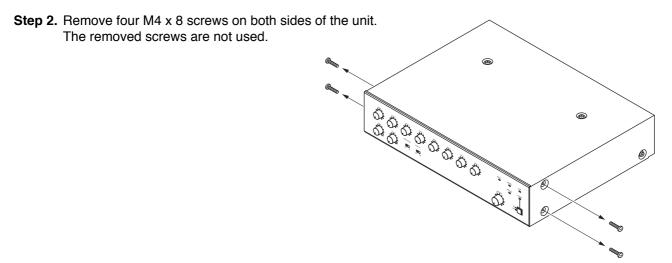
The connected potentiometer serves as the remote control of the Master volume control on the unit's front panel.

Note: The controllable maximum volume is limited up to the volume set with the Master volume control. So, do not place the Master volume control in the counterclockwise position when using the remote volume control.

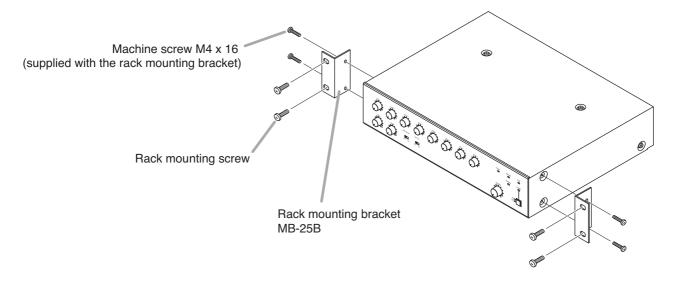
7. RACK MOUNTING BRACKET ATTACHMENT

The unit can be mounted in a standard 19" equipment rack using the optional MB-25B Rack mounting bracket.

Step 1. Remove 4 plastic feet on the bottom surface when mounting the unit in a rack.

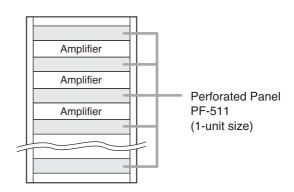


Step 3. Attach the brackets to the amplifier using four M4 x 16 Machine screws supplied with the bracket.



Notes

- Rack mounting screws are not supplied with the unit. Use the screws that are appropriate for the rack.
- When mounting the unit in an equipment rack, the inside of the rack must be sufficiently ventilated.
 To achieve sufficient ventilation, also mount the optional PF-511 Perforated Panel (1U*):
 - (1) at the top and the bottom of the rack, and
 - (2) above and below the unit.
 - * 1U size = 44.5 mm or 1.75" (reference size)



8. OPERATION

Step 1. Press the power switch to turn on the power.

The power indicator lights green.

The amplifier comes into operation about 5 seconds after the power has been switched on.

Step 2. Adjust the individual input and master volume controls for the optimum level. Turn the knobs clockwise to increase the output level and counterclockwise to decrease it. For normal music playing or announcement, adjust the input level so that the Normal Indicator intermittently lights. Sound quality is downgraded when the Peak Indicator remains lit.

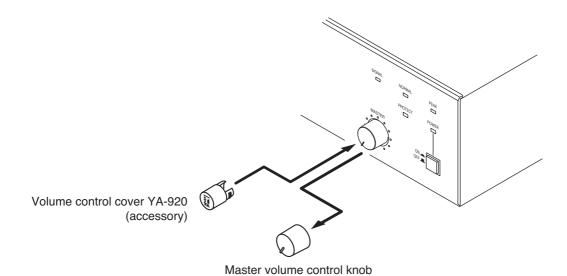
Step 3. Adjust the Bass and Treble controls.

Set the Tone Defeat Switch to the OFF position to activate the Bass and Treble controls. The Bass control boosts low frequencies in clockwise (cw) position and cuts in counterclockwise (ccw) position while the Treble control boosts high frequencies in cw position and cuts in ccw position. The center position of both controls provides flat frequency response.

When tone controls are not necessary, set the Tone Defeat Switch to the ON position.

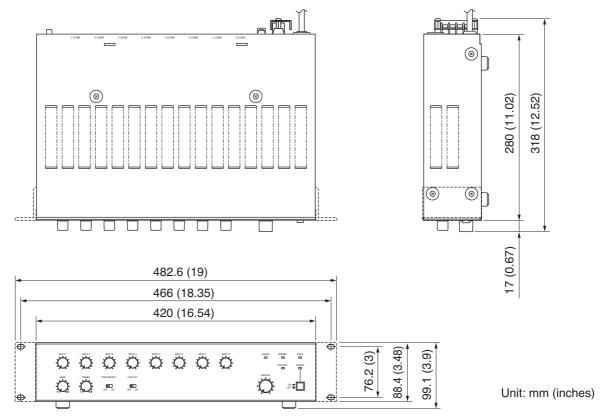
9. VOLUME CONTROL COVER

To prevent the accidental change of the settings of the Input and Master volume controls, remove the knobs after setting them to the desired position and attach the optional cover YA-920 instead.

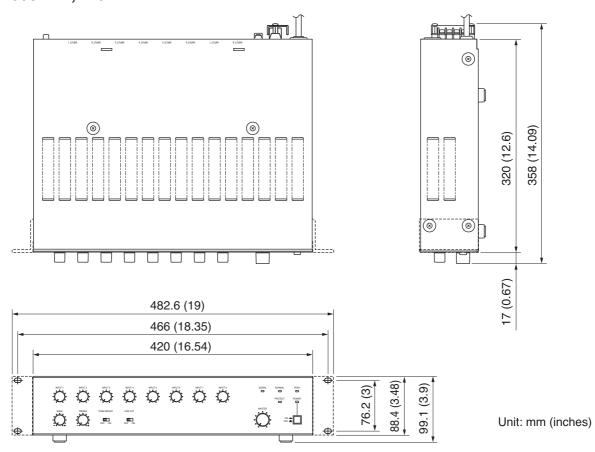


10. DIMENSIONAL DIAGRAMS

10.1. A-903MK2



10.2. A-906MK2, A-912MK2



11. SPECIFICATIONS

11.1. A-903MK2

Туре	8-channel mixer power amplifier	
Power Source	120 V AC, 60 Hz	
Rated Output	30 W RMS	
Power Consumption		
Rated output	60 W	
Based on cUL standards	40 W	
Power Bandwidth	(D): 20 Hz – 20 kHz, 0.5% THD (T): 50 Hz – 20 kHz, 0.5% THD	
Frequency Response	(D): 20 Hz – 20 kHz, ±1 dB (T): 20 Hz – 15 kHz, ±1 dB (T): 20 Hz – 20 kHz, +1 dB, –3 dB	
Total Harmonic Distortion	0.02% at 1 kHz, rated output	
Input	Eight input ports: each port accepts any input module. One bridging input/output	
Input Sensitivity/Impedance	Input port #1 to #8: 100 mV / 10 k Ω Bridging input/output: 100 mV / 3.3 k Ω	
Preamp OUT/Power amp IN	1000 mV into 600 Ω / 1000 mV, 10 k Ω	
Output	Main (T): 4 Ω , 25 V and 70 V, balanced Main (D): 8 Ω , unbalanced AUX: 10 k Ω , 1 V	
Output Regulation (1 kHz)	(D): Less than 0.5 dB, no load to full load (T): Less than 1.0 dB, no load to full load	
Signal to Noise Ratio (Band pass: 20 Hz – 20 kHz)	Master volume min.: 90 dB (Tone defeat switch: ON) Master volume max.: 77 dB (Tone defeat switch: ON) Power amplifier only: 105 dB (Tone defeat switch: ON)	
Tone Control	Bass: ±10 dB at 100 Hz, Treble: ±10 dB at 10 kHz	
Control	8 Input gain control 1 Master gain control 1 Bass control 1 Treble control 1 Power ON/OFF switch 1 Tone defeat switch 1 Low-cut switch (60 Hz, 6 dB/octave)	
Indicator	1 Power LED, 1 Protect LED, 1 Signal LED, 1 Normal LED, 1 Peak LED	
Protection	Self-protection, with AC fuse (inside)	
Connector	Input 1 to 8: card-edge connector Bridging, Mixer preamp. output, Power amp. input, Aux output: RCA jack Mute, Remote VR: screw terminal strip Output: screw terminal strip AC outlet: 3-pin grounding type AC power cord/plug: SJT, 3-prong type	
Operating Temperature	-10 to +60 °C (12 to 140 °F)	
Other Feature	Output disconnected for approx. 5 seconds after switching power on.	
Color	Black	
Dimensions	420 (w) x 99.1 (h) x 318 (d) mm (16.54" x 3.9" x 12.52")	
Weight	7.8 kg (17.2 lb)	

Notes

- The design and specifications are subject to change without notice for improvement.
- (D): Direct output, (T): Transformer output

Optional product

Rack mounting bracket: MB-25B

11.2. A-906MK2, A-912MK2

Model No.	A-906MK2	A-912MK2	
Туре	8-channel mixer	power amplifier	
Power Source	120 V AC, 60 Hz		
Rated Output	60 W RMS	120 W RMS	
Power Consumption			
Rated output	100 W	180 W	
Based on cUL standards	70 W	105 W	
Power Bandwidth	(D): 20 Hz – 20 kHz, 0.5% THD (T): 50 Hz – 20 kHz, 0.5% THD		
Frequency Response	(D): 20 Hz – 20 kHz, ±1 dB (T): 20 Hz – 15 kHz, ±1 dB (T): 20 Hz – 20 kHz, +1 dB, –3 dB		
Total Harmonic Distortion	0.02% at 1 kHz, rated output		
Input	Eight input ports: each port accepts any input module. One bridging input/output		
Input Sensitivity/Impedance	Input port #1 to #8: 100 mV / 10 k Ω Bridging input/output: 100 mV / 3.3 k Ω		
Preamp OUT/Power amp IN	1000 mV into 600 Ω / 1000 mV, 10 k Ω		
Output	Main (T): 8 Ω , 25 V and 70 V, balanced Main (D): 4 Ω , unbalanced AUX: 10 k Ω , 1 V		
Output Regulation (1 kHz)	(D): Less than 0.5 dB, no load to full load (T): Less than 1.0 dB, no load to full load		
Signal to Noise Ratio (Band pass: 20 Hz – 20 kHz)	Master volume min.: 90 dB (Tone defeat switch: ON) Master volume max.: 77 dB (Tone defeat switch: ON) Power amplifier only: 105 dB (Tone defeat switch: ON)		
Tone Control	Bass: ±10 dB at 100 Hz, Treble: ±10 dB at 10 kHz		
Control	8 Input gain control 1 Master gair 1 Treble control 1 Power ON/0 1 Low-cut switch (60 Hz, 6 dB/octave	OFF switch 1 Tone defeat switch	
Indicator	1 Power LED, 1 Protect LED, 1 Signal LED, 1 Normal LED, 1 Peak LED		
Protection	Self-protection, with AC fuse (inside)		
Connector	Input 1 to 8: card-edge connector Bridging, Mixer preamp. output, Power amp. input, Aux output: RCA jack Mute, Remote VR: screw terminal strip Output: screw terminal strip AC outlet: 3-pin grounding type AC power cord/plug: SJT, 3-prong type		
Operating Temperature	–10 to +60 °C (12 to 140 °F)		
Other Feature	Output disconnected for approx. 5 seconds after switching power on.		
Color	Black		
Dimensions	420 (w) x 99.1 (h) x 358 (d) mm (16.54" x 3.9" x 14.09")		
Weight	9.6 kg (21.16 lb)	12.7 kg (28 lb)	

Notes

- The design and specifications are subject to change without notice for improvement.
- (D): Direct output, (T): Transformer output

URL: https://www.toa.jp/