

MA-1206 60 watt

MA-1212 120 watt

Professional Mixer/Amplifiers

Instruction Manual and Users Guide

INSTALLATION NOTES

At all times, the amplifier has to be operated under appropriate conditions. This includes that the operation location provided sufficient ventilation and the device is not exposed to direct sunlight or the direct radiation or reflection from any heat source. Installing the loudspeaker systems choose a location that gets not affected by extreme and / or constant vibration or other mechanical oscillation. also make sure that the speakers are installed at locations that are free from dust and / or moisture.

▲CAUTION

We strongly recommend that you leave the connection of the appliance to the qualified and experienced service technician who is specialized in connecting electrical and electronically equipment. Do not take the risk of Electro-shock or shock hazard. To reduce the risk of Electro-shock, all connections have to be accomplished before it is permissible to connect the amplifier to the main supply, Before carried out correctly and that no short-circuit connecting the appliance to the mains supply, once again make certain that all connections are existing. The overall sound reinforcement installation has to be in accordance to the laws, regulations, standards, and guidelines that are relevant and applicable in the country where the equipment is going to be operated.

AC POWER SUPPLY

▲CAUTION

This equipment operates from a power source that does not apply more than 244 VAC(r.m.s) between the supply conductors or between either supply conductor and ground.

DC POWER SUPPLY

▲CAUTION

A 24V DC power source (i.e. a battery) has to be connected to the terminals (13) that are covered by a protective lid. To reduce the risk of dropping voltage to a minimum and to eliminate the danger of damaging the battery cables by thermal overload, these cables have to be at least 2.5mm in diameter, each Switching the amplifier on or off is performed through the power switch (6).

CONNECTING THE OUTPUT TERMINALS

▲CAUTION

TERMINALS marked with the symbol ! are HAZARDOUS LIVE and the external wiring connected to these TERMINALS requires installation by an INSTRUCTED PERSON or the use of ready-made lead or cords to avoid the risk of electrical shock, **never touch** the bare conductors leading to the output terminals of the amplifier when it is in operation. Under figures, show the possible connections of the " OUTPUT" speaker terminals accessible by removing the protective cover. Bear in mind the following rules:

Constant impedance lines

- The total impedance of the speakers connected **must correspond to that selected on the amplifier's output terminals.**
- The sum of the power capacities of the speakers must be no lower than the amplifier's power capacity.
- The length of the connecting cables must be as possible; in any case, the longer the distance to be covered and the greater must be the cross-section of the cables.

Constant voltage lines

- Each speaker must be equipped with a line transformer with an input voltage equal to that of the line (25, 70, 100V).
- The sum of the power capacities of the speakers must **not exceed the output power capacity of the amplifier (i.e. total wattage of speakers installed in zones 1 through 5).**

SAFETY PRECAUTIONS

1. Please read the notes preceded by the symbol ▲ **with special attention**, as they provide important safety information.
2. The power supply voltage of the amplifier has a sufficiently high value to involve the risk of electrical shock; therefore, **never install, connect, or disconnect the equipment with the power supply switched on.**
3. The metal parts of the equipment are earthed by means of the power cable. If the power socket used to Supply power does not have an earth connection, call a qualified electrician who will earth the equipment by means of the terminal.
4. Make sure that the power supply cable of the equipment cannot be trodden on or crushed by objects, To ensure that the cable is not damaged.
5. To prevent the risk of electric shock, **never open the equipment:** there are no parts inside that the user can use.
6. Make sure that no objects or liquids can get into the speaker, as this could cause a short circuit.
7. Never attempt to make any repairs that are not described in this manual. Contact your authorized service centers or highly qualified personnel when:
 - The equipment does not function (or functions in an abnormal way).
 - The power supply cable has been seriously damaged.
 - Objects or liquids have got into the equipment.
 - The equipment has been subject to heavy impact.
8. If the equipment is not to be used for long periods of time, switch it off and disconnect the power supply cable.
9. If the equipment gives off any strange odor or smoke, **switch it off immediately and disconnect the power from the supply cable.**

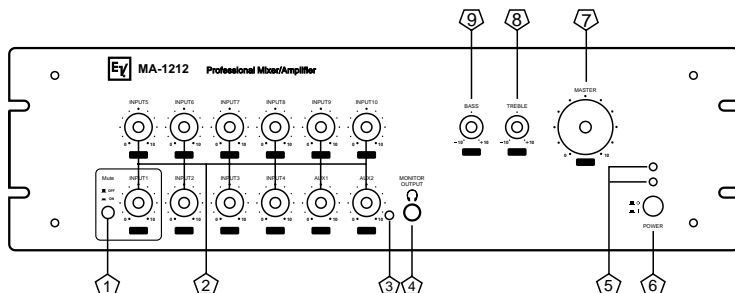
PRECAUTIONS

- Do not obstruct the ventilation grilles of the equipment.
- Avoid having the amplifier worked on overload for a long time.
- Fully tighten the screw terminals for speakers in order to ensure a safe contact.
- Do not force command parts (buttons, controls, etc.).
- When cleaning external parts, do not use thinners, spirits, or any other volatile substances.
- No naked flame sources, such as lighted candles, should be placed on the apparatus.

DESCRIPTION

The amplifiers in the MA-1212 series have been expressly designed for transmitting announcements through all PA sound systems. They incorporate the following functions:

- 10 combination jack (XLR and 6.3mm) inputs, line/micro switchable sensitivity with excludable 24V dc phantom supply.
- 2 stereo RCA input, four stage sensitivity selectable.
- 600Ω auxiliary signal(Aux. Paging) input.
- 1 "PRE OUT" output.
- 1 "MONITOR OUTPUT" and "1W/8Ω" slave output for monitor music signal.
- 1 "MAIN IN" input.
- Input 1 priority on the other inputs with vocal activation.
- Input 1, 2, 3, 4 priority on the other inputs, activation with contact.
- Outputs for speakers with constant impedance (4 ohm) and constant voltage (25-70-100 V).
- Treble and bass controls.
- Protection against short-circuiting between output terminals.
- Direct current supply 24 Vdc.



CONTROL AND FUNCTIONS

1. "Mute" function switch

This switch lets you turn the "Voice Priority" on or off of input 1 (1).

2. Input level controls

These controls let you individually set the volume of the sound source that are connected to the "INPUT 1 ~ INPUT 10", "AUX 1" and "AUX 2". Turning a control clockwise increases the volume of the corresponding source. We recommend to leave the controls of momentarily not used inputs their minimal setting "0".

3. Music signal monitor output level control

The control lets you individually set the volume of the sound output that are connected to the "MONITOR OUTPUT" (4) and "1W/8Ω" (25). Turning controls clockwise increase the volume of the corresponding source.

4. "MONITOR OUTPUT"

This allows signal output of the "AUX1", "AUX2", "CASSETTE" and "TUNER" input mixing. It can be used to control an audio appliance with input impedance over 600 ohms (e.g. Earphone or an additional amplifier etc.) The output signal is controlled only by the volume controls of the "AUX 1", "AUX 2", "TUNER" and music signal level control (3). This function is toggle switch the "1W/8Ω" (25) additional loudspeaker.

5. Indicator

When switch the amplifier's power on. The "PL" indicator lights. When the amplifier's output overload the "OVER LOAD" indicator lights and interrupt output. For equipment life, you have to adjust the volume at a lower setting.

6. "POWER" switch

Using the POWER switch lets you turn the main power on or off.

7. MASTER volume control

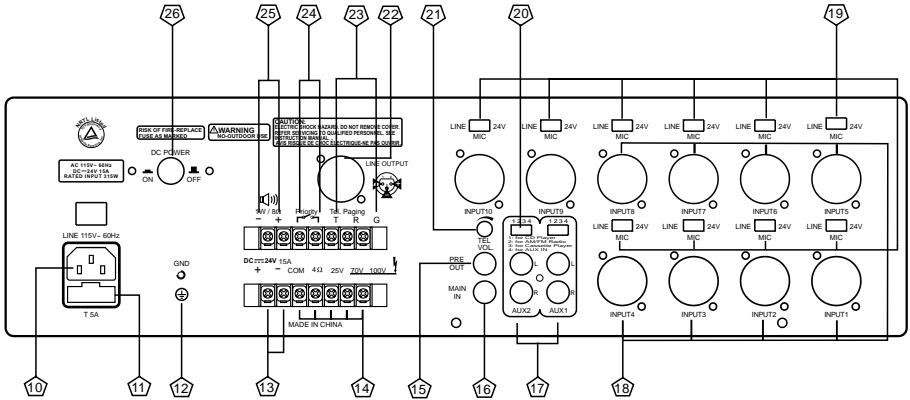
The setting of this control determines the output that is present at the loudspeaker OUTPUT. We recommend to generally adjust the MASTER and the input level controls at mediocre positions. extreme setting, where the MASTER is set to maximum output and the input controls nearly set to their minimum or vice versa are not recommendable.

8. Common TREBLE-control

Clockwise this control enhances the high frequency reproduction, while turning it counter clockwise attenuates the treble frequencies. If the control is set to its center position, the overall frequency response is not being altered.

9. Common BASS-control

Clockwise this control enhances the low frequency reproduction, while turning it counter clockwise attenuates the bass frequencies. If the control is set to its center position, the overall frequency response is not being altered.



CONTROL AND FUNCTIONS

10. Main cord connector

This connector is meant for the connection of the supplied mains cord.

11. AC fuse

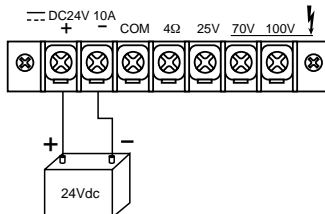
The fuse protecting currents supplies circuits of the equipment. The fuse can only be changed, in the event of a fault or changing the supply voltage, by an EV service center.

12. "GND" screw

In case the used mains outlet does not provide a ground conductor, this screw offers the possibility to amplifier metal parts. Nevertheless, you should leave this procedure to the experienced, qualified electrician.

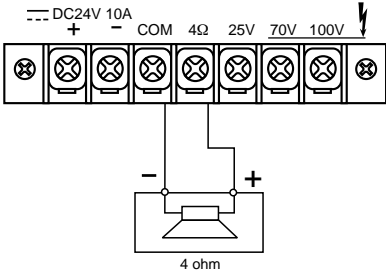
13. Terminals for the DC battery supply

These two terminals allow the connection of an external 24V DC power supply (e.g. a 24V battery). In this way continuous of the amplifier is maintained even during a power outage, since it is automatically switch to the DC power source.

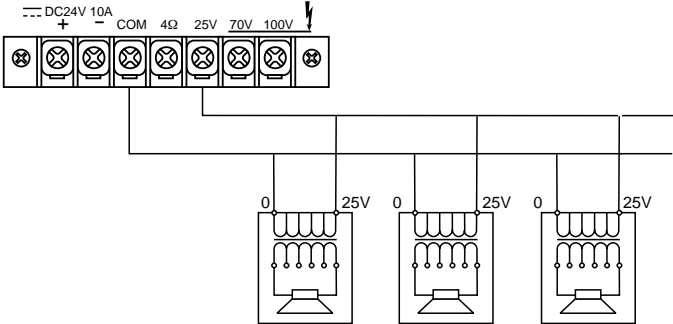


14. Output terminals

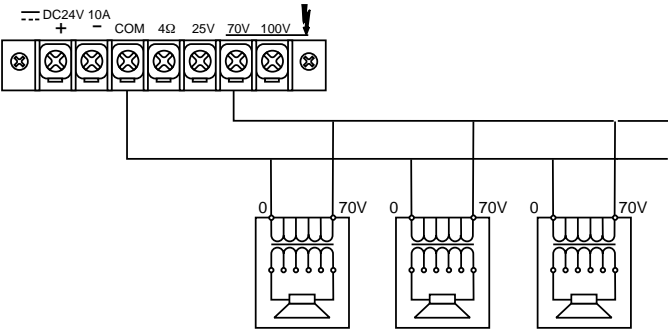
These 5 terminals allow connecting speakers.



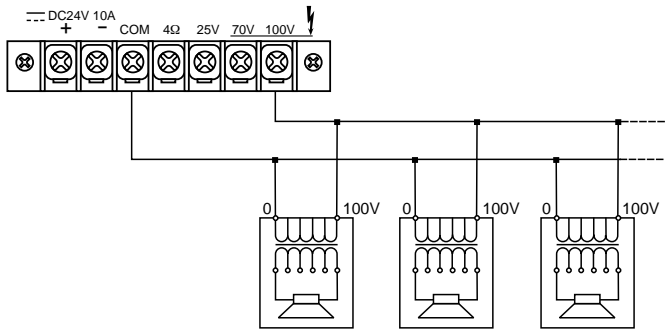
Connecting the speakers to 4 ohm output



Connecting the speakers to 25V output



Connecting the speakers to 70V output



Connecting the speakers to 100V output

15. "PRE OUT" terminal

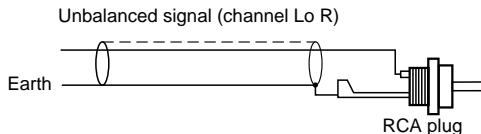
This terminal output the mixed audio signals of all sources that are connected to the amplifier Inputs and can be utilized to feed an external power amplifier, a signal processor (e.g.a equalizer) or any other appliance. The unbalanced signal is affected by the individual input controls. Before using the PRE OUT you have to remove the bridging-strip between this binding post and the "MAIN IN" terminal(16).

16. "MAIN IN" terminal

After removing bridging-strip between the "PRE OUT" and the "MAIN IN" terminals you can include an external signal processor (e.g an equalizer) in the audio-chain between the pre-amplifier and the power output stage of the power amplifier. This opportunity provides a proper solution whenever shaping or improving the audio signal is necessary (adjust delay times, equalizing, eliminating the larseneffect, ect.) The input is unbalance, which affected by the tone control and the master volume control.

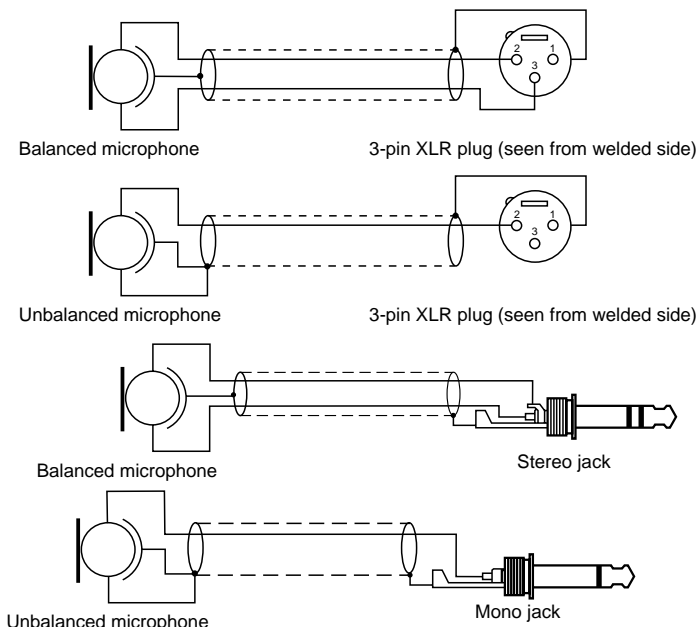
17. "AUX 1" and "AUX 2" inputs

These two RCA-type connectors let you connect the two channels of an external high-level unbalanced signal source. Such as an AM/FM tuner, a cassette deck, a CD player, etc.. use input sensitivity switch(20). Suitable for different appliances.



18. "INPUT 1 ~ INPUT 10" Inputs

These ten balanced/unbalanced combination type jack (XLR and 6.3mm) input, Meant for the connection of-condenser type microphone that accept 24V phantom power, dynamic microphone (30-600ohms) or a high level sound source (e.g AM/FM tuner, cassette desk, CD player, ect.) In case you are using , it is necessary to use the switch (20).



Note

Connecting unbalance microphones to the appliance when the phantom is switched on could lead to severe damage on the microphones and is therefore not permissible. It is absolutely mandatory to perform any plugging or unplugging of microphone cables with the phantom power turned off. Also make sure that the phantom power is turned off when utilizing microphones that are not meant to be operated with phantom power. The voltage that is present on pin2 and pin3 of the XLR-connector could lead to severe damages on the microphones. When in doubt, contact your dealer before you perform any connections.

19. "INPUT 1 ~ INPUT 10" Inputs sensitivity and XLR phantom 24V switch

By turning this switches onto the "LINE" position the input can be connected to an audio source with high level signal output. By turning these switches onto the "MIC" position, the input can be connected to a dynamic microphone with low impedance. By turning these switch onto "24V" position, connects the 24V phantom supply on XLR of pin2 and pin3 of inputs, necessary to operate condenser type microphone which require this type of external supply. It is recommended to use this switch with the general volume set on minimum.

20. Input sensitivity switch (AUX1 , AUX2)

By turning switch onto the "1" position, the "AUX 1" , "AUX 2" input suitable for connected to CD player signal output. By turning this switch onto the "2" position, the "AUX1","AUX2" input suitable for connected to AM/FM radio signal output. By turning this switch onto the"3" position, the "AUX1" "AUX2" input suitable for connected to desktop cassette player signal output. By turning this switch onto the "4" position, the "AUX1" , "AUX2" input suitable for connected to high-level signal output.

21. TEL. Paging input level control

This control let you set the volume of the sound source that is connected to the "Tel. Paging" (23) turning control clockwise can increase the volume of the corresponding source. We recommend to leave the control at it's minimum setting "0" when it is not used.

22. LINE OUTPUT CONNECTOR

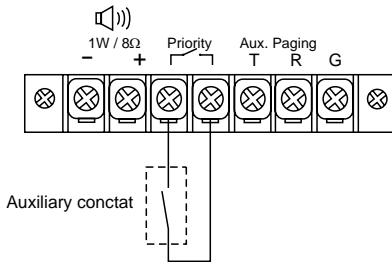
This XLR output mixed audio signals of all sources that can be utilized to feed an external power amplifier or an other external appliance.

23. Input "TEL.Paging"

It lets you connect to an auxiliary signal (600 ohms). The input features the "Voice Priority" function , which overrides all other input signals, once an auxiliary message is sent. If you want to have this function disabled forever, please contact an EV SERVICE CENTER.

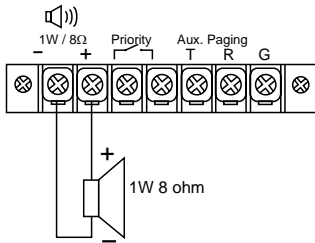
24. "Priority" terminal

When short-circuiting these terminals (i.e means of using an electrical switch). The audio signals coming form "AUX1" , "AUX2","CASSETTE" and "TUNER" are attenuate, while the signals coming form "IN1" , "IN2" and "IN4" are gaining priority.



25. Output terminal for auxiliary loudspeaker

The terminal is meant for the connection of a small external loudspeaker that gets driven by an internal auxiliary power amplifier, providing a nominal output 1 watt. Only the mixed audio signal coming from "AUX1" , "AUX2" "CASSETTE" and "TUNER" are included in the output signal. In addition, the output signal is controlled only by the volume controls of the "AUX1","AUX2","TUNTER" and music signal level control(4). This function is toggle switch the "MONITOR OUTPUT"(4) additional loudspeaker.



26. DC switch

This switch lets you turn the battery supply on or off.

- ▲ Read these instructions.
- ▲ Keep these instructions.
- ▲ Heed all warnings.
- ▲ Follow all instructions.
- ▲ Do not use this apparatus near water.
- ▲ Clean only with a damp cloth.
- ▲ Do not block any of the ventilation openings. Install in accordance with the manufacturers instructions.
- ▲ Do not defeat the safety purpose of the grounding-type plug. A grounding type plug has two lades and a third ground prong. The third prong are provided for your safety. When the provided plug does not fit your outlet, consult an electrician for replacement of the obsolete outlet.
- ▲ Protect the power cord from being walked on or pinched particularly at plugs, convenient receptacles, and the point where they exit from thee apparatus.
- ▲ Only use attachments/accessories specified by the manufacturer.
- ▲ The apparatus should be placed on a solid surface with a minimum distance of 1 m from the back or side plate to the wall and not in the following environments of cases; moist place; under direct radiation sunlight or other strong heat radiation.
- ▲ 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, not operate normally, or has been dropped.
- ▲ This handbook is an integral part of the product and must accompany when it is changed, to allow the new owner to get to know the installation, operating, and safety instructions.
- ▲ Faulty installation of the amplifier frees EV from all responsibility.

CAUTION FOR USING POWER LINE

- ▲ You shall hold plug firmly to avoid the pull-out of power line and risk occurring when you pull the power line out from AC outlet.
- ▲ The plug of power line for unit should be pulled out from power outlet to cut down the power supply, when this unit isn't used for a long period.
- ▲ Don't force any matter on the power line of this system to avoid the damaging power line and don't insert the knotted power line into unit.

HANDLING THIS UNIT

Check if the power supply is being shut down, the power line is pulled out from outlet and other lines connecting this unit are also disconnected.

DON'T DISASSEMBLE THIS UNIT

Servicing-Do not attempt to service the product beyond that described in the operating instructions, as opening or removing covers may expose you to dangerous voltages. All other servicing should be referred to qualified service personnel.

CLEANING

When the unit needs a cleaning, you can blow off dust from the unit with a blower or clean rag etc. Don't use solvents such as benzol, thinner, alcohol or other fluids with very strong volatility and flammability for cleaning the unit body.

▲ CAUTION

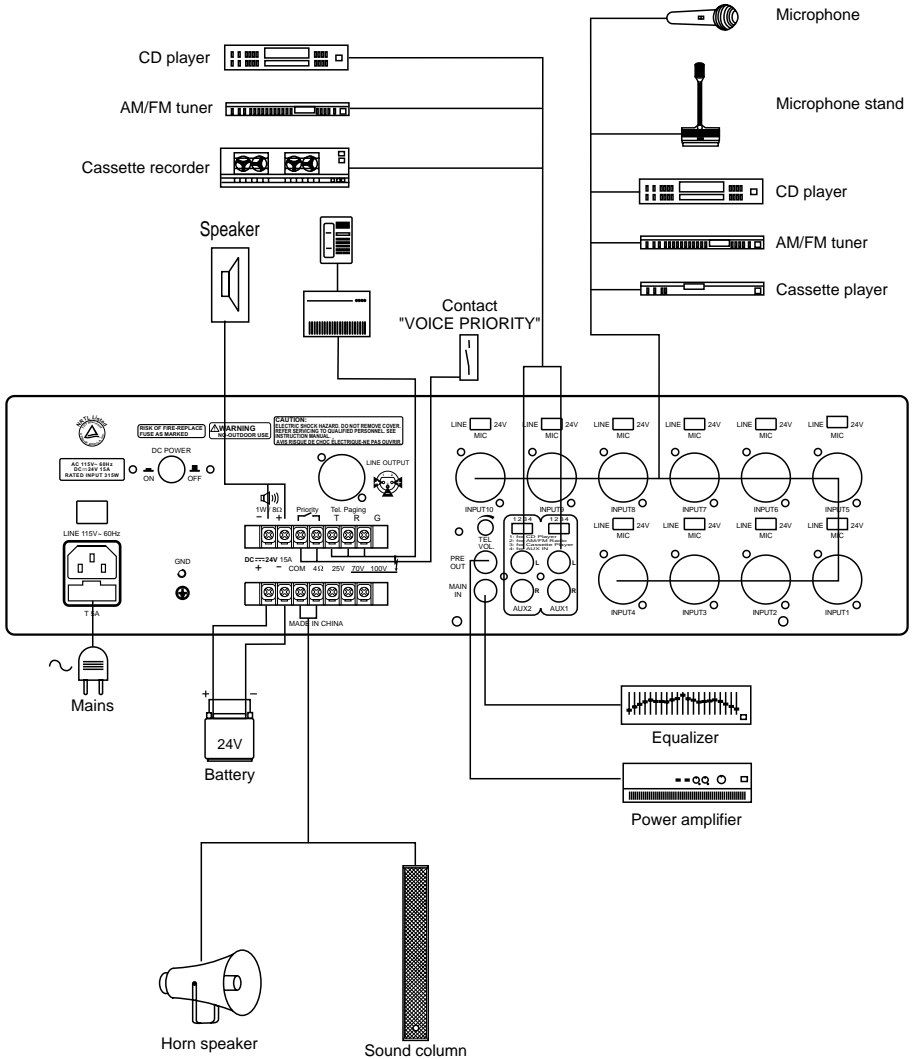
- ▲ Don't touch the screw around the ventilation holes in the bottom board. When heat sink is working, the screw's temperature will rise higher.
- ▲ If connecting interference takes place in source circuit, THD will be more than 10%.
- ▲ To prevent the risk of fire or electrical shock, the apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

Technical data

Amplifier section

Type	60W-Mono-tabletop (MA-1206 series) 120W-Mono-tabletop (MA-1212 series)
Output power capacity	Nominal: 60W- maximum:90W (MA-1206 series) Nominal: 120W- maximum:180W(MA-1212 series)
Nominal power capacity with supply at 24Vdc	45W(MA-1206 series) 90W(MA-1212 series)
Frequency response	50-15,000Hz (± 3 dB)
Total harmonic distortion	$\leq 1\%$ (1KHz-nominal power capacity)
Signal / noise ratio	INPUT 1-10, AUX1,2: >45 dB MAIN IN: >55 dB
Inputs / sensitivity-impedance	INPUT 1-10 / XLR and 6.3mm combination socket / balanced Micro: -60dB (1mV)-600 Ω Line: -22dBu (75mV)-47K Ω AUX1-2 / stereo RCA jack / unbalanced 1: 0dB (1V)-240K Ω (for CD player) 2: -6dB (500mV)-120K Ω (for tuner radio) 3: -10dB (300mV)-75K Ω (for cassette player) 4: -20dB (100mV)-24K Ω (for auxiliary appliance) MAIN IN / mono RAC jack / 0dB(1V)-10K Ω / unbalanced
Outputs for speakers / Ohms	4 ohms
Outputs for speakers / Volts	25V-70V-100V (10 Ω , 83 Ω , 170 Ω)(MA-1206 series) 25V-70V-100V (5 Ω , 42 Ω , 83 Ω)(MA-1212 series)
Additional outputs / voltage-impedance	PRE OUT / mono RCA jack / 1V-600 Ω / unbalanced Loudspeaker / on terminal board / 1 watt-8 Ω Monitor output / 6.3mm jack / 1.5V-600 Ω / balanced Line out / balanced Output / 1V/ 0dB
Tone controls	Bass ± 10 dB-100Hz Treble ± 10 dB-10KHz
Controls	13 volume controls for INPUT 1-10, AUX1-2 and tel. paging 1 master volume control 1 treble control 1 bass control
Power supply / Consumption	230 Vac ($\pm 5\%$)-50Hz / 145W (MA-1206 series) 230 Vac($\pm 5\%$)-50Hz / 315W (MA-1212 series)
Direct current draw (24V)	5A (MA-1206 series) 10A (MA-1212 series)
Dimensions(L×H×W)	480×320×150 mm (18.9"×12.6"×5.9")
Weight	9kg (19.84 lb) (MA-1206 series) 12kg (24.46 lb) (MA-1212 series)

Example of possible connections



WARRANTY STATEMENT

Electro-Voice products are guaranteed against malfunction due to defects in materials or workmanship for a specified period, as noted in the individual product-line statement(s) below, or in the individual product data sheet or owner's manual beginning with the date of original purchase. If such malfunction occurs during the specified period, the product will be repaired or replaced (at our discretion) without charge. The product will be returned to the customer prepaid.

Exclusions and Limitations

The Limited Warranty does not apply to: (a) exterior finish or appearance; (b) certain specific items described in the individual product-line statements below, or in the individual product sheet or owner's manual; (c) malfunction resulting from use or operation of the product other than as specified in the product data sheet or owner's manual; (d) malfunction resulting from misuse or abuse of the product; or (e) malfunction occurring at any time after repairs have been made to the product by anyone other than Electro-Voice Service or any of its authorized representatives.

Obtaining Warranty Service

To obtain warranty service, a customer must deliver the product to Electro-Voice Service or to any of its authorized service representatives, together with proof of purchase of the product in the form of a bill of sale or receipted invoice. A list of authorized service representatives is available from Electro-Voice Service at 12000 Portland Avenue, Burnsville, Mn55337. Ph: (887)863-4166.

Incidental and Consequential Damages Excluded

Product repair or replacement and return to the customer are the only remedies provided to the customer. Electro-Voice shall not be liable for any incidental or consequential damages including, without limitation, injury to persons or property or loss of use. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

Other rights

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Speakers and Electronics

Electro-Voice Speakers and Speaker Systems are guaranteed against malfunction due to defects in Materials or workmanship for a period of five (5) years from the date of original purchase. The Limited Warranty does not apply to burned voice coils or malfunctions such as cone and/or coil damage resulting from improperly designed enclosures. Electro-Voice active electronics associated with the speaker systems are guaranteed for three (3) years from the date of original purchase. Additional details are included in the Uniform Warranty statement.

Electro Voice

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www.electrovoice.com

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U.S.A and Canada only. For customer orders, contact Customer Service at:
800/392-3497 Fax:800/955-6831

Europe, Africa, and Middle East only. For customer orders, contact customer Service at:
+ 49 9427-706 0 Fax: + 49 9421-706 265

Other International locations. For customer orders, contact Customer Service at:
+ 1 952 884-4051 Fax: + 1 952 887-9212

For warranty repair or service information, contact the Service Repair department at:
800/685-2606

For technical assistance, contact Technical Support at: **886/78 AUDIO**
Specifications subject to change without notice.