

# MPA-124U

PA AMPLIFIER  
WITH USB/SD/MP3 PLAYER

## INSTRUCTION MANUAL



**FONESTAR**

We take this opportunity to thank you for buying this product.

We recommend you read the instruction manual before switching on the machine and follow the instructions that are given. Keep the manual for future reference.

## SECURITY AND THE ENVIRONMENT

### ELECTRICAL SECURITY

Check that the current in the mains connection where the machine is to be installed corresponds to the power supply of the machine.

To avoid damaging the equipment, electrical shocks, fire or physical injury when you connect or disconnect the equipment from the power supply, pull the plug firmly out of the mains socket holding the plug, never the cable.

Always do this with dry hands.

Keep the power supply cable far from sources of heat. Do not put heavy objects on top of it or change it.

Clean dust and dirt off the power supply cable regularly.

Do not open the machine; you could get an electric shock.

### CAUTION

While installing the machine, make sure it is switched off and unplugged.

Do not open the machine. Touching the internal parts is dangerous and you could receive an electric shock.

The machine must not be splashed or dripped on. Never place recipients with liquid inside on the machine.

Do not place anything inside the machine.

### LOCATION

Place the equipment on a horizontal surface with enough space around it to allow ventilation.

Avoid direct sunlight, heat sources and excessive dust.

Do not place the machine near magnetic fields or static electricity.

Do not use surfaces which vibrate or receive impact.

Do not pile machines on top of one another.

### VENTILATION

Never block or cover the ventilation slits on the machine.

Do not expose it to direct sunlight or place it near sources of heat.

### PERIODS OF INACTIVITY

When the machine is not going to be used for a long period of time, disconnect it from the mains.

If you are using an adapter, take into account that it will continue using electricity even if the machine is switched off. If it is not going to be used for a long period of time, disconnect it from the mains.

### THE ENVIRONMENT

To save energy, switch the machine off when you are not going to use it for a long time. The machine could contain substances that are harmful to the environment or human health. To minimize the effect of these substances the machine must be correctly managed and recycled when you decide to dispose of it.

When you dispose of it remember: it cannot be thrown into a conventional rubbish bin.

If it contains or uses batteries, these must be disposed of separately.

The machine (without batteries) must be disposed of correctly. Put it in a container specially intended for the collection of electronic and electrical appliances, at the dump or hand it over to the dealer when you purchase similar equipment, so that the dealer can dispose of it correctly (at no added cost).

## SIGNIFICANCE OF THE SYMBOLS ON THE MACHINE\*



The symbol formed by the expression “Class 1 laser product” written in a rectangle indicates that visible or invisible laser radiation could be produced. Avoid direct exposure to the laser.



The symbol formed by a ray of lightning inside a triangle shows that the machine has connection terminals or a circuit with areas with a current which could cause an electric shock, even in normal working conditions.



The symbol formed by an exclamation mark in a triangle shows that the instruction manual must be referred to for information on how the machine works and its use.



The symbol formed by one square inside another square shows that the machine has double electrical insulation.



The European Community symbol shows that the machine complies with the current European Union legislation, as well as its transposition to local legislation.



The symbol of a rubbish bin crossed out and over a horizontal line shows that when the product is disposed of it must be done properly, placing it in a special selective electronic and electrical equipment container or through a dealer when purchasing a similar product, at no additional cost. It also shows that the machine was put on the market after 13th August 2005 (European Community Directive 2002/96/CE of Electrical and Electronic recycling, and its Spanish equivalent R.D.208/2005).

In accordance with what is set out in the aforementioned decree, FONESTAR is registered in the RAEE (Registro de Aparatos Eléctricos y Electrónicos) in a special section REI (Registro de establecimientos Industriales), with the entry number 001851.

\*It is possible that some of these symbols do not appear on the machine.

### EXEMPTION OF LIABILITY

The characteristics of the equipment and the content of the manual can change without forewarning.

**FONESTAR, S.A.** does not assume responsibilities regarding the inappropriate use of the equipment or the information supplied in this instruction manual, and specifically disclaims any implied liability for marketability or fitness for any other use.

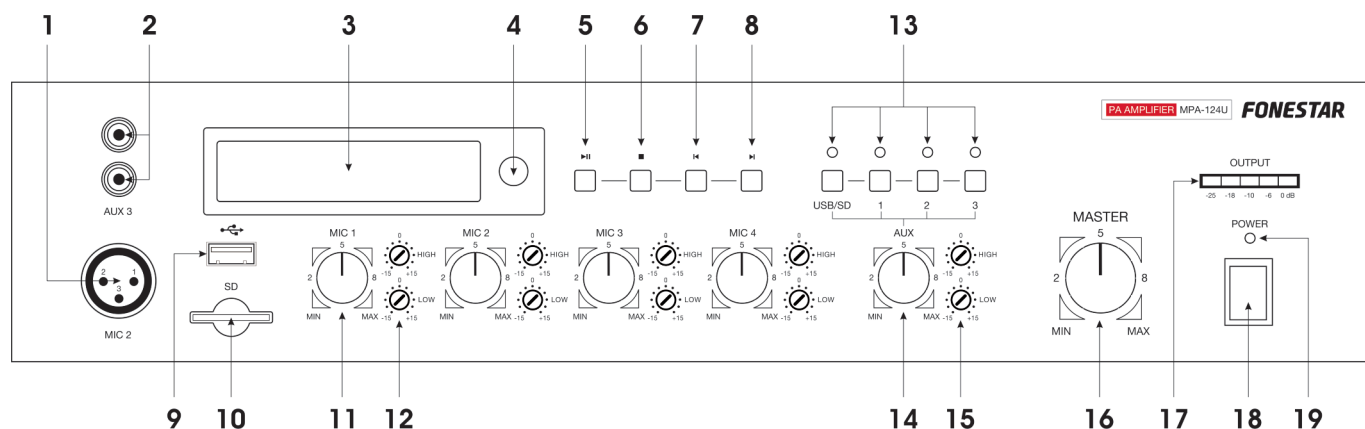
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## DESCRIPTION

- PA amplifier with USB/SD/MP3 player.
- Selector with 3 aux inputs and microphones with selectable priority.
- Different chimes and alarm. Output for priority in 24 V attenuators.
- 180 W maximum, 120 W RMS.

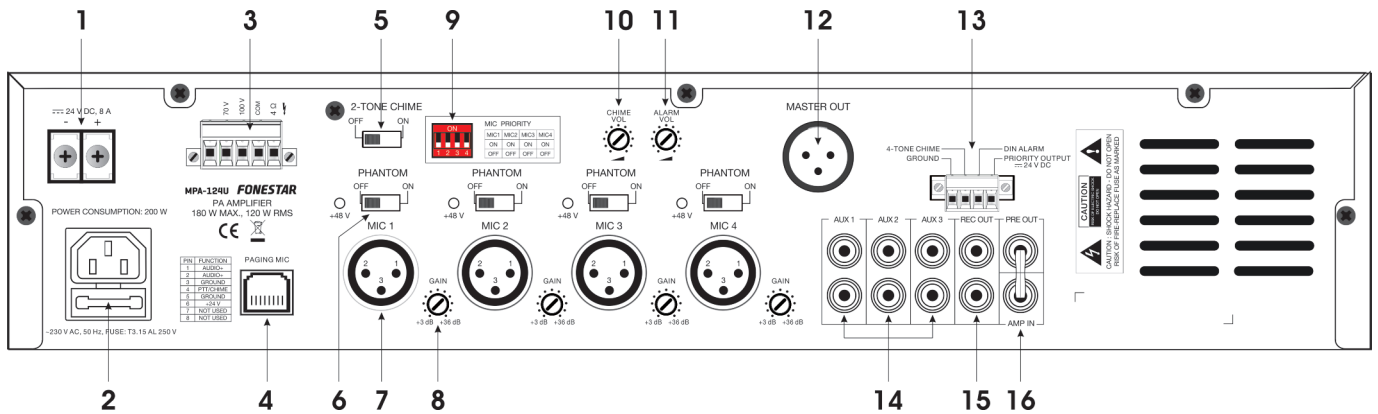
## CONTROLS AND FUNCTIONS

### FRONT PANEL



- 1.- **MIC 2**: microphone 2 input, XLR connector.
- 2.- **AUX 3**: aux line 3 input located on the front panel, 2 x RCA connectors.
- 3.- USB/SD/MP3 player module information display.
- 4.- Remote control infrared receiver.
- 5.- **▶||**: start and pause playback.
- 6.- **■**: button which allows playback to be stopped.
- 7.- **◀**: button which allows the previous track to be selected.
- 8.- **▶**: button which allows the next track to be selected.
- 9.- USB storage device connection port.
- 10.- **SD**: SD memory card connection slot.
- 11.- **MIC 1-4**: microphone inputs 1 to 4 volume control.
- 12.- Bass (LOW) and treble (HIGH)  $\pm 15$  dB tone controls for each microphone input 1 to 4.
- 13.- Buttons which allow the required input to be selected as an AUX channel audio source. It is possible to choose among the USB/SD/MP3 player module and aux inputs AUX 1, AUX 2 and AUX 3.
- 14.- **AUX**: volume control of the selected audio input (USB/SD, AUX 1, AUX 2 or AUX 3) in the AUX channel.
- 15.- Bass (LOW) and treble (HIGH) tone controls for the AUX channel.
- 16.- **MASTER**: general output volume control.
- 17.- **OUTPUT**: LED output signal level indicators. Regulate the individual volume control of the inputs or the general output volume control MASTER so that the level does not exceed the green LED indicators. The red LED indicator lights up when there is saturation or a distorted signal which could damage the amplifier or the loudspeakers.
- 18.- Amplifier on/off switch.
- 19.- **POWER**: amplifier LED power indicator.

## REAR PANEL



- 1.- 24 V DC power supply terminals. In order to operate the amplifier with 24 V DC power supply, batteries, emergency power supply system, etc. Make the connection with 2.5 mm<sup>2</sup> cable section to the - negative and + positive terminals.
- 2.- **AC socket:** for connection of AC power supply cable.
- 3.- Output for connection of low impedance 4 Ω loudspeakers and in high impedance lines 100 or 70 V. Connect the loudspeaker line between the COM terminal and the required impedance or line in volts (V).  
**Note:** it is not possible to use different types of loudspeaker output at the same time.
- 4.- **PAGING MIC:** paging mic. input connector, RJ-45 connector. Use a generic paging microphone adapting the original microphone connector to an RJ-45 connector. Follow the pin ratio shown on the rear panel of the amplifier.  
The volume of the microphone connected in this input is adjusted with the control MIC 1.  
**Note:** bear in mind that this connector always supplies 24 V DC phantom power supply.
- 5.- **2-TONE CHIME:** switch which allows 2 chimes to be activated when it is connected to the paging microphone in the PAGING MIC input.
- 6.- **PHANTOM +48 V:** switch which allows the phantom 2 and 3-pin power supply of 48 V to be activated/deactivated for each of the microphone inputs 1 to 4. The LED indicator lights up in red when the phantom power supply is activated.
- 7.- **MIC 1-4:** microphone inputs with XLR connector, accepting signals from balanced and unbalanced dynamic microphones and balanced electret condenser microphones that require 48 V phantom.
- 8.- **GAIN:** gain controls for the microphones connected to the inputs MIC 1-4.
- 9.- **MIC PRIORITY:** microswitches which allow the priority in microphones 1 to 4 to be activated over the rest of the inputs.
- 10.- **CHIME VOL:** chime volume control 4-TONE CHIME.
- 11.- **ALARM VOL:** alarm volume control DIN ALARM.
- 12.- **MASTER OUT:** balanced line output, XLR connector. Signal output to connect to another amplifier.

13.- Contact closures.

**4-TONE CHIME and GROUND:** short-circuits these two contacts to activate a 4-tone chime warning. The volume of the chimes can be adjusted with the CHIME VOL control.

**DIN ALARM and GROUND:** short-circuits these two contacts to activate an alarm. The alarm volume can be adjusted with the ALARM VOL control.

**PRIORITY OUTPUT 24 V DC:** this connector supplies a tension of 24 V DC when the alarm is activated, the chimes CHIME or there is a microphone message PAGING MIC. This voltage can be used as a control signal.

14.- **AUX 1-2-3:** aux line inputs. Allow connection of audio sources, 2 x RCA connectors.

15.- **REC OUT:** aux line output. Signal output for recording, mixer, amplifier, etc., 2 x RCA connectors.

16.- **AMP IN/PRE OUT:** connection bridge between the 2 RCA connectors that communicate the preamplifier output signal (PRE OUT) with the input of the final stage of the amplification (AMP IN).

## REMOTE CONTROL

1.- **▶||:** starts and pauses playback.

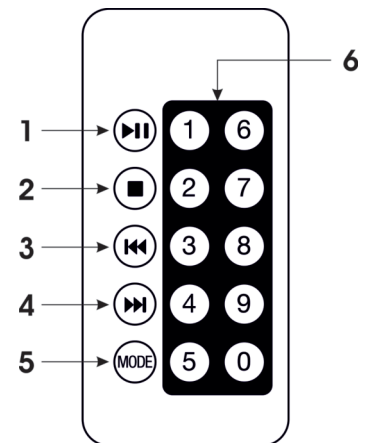
2.- **■:** button which stops playback.

3.- **◀◀:** allows rewinding to previous track.

4.- **▶▶:** allows forwarding to next track.

5.- **MODE:** allows playback mode to be changed among the following: play all tracks (ALL), repeat one track (REP 1), repeat all tracks (REP) and random play (RANDOM).

6.- Direct selection number buttons.



## CONNECTION

Make the connections with the amplifier and all the components of the audio system switched off and disconnected from the power supply.

Firstly, connect the audio sources through the AUX inputs 1-2-3.

Connect the microphones to the MIC inputs 1 to 4, and select if you need to apply 48 V phantom power supply (for condenser microphones) or not (dynamic microphones).

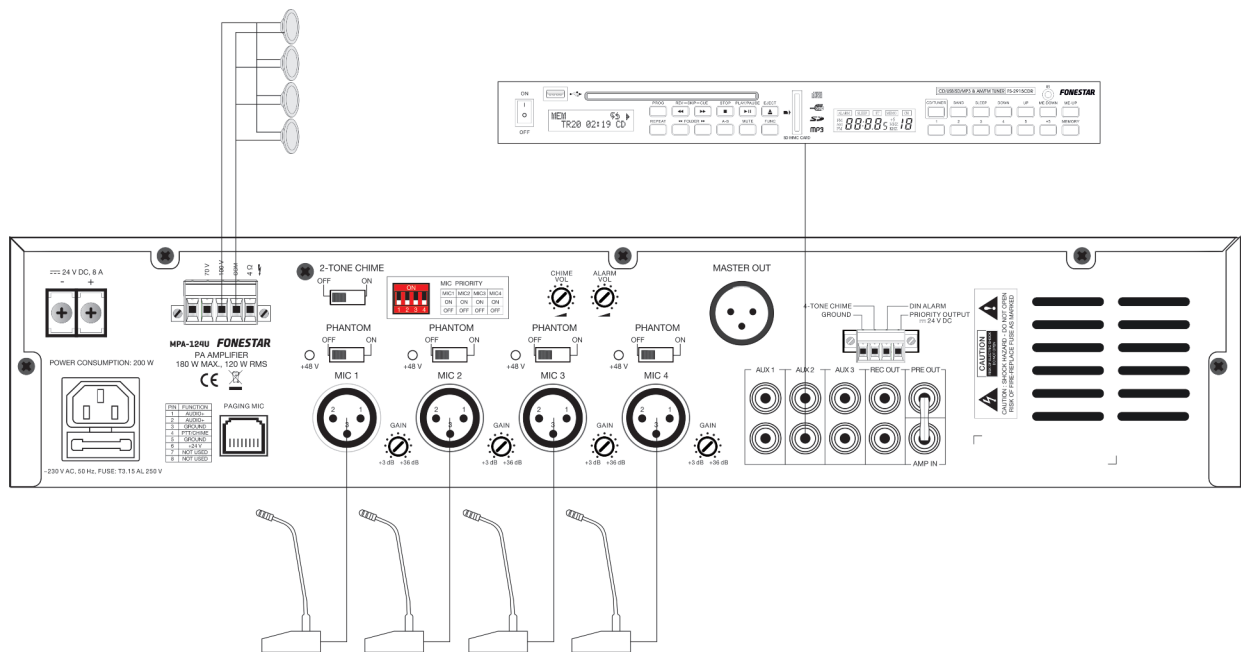
If you wish to record the amplifier output, or connect it to another device, use the MASTER OUT (balanced) or REC OUT outputs.

Use the low impedance 4  $\Omega$  output or the 100, 70 or 50 V line high impedance output, depending on the type of loudspeakers that you are going to connect. Do not use both types of output at the same time.

If using the low impedance output, you must connect the loudspeakers in a series/parallel circuit so that the charge impedance of the loudspeakers is the same as the amplifier output impedance and the power supplied by the amplifier does not exceed that withstood by the loudspeakers.

If using the 100, 70 or 50 V high impedance line output, you must connect all the loudspeakers in parallel and the sum of the power of all the loudspeakers must not exceed the power supplied by the amplifier.

Once all the connections have been made according to your needs, connect the equipment to the mains and switch it on. After use, do not forget to switch it off and disconnect the equipment from the mains.



## INPUT PRIORITY

The priority function automatically reduces the level of the inputs with less priority so that the message broadcast through those of greater priority can be clearly heard.

The microphone inputs MIC 1 to 4, together with the chimes and the alarm signal, have maximum priority over inputs AUX 1-3 and the USB/SD/MP3 player module.

The priority of inputs MIC 1 to 4 is activated with the microswitches MIC PRIORITY located on the rear panel and is activated when a signal is detected in the corresponding input.

The chimes are activated by contact closure 4-TONE CHIME and GROUND. Likewise, the alarm is activated by the contact closure DIN ALARM and GROUND.

When the priority is activated the selected aux input automatically attenuates so that the message, warning or alarm are clearly heard.

## TECHNICAL SPECIFICATIONS

	<b>MPA-124U</b>
<b>CHARACTERISTICS</b>	PA amplifier. USB/SD/MP3 player. Phantom power supply. Selectable priority paging. Chimes and alarm. 3 aux input selector.
<b>POWER</b>	180 W maximum, 120 W RMS
<b>RESPONSE</b>	50-16,000 Hz $\pm$ 3 dB
<b>DISTORTION</b>	Harmonic: < 0.5% at 1 kHz
<b>INPUTS</b>	1 remote mic. with PTT and chimes, RJ45 4 balanced mics., XLR 2,000 $\Omega$ 2.5 - 100 mV, adjustable 3 aux, 2 x RCA 470 $\Omega$ 350 mV 1 amp in, RCA 10,000 $\Omega$ 1 V
<b>OUTPUTS</b>	1 rec out, 2 x RCA 470 $\Omega$ 200 mV 1 pre out, RCA 470 $\Omega$ 1 V 1 master out, XLR 47,000 $\Omega$ 1 V
<b>CONTROLS</b>	Tone: bass and treble through input, trimmer type Volume: mic. 1 to 4, aux and general volume
<b>PHANTOM</b>	48 V in mics. 1 to 4, selectable
<b>PRIORITY</b>	Mics. 1 to 4 through signal level, selectable Chimes on contact closure
<b>CHIMES</b>	2 chimes, warning and on contact closure.
<b>PROTECTION</b>	Temperature, overload, short circuit
<b>IMPEDANCE</b>	4 $\Omega$ and 100 and 70 V lines, euroblock
<b>POWER SUPPLY</b>	230 V AC, 200 W and 24 V DC, 192 W
<b>DIMENSIONS</b>	483 x 89 x 340 mm depth. 2 U 19" rack



## WARRANTY

This product has been tested and has passed the corresponding quality control prior to being put on the market. **FONESTAR** guarantees the suitability of the product for its specified use during a period of 2 years from the delivery date and commits itself to repair or substitute the goods as expressed in the Spanish law 'La Ley General para la Defensa de los Consumidores y Usuarios, Real Decreto Legislativo 1/2007 16 Noviembre.

The lack of conformity in the first six months after purchase, due to a manufacturing defect, will be rectified with no more than showing the proof of purchase. After six months **FONESTAR** reserves the right to demand proof of the product being sold with that problem.

This warranty does not include damage produced by: inappropriate use or negligence, accidents, worn out parts due to use, breakages, burns, spilt liquids or other substances, excessive humidity, battery deterioration and internal manipulation of the device, the software or its components by unauthorized persons, and in general any use that is unrelated to the nature and purpose of the product.

If any service is needed during the warranty period because of lack of conformity, please contact the business or distributor where the product was purchased in no more than 2 months after being conscious of the problem. It is only necessary to contact **FONESTAR** if it is impossible or imposes an undue burden for them to solve it.

To benefit from this warranty it is necessary to show the proof of purchase with the date clearly visible, with no corrections or crossing out.

This document adds information, and never decreases the consumers' rights, which in all cases are protected by the Spanish law 'La Ley General para la Defensa de los Consumidores y Usuarios, Real Decreto Legislativo 1/2007 16 Noviembre.



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