



P650C

**60w 100v/Low impedance Mixer
Amplifier with USB/FM and Bluetooth**

IMPORTANT

Installer and Users please note:

These instructions should be read carefully and left with the user of the product for future reference.

Before Use

You must inspect the product including its cable and plug for any signs of damage. If the product is damaged, DO NOT use it, and contact your supplier immediately.

Product Safety

- This product can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the product in a safe way and understand the hazards involved.
- Children shall not play with the product.
- Cleaning and user maintenance shall not be made by children without supervision.
- For indoor use only.
- Make sure that air intakes and exhausts are not obstructed.
- Do not use this product in the immediate surroundings of a bath, shower or swimming pool.
- Do not place the mains lead beneath a carpet or rug.
- Do not insert any object into this product through the grilles. This may damage the heater or result in overheating or electric shock.

PAT Testing

When used in a workplace, this product must be safety-tested yearly by a qualified electrician (PAT Tested) in order to comply with the Electricity at Work Regulations. If hired out, it must be PAT tested prior to each hire. We recommend that it is PAT tested regularly when used in a domestic environment.

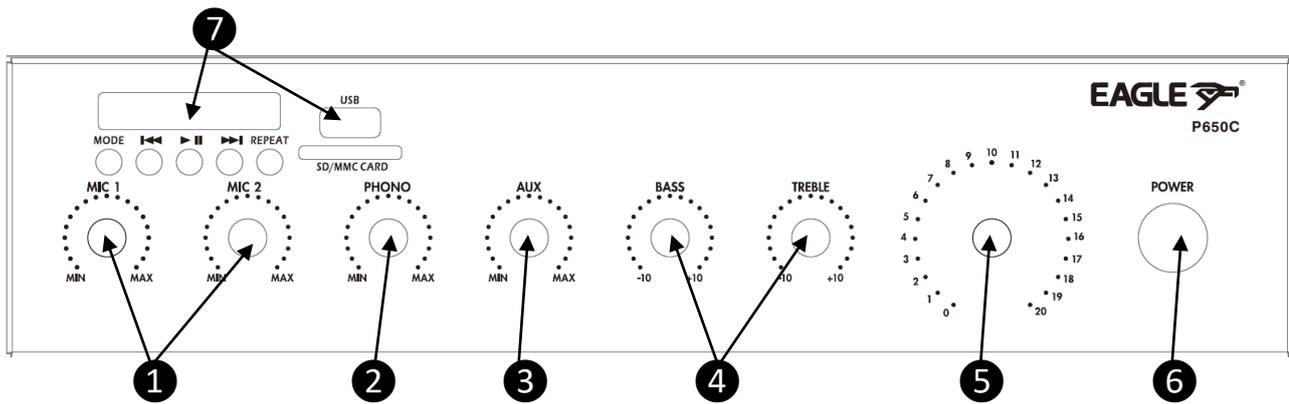
General Safety Requirements

Domestic wiring must be tested periodically by a qualified electrician at least once every 10 years or at every change of occupancy. For office and retail premises, and buildings such as village halls, the wiring must be inspected at least once every 5 years. It is recommended that all buildings be fitted with smoke alarms (it is mandatory for new buildings).

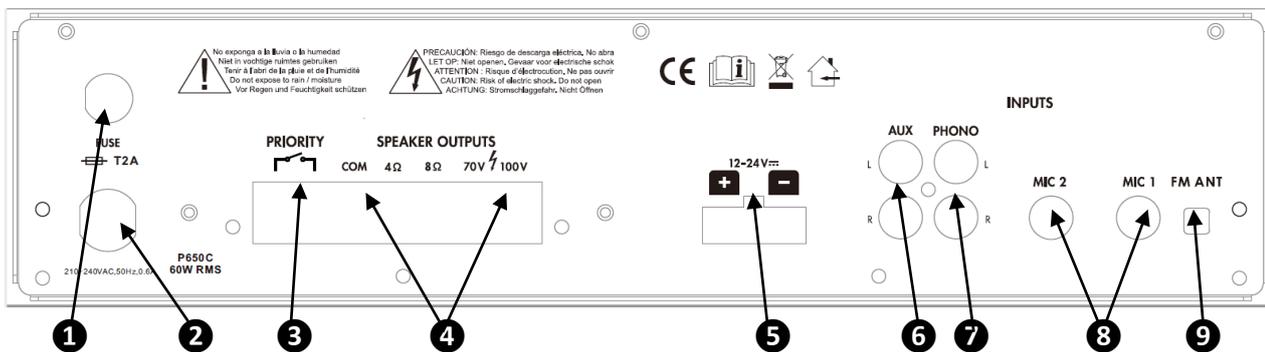
Disposal and Recycling

You must not dispose of this appliance with domestic household waste. Most local authorities have specific collection system for appliances and disposal is free of charge to the end-user. When replacing an existing appliance with a similar new appliance your retailer may take the old appliance for disposal.

Front Panel and Rear Panel Layout



- 1 Mic volume controls
- 2 Phono
- 3 Aux volume control
- 4 Tone controls
- 5 Master volume control
- 6 Power switch
- 7 Media Player MP3 Player, FM Radio & Bluetooth



- 1 AC Fuse 2A
- 2 AC Power Input
- 3 MIC Priority Contacts
- 4 4Ω, 8Ω, 70V, 100V Outputs
- 5 24 / 12 VDC Emergency backup supply
- 6 AUX RCA Input
- 7 Phono RCA Input
- 8 MIC1, MIC2 Unbalanced 6.3 mm phone jack inputs
- 9 FM Antenna
- 10 Fuse 2A

Installation

This unit must only be installed by a competent person after taking a site survey to establish that the structure is suitable and that there are no existing plumbing, gas, electrical services or other obstructions already in place.

The P650C must be earthed. NEVER disconnect the earth, even in an attempt to prevent „hum“. If the earth were disconnected, it could result in equipment connected to the input (even indirectly through a mixer), such as microphones, becoming live in the event of a fault (such as a liquid spillage into the amplifier).

Install the P650C away from sources of moisture; avoid areas where drinks can be spilled onto the amplifier as this may cause serious damage.

Avoid using microphone leads longer than 5 m. If longer microphone cable runs are required, then an amplifier with balanced-line microphone inputs is required.

For connection of 100 V line loudspeakers, two-core 0.75mm² cable should be used. Loudspeaker cables may not be run in the same conduit as mains cabled.

100 Volt line loudspeakers.

The 100V line system was developed to allow a long distance between loudspeakers and the amplifier, and to allow a large number of speakers to be connected to each amplifier.

In order to do this, the audio is transmitted at a much higher voltage (100Vrms) than with a conventional low-impedance amplifier, such as a hi-fi or disco amplifier.

Each loudspeaker is coupled to the amplifier by an inbuilt transformer. The transformer is generally fitted with a switch or a set of terminals that can be used to select the power supplied to the speaker. Thus, every loudspeaker connected to the 100V line can be set to the most appropriate power level.

Inputs

Microphones:

Connect microphones to the sockets on the rear panel, use a mono 6.3mm jack plug. If the microphone has a screened two-core cable, connect one core to the screen. Use Low impedance (30-600 ohm) Microphones.

Line inputs:

Connect any line inputs (such as radio, CD player, MP3 player) to the AUX or PHONO inputs on the rear panel using RCA phono plugs. AUX or PHONO cannot be used at the same time this can be selected using the switch on the rear panel. These inputs are generally used for background music.

Outputs

Connect the loudspeakers to the screw terminals on the rear panel.

Low Impedance

Connect low-impedance speakers between the 4 or 8Ω terminal and the COM terminal. DO NOT connect a combined impedance lower than 4 Ω. Make no connections to the 100V terminal.

The following combinations MAY be connected

1 × 16 Ω	16 Ω
2 × 16 Ω	8 Ω
3 × 16 Ω	5.3 Ω
4 × 16 Ω	4 Ω
1 × 16 Ω, 1 × 8 Ω	5.3 Ω
2 × 16 Ω, 1 × 8 Ω	4 Ω
2 × 8 Ω	4 Ω
1 × 4 Ω	4 Ω

The following combinations MUST NOT be connected

5 × 16 Ω	3.2 Ω
3 × 8 Ω	2.7 Ω
4 × 8 Ω	2 Ω
1 × 4 Ω, 1 × 8 Ω	2.7 Ω
1 × 16 Ω, 2 × 8 Ω	3.2 Ω
2 × 4 Ω	2 Ω

High Impedance 100V / 70V

Connect 100 V line speakers between the 100V terminal and the COM terminal or Connect 70V line speakers between the 70V terminal and the COM terminal

ADD UP the total of the stated powers on each loudspeaker, or, if the speakers are fitted with selector switches, add the selected power. The total power of all the connected speakers MUST BE LESS THAN 60 W. DO NOT connect low impedance speakers to the 100V or 70V terminals, Make no connection to the 4-8-16 Ω

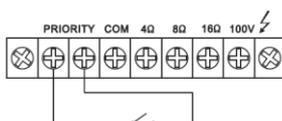
Operation

ALWAYS turn the MASTER volume controls to zero before switching on; do not touch the speaker outputs whilst the amplifier is running as this could result in electric shock.

- Set the MASTER level control to about 75% of full clockwise rotation.
- Then adjust the microphone level controls MIC1, MIC2, to achieve the desired volume
- Adjust the line level control for a comfortable background music level
- Adjust the treble and bass controls for the greatest clarity when using the microphone.
- Note that the MUTE facility only operates on microphones connected to the MIC1 input.

Mute Control (Priority)

When the terminals are a short circuit it will mute MIC2, AUX & PHONO inputs and MIC 1 is then priority (this can be used in conjunction with a fire alarm trigger for announcements)



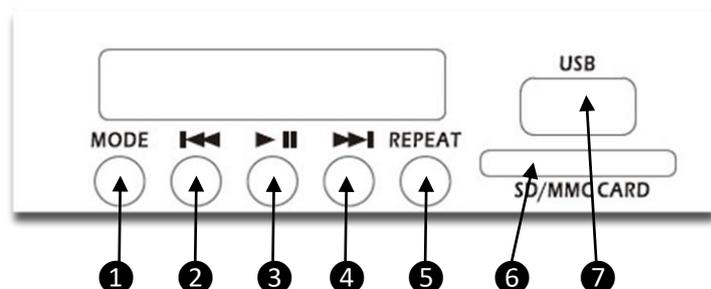
The amplifier has a built-in digital Media Player which has 4 modes, Bluetooth, USB, SD card and FM tuner.

Pressing the MODE button selects either Bluetooth FM tuner.

Output from the media player is controlled by the master volume and the Vol- and Vol+ on the remote control by pressing and holding the Previous or Next buttons.

Navigation for all 3 modes is provided by buttons beneath the LED display.

USB mp3 Audio Playback



- ➊ MODE Input source selector FM / Bluetooth
- ➋ Previous
- ➌ Play / Pause Track
- ➍ Next
- ➎ Repeat mode setting (ALL or ONE)
- ➏ Insert an SD/MMC card into the SD slot (with the contacts facing up) the display will show “Lod” to show that it is loading the media, Music will start to play once loaded.
- ➐ Insert a USB pen drive into the USB port and the display will show “Lod” to show that it is loading the media, Music will start to play once loaded.

Normal playback will play through all tracks on the selected storage device. Press the Repeat ➎ button once to continually repeat **ALL** tracks in the device, press Repeat ➎ again to repeat just the current track **ONE** will be shown on the display.

Pressing the Previous ➋ track button briefly steps backwards through tracks on the memory device. Pressing the Next ➌ track button briefly steps forwards through tracks on the memory device. To pause the current track, press the Play/Pause ➌ button and press it again to resume playback.

The LED digital display will show the track number when a track is selected and then the elapsed time during playback.

Bluetooth Mode

Pressing the mode button until the display shows “**bLUE**” this enters the Bluetooth mode. On a smart phone or other Bluetooth enabled device, scan for available devices and look for “**Bluetooth**”. Select this to pair and once connected wireless audio playback should be enabled. Once paired, the smartphone or other device should connect automatically when in range of the amplifier and when Bluetooth is enabled.

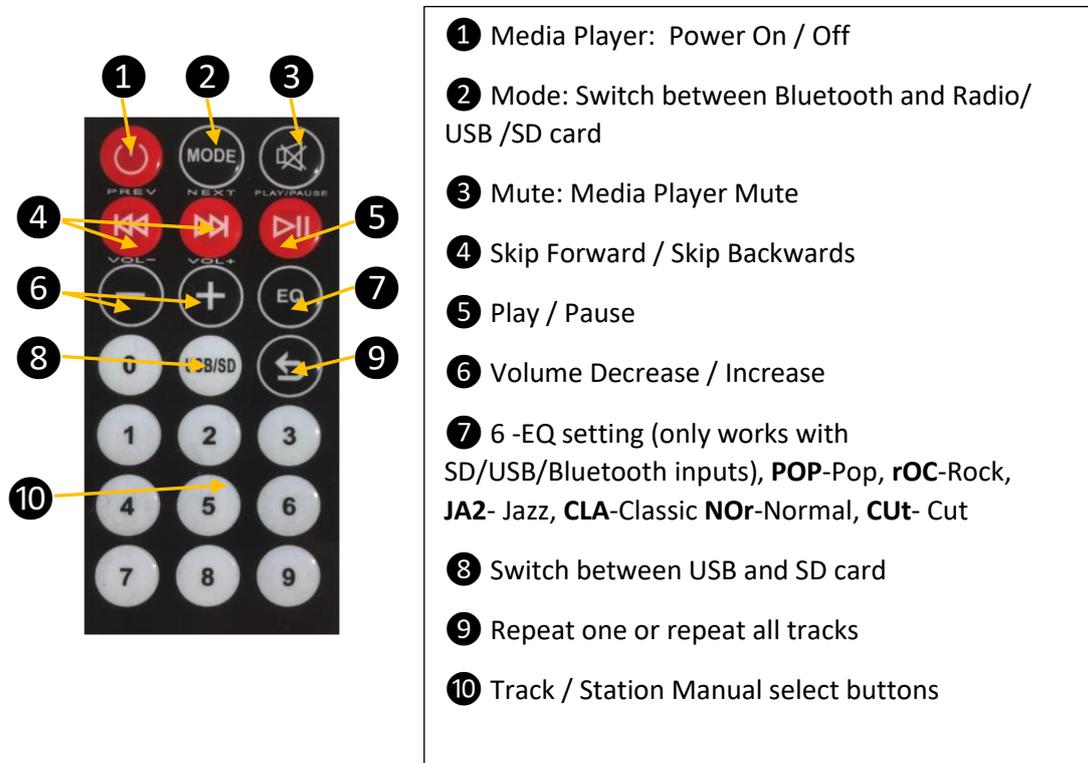
FM Tuner

Pressing the mode button until “FM” appears in the upper part of the display enters FM tuner mode. The display will show the current radio frequency in MHz’s. Connect an FM antenna to the socket on the rear panel.

Press Play/Pause to initiate the auto-tune process, which will scan for the strongest frequencies and store them automatically as P01, P02, P03, etc. These stored stations can then be selected using the Previous ② and Next ④ navigation buttons. The Program number will be displayed briefly, followed shortly by the tuned frequency.

Remote Control

The amplifier is supplied with an infrared remote control, this controls functions of the Media Player only.



TECHNICAL SPECIFICATION

Weight (excluding PSU).....	50g
Dimensions.....	27x41x118mm
Power Supply.....	Input 230V~ / Output 12/24Vdc
Frequency Response.....	100-18000 Hz
Power.....	1 x 60W
Bluetooth Version.....	4.0

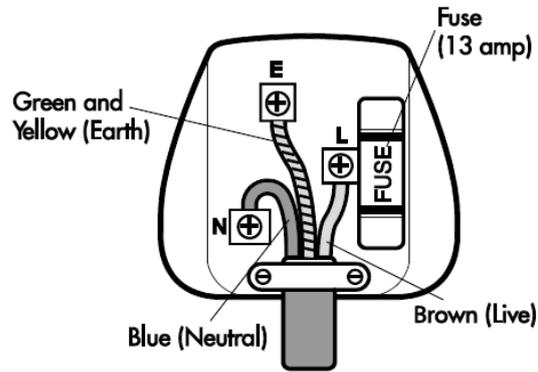
Maintenance

Before cleaning, turn the amplifier off, and disconnect from the mains supply. The product may then be cleaned using a damp cloth with a drop of washing-up liquid to remove any dust or dirt from the case. Do not use stronger detergents or solvents as these may damage the surface finish.

Using a dry 1" (25mm) paint-brush, remove any dust from the grilles.

If the mains lead is damaged, it must be replaced by the manufacturer or an authorised service centre.

If the mains plug needs to be replaced, proceed as follows:



- Connect the brown wire to the terminal labelled "L".
- Connect the blue wire to the terminal labelled "N".
- Connect the green/yellow wire to the terminal labelled with the earth symbol or "E".
- Make sure that the cord-grip is positioned correctly (over the outer sheath of the cable) and is fully tightened.

SERVICE WARRANTY

Electrovision guarantees the product free from defects in materials and workmanship for a period of one year. Should this unit be operated under conditions other than those recommended, at voltages other than the voltage indicated on the unit, or any attempts made to service or modify the unit, then the warranty will be rendered void.

The product you buy may sometimes differ slightly from illustrations. This warranty is in addition to, and does not affect, your statutory rights.

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