HYUNDAI
ELECTRONICS

120W MINI MIXER AMPLIFIER WITH USB/SD/FM/BLUETOOTH

HYU-PA-AP120002

USER MANUAL

GENUINE PRODUCT OF
HYUNDAI CORPORATION

SAFTY WARNINGS!

1. Read and keep these instructions.
2. Heed all warnings and follow all instructions.
3. Do not use this apparatus near water.
4. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
5. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus that produce heat.
6. 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 is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
7. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
8. Only use attachments/accessories specified by the manufacturer.
9. 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.
10. Unplug this apparatus during lightning storms or when unused for long periods of time.
11. 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.
12. This appliance shall not be exposed to dripping or splashing water and that no object filled with liquid such as vases shall be placed on the apparatus.
13. Plug this apparatus to the proper wall outlet and make the plug to be disconnected readily operable.
14. Main plug is used as disconnected device and it should remain readily operable during intended use. In order to disconnect the apparatus from the mains completely, the mains plug should be disconnected from the mains socket outlet completely.
15. WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
16. An appliance with a protective earth terminal should be connected to a mains outlet with a protective earth connection.

WARNING!

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT USE THE PLUG WITH
AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES
CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE
THIS APPLIANCE TO RAIN OR MOISTURE.
TO PREVENT ELECTRICAL SHOC
K, MATCH WIDE BLADE PLUG TO WIDE SLOT, FULLY INSERT.



INTRODUCTIONS

Description

The mini Mixer Amplifier with MP3, FM tuner & blue tooth, its rated power output from 120W,240W,350W and 500W, it is ideal for school, super market, bank, hotel BGM and speech use. It is all in one solution with media players, pre amplifier and mixer power amplifier into one unit, which is economy but of high reliable performance.

It integrates audio sources into a mixer amplifier, plus Mic1(6.3mm) and Mic/Line input 2 (XLR), one line input, one Tel input and one line output. Mic1 VOX with priority except Mute and EMC inputs. One USB and one SD slots on front provide easy access and operation for installer and end-user.

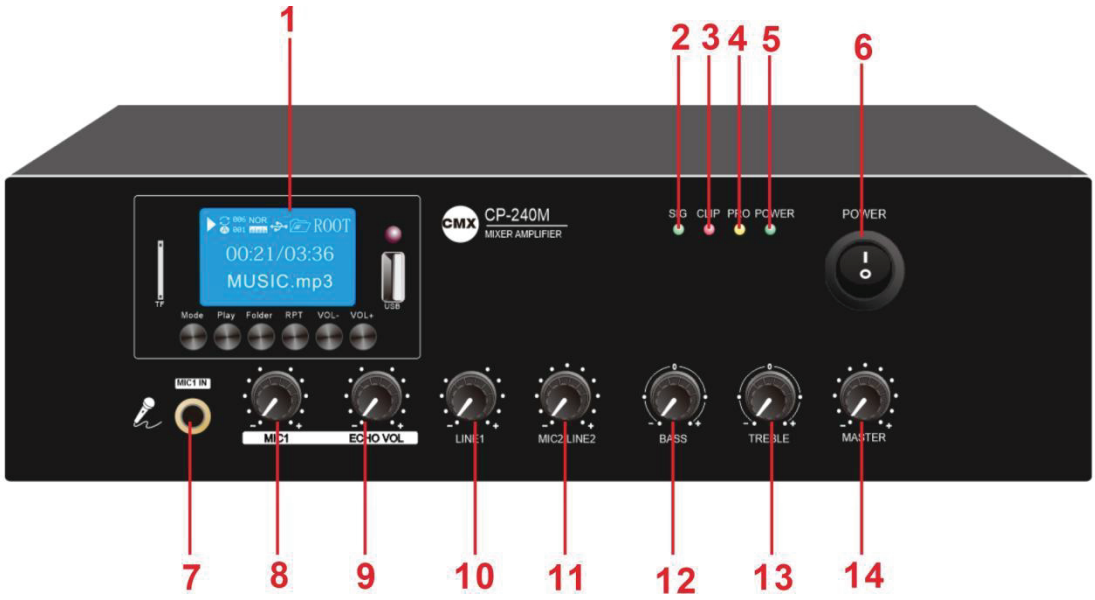
100V and 4-8 Ohms speakers outputs enable to divide the multiple loudspeakers for whether commercial audio system or low impedance pro sound system. The total speaker loading shall be 80% of the amplifier rated power output.

The mini mixer amplifier is designed with complete protection of overload, short circuit and high temp to avoid any damage. These amplifiers with echo features are suitable for applications in bank, mosque, school, hotel, restaurant, theme centers and shopping center. Both AC 110V-230V and 24V DC power supply system for car or vessel mobile sound system.

Features

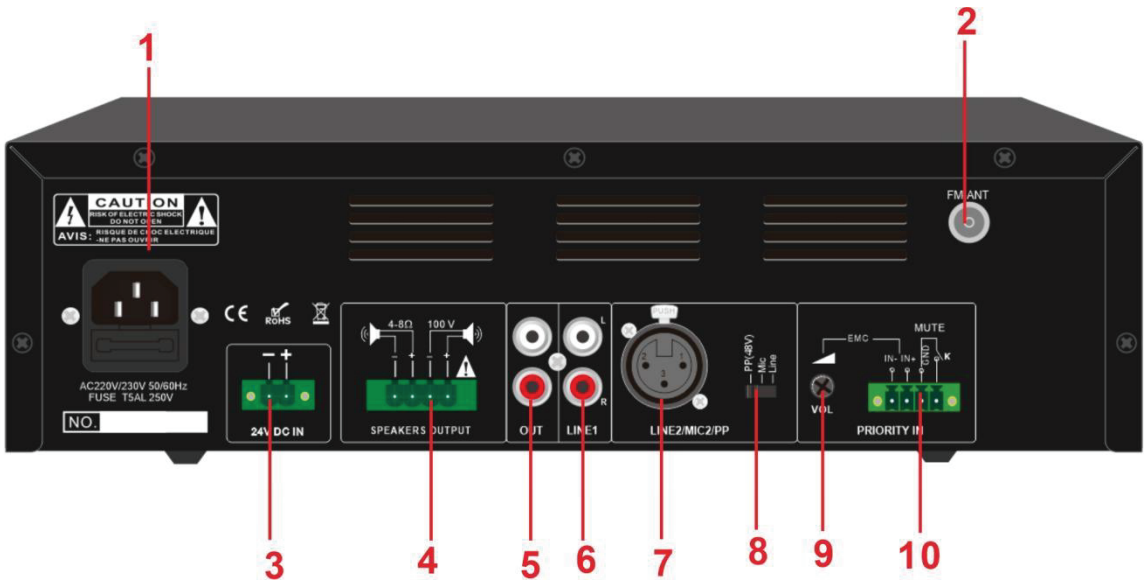
- Compact mini size public address amplifier
- Tabletop mixer amplifier with Mp3 player, FM radio & bluetooth
- Rate power output at 120W & 240W & 350W & 500W
- Speaker output of 100V & 4-8 Ohm
- Mp3 player with USB/SD input on front panel, IR remote control for Mp3 player, FM radio and bluetooth
- LED indicators for power, clip, protect and signal
- Mic1 of 6.3mm Jack input on front panel
- Mic2/line2 switchable input balanced XLR with +48V phantom power
- Line1 input of RCA input and one RCA line output
- With mute and EMC input from fire alarm system
- Input priority from high to low: MUTE, EMC and others inputs (Mic1 and all others inputs)
- Mic1 input of echo features and echo volume control.
- With Echo features and volume control ideal for mosque and religious applications
- Volume control for Mic1, Echo, line 1, Mic2/line2, bass/treble and master
- Complete amplifier protection includes short-circuit, clip, overload and high temp
- 110V-230V AC & 24V DC both power supply system
- 24V DC power supply system for car or vessel mobile sound system

FRONT PANEL



1. Mp3/FM/Blue tooth media player module.
2. Signal Indicator
3. Clip Indicator
4. Protection Indicator
5. Power Indicator
6. AC power switch
7. Mic1 input, 6.3mm phone jack
8. Mic1 Attenuator
9. Echo Effector Attenuator
10. Line1 Attenuator.
11. Mic2/Line2 Attenuator
12. Bass Tone Control
13. Treble Tone Control
14. Master Volume Control

REAR PANEL



1. AC Power Socket.
2. FM antenna
3. 24V DC Battery Input.
4. Speaker output (COM, 4-8Ohms, 100V).
5. Line Output, to external Power Amplifier.
6. Line1 Input to connect with Media Player.
7. Line/Mic 2 Input, XLR for media player or Mic.
8. Selector for 48V phantom power Mic or Line input. (Notice-3/4)
9. EMC Input Attenuator.
10. EMC input & Mute input. (Notice 9-10)



Male XLR-3P:
Pin1-Ground
Pin2-Positive signal
Pin3- Negative signal

Notice:

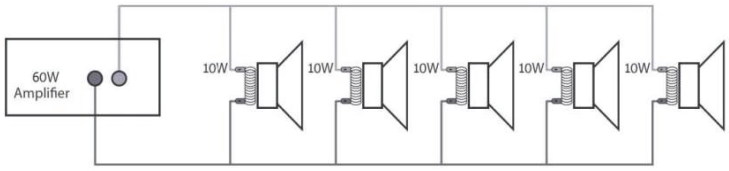
1. Do not connect 100V or 4-8Ohms speakers at the same time, only choose one of 100V or 4-8Ohms speakers connection.
2. Only connection speaker loading of 80% of the amplifier rated power output, for example, amplifier rated power output of 120 watts, only connection of 96 watts speaker loading, which means 16 pcs of 6 watts 100V speakers.
3. Do set the selector well (rear panel item 9) before you connect the MIC/LINE2 input for corresponding input of microphone or media player.
4. The Mic2/Line 2 could connect phantom power microphone 48V, before you shall set the selector on PP 48V (rear panel item 9).
5. Once the front panel clip indicator light on means the input signal level is too high, please check and decrease it.
6. Once the front panel protection indicator light on means the amplifier may of overloading, short circuit, over heat, wrong connection etc problem, please ask professional technician to check and solve it before any operation.
7. Input priority from high to low: MUTE, EMC and others inputs (Mic1 and all others inputs)
8. Mic1 input of echo features and echo volume control.
9. EMC input: EMC input is used to receive fire alarm aux signal from fire alarm or voice evacuation system to override BGM, which of secondary priority except Mute input.
10. Mute input: Mute input is used to receive fire alarm aux signal from fire alarm or voice evacuation system to mute BGM, which of highest priority. Closed circuit to trigger mute and open circuit means normal amplifier working status.

AMPLIFIER OPERATION GUIDANCE

100V Line System

For 100V line systems, connect the amplifier to the first speaker in the system using double-insulated speaker wire which has adequate current rating to handle the total output of the amplifier.

Connect the “100V” output terminal to the positive (+) connection of the speaker and “COM” output to the negative (-) connection of the speaker. Connect further speakers in parallel to the first speaker with all positive terminals and connected together and all negative terminals connected together as shown below.



A 100V line speaker system can comprise of many speakers connected together. The determining factor for how many speakers can be used on a single amplifier is the power rating. For most purposes, it is advised to connect as many speakers as needed with a combined wattage of no more than 90% of the amplifier’s output power rating.

The terminals of a 100V speaker are connected to a transformer and in some cases, this transformer may be “tapped” for different power ratings. These tappings can be used to adjust the wattage (and output volume) of each speaker in the system to help achieve the ideal total power of the system for the amplifier.

Speaker Terminals

These terminals are offering 2 low voltage outputs 4Ω, 8Ωdepending on your speaker combination. A 100V commercial output is also available. Please note that one wire only should be connected to COM screw and one wire to the selected impedance or voltage. **Multiple combinations cannot be done at the output level.** Four different types of connections are provided. The low impedance section: 4Ω, 8Ω is designed for a small amount of speakers to be connected to your amplifier. The 100V section is especially designed for a multiple speaker distribution. When using the 100V output, speakers have to be equipped with 100V transformer. The maximum amount of speakers to be placed on your distribution line is in relation to the power allocated to each speaker. The total wattage set on the secondary side of the transformers on your speaker line must not exceed the maximum RMS output power: 120W,240W,350W or 500W. Failure to respect this may cause permanent damage to the amplifier.

Operation Steps

- When all connections to the amplifier are made, turn all rotary controls down and switch on the power and a power “ON” LED will illuminate. Turn BASS and TREBLE controls to the 12 o’clock position (pointing straight up) and turn MASTER rotary control up part way for testing.
- Ensure a signal is being fed to one of the line inputs 1-3 and gradually increase the volume control for that channel until the output is heard through the speakers. Turn up the MASTER to the maximum required volume level and reduce the channel volume control if necessary.
- Note: The initial test can be made using the built-in USB/SD/FM audio player. The output of the amplifier is represented on the signal LEDs and CLIP or protection LED is only lit momentarily during use. Anything longer than a short flash of these CLIP and protection LED may be indicating distortion or clipping of the output signal and the MASTER should be turned down.
- If a microphone is connected to MIC1 input, make sure it is switched on. and if it requires phantom power only for MIC2, make sure this feature is enabled by selector PP 48V. Gradually increase its volume control whilst speaking into the microphone until the required volume level is reached. The microphone should not be able to “hear” the speakers, which can cause feedback (squealing or howling noise).
- If the VOX feature is enabled, audio playback through other channels will be reduced in volume automatically when speaking

into MIC 1, use its attenuator to increase or decrease the mute level.

- In addition to channel and MASTER volume controls, there are BASS and TREBLE EQ controls to adjust the tone of the overall output. At the 12 o'clock position, these controls are applying no effect to the signal (no boost or cut). Moving the BASS control clockwise boosts the low frequencies in the audio, whilst moving it anticlockwise will cut these low frequencies. Likewise, moving the TREBLE control clockwise boosts the high frequencies in the audio, whilst moving it anticlockwise will cut these high frequencies.
- For echo effector control, adjust the Echo attenuator (front panel-9) to increase or decrease the volume.

Media Player

The mixer-amplifiers are built-in a built-in media player which includes Mp3/FM/Bluetooth. Pressing the Mode button to switch the media player among Mp3/FM/Bluetooth according to the LED display, where there is one IR remote control enable to operate the media player remotely around 10 to 30 meters.

Bluetooth Operation

In order to play back audio from a smartphone, tablet or other Bluetooth device, the built-in Bluetooth receiver will need to be paired with a device which is within range."

To pair a device with the amplifier Bluetooth receiver, it is necessary to scan for devices in the Bluetooth menu of the sending device and select to pair with "**BT66078**". Once paired, the amplifier display will show it is connect, **Password: 1234**

Select to connect as an audio device and play audio tracks on the smartphone or tablet (or other) and the audio should be heard on the selected zone.

The buttons labelled "Prev" and "Next" can adjust the audio player output volume.
Press and hold "Prev" to increase volume or press and hold "Next" to decrease volume.

If the sending device goes out of range or the Mode of the audio player is changed, the connection will stop. Returning to within range or to Bluetooth mode will restore the pairing.
It may be necessary to re-select connection as an audio device on the sending device.

USB/SD Playback

Push a USB pen drive into the USB port and/or an SD card into the SD card input.
Press the CD/USB/SD button to ensure that the player is set to play from the required memory device. Press the PLAY/PAUSE button to play the current track and press again to pause as needed.
Searching and playback of tracks is the same as described above for the CD player

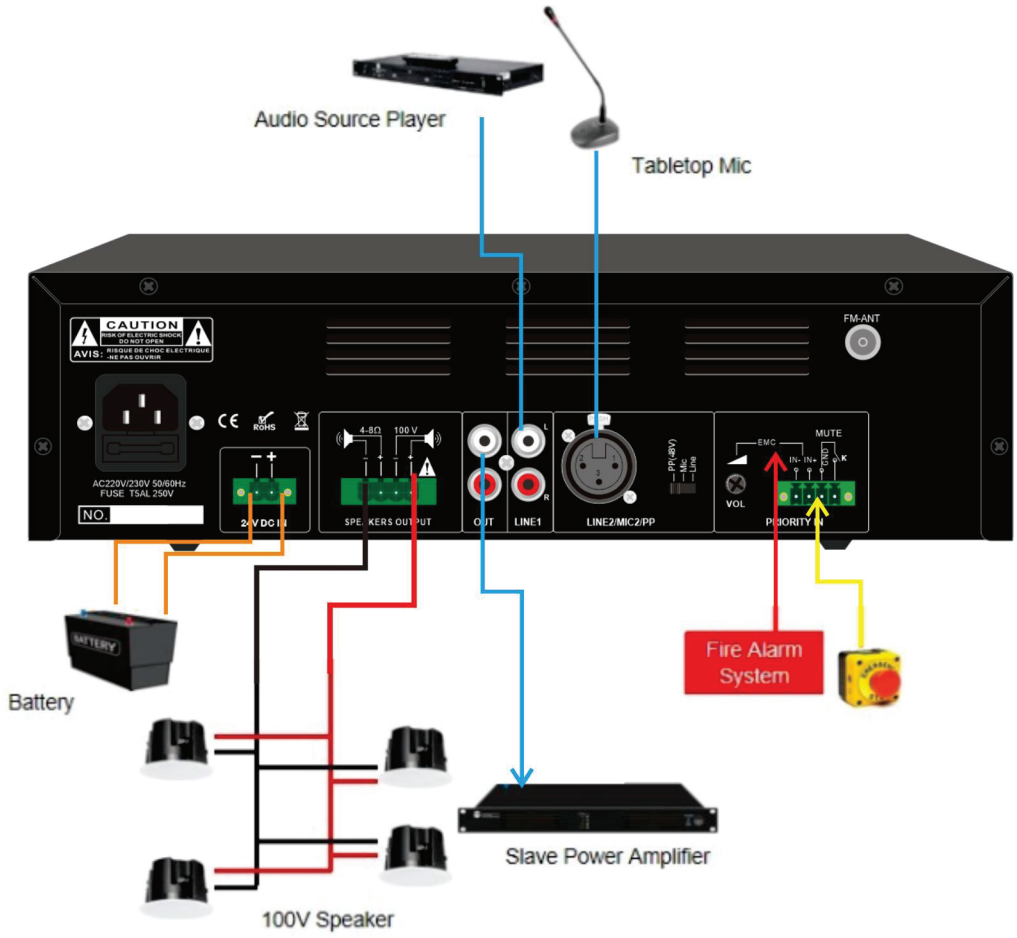
FM Tuner

Press the FM select button to switch to the FM tuner function. Use the Previous or Next buttons to select a stored channel.

Tuning and storing stations

Use the Forward/Reverse seek buttons to manually tune the frequency in steps of 0.05MHz
Alternatively, press and hold the Forward/Reverse seek buttons to auto search for available stations.
Upon finding a station, the auto search will stop, giving the option to store this station.
At this point, pressing the PLAY/PAUSE button will flash a "00" channel number in the display.
Use the Previous/Next buttons to select an appropriate channel memory.
Press PLAY/PAUSE again to confirm and store the station into the selected channel memory.
Auto search can be stopped at any time by pressing the Forward/Reverse seek buttons.

CONNECTION DIAGRAMS



SPECIFICATION

Model	HYU-PA-AP120002
Description	Mini Mixer Amplifier with USB/SD/FM/Bluetooth/Echo
Rated Power Output	120W
Speaker Outputs	100V & 4-8 Ohm
Connector	Mic1 of 6.3mm Jack on front panel Mic2/line2 switchable input balanced XLR with +48V phantom power Line1 input of RCA input and one RCA line output With mute and EMC input from fire alarm system
Input	MIC: 5-8mV, 600Ω; Line, 150-470mV, 10KΩ, unbalanced RCA
Line Out	0.775(0dBV)
Frequency Response	60Hz-15kHz(±3dB)
S/N Ratio	Line ≥ 85dB, Mic≥ 72dB
THD	Less than 0.5%
Protection	Short-circuit, clip, overload and high temp protection
Power Consumption	200W
Power Supply	110V-230V AC & 24V DC; 50-60Hz
Dimension	320×210×90mm
Weight	3.4kg

TROUBLESHOOTING

No power LED on control panel	Ensure IEC lead is in good condition and connected properly
	If 12-24Vdc power input is being used, check battery is charged
	Check mains inlet fuse
	Ensure POWER switch is on
Power LED is on but no other LEDs and no output	Check input signals and condition of input connection leads
	Check MASTER, MIC, LINE IN or MEDIA controls are turned up
Power light and output LEDs lighting but no output	Check speaker output terminals are connected correctly
	Check speakers are working (test on another amp if available)
Bluetooth cannot connect	Ensure that Bluetooth is enabled on sending device
	Ensure that the sending device is within Bluetooth range (5-10m)
	Check that blue tooth is the connected device
	If there are more than one blue tooth devices, check each in turn
No audio from connected Bluetooth device	Ensure that volume controls are not turned down on sending device
	Check volume and Play/Pause buttons in case Bluetooth is muted
USB player will not play audio from media	Press PLAY on transport controls
	Check memory device is connected properly (remove and re-insert)
	Check file types – standard compressed digital audio files required
	Check memory device works on a PC or Mac for standard playback
Output is very loud or distorted	Check level of input signal is not too high
	Reduce MIC, LINE IN, MEDIA and/or MASTER level
	Ensure Hi-Z line level input(s) not connected via MIC input
Output is working but at very low level	Check input audio source level is not too low
	Increase MIC, LINE IN, MEDIA and/or MASTER level
	Check for quiet recording of media files on USB
Feedback from microphone	Face microphone away from speakers and monitors
	Turn down MIC and/or MASTER level
Amplifier overheating	Ensure cooling vents are clear from debris and dust
	Check that 8Ω speakers are not connected to 100V terminals
	Ensure total 100V speaker wattage is lower than amplifier rating
	Ensure that 100V and 8Ω speakers are not both connected
	Ensure that total load connected to 8Ω output is not less than 8Ω

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