

INSTRUCTION MANUAL

MDA-9202H

ECHO DUAL MIXER AMPLIFIER



1. Security Precautions

- ◎ Carefully to **READ** the instruction in this manual before use.
- ◎ Certainly to **OBSERVE the INSTRUCTION** in this manual regard convention of safety symbols and messages
- ◎ Please **KEEP** this user **MANUAL** nearby for anytime reference.

Safety symbol and Message Conventions

Below-described safety symbols and messages are to prevent bodily injury and property damage. Before operating the amplifier, read this manual first so you completely knowing the potential safety hazard and understanding the meaning of the safety symbols and messages.

 WARNING	Indicates a potentially hazardous situation, which, if mishandled, could result in death or serious body injury, and/or property damage.
 CAUTION	Indicates a potentially hazardous situation, which, if mishandled, could result in moderate or minor body injury, and/or property damage.



■ When Installing the Amplifier

- **DO NOT** installing or mounting the amplifier in unstable locations, such as on the rickety table or the slanted surface. It may result in the amplifier falling down and causing body injury and/or property damage.
- **Be sure to ground** to the safety ground (earth) terminal to avoid electric shock. Never to ground to a gas pipe for tragic disaster may occur.
- Use the amplifier only with the voltage specified on the amplifier. Using the voltage higher than specified may cause fire or electric shock.
- **DO NOT** cut, twist, damage, nor modify the power supply cord. In addition, avoid using the power cord close to heaters, and don't place heavy object, including the amplifier itself, on the power cord, for it may cause fire or electric shock.
- **DO NOT** expose the amplifier to rain or the environment where it may be splashed by water or other liquids, for doing so, it may cause fire or electric shock.

■ When using the Amplifier

- When found following irregular situation during amplifier is in use, immediately switch off the power, disconnect the power supply plug from the AC outlet. Don't try to operate the amplifier again. Contact your local dealer to check the amplifier.
- ✓ The amplifier falls.
- ✓ Amplifier is malfunction.
- ✓ Water or any metallic object gets into the amplifier.
- ✓ The smoke or strange smell coming from the amplifier.
- ✓ The power supply cord is damaged, such as exposure of the core, disconnection etc..
- **DO NOT** put cups, bowls, or other containers with liquid or metallic object in it on the top of the amplifier. If they spill accidentally into the amplifier, it may result in fire or electric shock.
- **DO NOT** touch the power supply plug during thundering and lightning, for it may result in electric shock.
- **DO NOT** insert or drop the metallic objects or flammable materials into the ventilation slots of the amplifier, for it may result in fire or electric shock.
- **DO NOT** open nor remove the amplifier cover to prevent fire or electric shock, for there are high voltage components inside the amplifier.



■ When Installing the Amplifier

- **DO NOT** remove nor plug in the power supply plug with wet hands, for it may cause electric shock.
- When unplug the power supply cord, be sure to grasp the power supply plug. **DO NOT** pull on the cord itself. Operating the amplifier with damaged power supply cord may cause fire or electric shock.
- **Avoid** installing the amplifier in humid or dusty places, the area exposed to the direct sunlight, locations generating smoke or steam, or the spot near the heaters. It may result in fire or electric shock.
- When moving the amplifier, be sure to remove its power supply cord from the wall outlet. Moving the amplifier with the power cord connected to the outlet may cause damage to the power cord, and resulting in fire or electric shock. When removing the power cord, be sure to grasp its plug to pull.
- **DO NOT** block the ventilation slots of the amplifier chassis. It will cause the temperature rising and result in fire.

■ When Using the Amplifier

- Make sure that the volume control is turned to minimum position before power is switched on. Loud sound produced at high volume when power is switched on may impair hearing.
- **DO NOT** place heavy objects on the amplifier, for it may cause it fall and may result in body injury and/or property damage. Besides, the object itself may cause damaged or body injury.
- **DO NOT** operate the amplifier for the extended period of time with the sound distorting. It is an indication of malfunction, which can cause heat and result in fire.
- Switch the power off, and unplug the power supply plug from the AC outlet for safety purposes, when cleaning or leaving the amplifier unused for 7 days or more. Fire or electric shock may occur.
- If the dust accumulates on the power supply plug or in the wall AC outlet, fire may result in. Clean it periodically. In addition, make sure the plug is inserted in the wall outlet securely.
- Contact your local dealer to clean the dust, if the dust has accumulated in the amplifier for a long period of time. Dust accumulation may result in fire or damage.

2. Description

MDA-9**2H series is the echo dual mixing amplifier of output power 200Wx2, 100Wx2, 60Wx2 and 30Wx2 in one unit designed for two different spaces application, such as 2 floors, or 2 zones.

There are totally 6 inputs, including 4 microphones, 1 AUX, and 1 CD/Tuner/Tape (selectable) inputs.

For convenient to operate, CD/Tuner/Tape input selection switch and its level control are on the front panel. One additional MIC 1 input is also on the front. All other input and output level, volume, and tone controls are on the front. MIC1 has first level VOX priority over other input.

On the rear there are two speaker screw terminals. Each one has low impedance 4 ohm and 8 ohm, and high level 70V and 100V. Choose only one of these output connections to match the speaker. Furthermore, each channel has record output.

To ensure the amplifier safety, it has speaker short, over temperature, and over load protection. Besides AC power source, MDA-9**2H series has DC 24V input power screw connector as backup power source.

MDA-9**2H series is ideal and convenient dual amplifier for the application of multi-input.

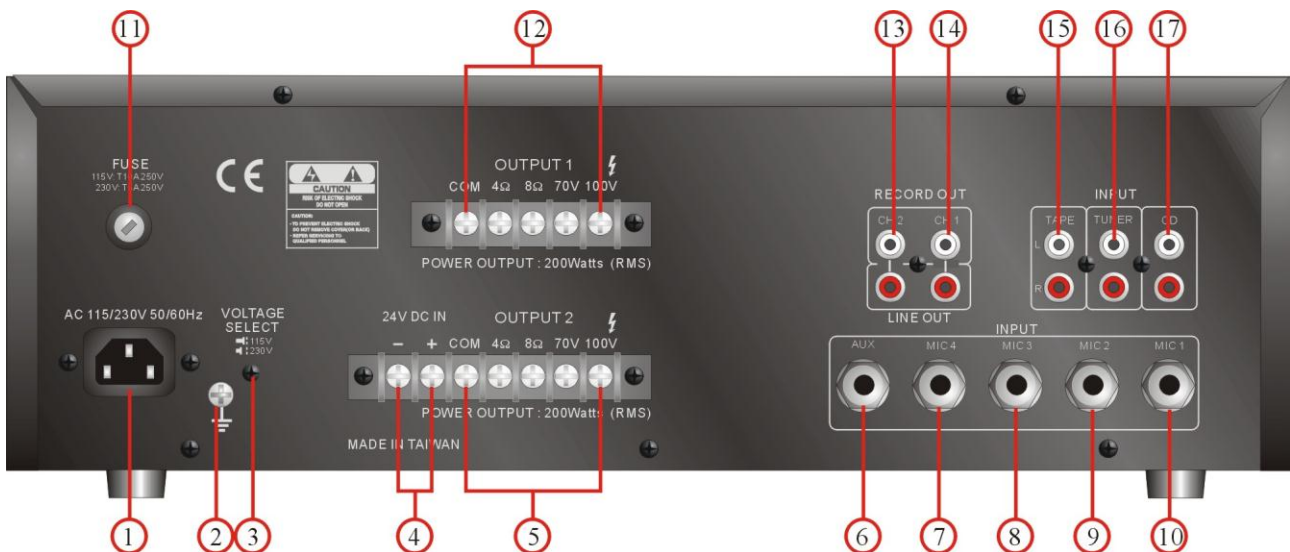
3. Panel Description

FRONT PANEL



- | | | |
|-----------------------------------|-------------------------|-------------------------------------|
| 1. MIC 1 Input | 9. CH-2 Bass Control | 17. CH-1 Treble Control |
| 2. MIC 1 Level Control | 10. CH-2 Treble Control | 18. CH-1 Volume Control |
| 3. MIC 2 Level Control | 11. CH-2 Volume Control | 19. CH-1 Power indicator LED |
| 4. MIC 3 Level Control | 12. Power on/off Switch | 20. CH-1 Output Level indicator LED |
| 5. MIC 4 Level Control | 13. Echo Delay Control | 21. CH-2 Output Level indicator LED |
| 6. AUX Level Control | 14. Echo Repeat Control | 22. CH-2 Power indicator LED |
| 7. CD/Tuner/Tape Selection Switch | 15. Echo Volume Control | |
| 8. CD/Tuner/Tape level control | 16. CH-1 Bass Control | |

REAR PANEL



- | | | |
|--------------------------------|---------------------------------|---------------------|
| 1. AC power input socket | 7. MIC 4 input | 13. CH-2 Record Out |
| 2. Earth Connection Screw | 8. MIC 3 input | 14. CH-1 Record Out |
| 3. AC Voltage Selection Switch | 9. MIC 2 input | 15. Tape Input |
| 4. DC power supply terminals | 10. MIC 1 input | 16. Tuner Input |
| 5. CH-2 Speaker Screw Terminal | 11. AC fuse | 17. CD Input |
| 6. AUX Input | 12. CH-1 Speaker Screw Terminal | |

4. Power Source

● AC Power Source

The supply transformer has been designed for use on either 115Vac or 230Vac, selected by a push switch on the rear panel. The amplifier is factory set at 230Vac mains voltage.

● DC Power Source

Battery Connection (24Vdc)

When using external batteries, earth the amplifier via the screw terminal because of the high voltages present. Electrical stability of the system is increased by earthing the case.

NOTE: The connection cable must be fitted with an in-line fuse; suggest to using quick-blow type F15A. When Connect batteries, please ensure correct polarity.

5. Connection

● Microphone Connection

Mic1~4 inputs are unbalanced standard 1/4" stereo jack on the rear panel. Mic1 has additional input jack on the front panel for convenient operation.

1/4" stereo Jack Plug (Balanced operation)

Tip : signal (live)
Ring : Signal (Return)
Sleeve : Screen



● Priority Microphone

Mic1 input has VOX priority function, which will override all microphone and other inputs signals. It means the voice signal from Mic1 will mute all other input signals.

● CD/Tuner/Tape Connection

The equipment provides one CD/Tuner/Tape input, which may be used for connecting other signal sources such as a Radio Tuner, CD or Cassette player. A selection switch is located on the front panel. Select the desired source using this switch. Beside it is its level (volume) control. And turn it clockwise to increase the volume or anticlockwise to reduce the volume.

The Aux input sockets are standard RCA stereo jack, sockets are supplied and these are linked together internally, this allows stereo signal source to be used without the need to obtain a special lead. However, you may check with the manufacturer of the signal source to ensure that no damage will occur if the left and right output channels are connected in parallel.

- **Loudspeaker Connection**

There are two speaker output screw terminals. Each speaker output screw terminal allows connection of the standard low impedance of 4Ω or 8Ω loudspeakers, or 70V, or 100V line loudspeaker. Use only one of these output connections for corresponding speaker for each channel.

- **Record Out**

It is for the use of record, when it is demanded. Both two channels have their own record out.

6. Operation

- **Level/Volume Control**

On the front panel, there are 4 level/volume controls for microphone 1~4, 1 for AUX input, and 1 for CD/Tuner/Tape. For the output, each channel has its own volume, treble, and bass control. Adjust them to what you desired.

7. Technical Specifications

Model No.	MDA-9032H	MDA-9062H	MDA-9102H	MDA-9202H
Type	Echo Dual Mixing Amplifier			
Power Supply	AC 115/230V 50/60Hz, DC 24V			
Power Output (RMS)	CH1: 30W + CH2: 30W	CH1: 60W + CH2: 60W	CH1: 100W + CH2: 100W	CH1: 200W + CH2: 200W
Total Harmonic Distortion	$\leq 1\% @ 1 \text{ KHz}$			
Sensitivity	1/4" Phone Jack (Unbalanced) Mic 1~4 1.5mV@600 ohm Aux 200mV@220Kohm RCA Jack (Unbalanced) CD,TUNER,TAPE 200mV@10K ohm Record Out 1V			
Frequency Response	50 Hz~ 15KHz $\pm 3\text{dB}$			
Output	100V, 70V, 8 ohm, 4 ohm			
Signal to Noise Ratio	86dB			
Tone	Bass 100 Hz $\pm 10 \text{ dB}$ Treble 10KHz $\pm 10 \text{ dB}$			
AC Power Consumption	160 W @ Rated Power	320 W @ Rated Power	640 W @ Rated Power	1280 W @ Rated Power
DC Power Consumption	5A @ Rated Power	8A @ Rated Power	15A @ Rated Power	30A @ Rated Power
Dimension	132(H) x 425(W) x 355mm (D)			
Weight (Net/Gross)	10 KGS / 12 KGS	12 KGS / 14 KGS	15 KGS / 17 KGS	18 KGS / 20 KGS
Mounting	Free Standing or 19" Rack			