

USER MANUAL

USM-608ACZ

USM-612ACZ

USM-624ACZ

USM-636ACZ

USM-648ACZ

MIXER AMPLIFIER

WITH USB PLAYER + 5ZONE



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 symbol 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

USM-6xxACZ series is the mixer amplifiers designed for total 6 inputs (channel) application. They include 3 AUX and up to 4 microphones connectors. The series include the models of output power 60W, 120W, 240W, 360W, and 480W.

5 of 6 inputs have its own level control on the front panel, while the 6th level control is on the rear panel. It is convenient for the user to control. Besides, there are 1 Master control of output volume and 2 tone controls: Bass and Treble.

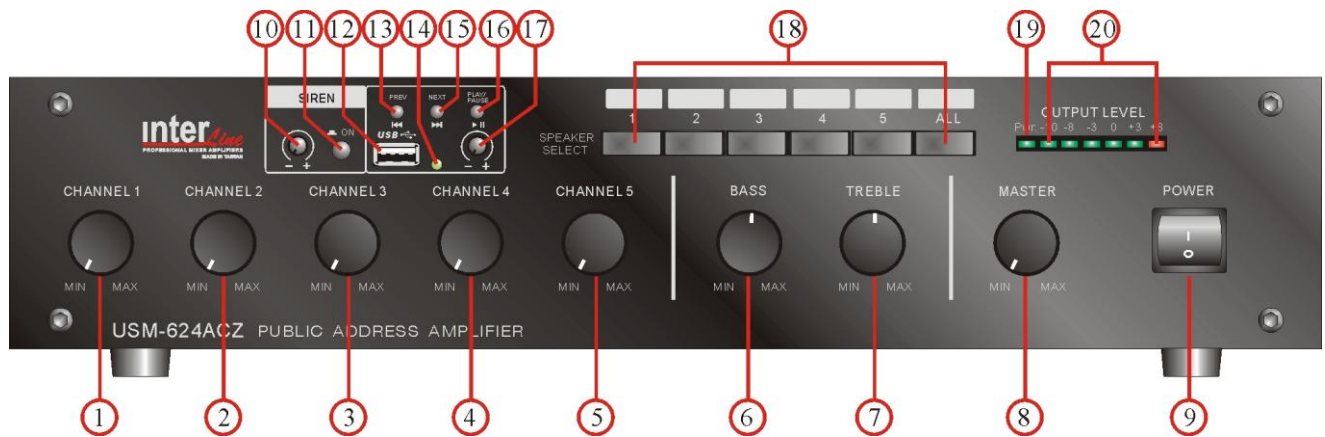
The output connection is speaker screw terminal including low impedance 8 ohm, and high level 70V and 100V. Choose only one of these output connections to match the speaker. 6 LED indicators show the output level. Furthermore, it has AUX and Tape output.

To ensure the amplifier safety, it has speaker short, over temperature, and overload protection.

Besides AC power source, it has DC 24V input power screw connector as backup power source.

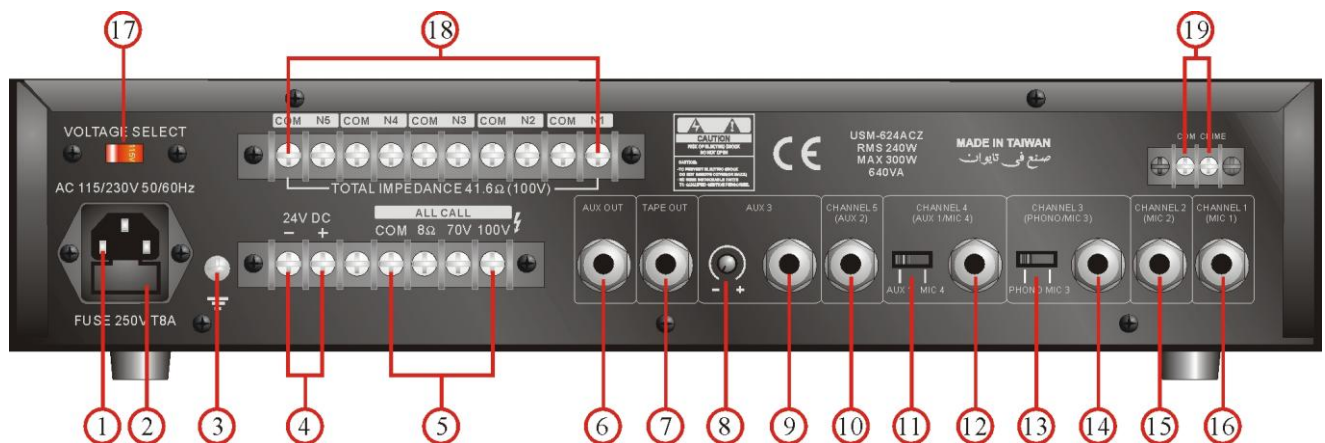
USM-6xxACZ series is the ideal and convenient mixer amplifier for multi-input application.

3.Front Panel



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|---------------------------------|--------------------------|--------------------------------|
| 1. Channel 1 Volume Control | 8. Master Volume Control | 15. Next, Fast-forward |
| 2. Channel 2 Volume Control | 9. Power On / Off Switch | 16. Play, Pause |
| 3. Channel 3 Volume Control | 10. Siren Volume Control | 17. USB Volume Control |
| 4. Channel 4 Volume Control | 11. Siren Switch | 18. Zone Control Switch |
| 5. Channel 5 Volume Control | 12. USB Socket | 19. Power On/Off Indicator LED |
| 6. Master Tone Control (Bass) | 13. Previous, Reverse | 20. Output Level Indicator LED |
| 7. Master Tone Control (Treble) | 14. USB Indicator LED | |

4.Rear Panel



- | | |
|------------------------------|--|
| 1. Mains Input Socket | 11. MIC 4/Aux 1 Selector Switch |
| 2. Power Fuse | 12. MIC 4 Input |
| 3. Earth Connection Screw | 13. MIC 3/Phono Selector Switch |
| 4. DC Power Supply Terminals | 14. MIC 3 Input |
| 5. Speaker Output Terminals | 15. MIC 2 Input |
| 6. Aux Output | 16. MIC 1 Input |
| 7. Tape Output | 17. Voltage Selector |
| 8. Aux 3 Level Control | 18. Zone Control Speaker Output Terminal |
| 9. Aux 3 Input | 19. Chime Output Control |
| 10. Aux 2 Input | |

5.Mains Connection

The supply transformer has been designed for use on 115Vac or 230Vac .

6.Battery Connection (24Vdc)

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

NOTE: the connection cable must be fitted with an in-line fuse. Quick blow type F15A when Connecting batteries please ensure correct polarity.

7.Microphone Connection

Mic1~5 inputs are unbalanced 1/4" Phone Jack, rear panel.

Mic1 input has VOX priority which will override Channel 3~5 and Line input signals but NOT the Channel 2 input.

Tip : signal (live)

Ring : Signal (Return)

Sleeve : Screen



8.Line (Aux/CD) Connection

The equipment provides an auxiliary input which may be used for connecting other signal sources such as a Radio Tuner, CD or Cassette player. A slide switch is located on the rear panel for selection of, Mic3→Phono, Mic4→Aux1, Mic5→Aux2. The line level control operates on each of the input sources.

To operate select the desired music source using the push switch and turn the “Channel” control clockwise to increase the volume or anticlockwise to reduce the volume.

The Aux / input sockets are standard stereo Phone Jack, single 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 wish to check with the manufacturer of the signal source to ensure that no damage will result if the left and right output channels are put in parallel.

9.Chime Output Control

Chime is two tone “DING DONG”

Short Screw Terminals two extremities with “Ding Dong” output, The “Ding Dong” level 1/8 power output.

Connects the Terminals to microphone switch can be mute all channel.

10.Tape Output Connection

These standard 1/4" Phone Jack sockets provide a mixed output suitable for connection to a tape or Cassette recorder.

11.Aux Out

Connects the mixer/preamplifier stage to the power amplifier stage. The connecting link must be plugged in for normal operation as a mixer/amplifier. "AUX OUT" is after the tone controls and the master volume control.

12.Power outline voltage comply with power input voltage (IEC voltage).

13.Loudspeaker Connection

Note: Use only 100V or 70V (Selectable) Line Loudspeakers.

14.Low Impedance (8Ω)

This output allows connection of standard low impedance loudspeakers, the minimum load impedance must be 8Ω, when two or more loudspeakers are used ensure that they are wired in such a way that the load impedance is between 16Ω or between (4Ω).

15.Connecting a Mixer Amplifier to a Power Amplifier

These amplifier can be connected using phono to phono leads from the mixer amplifier PRE out the power amplifier input. Further power amplifier can be connected by connecting from the output of first power amplifier to the input of the second. Up to three power amplifier can be connected in this way.

Input must be from power amp in (Rear Panel)

16.Chime Function

The chime input terminal is at the right side of rear panel. Connect chime source to the terminal.

17.Siren Function

The "siren switch" and "siren volume control" are at the front panel. Push "siren switch" to activate the siren. Adjust "siren volume control" to the suitable level.

18.USB Host

1. USB host MP3/WMA player controller.
2. Supporting MPEG 1, 2 layer.
3. Microsoft WMA V7/V8/V9 audio decoder supporting.
4. Functions: Play/Pause/Random , Next/Volume + , Previous/Volume -

19.Specifications:

Type	Mixer Amplifier				
Model	USM-608ACZ	USM-612ACZ	USM-624ACZ	USM-636ACZ	USM-648ACZ
Supply	Mains Voltage	AC 115/230V, 50/60 Hz $\pm$ 10%			
	Battery Voltage	DC 24V (MAX 10% deviation)			
Output power (RMS)	RMS- 80W	RMS-120W	RMS-240W	RMS-360W	RMS-480W
	MAX-120W	MAX-180W	MAX-300W	MAX-420W	MAX-540W
Total Harmonic Distortion	$\leq$ 1% at 1KHz, rated power				
Input Sensitivity	1/4" Phone Jack Channel 1~3 (MIC 1~3) 1mV@ 600 Ω Tel (Terminal) 4mV@ 100K Ω Channel 4(MIC 4) 1mV@ 600 Ω AUX 1, 150mV@ 22K Ω Channel 5(AUX 2) 150mV@ @ 22K Ω AUX 3, 100mV@ 22K Ω				
Frequency response	50Hz ~ 15KHz $\pm$ 3dB				
Output	Speaker outputs: Music/speech: 8 Ω , 70V, 100V Tape output: 1V 150 Ω Aux output: 1V, 150 Ω				
Priority	Priority level (Mic 1: 0.3mV) Channel 1 can mute channel 3~5, Aux 3.				
Signal to noise ratio	86 dB				
Indicators	Power indicator (LED), output level indicators (6 LEDS)				
USB Data Format	WMA, MP3				
Tone Controls	Bass: 100Hz $\pm$ 10dB Treble: 10KHz $\pm$ 10dB				
AC power consumption	160W	320W	640W	960W	1280W
DC power consumption	4A	8A	15A	24A	30A
Dimensions (H x W x D)mm	88(H) x 425(W) x 305(D) mm			132(H) x 425(W) x 355(D) mm	
Weight	8 kgs	10 kgs	11 kgs	15 kgs	17 kgs
Mounting options	Table top or 19" rack.				