Player	USB	Type	OTG2.0 full-speed controller
		Connectors	USB 2.0 Type-A
	SD/MMC	Connectors	Non-self-locking so card slot
	Bluetooth	Version	Bluetooth Ver20+EOR
		Max range	10m (without interference)
		Trans Frequencies	2402-2480MHz
	Music formats		MP3/WAW/WMA/FLAC (8/16/24bit)
	File system		FAT16 or FAT32
	FM Section	Tuning range	87.5MHz to 107.9MHz
		Antenna input	75Ω unbalanced
Outputs	Low impedance		4Ω
	Constant Voltage impedance		167Ω-Zone 60BT
			84Ω-Zone 120BT
			42Ω-Zone 240BT
			28Ω-Zone 360BT
Indicators	LED		Power/Zone/Output
	LCO		Player
	Sound		Protect
Protection			DC-Short Circuit
			Over Healing
			Over Load
			Limiter
Cooling system			Fan cooled
Amplifier technology			Class A/B
Power supply	Master		AC230V-240V/50-60Hz
	Standby		DC24V

AUDIBAX

Zone **120 BT**
Zone **240 BT**
Zone **360 BT**

Please read the manual before using the product

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ATTENTION

• Do not operate the amplifier or disconnect power cable during firmwave update Firmware update takes about10seconds
• No files other than firmware in USB storage device or SD card.
• Do not perform this procedure unless firmware update is necessary Also make sure you read the information supplied with updates before updating the firmware.

Chapter 4

Additional information

Technical specifications

RMS Output Power 1 kdiE.TriD %o	Zone 120BT		120 Watt
	Zone 240BT		240 Watt
	Zone 360BT		360 Watt
Frequency response			20Hz-20KHz
Signal to Noise Ratio			>90dB
THD+N			<0.5%
Common Mode Rejection			<0.5%
Crosstalk			>70dB
Inputs	MiC1-2	Type	2x Balanced mic / Une
		Sensitivity	-50dB
		Connectors	2xXLR/6.3mmJack combo
		Phantom power	15VDO
		Priority	Yes
	LINE 1/MIG3	Type	Balanced mic/line
		Sensitivity	-50dB
		Connectors	XLBi6.3mm Jack combo
		Priority	YES
	LINE2-3	Type	2x Stereo ling
		Sensitivity	-30dB
		Connectors	2x RCA
	Chime/Fire/TEL	Type	Priority mic inputs
		Connectors	Euro terminal block-5.08mm

3)Phantom power

MIC input 1&2contain the possibility for supplying 15Volts phantom power for powering condenser microphones. Enabling of the phantom power can be done by the switches located between MIC 1&2 connections. Switch 2 will enable phantom power to Mic input 1while switch 1 enables phantom power to Mic input 2.



4)To start playing music form MP3

Insert a USB storage device or SD/MMC memory card to the slots on front of the device. The MP3 player can play such as MP3WMAWAVFLAC. AAC audio formats When the media is inserted the device will detect automatically and will start playing You can select the playing tracks using the control buttons on front of the device. For switching to settings of another media source, press the M button on front (The variable audio output will switch automatically to this media source)

5)To start playing music via Bluetooth

Adjust the bluetooth antenna to a vertical position then press the M button on front to switch the operation mode to Bluetooth. Turn on the bluetooth on your device(phone computer, Ipad, mace or other music playback devices with bluetooth) and search for bluetooth device, you'll find a device named ⏮ , ⏭ and ⏯ "Bluetooth" in the list, select and connect it. Then you can play music on your device. pressing the to control the music track previous, next or pause.

6)Update the player's firmware

New firmware that provides additional features or product improvements will be released as needed. You can download the type MVA of firmware from our website.

Format the USB storage device or SD card for upgrade firs. Insert a USB storage device or SD card with firmware on the front if the player detects firmware, it will automatically extinguish the LCD screen and start to upgrade the firmware, it will restart about 10 seconds later.

Introduction

Public address amplifiers

The Zone series public address amplifier was developed as an easy to use, flexible solution for multifunctional use

During the development of the Zone series amplifiers, our engineers wanted to achieve four goals:

-Delivering a flexible audio solution to control multiple functions
- Easy to use
-Excellent sound quality
-Modern and advanced design

The Zone series amplifiers has 2 stereo unbalanced line level inputs, 1 mono balanced line level inputs, 2 mono balanced line level inputs with phantom power, 4 high impedance 100V mono output zones, 1 low impedance 4ohm mono output zone a link output a telephone signal input, a chime and fire signal input, an 100V emergency input with 24V control, a lossless music player with screen, including FM tuner, the model with a "+BT" version also has bluetooth.

The Zone series amplifiers can be used in commercial applications such as restaurants, hotels, shops, warehouses, professional offices, public buildings..... A simple example: when installed in a shop you could connect a tuner to play your favorite radio station, microphone to make announcements, a telephone pager. and off course the doorbell of the shop.

Precautions

READ FOLLOWINGINSTRUCTIONS FOR YOUR OWN SAFETY

ALWAYS KEEP THESE INSTRUCTIONS NEVER THROW THEM AWAY

ALWAYS HANDLE THIS UNIT WITH CARE

HEED ALL WARNINGS

FOLLOW ALLINSTRUCTIONS

NEVER EXPOSE THIS EQUIPMENT TO RAINMOISTUREANY DRIPPING ORSPLASHING LIQUID.AND NEVER PLACE AN OBJECT FILLED WITH LIQUID ON TOP OF THIS DEVICE

DO NOT PLACE THIS UNIT IN AN ENCLOSED ENVIRONMENT SUCH AS A BOOKSHELF OR CLOSET ENSURE THERE IS ADEQUATE VENTILATION TO COOL THEUNITDO NOTBLOCK THE VENTILATION OPENINGS

DO NOT STICK ANY OBJECTS THROUGH THE VENTILATION OPENINGS

DO NOT INSTALL THIS UNIT NEAR ANY HEAT SOURCES SUCH AS RADIATORS OR OTHER APPARATUS THAT PRODUCE HEAT

DO NOT PLACE THIS UNIT IN ENVIRONMENTS WHICH CONTAIN HIGHLEVELS OF DUST HEATMOISTURE ORVIBRATION

THIS UNIT IS DEVELOPED FOR INDOORUSE ONLYDONOT USEITOUTDOORS

PLACE THE UNIT ON A STABLE BASE OR MOUNTITIN A STABLE RACK

ONLY USE ATTACHMENTS & ACCESSORIES SPECIFIED BY THE MANUFACTURER

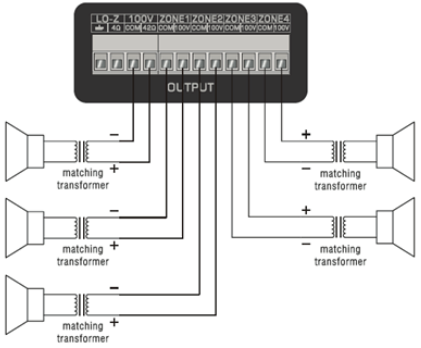
UNPLUG THIS APPARATUS DURING LIGHTNING STORMS ORWHEN UNUSED FORLONG PERIODS OF TIME

ONLY CONNECT THIS UNIT TO A MAINS SOCKET OUTLET WITH PROTECTIVE EARTHING CONNECTION

CAUTION-SERVICING
This product contains no user serviceable parts. Refer all servicing to qualified service personnel. Do not perform any servicing (unless you are qualified to)

EC DECLARATION OF CONFORMITY
This product conforms to all the essential requirements and further relevant specifications described in following directives: 2004/108/EC(EMC) and 2006/95/EC(LVD)

WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT(WEEE)
The WEEE marking indicates that this product should not be disposed with regular household waste at the end of its life cycle. This regulation is created to prevent any possible harm to the environment or human health.
This product is developed and manufactured with high quality materials and components which can be recycled and/or reused Please dispose this product at your local collection point or recycling center for electrical and electronic waste. This will make sure that it will be recycled on an environmentally friendly manner, and will help to protect the environment in which we all live.



2) Connecting the audio sources

The next step is making the signal input connections. Depending of the type connection and output level of the available audio sources they should be plugged into the matching channel/connection.

Before connecting, turn all the channel input and master volume controls on the front panel of the amplifier fully counter clockwise (to their minimum setting) and put the gain control trimmers on the rear panel in a central position. Then connect all the available sources to their corresponding channels and switch on the power of the amplifier and al the connected audio sources the green light around the power button will illuminate after powering on. The buzzer inside will ring three times and then the output protection relay will be switched on (a click will be heard when this occurs) that mean the amplifier is ready.

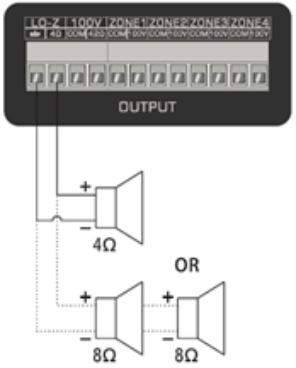
Apply a signal to the inputs as it will be used in normal operation circumstances and turn the channel input level control up about 50%Slowlyraise the master volume control till a certain level until the desired sound level is achieved Depending of the output level of the connected music sources the input gain might need adjustment Adjust these trimmers on the rear panel until the desired level is achieved.

For the best signal to noise ratio, the amplifier should run in normal circumstances with the master level control near maximum position and the peak indicator (0 dB) of the VU meter on front should light occasionally (but not frequently during peak levels. If the signal is too loud or distorted use the input level controls to attenuate as necessary to achieve the desired speaker level.

1) Connecting the loudspeakers

The loudspeakers should be connected to the euro terminal block connectors on the back panel of the device. First the decision should be made which kind of loudspeakers will be used between low impedance (4 Ohm) or constant voltage(100V/70V/) depending on the project requirements. It is only possible to use one (either constant voltage or low impedance) of both options at a time

For operating using the low impedance (4 ohm) output any loudspeaker with a minimum impedance load of 4 ohms (that is 4 ohms or greater) can be used.



Example diagram low impedance connections

For operating using constant voltage (100V/70V/…) audio distribution systems, the positive output should be connected to the positive terminal of the loudspeakers, while the negative terminal of the speaker should be connected to the COM (ground) terminal of the amplifier.

ATTENTION

THE TOTAL IMPEDANCE OF ALL CONNECTED SPEAKERS MUST BE GREATER THAN THE RATED IMPEDANCE OF THE AMPLIFIER

CAUTION

The symbols shown are internationally recognized symbols that warn about protentional hazards of electrical products. The lightning flash with arrow point in an equilateral triangle means that the unit contains dangerous voltages. The exclamation point in an equilateral triangle indicates that it is necessary for the user to refer to the user manual.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

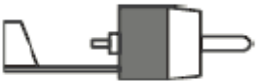
These symbols warn that there are no user serviceable parts inside the unit. Do not open the unit Do not attempt to service the unit yourself. Refer all servicing to qualified personnel. Opening the chassis for any reason will void the manufacturer's warranty. Do not get the unit wet. If liquid is spilled on the unit shut it off immediately and take it to a dealer for service. Disconnect the unit during storms to prevent damage.

Chapter 1

Pin connections and connectors

CONNECTION STANDARDS
The in and output connections for our audio equipment are performed corresponding to international wiring standards for professional audio equipment.

RCA(Cinch):
For unbalanced line input



Tip: Signal **Sleeve: Ground**

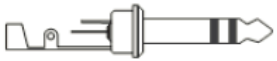
White: Left **Red: Right**

XLR:
For balanced signal input connections



Pin 1: Ground
Pin 2: Signal+
Pin 3: Signal-

6.3mm (1/4) balanced Jack:
For balanced line in & output connections.



Tip: Signal+
Ring: Signal-
Sleeve: Ground

6.3 mm (1/4") unbalanced Jack:
For unbalanced line in & output



Tip: Signal

Sleeve: Ground

Chapter 2

Front & rear panel
Front panel overview



Front panel description

The front panel for Zone series amplifiers is identical and enables you to control the level for every input and the overall output volume. A two band tone control is provided for the main output, allowing adjustment of the overall system frequency response while zone (output) switches allows enabling/disabling of the different speaker zone outputs each zone output has a separate volume control. The music player can play such as MP3,WMA,WAV,FLAC AAC and other formats of digital music the model with "+BT" also lets you can play music from your smartphone or computer via bluetooth 2.0.

Input level controls

Using the input level controls, the individual level for each connected input can be set This way, multiple inputs can be mixed with each other between zero and maximum level.



Unbalanced line inputs 2 & 3 (RCA jack):



Line inputs 2 and 3 are implemented using RCA jack connections it can be made a stereo line input red for right channel white for left channel.

Chime &Fire inputs (Terminal block):



Chime &Fire inputs can be connected to any external source, such as call station, signal matrix, fire alarm system. These channels have priority over other inputs.

Tel input (Terminal block):



The amplifier can be connected to any business telecom system using the tel input, allowing announcements to be made from any handset. It is a line level input with priority to be connected to the line output of the telecom system. Unalanced input connections should be made to the 'CH' (Hot or Signal) and GND (Ground) terminals.

Emergency input (Terminal block):



The amplifier can be connected to any100Vconstantvoltage amplifier output of alarm system with DC 24V remote control using the emergency input. When the DC 24V is input the amplifier will switch the all connected speakers (just constant voltage output) to the alarm input.

Chapter 3

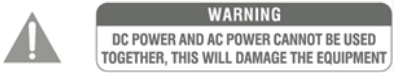
Setting up the system

ATTENTION
Make sure the power of the device is turned OFF before any connections or wiring adjustments are made. Disregarding this rule can lead to permanent damage of the equipment.

DC Power inlet:



The main DC power supply (24V) has to be applied to the connector on the left of the AC power inlet. This is a standby power inlet to connect a24V battery. A fuse holder with main fuse is located on the top of the DC power inlet. When replace the fuse make sure the replacement matches the specifications of the original fuse.



Loudspeaker output connections (Terminal block connectors)

Output connections for both low impedance and constant voltage distributed audio systems are provided The low impedance loudspeaker and 100Vconstant voltage output share a 4-PIN terminal block, the two on the left are used to connect low impedance speakers the two on the right are used to connect high impedance (iust100V constant voltage) speakers. While different zone (1-4) outputs are provided on a8-pin terminal block connector More information about loudspeaker output connections is described in a further chapter of this instruction manual.



Link out connections (RCA jack connectors):

These connections can be used when expanding your system by adding a second amplifier in your system. Connect LINE2 or LINE3 input of the second amplifier with the OUT of the master amplifier in your setup.

Balanced line1/mic inputs12&3(combination63mmjack&XLR):

Channels1, 2 & 3areimplemented using combination connectors accepting both XLR and 6.3 mm jack plugs. Both inputs will mute all other channels when a signal is present on the connected microphones / inputs / Mic input 1 & 2 can be used for capacitive microphones phantom power switches enable 24Vots phantom power supply for 12V-48V capacitive microphone. Switch 2 will enable phantom power to Mic input 1while switch 1 enables phantom power to Mic input 2.

Chime:

When the chime button is pressed the selected chime tone as pre-announcement for paging will be played once.

Fire:

When the fire button is pressed the fire alarm goes through the loop until the fire button is pressed again.

Two band tone control:

Using the bass and treble rotary dials, the overall system frequency response can be adjusted within a range of+12dB. The level will be increased while clockwise rotating. while counter-clockwise will result in a level decrease. In center position, both dials are set to neutral level.

Microphone echo control:

Articulated echo effect suitable for microphone channel

Master volume control:

Using the master volume control the overall system volume will be adjusted in a range between minimum and maximum level

Digital Music player:

This is an Al-In-One Digital audio source device accommodates three different kinds of audio sources into one single device. It including a lossless MP3plaverFM tuner Bluetooth (+BT model only), the MP3 player can play such as MP3,WMA,WAV,FLAC ,AAC audio formats on the front side is a graphic LCD display screen, an USB slot a SD/MMC memory card slot and 8 control buttons provided.

Button Function

⏻	Press: Turn on the player Press & Hold: Turn off the player
M	Switch the operation mode between USBSD/MMC Bluetooth

⏯	Press: Started and paused for track when in USB/SD/MMC/Bluetooth Mode Press & Hold: Automatically scanning FM radio, store it when in FM tuner Mode
⏮	Previous track when in USB/SD/MMC/Bluetooth Mode Previous stored FM radio station when in FM tuner Mode
⏭	Next track when in USB/SD/MMC/Bluetooth Mode Next stored FM radio station when in FM tuner Mode
+	Increase player volume
–	Reduce player volume
RPT	Switch the repeat mode between Repeat One. Repeat Folder, Repeat All and Repeat Off

USB connection port &SD/MMC card slot:

An USB storage device and/or an SD/MMC memory card can be inserted to these slots. Tracks stored on here can be played through the player and it will automatically start to play when the medium is inserted.



LED indicators:

The current system operation is indicated on the 6digit LED bar graph The LED's monitor the current output eve within a range of-18 dB and 0 dB while the upper LED (red) illuminates when the output is clipping you need to reduce the channel or master volume.

Zone 1-4(output)switches:

The different connected loudspeaker lines (1-4) can be switched on and off by pressing the switches with the corresponding numbers when the zone (1-4) is enabled the green light on the corresponding switch will be illuminated. When the 'All switch is pressed, all zone (1-4) outputs will be enabled

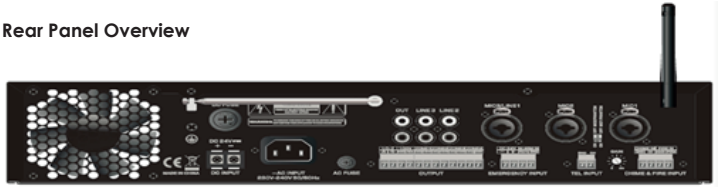
Zone 1-4 (output) level control:

The output level of different zone (1-4) can be adjust within a range of-15dB and 0dB by the band switches with the corresponding numbers.

Power switch:

The device can be switched ON and Off using the power switch. When the device is switched ON, the green light around the power button will illuminate. After powering on the buzzer inside will ring three times and then the output protection relay will be switched on (a click will be heard when this occurs) that mean the amplifier is ready.

Rear Panel Overview



Rear panel description

The rear panel for amplifiers is identical and contains all connection and configuration controls (the model without "+BT" has no bluetooth antenna). Configuration controls include the settings which should be made once when setting up the system and doesn't have to be changed by the user afterwards.

AC Power inlet:

The main AC power supply (230~240VAC/50~60 Hz) has to be applied to this AC power inlet. The connection is made by an IEC C14 power connector A fuse holder with main fuse is located on the right of the AC power inlet. When replace the fuse make sure the replacement matches the specifications of the original fuse.

FM antenna:

When using an FM radio, pull out the FM antenna to ensure a good FM reception.

Bluetooth antenna:

When connecting the bluetooth adjust the bluetooth antenna to a vertical position to ensure a good wireless signals and longer distance.

****Only the model with '+BT has a bluetooth antenna****