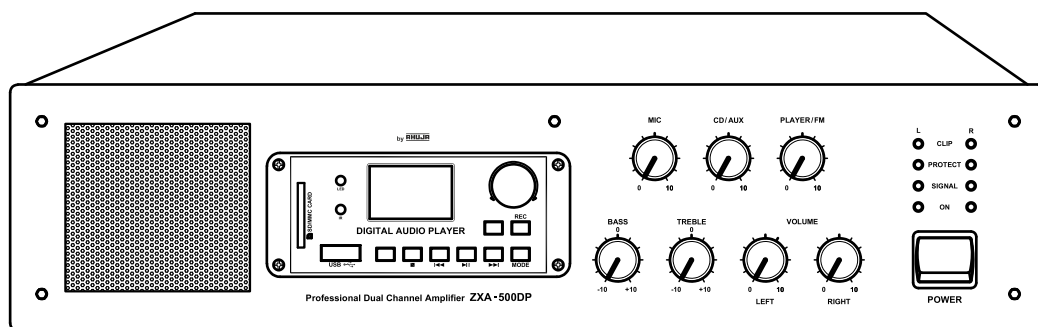


Dual Channel Power Amplifier

250W + 250W RMS

ZXA-500DP



- ◆ Please read this manual thoroughly before making connections and turning on the power. Following the instructions in this manual will enable you to obtain optimum performance from your
- ◆ Please retain this manual for future reference.

• Safety Instructions

Read the Instructions: Please read all the instructions in this section carefully before installation or use of the product. All the safety instructions must be followed.

Retain the Instructions: Please retain this Instruction Manual for future reference.



This symbol, wherever it appears, alerts you to the presence of uninsulated hazardous voltage that may be sufficient to constitute a risk of electric shock. External wiring to any terminal marked with this symbol must be done by a trained and instructed person only.



This symbol, wherever it appears adjacent to a component, alerts you that the concerned component can only be replaced by another of the exact same specifications.

WARNING

- To reduce the risk of electric shock, do not remove the top cover. No user serviceable parts inside. Refer all servicing to qualified personnel only.
- Before replacing any fuse, make sure the set is switched off and disconnected from the AC mains or any other power source. Replace a fuse only with another of exactly same specification.

CAUTIONS

Water & Moisture: To reduce the risk of fire or electrical shock, do not expose this set to rain or moisture. Do not use this set near water or in a wet location. Do not keep any object filled with liquid, such as a vase, on top of this set. Do not insert or remove the AC mains plug with wet hands.

Power Source: The voltage & frequency of the AC mains supply, to which this set can be connected, is marked on the rear panel of the set. Do not connect this set to any power source other than those specified on the rear panel.

Power Cord Protection: Do not cut, kink, damage or modify the AC power cord supplied with this set. Keep the AC power cord away from heaters and harmful chemicals. Do not keep any heavy object on the power cord.

Operation on Generator: When operating this set on a generator, make sure the set is switched off till the generator voltage has stabilized.

Ventilation: This set should be situated so that its location or position does not interfere with its proper ventilation. Do not cover the ventilation holes / slots. Do not insert or drop anything into the ventilation holes / slots. Do not insert a finger or any object through the slots in the rear panel for the fan.

Stability: This set must be kept in a stable and flat horizontal position, and never in a tilted position. Do not place this set on an unstable stand, tripod, bracket or mount. Do not use attachments which are not supplied or explicitly recommended by the manufacturer.

Earthing: This set must be earthed properly before use. A wire from the Earth terminal on the rear panel must be connected to electrical earth.

Cleaning: Disconnect this equipment from the AC mains and external battery before cleaning. Clean with a damp cloth, but do not allow any liquid to enter the set. Do not clean with liquids or aerosols.

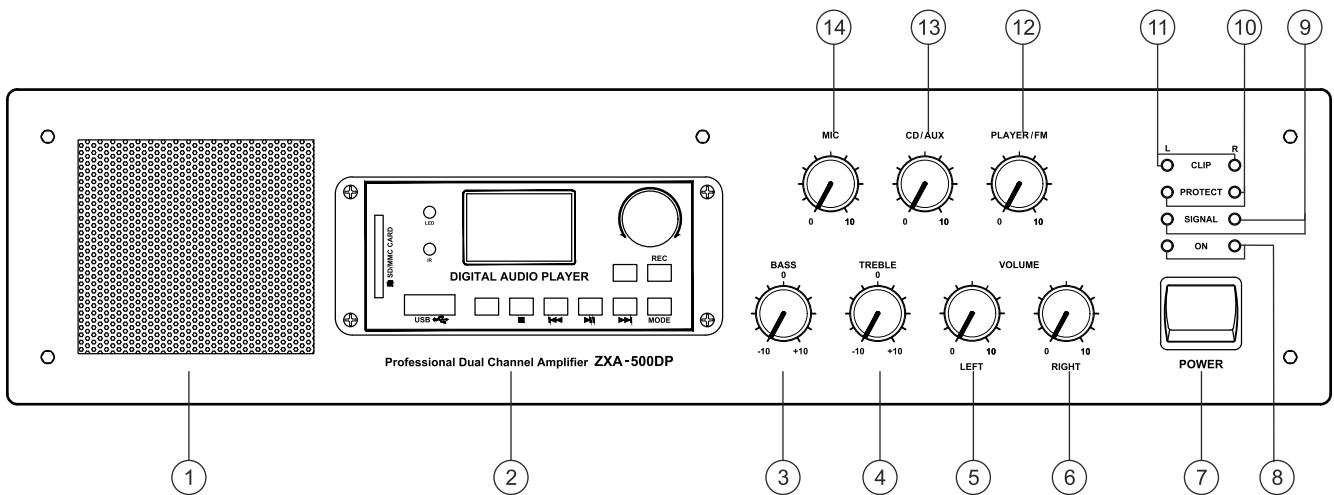
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• Features/General Description of Product

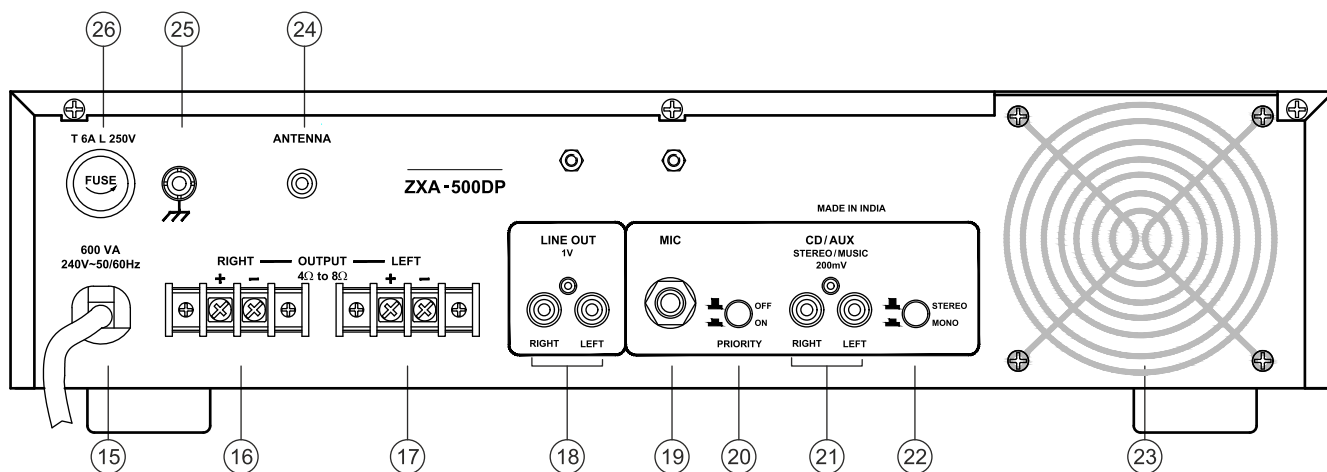
- ZXA-500DP is designed for use in a wide variety of PA applications, especially where high quality music is required.
- Professional dual channel amplifier of 250 watts rated output for each channel at 2 Ohm load with one unbalanced mic input, 1CD/AUX (RCA) input and a built-in MP3 player with Bluetooth & FM radio.
- Built-in MP3 playback facility, with remote control is provided. It can be used to play back music recorded in MP3 format on USB pen drives or SD cards. A backlit LCD display shows the track being played and the time elapsed on that track.
- Cut-boost type treble and bass controls provided for tonal adjustment.
- Line output for connecting to a Booster Amplifier or an active sub-woofer.
- High current torroidal transformer which provides excellent regulation and minimises hum & noise.
- Low THD and high damping factor for excellent sound quality.
- Extensive protection circuits for Temperature (transistors), Overload, DC, RFI and Output short circuit.
- Indicator LEDs for ON; SIGNAL, CLIP, and PROTECT.
- Limiter circuit protects the amplifier and speaker from being over driven because of high input signal level.
- Ease of operation, combined with service accessibility has been optimized in the design.

• Front Panel Controls & Features



1. **Ventilation Grille**
2. **MP3 player (Refer Page no. 7&8)**
3. **BASS Control**
To increase or decrease the level of Low frequencies.
4. **TREBLE Control**
To increase or decrease the level of high frequencies.
5. **Volume Control of LEFT Channel**
For adjusting the overall volume level of left channel.
6. **Volume Control of RIGHT Channel**
For adjusting the overall volume level of right channel
7. **POWER Switch**
Push the top part of the knob to switch the amplifier ON. Push the bottom part of the knob to switch the amplifier OFF.
8. **POWER ON LED**
These LEDs glows when the amplifier is switched ON.
9. **SIGNAL Indicator LEDs for Channels L & R**
One separate blue LED provided for each channel. This LED indicates the presence of signal at input stage.
10. **PROTECT Indicator LEDs Channels L & R**
One separate orange LED provided for each of the two channels Left & Right. These LEDs glow when the output is shorted or there is DC offset or the input is over driven or output is overloaded or fuses of $\pm$ DC supply (each are both) are blown-off.
11. **CLIP Level LEDs**
One separate orange LED provided for each of the two channels L & R. Continuous glow of LEDs indicates that there is excessive signal being fed to the input of the amplifier resulting in clipped and distorted output levels. Reduce the level of the input signal.
12. **Level Control for MP3 player & FM Radio**
This control is used for adjusting the level of MP3 player, Bluetooth & FM.
13. **Level Control for CD/AUX input**
This control is used for adjusting the level of CD/AUX input.
14. **Level Control for MIC input**
This control is used for adjusting the level of Mic input.

• Rear Panel Controls & Features



15. 3 Core AC Mains Cable with Plug

16. Output Terminal Strip for Right Channel

17. Output Terminal Strip for Left Channel

18. LINE Output

The LEFT and RIGHT channel RCA connectors give a LINE OUTPUT signal, which can be used to connect an active sub-woofer, or another amplifier.

19. Mic Input Jack

This 6.3mm phone jack is for an unbalanced signal from a low impedance microphone.

20. Priority ON/OFF switch for MIC-1 Signal

Push this switch to use mic priority. Keep this switch unpressed if mic priority feature is not required. If priority is ON, the CD/AUX signal will be automatically muted when a microphone is used.

21. CD/AUX RCA Connector

The RCA connectors L&R are to accept the music input from another device like CD player, mixer, mobile & laptop etc.

22. STEREO / MONO Mode Selector Switch

This Push switch is used to operate the unit in stereo or mono mode. When switch is pressed, both LEFT and RIGHT channels will be shorted. For stereo operation keep the switch unpressed.

23. Fan Grille

This is protective grille for fan. Do not insert anything into this opening.

24. Antenna

To connect the Antenna wire supplied with unit, (for FM radio only).

25. Earth Terminal

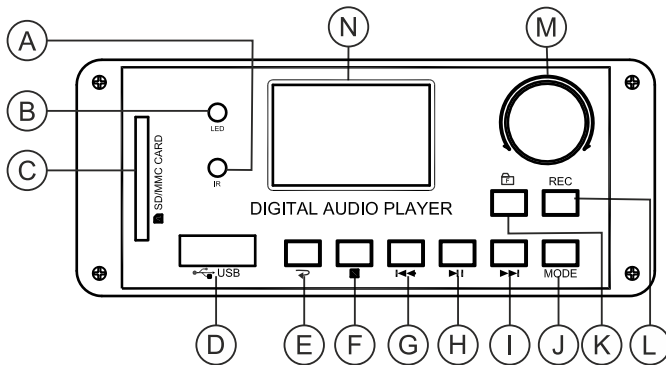
This terminal is used to connect the chassis to main earth .

26. AC mains fuse holder

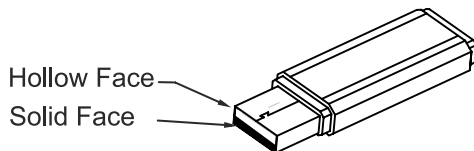
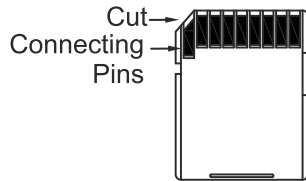
This fuse protects the amplifier from excessive current flow. In case the fuse fails, replace with another of exact same rating.

• MP3 Module & Remote Control: Control & Features

MP3 Module



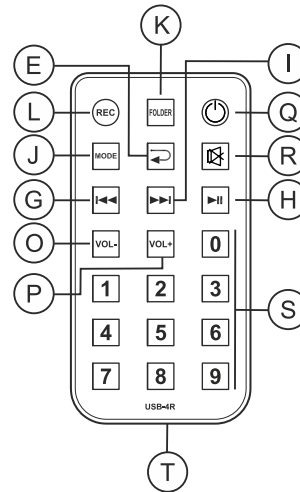
- A. IR Sensor:** Picks up signal from the Remote control. For best results, point the Remote control towards IR sensor.
- B. LED:** This LED blinks when recording is going on.
- C. SD/MMC Card Connector:** Insert the SD/MMC Card into this slot to play. When taking out the card, pull the card to take out.
While inserting SD/MMC card into the slot, ensure that the card is inserted in such a way that cut is facing upwards.
- D. USB Connector:** Insert the USB drive here. While inserting USB drive into the USB connector, hold the USB drive in such a way that hollow face of the USB drive is upwards as shown in Figure.



Any forceful insertion in wrong direction will damage the connector.

- E. Cycle Mode:** Successive pressing of this button provides various options like REPEAT1, INTRO, NORMAL, FOLDER, REPEAT FOLDER, RANDOM and REPEATALL.
- F. STOP:** Press this key to stop PLAY.

Remote Control



- G. Prev:** During playback short pressing the PREV. key will go to the prev. file/track. Long press will fast backward the track. In main menu, short pressing previous key will go to the previous option in the main menu.
- H. PLAY/PAUSE:** Press PLAY/PAUSE once to pause if music is already playing. Press PLAY/PAUSE again to resume playing. During recording, short press of PLAY/PAUSE will immediately start playing the recently recorded file. When mode is selected to FM this key is used for auto tuning of FM.
- I. Next:** During playback, short press the NEXT key to go to the next file or track and long press to fast forward the track. In main menu, short press NEXT key to go to the next option in the main menu.
- J. Mode:** Press MODE key for the selection of desired function from main menu. While USB/SD/Bluetooth functions are in use for playback or recording, if the MODE key is pressed then it will stop the function & return to main menu.
- K. Folder:** Press the FOLDER key and display will show track list or folder of the USB/SD card, then use NEXT/PREV. key or rotate the control 'M' to select the desired track and press Mode/control knob to confirm.
- L. REC:** Press REC button when USB/SD Card is connected, then module will start recording in USB/SD Card. During recording short press the REC button, it will Pause the recording. Press again to resume the recording. Long press of REC button or short press of PLAY/PAUSE button during recording will immediately start playing the latest recorded file.

• MP3 Module & Remote Control: Control & Features

M. Rotary Control: Rotate clockwise or anticlockwise for selecting the option from main menu and press control knob to confirm. In case of folder option, LCD will show folders or track list. Select the desired file by rotating this knob and press to confirm. In case of USB/SD Card playback, rotate this knob to select the Next or Previous track and short press this knob to confirm. Long press will go to main menu.

By rotating this knob clockwise or anticlockwise, during playback, display will show the track name.

To play the selected track immediately, press the knob to confirm. If not pressed then it will start to play automatically the selected track after completing the current track being played.

For example track 001 is currently playing. After rotation, rotary knob cursor is on track 005 and left without pressing, then after completing track 001 it will automatically start to play track 005.

N. LCD Display: Momentarily display . During play, displays the time duration of the track being played.

O. VOL- : To decrease volume level of MP3 player.

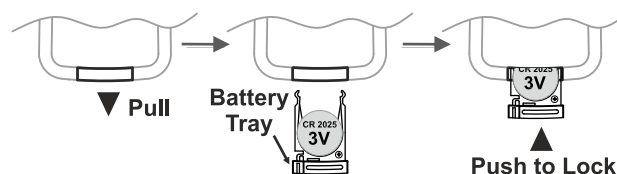
P. VOL+ : To increase volume level of MP3 player.

Q. Power: Press once to switch off MP3 player, press again to switch ON.

R. MUTE: Press once to mute the audio, press again to resume the audio.

S. Number key 0 to 9. To choose the track number to be played.

T. Battery Replacement: Pull out the battery tray and replace the battery with positive electrode facing upwards as shown in fig. below. Push the battery compartment back to the close position. Use CR2025 or equivalent lithium coin cell.



• Pairing of Bluetooth Device

Switch ON the unit ZXA-500DP and select the Bluetooth option either by pressing MODE button or rotary control on MP3 module.

To play the MP3 programme from mobile phone or laptop in bluetooth mode, the PAIRING of mobile phone/laptop & the unit is necessary.

Normally the following general instructions are followed :

For pairing of devices, switch ON the Bluetooth option in mobile phone or laptop.

The mobile phone or laptop starts searching for the new Bluetooth device. The moment new device by name PA appears on the mobile phone or laptop, select the new device i.e. PA and press OK or else allow as it appears on mobile phone or laptop. The display on the unit

shows BT mode connected and the system is now ready to use.

In some mobiles, it asks for a code to allow access. Press 0000 and follow the steps, like pressing "OK", "Allow once", "Allow always" etc. and make the device ready for use.

Select the MP3 programme from mobile phone or laptop and press PLAY. The same song starts playing on the Ahuja Digital Player/Recorder. We can select Volume, FF, Rewind, Play/Pause function either from keys on the Digital Audio Player or through Remote Control.

• Operating Procedure

- n Keep all volume controls to '0' position and the power switch at OFF position.
- n Plug in the AC power cord to the nearest AC mains socket and put the power switch to ON position. LCD Display will show 'Logo.
- n Press the mode button or rotate the control knob to go to the main menu. It will show USB REC/Player, SD REC/Player, BT MODE, AUX, FM MODE, SET CONTRAST, VERSION.

System as a Player:-

- a) Insert the USB drive or SD card into their respective port. Module will automatically start playing.
- b) When the MP3 player starts playing, the first line of display shows the time elapsed of the track being played/total time of the track, in the second line of the display show name of track & third line shows track No. being played/total number of tracks.

00:01
ABCDEF
0001/XXXX
- c) Use the volume button on the remote control or Player/FM level control on the set to adjust the desired playback level so that clip LED starts glowing. Select the desired track by remote control or press Next/Prev keys.
- d) Press STOP to stop the track being played.
- e) Setting of volume level remains in memory.
- f) Use remote control to switch OFF the USB MP3 recorder player while not in use.

System as a Recorder:-

- a) Insert the USB drive or SD card into the respective port.
- b) Feed the signal to be recorded into the MIC or CD/AUX input.

Press REC button, the system will start recording immediately. Display will show the track no., time elapsed, & total recording time. It will automatically save the file into a separate RECORD folder. By the name REC 001.....REC 00n.



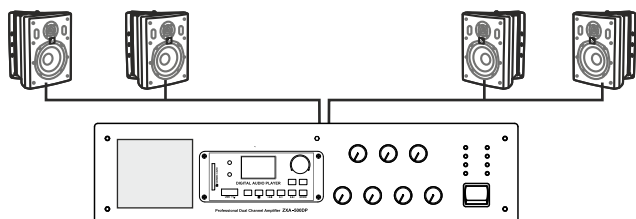
- c) If need arises to PAUSE the recording, short Press REC button to PAUSE the recording. To resume the recording again short press the REC button. It will resume recording in the same file and from the same point where it paused earlier.
- d) Long pressing the REC button or Short pressing PLAY/PAUSE button during recording will immediately start playing the last track recorded. Press the MODE button to exit the REC function & return to main menu and track will be saved automatically.
- e) To playback the recorded programme, press FOLDER key. Rotate the control knob to select RECORD folder and the desired recorded file to play.

• Guideline for FM Tuning

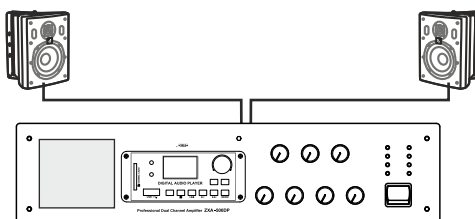
1. Press the mode button or rotate the control knob to go to the main menu. It will show USB REC/Player, SD REC/Player, BT MODE, AUX, FM MODE, SET CONTRAST, VERSION. Select FM mode by rotating control knob from main menu. After selecting FM Mode press control knob or mode key to go in FM Mode.
2. For Auto Tuning, short press the PLAY/PAUSE button and the module will go in Auto Tune Mode. Or press control knob it will show SAVE CHANNEL, AUTO SEARCH, BACK, EXIT. Select auto search option and press control knob and the module will go in Auto Tune Mode. All available stations will automatically get tuned and saved to the programme locations CH01, CH02, CH03... etc.
3. For Manual Tuning, rotate control knob to get desired frequency.
4. To save this station, press control knob, it will show SAVE CHANNEL, AUTO SEARCH, BACK, EXIT. Select save channel option and press once again this knob to save channel.
5. If we feed the FM frequency of the desired station by pressing the numeric keys of the Remote control, it will play the desired station. For example to play 104.0 MHz, feed 1040 on the Remote control. The station 104.0 MHz will be displayed and start playing. However this station will not be saved automatically. Follow steps 3&4 to save the desired station.
6. To access the saved stations, press NEXT or PREV. button on the module.
7. We can also press numeric keys 1,2,3... etc. on Remote control for retrieving the FM station saved in program locations CH01, CH02, CH03... etc.

• Possible Combinations with Wall & Ceiling Speakers

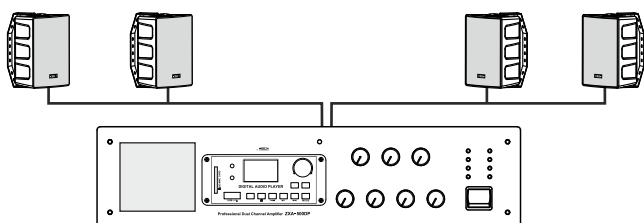
ZXA-500DP-1 No., SMX-902-4 Nos.



ZXA-500DP-1 No., SMX-902-2 Nos.

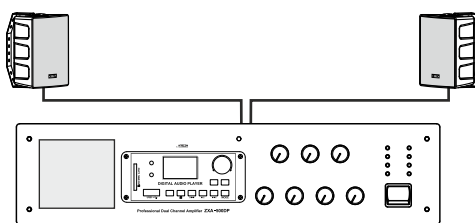


ZXA-500DP-1 No., ASX-612/SMX-602-4 Nos.



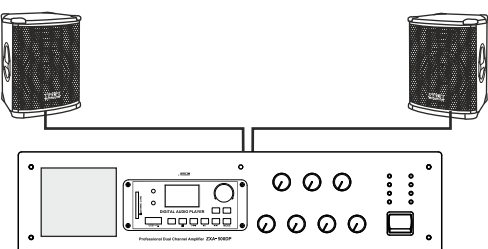
For safety of the speakers, the volume controls should be kept at the desired optimal level, and not at maximum.

ZXA-500DP-1 No., ASX-612/SMX-602-2 Nos.

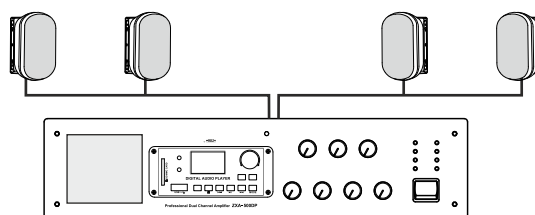


For safety of the speakers, the volume controls should be kept at the desired optimal level, and not at maximum.

ZXA-500DP-1 No., SRX-120DXM-2 Nos.

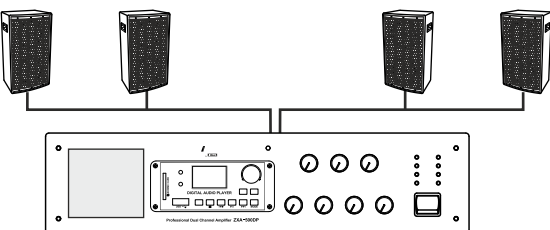


ZXA-500DP-1 No., OSX-666T-4 Nos.



For safety of the speakers, the volume controls should be kept at the desired optimal level, and not at maximum.

ZXA-500DP-1 No., SRX-50DX-4 Nos.



4 Nos. or more Ceiling Speakers like CSD-8401T or CSD-6303T can be used (without line matching transformer) in a suitable series-parallel combination.

• Trouble Shooting

Key to LED symbols:	
	GLOWING
	BLINKING
	OFF
Condition: Normal operation	
Indication:  CLIP  SIGNAL  PROTECT  ON	Possible Reason: ■ The amplifier is in normal operation.
Condition: Low output	
Indication:  ON  SIGNAL	Possible Reason: ■ Check if the level of the input signal is too low. ■ Check the signal source is operating and the input cable is intact. ■ The channel volume control setting is not at desired level.
Condition: No Sound	
Indication:  PROTECT	Possible Reason: ■ The amplifier goes in mute mode due to excessive input signal, speaker impedance mismatch or output short circuit. ■ Check the speaker impedance and speaker wiring for stray strands touching or breaks in the insulation. ■ To restore normal operation, switch OFF the amplifier and switch ON after few sec. (after correcting the fault)
Condition: Distorted Sound	
Indication:  ON  CLIP  PROTECT  SIGNAL	Possible Reason: ■ The input signal level may be too high. So turn down the amplifier level controls. ■ Check the level of signal from input source. If it is high then reduce the input signal level. ■ The amplifier should never be operated at a level which causes the clip LEDs to illuminate constantly.

• Protections

Thermal Protections

Output Devices

In case of excessive heating of the output devices the thermal protection circuits will bring the audio signal to mute status. Onset of thermal protection circuit is indicated by glowing of PROTECT LEDs (Orange) in each channel. To restore normal operating conditions, it is recommended to switch off the amplifier for cooling and then switch ON again after cooling and checking the speaker connections.

DC, RFI Protection

Inbuilt circuits are provided to protect the loudspeakers from any offset DC voltages. Also suppression filters at primary and secondary power supplies have been inbuilt, to reduce some RF interference.

Overload / Short Circuit Protection

Protection circuits are provided in both channels for the safety of output devices in case of overload or mismatch of impedances at the outputs. This circuit brings the input signals to mute condition, and set will be in protect mode. To reset, switch OFF the amplifier for few seconds, remove the short circuit or overload and then switch ON for normal operation.

Fuses

- 1 × 6 Amp (T 6AL) fuse for AC mains.
- 2 × 8 Amp (T 8A L) fuse for +ve and -ve DC supply for each channel.

• Specifications

Model	ZXA-500DP
Power Out put (Stereo/Mono Mode) 8Ω 4Ω 2Ω	2 × 100W RMS 2 × 180W RMS 2 × 250W RMS
THD + N	≤ 1.0%
Frequency Response (-1dB)	20-20,000Hz
Power Bandwidth (0.5% THD)	20-20,000Hz
Inputs	MIC: Mono phone jack 6.3mm CD/AUX: RCA jack (L&R)
Sensitivity	MIC: 5mV/4.7k (unbalanced) CD/AUX: 250mV/10k (L&R) (Stereo Mode)
Audio Player	MP3 player with USB, SD/MMC card reader, Bluetooth and FM
S / N Ratio	≥ 65dB
Tone Controls	Bass: ±10dB at 100Hz, Treble: ±10dB at 10kHz
Line Output	1V/1kΩ (L&R) (Through RCA Jack)
Channel Separation	≥ 60dB at 1kHz
Protections	Temperature, DC, RFI, Short Circuit, Built-in Limiter AC: Fuse 6Amp. (T 6A L); ± DC: Fuse 2 x 8Amp. (T 8A L) for each channel
Cooling	DC Fan with Temperature Sensing
Indicators	Power ON, Signal, Clip, Protect (Ch. L & R)
Power Consumption (Rated)	600VA @ 220-240V 50/60Hz
Dimensions	W393 × H108 × D375mm
Weight	10.5 kg approx.

- Design and Specifications are subject to change without notice owing to continuous product upgradation.
- Technical specifications are subject to production tolerances.