

TANNOY®

iwsa500-D



IN | WALL


BASH®
U.S. Patent #5,075,634 and
5,510,753 Patent Pending

iwsa500-D Amplifier OWNER'S MANUAL

2.0 WARNINGS

2.1 Important Safety Instructions

Before using your amplifier, be sure to carefully read the applicable items of these operating instructions and the safety suggestions.

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturers instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 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 are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer.
- 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. 
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- 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.
- To completely disconnect this equipment from the mains, disconnect the power supply cord from the receptacle.
- The mains plug of the power supply cord shall remain readily operable.
- Do not remove top or bottom covers. Removal of the cover will expose hazardous voltages. There are no serviceable parts inside and removal may void the warranty.

2.2 WARNING

The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electrical shock to persons.



2.3 CAUTION

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.



2.2 WARNING

To reduce the risk of fire and electric shock, do not expose this apparatus to rain or moisture and objects filled with liquids, such as vases, should not be placed on the apparatus.

iwsa500-D | O W N E R ' S M A N U A L

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Thank you for selecting Tannoy developed by our dedicated team of design engineers, they are the choice of discriminating music and movie lovers the world over. Excellence is designed into our loudspeakers and electronics from the start. Careful selection of the very best components combined with strict quality control procedures during the production process ensures this level of excellence is maintained. We feel confident that you will enjoy your new Tannoy loudspeakers/electronics for many years to come.

Please take time to read the rest of this owner's guide before using your loudspeakers/electronics to gain maximum effect from their use. Once you have installed your new loudspeakers/electronics please complete and return the registration document – this does not limit your legal rights.

2.4 USER RESPONSIBILITY

2.4.1 Speaker Damage



Your amplifier is very powerful and can be potentially dangerous to both, loudspeakers and humans alike. Many loudspeakers can be easily damaged or destroyed by overpowering, especially with the high power available. Always check the speakers' continuous and peak power capabilities.

Even is the amplifier's front panel attenuators can be used to reduce the gain, it is still possible to reach full output power if the input signal level is high enough.

2.4.2 Radio Interference

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference from electrical equipment. This product uses radio frequency energy and if not used or installed in accordance with these operating instructions, may cause interference in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment on and off, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

3.0 APPROVALS

This equipment is tested and approved according to the Canadian Standards Association (CSA/C/US) and Federal Communications Commission (FCC).

4.0 INTRODUCTION

Thank you for purchasing a Tannoy power amplifier. This manual contains important information on operating your amplifier correctly and safely. Please take some time and read this manual to familiarize yourself with the advanced features of this amplifier.

4.1 Unpacking

Carefully open the shipping carton and check for any noticeable damage. Every Tannoy amplifier is tested and inspected before leaving the factory and should arrive in perfect condition. If found to be damaged, notify the shipping company immediately. Only the consignee may institute a claim with the carrier for damage incurred during shipping. Be sure to save the carton and packing materials for the carrier's inspection. It is also advisable to save the carton and packing material, even if the amplifier is undamaged. Should you ever need to ship the amplifier, always use original packaging.

4.2 Front Panel

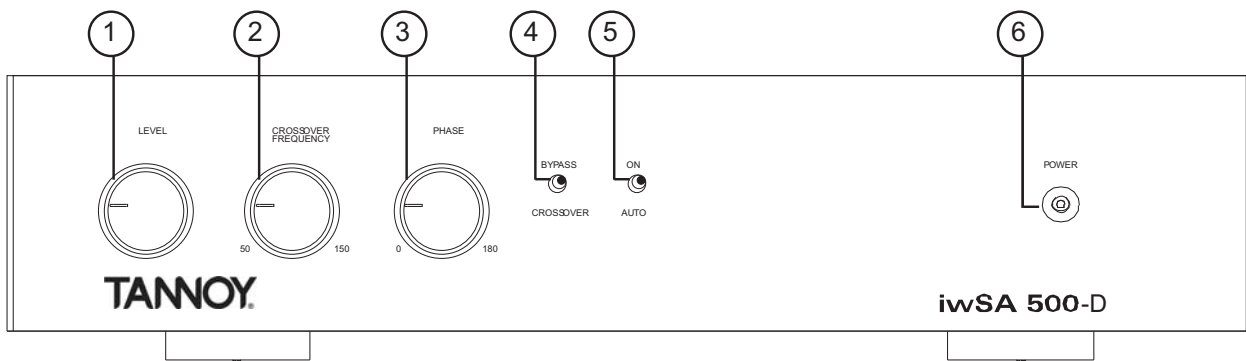


Figure 1: Front Panel

1. Input level attenuator

This control is used to alter the signal level entering the amplifier or to cut down the unwanted noise from the input signal.

2. Crossover frequency adjustment

Continuously variable from 50Hz - 150Hz, to allow custom integration with various mid/high units and installation positions.

3. Phase control

Continuously variable from 0° - 180° to allow custom integration with mid/high units in various installation positions.

4. Crossover / Bypass switch

Allows the low pass crossover to be taken out of the circuit so an external crossover can be used.

5. On/Auto switch

In the auto position the amplifier will go into sleep mode when there is no signal present for 20-30 minutes. On position defeats the sleep mode.

6. Power indicator

This blue LED indicates that there is power present at the amp and that the rear mounted power switch is on.

4.3 Rear Panel

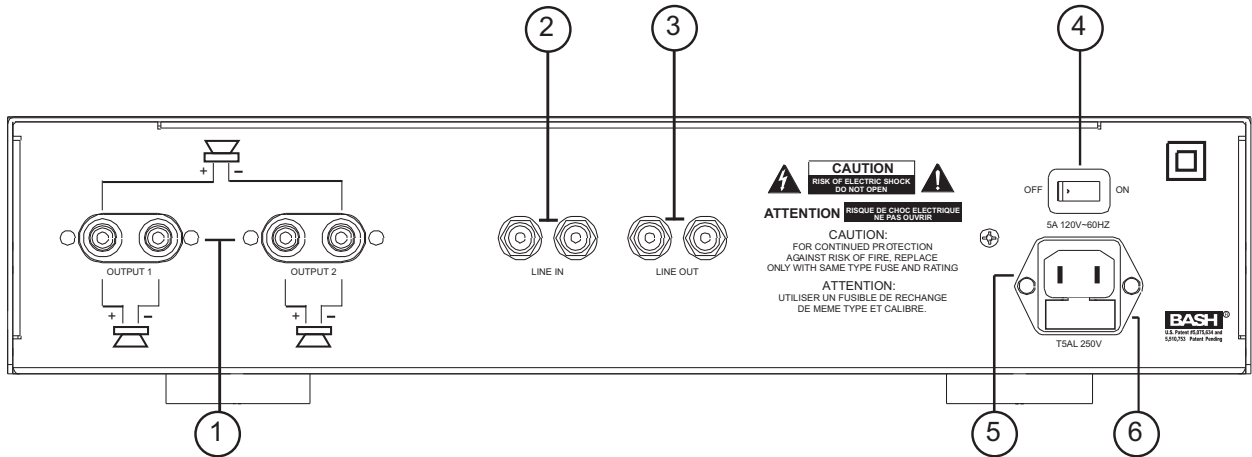


Figure 2: Rear Panel

1. Output / speaker connections

4 x Gold plated binding posts to allow the connection of speaker wires. A full description can be found on page 7.

2. Line in connectors

2 x RCA connectors for an unbalanced input signal.

3. Line out connectors

2 x RCA connectors for an unfiltered output signal.

4. Power switch

Turns mains power on or off.

5. AC power connector

6. Fuse holder

Pull out to remove fuse. Replace with same type and rating of fuse.

5.0 INSTALLATION

5.1 Mounting

The amplifier is two rack units high (2U) and will fit into a standard EIA 19" rack. Amplifiers should not be stacked directly on top of each other, we recommend a space at least 3" for the top and sides with 5" on the back. When shelf mounted the height of the supplied feet is adequate.

5.2 Operating Voltage

WARNING!

A label just above the mains cable connector on the rear of the amplifier indicates the AC mains voltage for which the amplifier is wired. Connect the power cable only to the AC source referred to on the label. The warranty will not cover damage caused by connecting to the wrong type of AC mains.

6.0 CONNECTIONS

6.1 Input Connections

From an unbalanced source the hot (+) center conductor connects to the center pin of the RCA connector. The (-) shield connects to the chassis of the RCA connector.

From a balanced source the hot (+) conductor connects to the center pin of the RCA connector. The cold (-) and the shield connect to the chassis of the RCA connector.

6.2 Connecting The Speaker

Speaker connections are made via 4 gold plated binding posts. When connecting 1 subwoofer to the amplifier the (+) wire connects to the RED (+) binding post of output #1. The (-) wire connects to the BLACK (-) binding post of output #2.

When connecting 2 Tannoy subwoofers one will connect to output #1. Negative (-) wire to BLACK binding post and positive (+) wire to RED binding post. The second will connect to output #2. Negative (-) wire to BLACK binding post and positive (+) wire to RED binding post.

Never connect either output terminal to ground or to some other output or input terminal. Pay attention to speaker polarity; loudspeakers connected out of polarity degrade sound quality, and may be damaged as a consequence.

6.3 Cable Choice

Always use the best quality of cable available within your budget. High quality audio signals passing from the amplifier to the loudspeaker are unusual in their demands on the cable. Wide dynamic range and frequency bandwidth information has to coexist with the ability to transmit peak currents of at least 10 Amps, without incurring any loss or signal impairment. This explains why the sound quality of the information reproduced by the loudspeakers is so dependant on the physical properties of the cables connecting them to the amplifier.

Technically, we recommend two-core cable with cross section area not less than 1.5mm² (14 gauge) for cable runs of up to 3 metres. For longer lengths we would suggest that you use cable with a minimum cross sectional area of 2.5mm² (12 gauge).

Keep the speaker cable leads as short as possible. Do not use shielded leads, such as microphone or guitar cable. Remember that the speaker cable robs the power of the amplifiers in two ways: by increasing the load impedance and by introducing resistive power losses.

7.0 OPERATION

7.1 Operation Precautions

- Make sure that the power switch is set to "off" before connecting any input or output, or operating the switch on the rear panel.
- Make sure that the AC mains voltage is correct, and the same as the one printed on the rear panel of the amplifier.

8.0 PROTECTION FEATURES

8.1 Limiter Function

The limiter function is included to prevent dangerous clipped signals reaching the speaker and damaging it. If an amplifier is severely overdriven, its output waveform is clipped (its peaks are squared off) - reducing the crest factor. In extreme cases the waveform can approach that of a square wave. An amplifier is normally capable of producing far more power under these conditions than its normal undistorted rated output power.

The Tannoy iwsa500-D Amplifier has two modes of thermal protection and an auto shut down when an internal fault is detected.

9.0 MAINTENANCE

Under normal use the amplifier should provide years of trouble-free service, with no maintenance required.

10.0 TROUBLESHOOTING

These are typical things to check if you think your amplifier is faulty:

FAULT: No power indicator light

- Check for proper voltage at receptacle.
- Make sure power cord is properly seated in connector on the rear of the amplifier.
- Check power switch on back of amplifier.
- Check fuse located in holder/drawer below power input connector on back of amp.

FAULT: No output

- If the power indicator light is on, verify that there is a usable signal on the input.
- Check position of level control knob on the front of the amplifier.
- Check speaker cable connections on the output binding posts for bad connections.
- Check speaker cables for possible short circuits.

FAULT: The amplifier does not respond even after having checked the above items.

In the unlikely event of a non-user rectifiable fault return the amplifier to your supplier, or an approved service center.

Tannoy cannot be held responsible for damage or injury as a result of the top or bottom cover being removed.

11.0 WARRANTY

No maintenance of Tannoy products is necessary.

All of our products have been produced and tested with care and precision to give first-class service.

All passive components are guaranteed for a period of five years from the date of purchase from an authorized Tannoy dealer subject to the absence of evidence of misuse, overload or accidental damage.

All active and electronic components are guaranteed for a period of one year from the date of purchase from an authorized Tannoy dealer subject to the absence of, or evidence of, misuse, overload or accidental damage.

If at any time during this warranty period the equipment proves to be defective for any reason other than accident, misuse, neglect, unauthorized modification or fair wear and tear, we will repair any such manufacturing defect or, at our option, replace it without charge for labour, parts or return carriage.

If you suspect a problem with a Tannoy product then, in the first instance, discuss it with your Tannoy dealer. If you require further assistance then we ask that you deal directly with your local Tannoy distributor.

For spares and service in NORTH AMERICA only:

Contact: Customer Service Manager
inquiries@tannoyna.com
Telephone: 519.745.1158

DO NOT SHIP ANY PRODUCT TO TANNOY WITHOUT PREVIOUS AUTHORIZATION

12.0 TECHNICAL SPECIFICATIONS AND DRAWINGS

iwsa500-D SUBWOOFER AMPLIFIER

PERFORMANCE

Maximum Output Power ^{(1) (2)}	500 Watts Continuous into 4 Ω 500 Watts Continuous into 8 Ω
Minimum Nominal Load Impedance	4 Ω
Distortion	<1% @ Maximum Rated Output
Minimum Frequency Bandwidth	20Hz - 500Hz (no filters or EQ)
Input Impedance	>20 kΩ
Current Draw at 4 Ω	5 Amps

FRONT PANEL

Level Control	Adjusts Input Signal Level
Crossover Frequency Adjustment	50Hz - 150Hz
Phase Control	0° - 180° Continuously Variable
Crossover/Bypass Switch	Engages or Disengages Low Pass Filter
On/Auto Switch	On Continuous / Sleep Mode
Power On Indicator	Blue LED

REAR PANEL

Input Connectors	2 x RCA
Link Connectors	2 x RCA
Output Connectors	4 x Gold Plated Binding Postings
Mains Voltage Connector	120 Volt IEC - 2 Conductor
Mains Voltage Fuse Holder	T5AL, 250 Volt

REAR PANEL SWITCHES

Power Switch

DIMENSIONS

incl. Feet & Rack Ears	99 x 483 x 372 (3 ⁷ / ₈ x 19 x 14 ⁵ / ₈)
Net Dimensions (HxWxD)	208 x 538 x 445 (8 ³ / ₁₆ x 21 ³ / ₁₆ x 17 ¹ / ₂)
Shipping Dimensions (HxWxD)	

WEIGHT

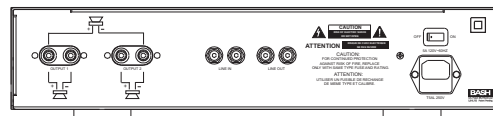
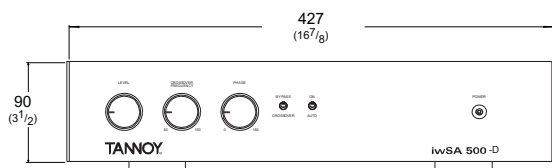
	6.8 (15)
Net Weight (each) - kgs (lbs)	8.6 (19)
Shipping Weight (each) - kgs (lbs)	

APPROVALS

CSA C/US & FCC

NOTES

- (1) Thermal protection may occur at high continuous power.
- (2) Depending on configuration, output power may be lower due to limiting circuit.



TANNOY | iwsa500-D | **BASH**[®]

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