



THA
SERIES

User's Manual

4-CHANNEL HEADPHONE AMPLIFIER
THA-4



TOPP PRO MUSIC GEAR

www.topppro.com



THA
SERIES

Safety Related Symbols



This symbol, wherever used, alerts you to the presence of un-insulated and dangerous voltages within the product enclosure. These are voltages that may be sufficient to constitute the risk of electric shock or death.



This symbol, wherever used, alerts you to important operating and maintenance instructions.

Please read.



Protective Ground Terminal



AC mains (Alternating Current)



AC mains (Alternating Current)

ON:

Denotes the product is turned on.

OFF:

Denotes the product is turned off.

WARNING

Describes precautions that should be observed to prevent the possibility of death or injury to the user.



CAUTION

Describes precautions that should be observed to prevent damage to the product. Disposing of this product should not be placed in municipal waste but rather in a separate collection.

WARNING

Power Supply

Ensure that them a inssource voltage (AC outlet) matches the voltage rating of the product. Failure to do so could result in damage to the product and possibly the user. Unplug the product before electrical storms occur and when unused for long periods of time to reduce the risk of electric shock or fire.

External Connection

Always use proper ready-made insulated mains cabling (power cord). Failure to do so could result in shock/death or fire. If in doubt, seek advice from a registered electrician.

Do Not Remove Any Covers

Within the product are areas where high voltages may present. To reduce the risk of electric shock do not remove any covers unless the AC mains power cord is removed. Covers should be removed by qualified service personnel only.

No user serviceable parts inside.

Fuse

To prevent fire and damage to the product, use only the recommended fuse type as indicated in this manual. Do not short-circuit the fuse holder. Before replacing the fuse, make sure that the product is OFF and disconnected from the AC outlet.

Protective Ground

Before turning the unit ON, make sure that it is connected to Ground. This is to prevent the risk of electric shock.

Never cut internal or external Ground wires. Like wise, never remove Ground wiring from the Protective Ground Terminal.

Operating Conditions

Always install in accordance with the manufacturer's instructions.

To avoid the risk of electric shock and damage, do not subject this product to any liquid/rain or moisture. Do not use this product when in close proximity to water.

Do not install this product near any direct heat source. Do not block areas of ventilation. Failure to do so could result in fire.

Keep product away from naked flames.

IMPORTANT SAFETY INSTRUCTIONS

Read these instructions

Follow all instructions

Keep these instructions. Do not discard.

Heed all warnings.

Only use attachments / accessories specified by the manufacturer.

Power Cord and Plug

Do not tamper with the power cord or plug. These are designed for your safety.

Do not remove Ground connections!

If the plug does not fit your AC out let seek advice from a qualified electrician.

Protect the power cord and plug from any physical stress to avoid risk of electric shock.

Do not place heavy objects on the power cord. This could cause electric shock or fire.

Cleaning

When required, either blow off dust from the product or use a dry cloth.

Do not use any solvents such as Benzol or Alcohol.

For safety, keep product clean and free from dust.

Servicing

Refer all servicing to qualified service personnel only.

Do not perform any servicing other than those instructions contained within the User's Manual.

PORTABLE CART WARNING



Carts and stands - The component should be used only with a cart or stand that is recommended by the manufacturer. A component and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the component and cart combination to overturn.

NOTES

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Topp Pro guarantees the normal operation of the product against any defect of manufacture and / or vice of material, by the term of (12) months, counted as of the date of purchase on the part of the user, committing itself to repair or to change, to its election, without position some, any piece or component that will fail in normal conditions of use within the mentioned period.

This guarantee is valid if the original buyer will have to present/display this certificate properly sealed and signed by the selling house, accompanied by the corresponding invoice of purchase where it consisted the model and serial number of the acquired equipment.

The guarantee does not cover:

- Damages caused by the illegal use of the product, repair and/or nonauthorized modification conducted by people by **Topp Pro**.
- Damages caused by the connection of the equipment to other equipment different from the specified ones in the manual of use, or by bad connection to these last ones.
- Damages caused by electrical storms, blows and/or incorrect transport.
- Damages caused by excesses or falls of tension in the network or by connection to networks with a tension different from the required one by the unit.
- Damages caused by the presence of sand, acid of batteries, water, or any strange element inside the equipment.
- Deteriorations produced by the course of the time, use and/or normal wear of the unit.
- Alteration or absence of the serial number of factory of the equipment.

The repairs could only be carried out the authorized technical service by **Topp Pro**, that will inform about the term and other details into the repairs to take place according to this guarantee.

Topp Pro, will repair this unit in counted a term nongreater to 30 days as of the date of entrance of the unit to the Technical Service. In those cases in that due to the particularity of the spare part, outside necessary their import, the repair time and the viability of the same one will be subject to the effective norms for the import of parts, in which case one will inquire to the user about the term and possibility into repair.

With the object of its correct operation, and of the validity of this one guarantee, this product will have to be installed and to be used according to the instructions that are detailed in the manual associate or the package of the product.

This unit will be able to appear for its repair, next to the invoice of purchase (or any other proof where the date of purchase consists), to its authorized distributor **Topp Pro** or an authorized technical center on watch by **Topp Pro**.

Exclusion of damages:

THE RESPONSABILITY OF TOPP PRO BY ANY DEFECTIVE PRODUCT IS LIMITED THE REPAIR OR THE REPLACEMENT OF HE HIMSELF, TO TOPP OPTION PRO. IF WE CHOSE TO REPLACE THE PRODUCT, THE REPLACEMENT CAN BE A RECONDITIONATED UNIT. TOPP PRO WILL NOT BE RESPONSIBLE BY THE DAMAGES BASED ON THE LOST, INCONVENIENCE, LOSS OF USE, BENEFITS, LOST SAVINGS, BY THE DAMAGE TO OTHER EQUIPMENT OR OTHER ARTICLES IN THE USE SITE, OR BY ANY OTHER DAMAGE IF HE IS FORTUITOUS, CONSEQUENT OR OF ANOTHER TYPE, ALTHOUGH TOPP PRO HAS BEEN NOTICED OF THE POSSIBILITY OF SUCH DAMAGES.

Some states do not allow to the exclusion or the limitation to the fortuitous or consequent damages, so the aforesaid limitation can not be applied to you. This guarantee gives specific legal rights him, you can also have other right that varies of state to state.

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Don't forget to visit our website at www.toppopro.com for more information about this and other Topp Pro products.

1 Introduction

Thank you for purchasing the THA-4 4-channel headphone amplifier. THA-4 is really ideal for applications such as recording, broadcast and Live events. It is a very flexible tool allowing personal headphone mix for up to four musicians.

Please read this manual carefully so you can take advantages of all features of THA-4 headphone amplifier.

Thank you again for making the right choice in purchasing the TOPP PRO MUSIC GEAR.

2 Features

- *Mountable in a 1/2 Rack Unit
- *4 individual headphone channels
- *Input gain control, and individual output gain control
- *Up to 2 headphone outputs per channel for a total of 8 headphones
- *Direct In and Headphone Output on the front panel for easy operation, when mounted in a rack
- *Input and Output Level Led Meter
- *Main Outputs for linking additional THA-4 headphone amplifiers
- *High-end quality even at high volume levels
- *Exceptionally rugged construction ensures long life and durability
- *Universal and professional headphone amplification system for studio and stage application
- *Manufactured under QS9000 certified quality system

3 Usefull Data

Please write your serial number here for future reference.

Serial Number:

Date of Purchase:

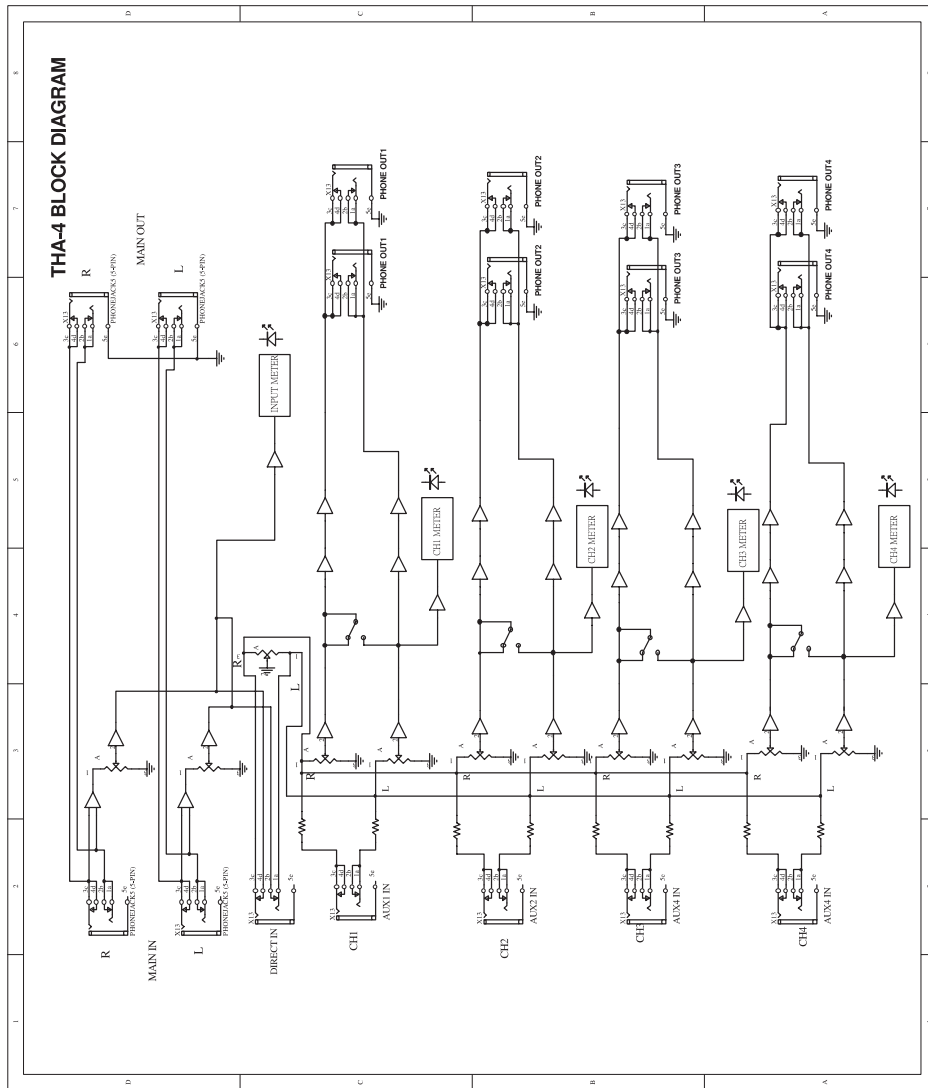
Purchased at:

8

TECHNICAL SPECIFICATIONS

Model	THA-4	4 CHANNEL HEADPHONE AMPLIFIER
Audio Input	Connectors	XLR and 1/4" jack
	Type	HF filtered, servo balanced input
	Impedance	50 kOhms balanced, 25 kOhms unbalanced
	Max.input level	+21 dBu balanced and unbalanced(unity gain)
AUX IN and DIRECT IN input	Connectors	1/4" TRS (tip=left, ring=right, sleeve=ground)
	Type	Unbalanced
	Impedance	25 kOhms Unbalanced
	Max.gain (CH GAIN & INPUT GAIN)	+6 dBu
Audio Output	Max input level	+21 dBu unbalanced(unity gain)
	Connectors	XLR and 1/4" Jack
	Max. output level	+21 dBu Balanced and Unbalanced
System Specifications	Frequency response	10 Hz to 20 kHz, +/-2 dB
	SNR	>90 dB, Unweighted, 22 Hz to 22 kHz
	THD	≤0.01% typ.@0 dBu, 1kHz
	Max.out	+21 dBm
Headphone Out	Min.output impedance	100 Ohms
	Max voltage gain	+12dB(MAIN IN:0dBu, input & output gain max)
	Noise(bus noise)	≤-76dB@1KHz(CH GAIN & MAIN GAIN at max, other at min, SW at up)
	Input level	Main input level
Function Controls	Output level per CH	Output level per CH
	Balanced	L/R
	Mode	Switches channel to mono
	Input level	8-digit LED display:-12/-6/0/+6/+12/+18dBu(clip)
Indicators	Output level	4-digit LED display: -24/0/+12/+18dBu(clip)
	Power Supply	AC input AC 18V/1000mA
PHYSICAL	Dimensions	(WxDxH) 483mmx197mmx44mm
	Net weight	1.9kg

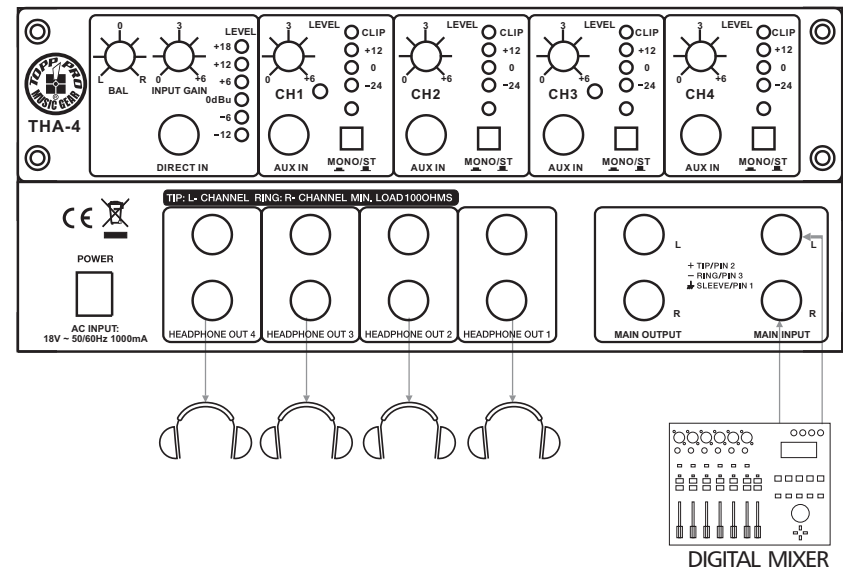
7 Block Diagram



HOOKUP DIAGRAM

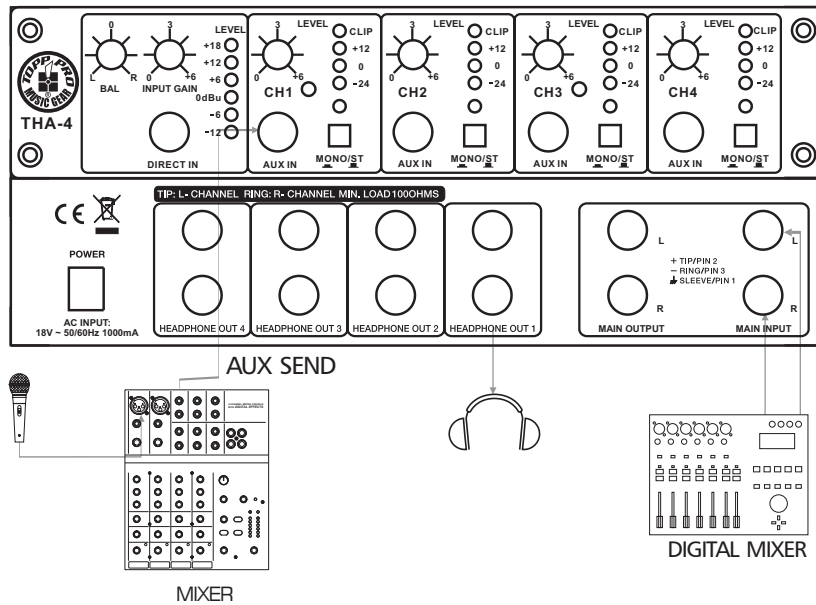
USING THE MAIN IN CONNECTORS

First, connect a signal source to the MAIN IN connectors on the rear panel of your THA-4. Set the Input Gain (Main section) and the Balance control (Channel section) on centre position. Output gain of each channel must be turned down at this stage. Check the input level Meter for optimal operation as described earlier on in this Manual. Connect the headphones you want to use and start to raise the output gain of each channel for the desired listening volume.



USING THE AUX IN INPUTS

You can playback a signal and feed in additional vocals through a microphone and mixer/preamplifier connected into the AUX IN socket. Use the balance control to give the vocalist the desired mix in between his voice and the playback signal. Use the OUTPUT GAIN control to regulate the overall desired volume.

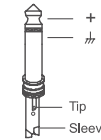


Through the AUX IN inputs you can also use the 4 channels of your THA-4 independently to give individual mixers to 4 different musicians. Connect the Aux Sends or Subgroups outputs directly to the AUX IN input of your THA-4. You need a mixer with 4 Aux sends output or with 4 sub-groups. Now rotate the BALANCE control on your THA-4 fully to the left. IN this way you will exclude the MAIN signal and only the AUX IN signal will be sent to headphones.

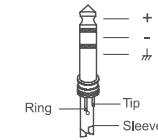
Wire Connections

Either the 1/4" TRS phone jack or XLR connector can be wired in balanced and unbalanced modes, which will be determined by the actual application status, please wire your system as the following wiring examples:

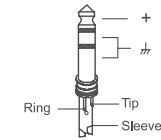
For 1/4" Phone jack



TS Type Unbalanced

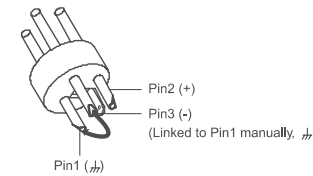


TRS Type Balanced

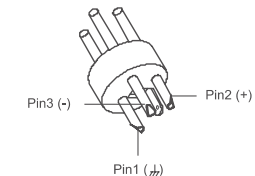


TRS Type Unbalanced

For XLR connector



XLR Type Unbalanced

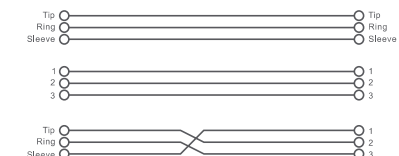
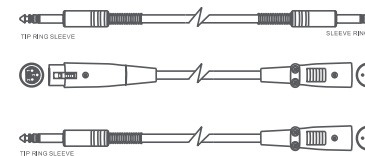


XLR Type Balanced

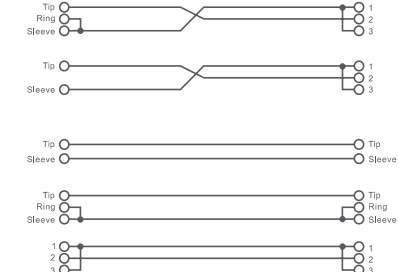
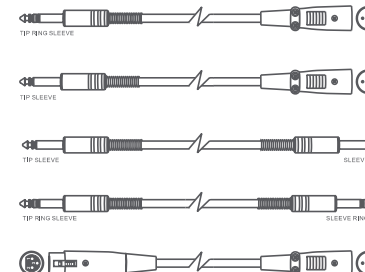
In-line Connection

For these applications the unit provides 1/4" TRS and XLR connectors to easily interface with most professional audio devices. Follow the configuration examples below for your particular connection.

• Balanced



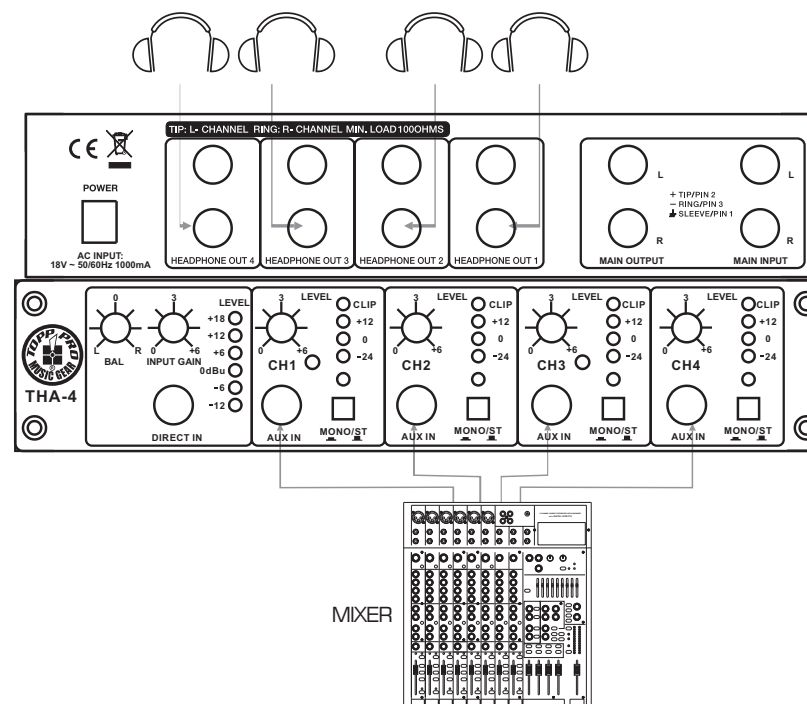
• Unbalanced



5 Installation tips

- 1- Speakers should be placed in a position that allows for unobstructed sound projection. In many instances is beneficial for speakers to be elevated on tripod stands to achieve maximum dispersion and reach.
- 2- Use professional advice or service when hanging and installing speakers. Please take precautions to secure them to prevent them from falling and hurting someone. Care should be taken as to not damage the cabinet or its components. Please comply with all pertinent Regulations.
- 3- Use quality cables. Using quality cables will ensure the best possible sound.
- 4- For best results match the speakers to a good amplifier that matches the wattage and impedance of your speakers. Proper amplification power results in good quality audio and longer component life. Check out the power requirement for your cabinet.
- 5- Avoid pointing a microphone directly at an amplified speaker doing so, could cause feedback possibly damaging speaker components and your hearing.

Enjoy the sound!



SOME FINIAL NOTES

1. RACK MOUNTING

The most secure mounting is on a universal 1/2 rack available from various rack manufacturers or your Dealer. THA-4 4-Channel Headphone Amplifier Fits into one standard 1/2 rack unit of space. Please allow at least an additional 4" depth for the connectors on the rear panel. Be sure that there is enough air space around the unit for sufficient ventilation and please do not place your THA-4 the 4-Channel Headphone Amplifier close to high temperature devices such as power amplifiers etc. to avoid overheating.

2. USING MULTIPLE HEADPHONES ON THE SAME CHANNEL

Each channel provides 2 Headphone Outputs. These jacks are all parallel connected. For best results getting from THA-4, please note the impedance information as following:

1. For each channel connecting with 1 headphone, the minimum impedance of the headphone should be 100 ohms.
2. For each channel connecting with 2 headphones, the minimum impedance of each headphone should be 200 ohms.

4 Control Elements

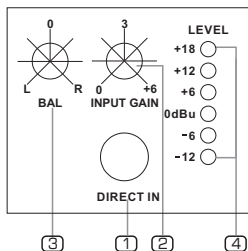
MAIN SECTION:

1- DIRECT IN

You can use this socket to feed an additional stereo signal into THA-4. This socket is in "priority". It means that when you insert the jack, the signal fed into the MAIN input on the rear panel will be disconnected.

2- INPUT GAIN

This knob controls the level of the signal applied to the MAIN or DIRECT IN inputs.



3- BALANCE CONTROL(L/R)

This is the PANORAMA control, or balance control. You can adjust the stereo image of the signal via this control. Keep this control in center position and your signal will be positioned in the middle of stage. Turn this control fully counter clockwise and the signal will be present only on the left speaker and vice-versa. Of course a large number of intermediate positions is available.

4- INPUT LEVEL METERS

This Led Meter informs you about the level of the input signal. The range goes from - 12 dBu to +18 dBu. For the best quality of input signal the operating LEDs should be those from +6 to +18 dBu. The CLIP led should light up only occasionally. If CLIP LED is always on, you must reduce the input level through the input gain control. If only -12 and -6 dBu LEDs are operating, you will experience a bad S/N ratio and increase the input level.

CHANNEL SECTION

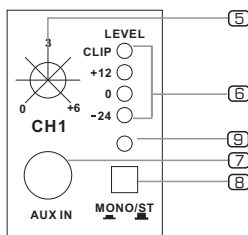
There are 4 identical channels on your THA-4 with identical functions and performance.

5- OUTPUT GAIN CONTROL

This knob controls the output volume of corresponding channel. Both right and left signals are regulated at same time.

6- OUTPUT LEVEL

This 4-digit LED meter tells you about the level of the output signal, and the range goes from -24dBu to +12dBu. When the Clip LED lights up, please turn down the output Gain control to avoid any distortion.



4 Control Elements

4

7- AUX IN

This stereo input is useful when you want to feed an additional signal with the signals applied to MAIN or DIRECT IN inputs. If you have stereo signal depress the MONO switch. If you have a mono signal. Press MONO switch if you want such signal to appear on both ears.

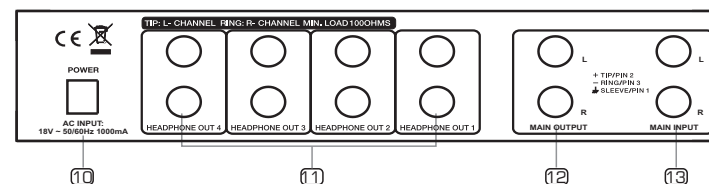
8- MONO/ST SWITCH

Depress this switch if you want to hear a stereo signal. Press it again if you want to hear a mono signal.

9- MONO/ST LED

When the MONO/ST switch is engaged, the LED will light up.

Rear Panel



10- POWER SUPPLY CONNECTION

Please use the 18 VAC AC adapter provided to connect your THA-4 You can follow. The illustration in detail.

11- HEADPHONE OUT (1 to 4)

These are totally 8 additional outputs for headphone (two for every channel) wired in parallel with the output available on the front channel.

12- MAIN INPUT CONNECTORS

This connector is used to input the stereo signal from mixer via TRS(L & R) connector.

13- MAIN OUTPUT CONNECTORS

This connector is used to output the stereo signal via TRS(L & R) connector.