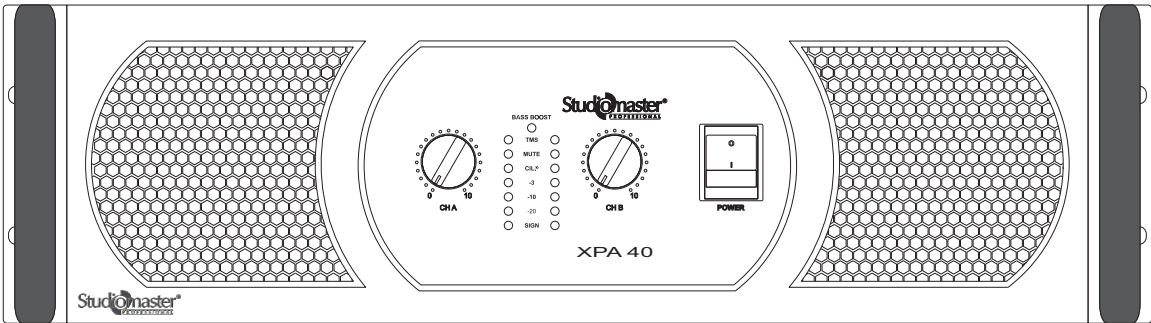




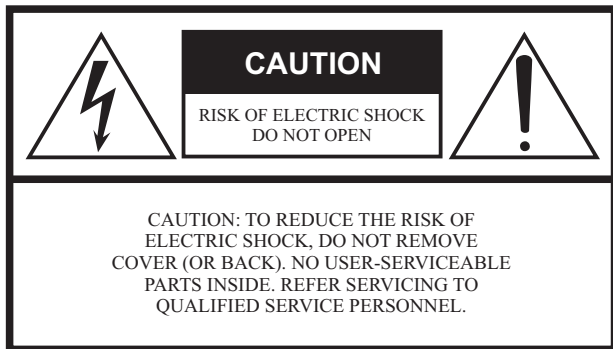
XPA 40

Professional Power Amplifier

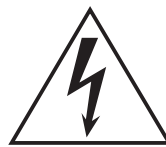


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Explanation of Graphical Symbols



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 electric shock to persons.



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.

IMPORTANT SAFETY INSTRUCTIONS

WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK,
DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.


IMPORTANT NOTICE

Connecting the Plug and Cord

WARNING: THIS APPARATUS MUST BE EARTHED
IMPORTANT: The wires in this mains lead are coloured in accordance with the following code:

GREEN-AND-YELLOW: EARTH
BLUE: NEUTRAL
BROWN: LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

The wire which is coloured GREEN-and-YELLOW must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol  or colored GREEN or GREEN-and-YELLOW.

The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

- 1 Read these instructions.
- 2 Keep these instructions.
- 3 Heed all warnings.
- 4 Follow all instructions.
- 5 Do not use this apparatus near water.
- 6 Clean only with dry cloth.
- 7 Do not block any ventilation openings. Install in accordance with the manufacturer’s instructions.
- 8 Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9 Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 10 Only use attachments/accessories specified by the manufacturer.
- 11 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.



- 12 Unplug this apparatus during lightning storms or when unused for long periods of time.
- 13 Refer all servicing to qualified service personnel. Servicing 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.

Tips for Safe Operation

The 3 core AC mains cable should be terminated with this AC mains plug by connecting brown/red wire on live pin (L), black wire on neutral pin (N) and yellow/green wire on earth pin (E).

The amplifier must be connected to an AC earthed mains outlet that can delivered the maximum power required. The use of extension cables or adaptors should be avoided as this can jeopardize correct delivery to the amplifier.

All connections must only be carried out or changed with the amplifier switched OFF.

Ensure proper impedance matching while in use for BRIDGE mode applications. For continuous safe operation, resultant impedance of the speakers 8 ohm/4 ohm is recommended.

For 2 ohm/4 ohm applications, it is recommended to use speakon connectors only. Use of cable 40/36 or thicker is recommended to prevent power losses.

The level of input signal should not exceed the specified input sensitivities. Excessive input signal level result in over driving of input circuit which leads to saturated / distorted output at speaker terminals.

Do not operate the amplifier with continuously blinking CLIP LED. The respective volume control of the channels must be adjusted so that the output level does not clip and distort.

Do not obstruct the front or back of the amplifier for necessary intake of air.

Precautions

— For safe operation —

WARNING

Installation

- Connect this unit's power cord only to an AC outlet of the type stated in this Owner's Manual or as marked on the unit. Failure to do so is a fire and electrical shock hazard.
- Do not allow water to enter this unit or allow the unit to become wet. Fire or electrical shock may result.
- Do not place a container with liquid or small metal objects on top of this unit. Liquid or metal objects inside this unit are a fire and electrical shock hazard.
- Do not place heavy objects, including this unit, on top of the power cord. A damaged power cord is a fire and electrical shock hazard. In particular, be careful not to place heavy objects on a power cord covered by a carpet.

Operation

- Do not scratch, bend, twist, pull, or heat the power cord. A damaged power cord is a fire and electrical shock hazard.
- Do not remove the unit's cover. You could receive an electrical shock. If you think internal inspection, maintenance, or repair is necessary, contact your dealer.

- Do not modify the unit. Doing so is a fire and electrical shock hazard.
- If lightning begins to occur, turn off the power switch of the unit as soon as possible, and unplug the power cable from the electrical outlet.
- If there is a possibility of lightning, do not touch the power cable plug if it is still connected. Doing so may be an electrical shock hazard.

In case an abnormality occurs during operation

- If the power cord is damaged (i.e., cut or a bare wire is exposed), ask your dealer for a replacement. Using the unit with a damaged power cord is a fire and electrical shock hazard.
- Should this unit be dropped or the cabinet be damaged, turn the power switch off, remove the power plug from the AC outlet, and contact your dealer. If you continue using the unit without heeding this instruction, fire or electrical shock may result.
- If you notice any abnormality, such as smoke, odor, or noise, or if a foreign object or liquid gets inside the unit, turn it off immediately. Remove the power cord from the AC outlet. Consult your dealer for repair. Using the unit in this condition is a fire and electrical shock hazard.

CAUTION

Installation

- Keep this unit away from the following locations:
 - Locations exposed to oil splashes or steam, such as near cooking stoves, humidifiers, etc.
 - Unstable surfaces, such as a wobbly table or slope.
 - Locations exposed to excessive heat, such as inside a car with all the windows closed, or places that receive direct sunlight.
 - Locations subject to excessive humidity or dust accumulation.
- Do not place the power cord close to a heater. It may melt, causing fire or electrical shock.
- Hold the power cord plug when disconnecting it from an AC outlet. Never pull the cord. A damaged power cord is a potential fire and electrical shock hazard.
- Do not touch the power plug with wet hands. Doing so is a potential electrical shock hazard.
- This unit has ventilation holes at the front, rear & top to prevent the internal temperature rising too high. Do not block them. Blocked ventilation holes are a fire hazard. In particular, do not
 - place the unit on its side or upside down,
 - place the unit in any poorly-ventilated location such as a bookcase or closet (other than on the dedicated rack),
 - cover the unit with a table cloth or place it on a carpet or bed.
- Allow enough free space around the unit for normal ventilation. This should be: 5 cm at the sides, 10 cm behind, and 10 cm above.
- If the airflow is not adequate, the unit will heat up inside and may cause a fire.

- To mount several of these units in a standard EIA rack, refer to the rack mounting instructions on page 16.
- To relocate the unit, turn the power switch off, remove the power plug from the AC outlet, and remove all connecting cables. Damaged cables may cause fire or electrical shock.

Operation

- Use only thick speaker cables when connecting speakers to amplifier outputs. Use of cables type 40/36 or thicker is recommended for connecting low impedance speakers to avoid power loss in the cables, as heavy current flows through the cables. Using other types of cables is a fire hazard.
- Turn off all musical instruments, audio equipment, and speakers when connecting to this unit. Use the correct connecting cables and connect as specified.
- Always lower the volume control to minimum before turning on the power to this unit. A sudden blast of sound may damage your hearing.
- Do not use this amplifier for any purpose other than driving loudspeakers.
- If you know you will not use this unit for a long period of time, such as when going on vacation, remove the power plug from the AC outlet. Leaving it connected is a potential fire hazard.
- When operating amplifier on a generator, make sure it is switched "OFF" till generator voltages has stabilized & then only switch "ON" amplifier.
- Be sure of proper impedance of 2/4/8 ohm when used for STEREO/PARALLEL configuration & 4/8 ohm recommended when used in BRIDGE mode.

1. Warranty Information

Unpacking

As part of our quality control system, every Studiometer Professional product is thoroughly inspected before leaving the factory to ensure a flawless performance. After unpacking, please inspect the unit for any physical damages. In the event that a damage has occurred, kindly notify your Studiometer Professional dealer immediately. We request you to retain the packing/cartons should the product require servicing/maintenance in the future.

2. Introduction

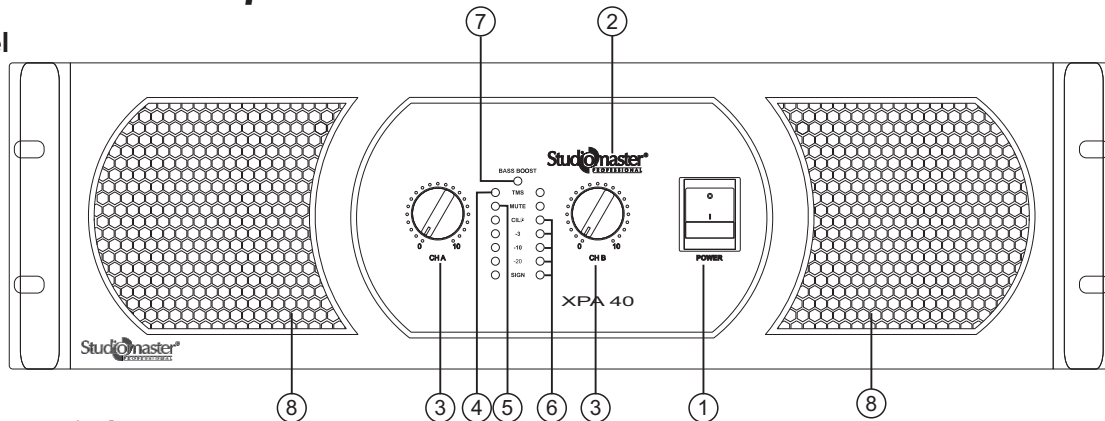
The Studiometer Professional XPA series is a premium-grade high power stereo amplifier featuring an intuitive Thermal Management System (TMS) that delivers unmatched sound, uninterrupted performance and optimal protection.

3. Features at a Glance

1. Professional-grade high-power stereo amplifier.
2. High-quality balanced XLR and 1/4" Stereo Jack input connectors
3. 3 switchable operational modes: Stereo, Mono & Bridge
4. Intuitive Thermal Management System (TMS) for temperature-controlled gain variation for optimal thermal protection & uninterrupted sonic performance.
5. High-current toroidal transformers with high-endurance cores for greater transient response and low-noise even at 2 Ohms.
6. Sensitivity (0.775V or 1.2V) selection switch allows flexibility in connection of input sources.
7. Limiter switch to protect speakers from damage due to distorted input signals.
8. 41-dented rotary volume control knobs.
9. Low THD & high damping factor for excellent sound quality.
10. High-quality glass epoxy, double-sided PTH PCBs and high-grade components ensure reliability even in tough ambient environs.
11. Intelligent cooling using low-noise variable speed fans & direct mounted over-designed heat-sinks.
12. Built in protection against mains over voltage supply.

4. Front & Rear Panel Description

Front Panel



1 Master Switch

Switches the unit on and off.

2 Power ON Indicator Light

The Studiometer Professional logo lights up when the amplifier is powered on.

3 Volume Control

This knob is used to adjust and control the volume and output level of the respective channel.

4 TMS (Thermal Management System)

This amplifier features an innovative temperature controlled gain variation technology called the Thermal Management System (TMS). When the temperature at the heatsink reaches beyond the permissible limit, the TMS circuit intuitively reduces the gain proportionally without any dropouts. This feature prevents the amplifier from going into thermal protection mode thereby ensuring a smooth and uninterrupted sonic performance.

5 Mute Indicator

The Yellow LED lights up when the amplifier is in mute mode. This may occur due to the following reasons: switch on delay (3 seconds), presence of a continuous voltage on the channel output, short circuit, thermal protection of the channel, or thermal protection of the transformer.

6 Signal & Clip Indicator

These 4-segment Green LED lights show the output level of the amplifier. When the Clip LED turns Red, it means that the signal is distorting/clipping. Kindly reduce the output level from the mixer or other connected devices to avoid any damages.

7 Bass/Boost Indicator

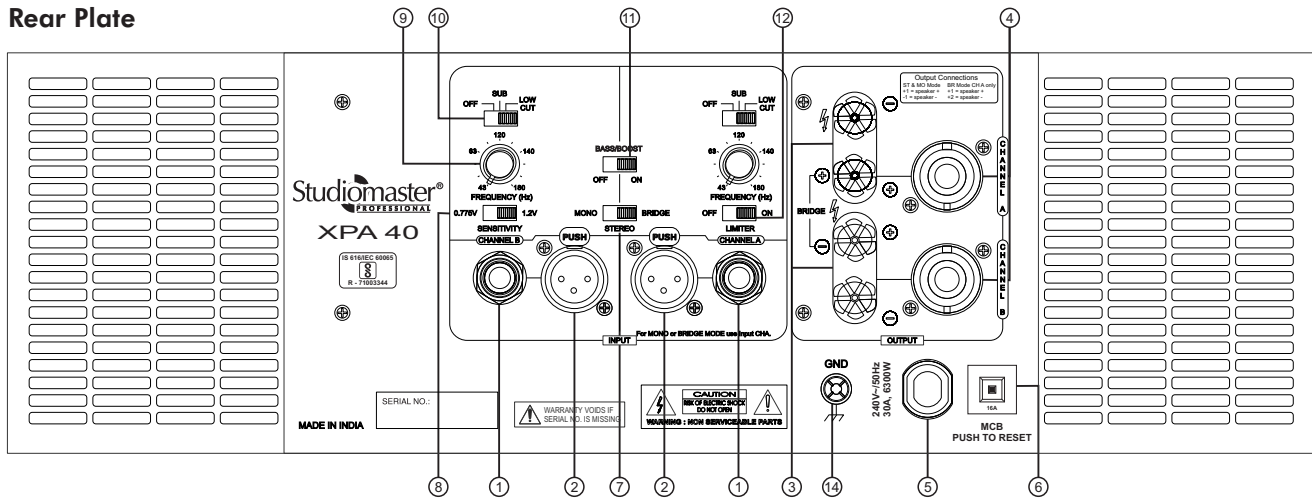
This Red LED lights up when the Bass/Boost Function is activated or is in use.

8 Air Intake Grill

This intake grill sucks in air to dissipate the heat generated and keep the amplifier cool.

⚠ For best results, do not obstruct the grill and clean the air filter whenever necessary.

Rear Plate



1 Balanced 6.3 mm Jack Input

This TRS stereo jack connector accepts an input signal (balanced/unbalanced) to drive the respective channel. If the signal is unbalanced, kindly use a mono (TS) connector.

2 Balanced XLR Input

This XLR connector accepts an input signal (balanced/unbalanced) to drive the respective channel. If the signal is unbalanced, pin 2 can be used for the signal and pin 3 connected to the earth.

3 Output Binding Post

The binding post output is used to pick up the amplified signals individually in the stereo mode & in combination in the bridge mode.

4 Output Speakon Connector

Use this connector for picking up the amplified signal of CH 1 & CH2 and signal for bridged configuration.

5 Power Cable

This cable is used to supply the required power to the unit.

6 Circuit Breaker

The circuit breaker is provided to avoid amplifier failure caused due to a sudden surge or continuous high current supply.

7 Configuration Switch

This three-way switch is used to select between the three operational modes: mono, stereo and bridge.

8 Sensitivity

This switch is used to set the input sensitivity either at 0.775V or at 1.2V depending on the source.

9 Frequency Adjustment Knob

When the filter switch is at SUB or at the LOW CUT position, use this knob to adjust the frequency.

10 Filter Switch

Use this switch to select between the following two filter types.

SUBWOOFER: This is a low-pass filter. The amplifier reproduces frequencies that are lower than the cut-off set by the frequency adjustment knob.

LOW CUT: This is a high-pass filter. You can use this setting to filter out unneeded low or subsonic frequencies.

11 Bass Boost Switch

When you activate this mode, the amplifier adds low-frequency compensation to enhance the speaker's output.

⚠ Note: This switch is only effective when the FILTER switch is in the OFF position.

12 Limiter

Use this switch to activate or deactivate the built-in limiter. The limiter prevents distortion at the output level. When the output level exceeds its maximum, an internal adjustment is made to prevent overloading. It is specially designed to protect the connected speakers. When the amplifier is used to drive a subwoofer, switch the limiter off for added "punch".

13 Air Exit Grill

Warm air exits from this grill to dissipate the heat generated and keep the amplifier cool.

⚠ For best results, do not obstruct the grill and clean the air filter whenever necessary.

14 External Earth Terminal

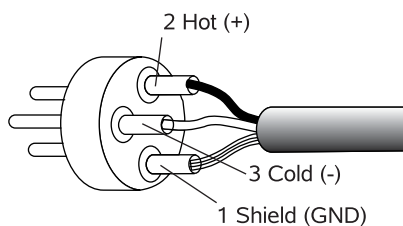
Use this for a ground/earthing connection if there are any humming problems.

5. Wiring Information.

FIG. 1

BALANCED INPUT CONNECTIONS

XLR CONNECTOR



STEREO JACK 6.3mm 1/4"

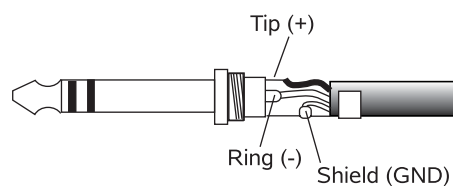
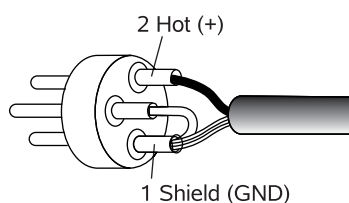


FIG. 2

UNBALANCED INPUT CONNECTIONS

XLR CONNECTOR



MONO JACK 6.3mm 1/4"

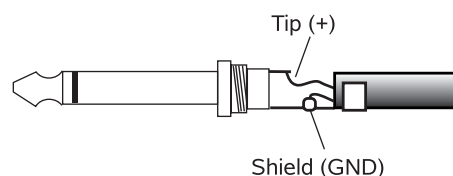
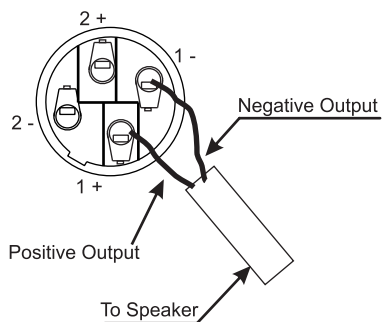


FIG. 3

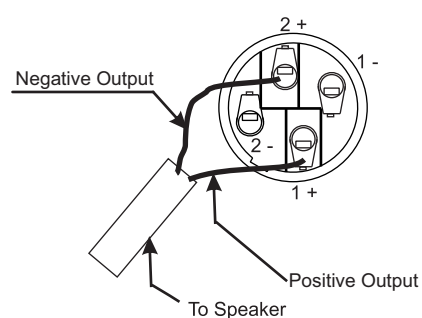
SPEAKON CONNECTOR



MONO / STEREO OUTPUT CONNECTIONS

FIG. 4

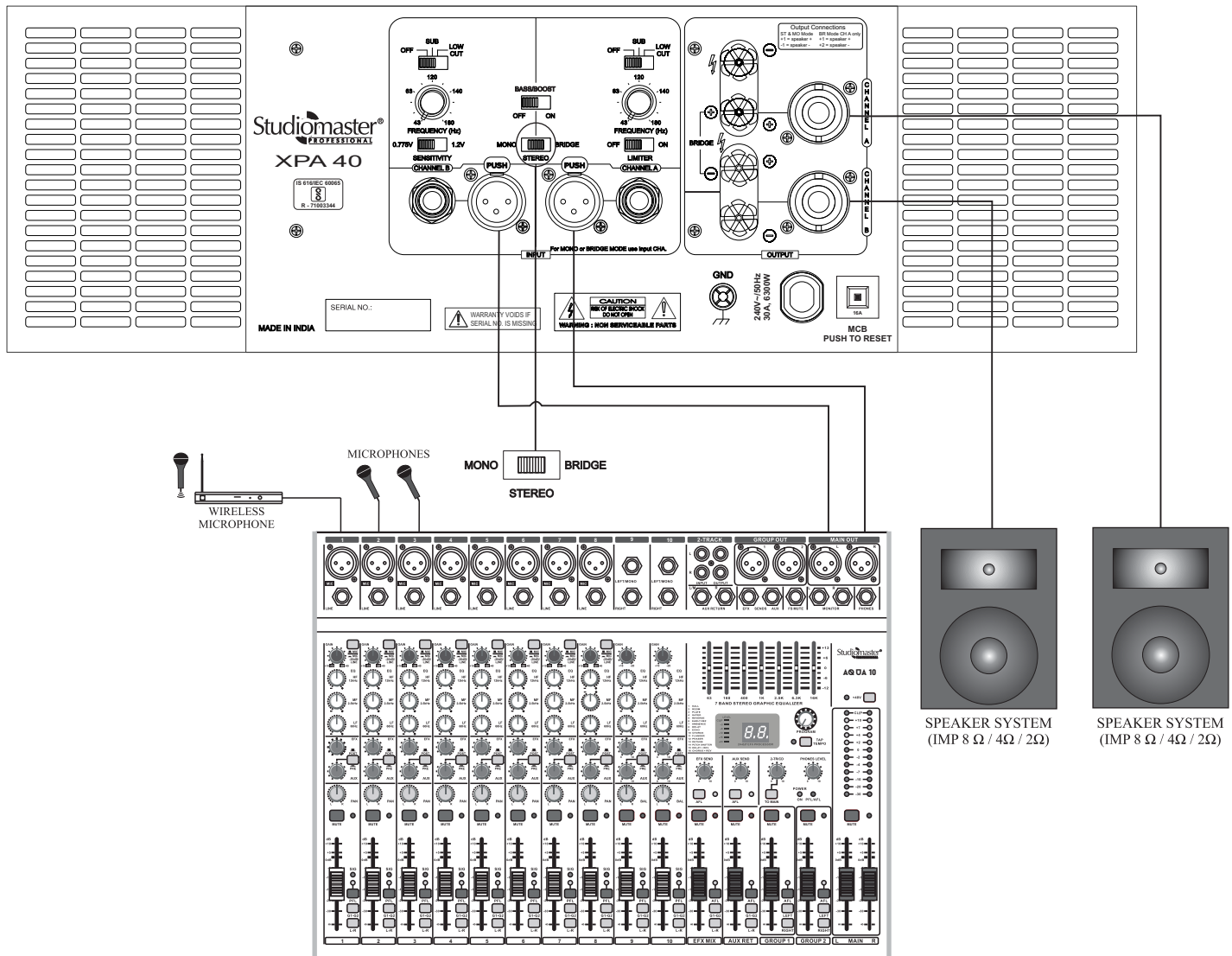
SPEAKON CONNECTOR



BRIDGE OUTPUT CONNECTIONS (CH 1 OUTPUT CONNECTOR)

6. System Application.

Stereo Mode Configuration



In STEREO mode, both channels A & B are fully independent of each other. The balanced /unbalanced inputs can be connected either to a stereo signal source or two independent mono signal sources. Each channel can separately drive loudspeaker loads of 8 ohm or 4 ohm or 2 ohm.

Connect the Left & Right outputs of a mixer to channel A & B inputs of the amplifier respectively. Inputs can be wired as per fig.1 & 2 (Input Connections for Balanced & Unbalanced Mode) as mentioned in wiring information on page no. 6.

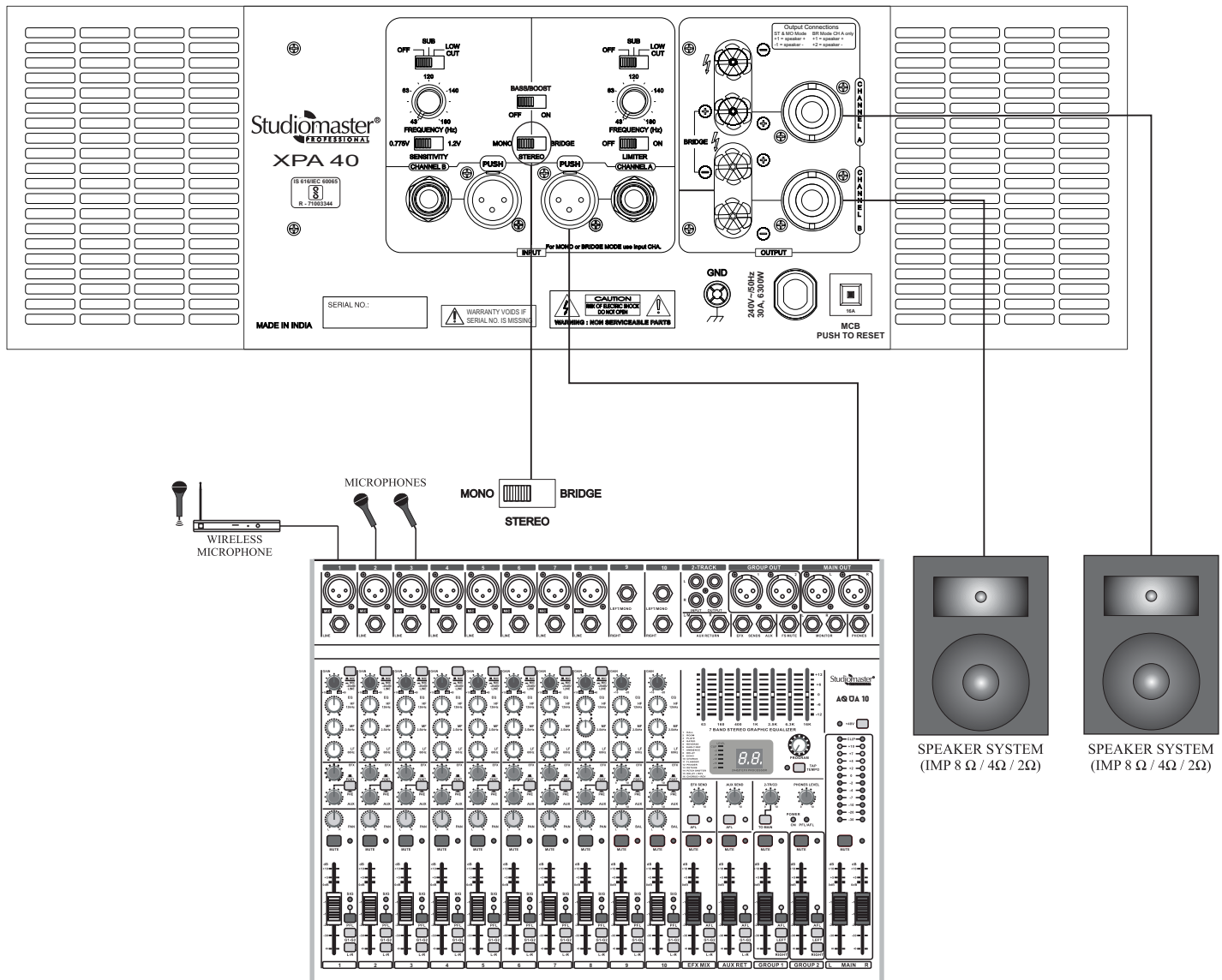
Connect a speaker system (8 ohm / 4 ohm / 2 ohm) on the output terminal of each channel. It is recommended to use the speakon connectors and wire these as per fig.3 (Output Connections for Stereo / Mono Mode) as mentioned in wiring information on page no. 6.

To select STEREO mode, keep the slide switch, provided at rear panel, in STEREO position.

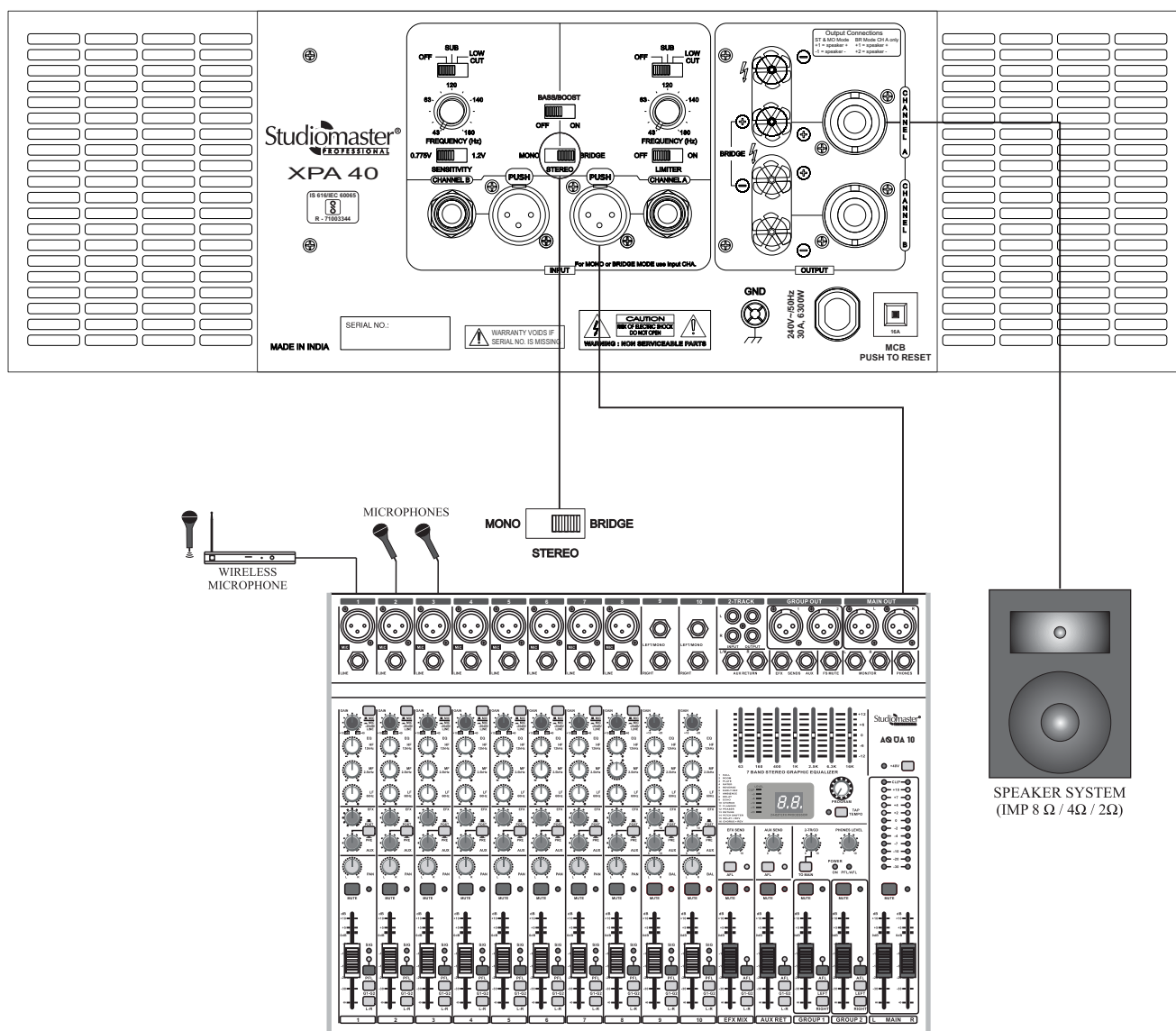
Adjust the individual volume controls of each channel on the front panel to obtain the desired output level.

The level indicator LEDs glow to indicate the presence of signal at the output terminals.

Mono Mode Configuration



Bridge: Mode Configuration



For BRIDGE mode operation, the signal source should be connected to the balanced /unbalanced inputs of channel 1 only. This mode combines power output of both channels for connecting a single loudspeaker load. The combined loudspeaker load should not go to below 4 ohm.

Connect the line output of a mixer to a channel A input of the amplifier. Input can be wired as per fig.1 & 2 (Input Connections for Balanced and Unbalanced Mode) as mentioned in wiring information on page no. 6.

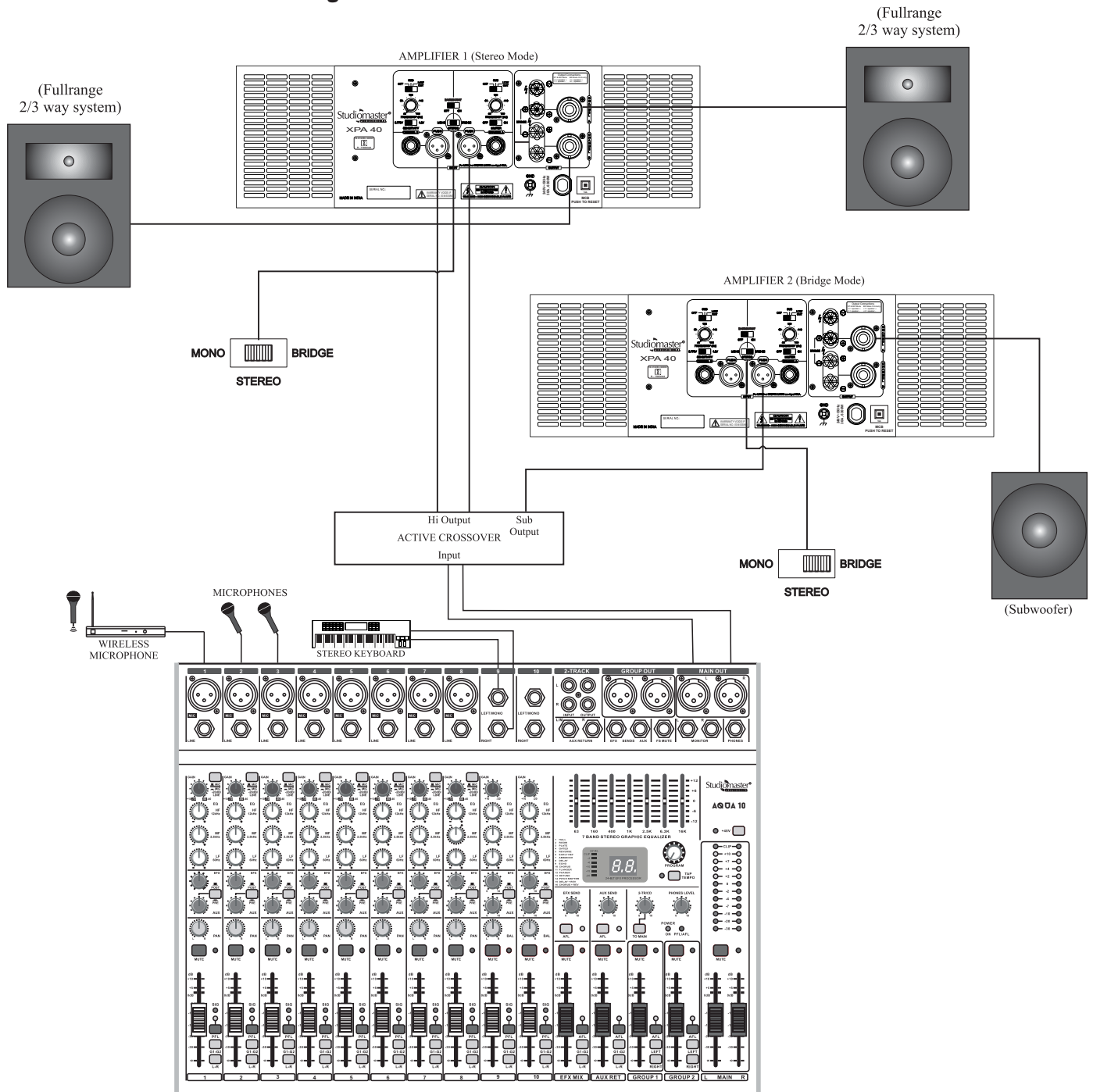
Connect a speaker system (8 ohm / 4 ohm) on the speakon output of channel 1 only. It is recommended to use the speakon connectors and wire these as per fig.4 (Output Connections for Bridge Mode) as mentioned in wiring information on page no. 6.

To select BRIDGE mode, keep the slide switch, provided at rear panel, in Bridge position.

The desired output levels of both the channels are adjustable by volume control of channel 1 only.

The level indicator LEDs glow to indicate the presence of signal at the output terminals.

Stereo Mix Plus Subwoofer Configuration



Connect the left & Right outputs of the Audio mixing console to the respective inputs of the Active Crossover. Connect the Left & Right High frequency output of the active crossover to the respective input channels A & B of amplifier 1.

Inputs can be wired as per fig. 1 & 2 (Input Connections for Balanced & Unbalanced Mode).

One no. of full range loudspeaker system can be connected to each of the channels of amplifier 1.

The output speakon connectors should be wired as per fig. 3 (Output Connections for Stereo/Mono Mode) Amplifier 1 will be used in STEREO mode. Keep the slides switch of amplifier 1 in STEREO position.

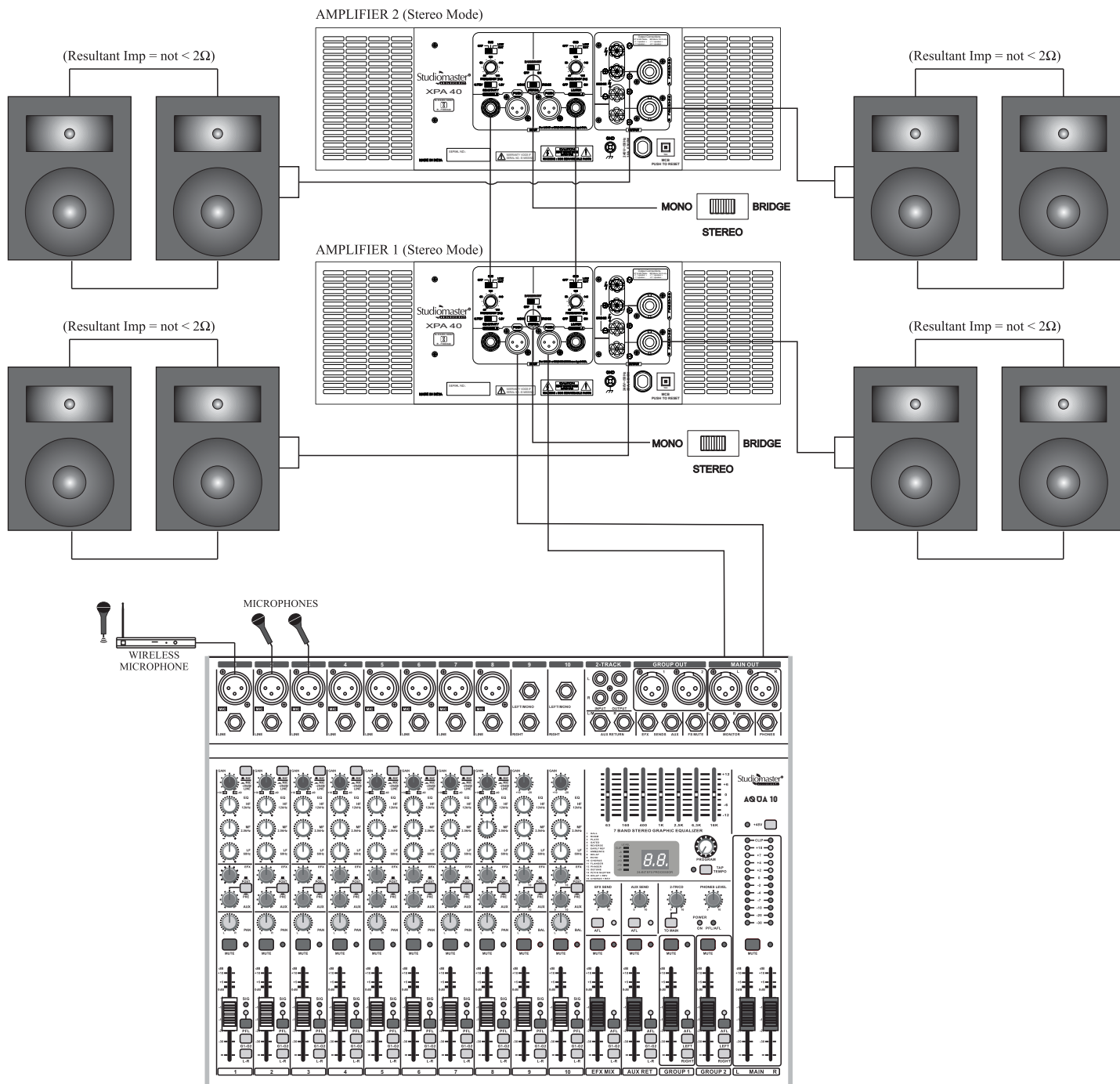
Feed the Sub output signal of the crossover to channel A input of amplifier 2. Input can be wired as per fig. 1 & 2 (Input Connections for Balanced & Unbalanced Mode)

One no. of each of high powered subwoofer system can be connected to the channel A output of amplifier 2. Output speakon connectors can be wired as per fig. 4 (Output Connections for Bridge Mode).

Amplifier 2 will be used in bridge mode. Keep the slide switch of amplifier 2 to BRIDGE position to activate bridge mode.

Finally adjust the volume control of channel A & B in amplifier 1 to control the level of their respective position to get desired power. Also, adjust the volume control of channel A in amplifier 2 to control the levels of Sub out.

Stereo Mode: Cascade Configuration



Connect the left and Right outputs of the Audio mixing console to the channel A & B (XLR/jack) of amplifier 1. The XLR and jack inputs of the amplifier are in parallel. Either ones can be used.

Connect CH A jack input of amplifier 1 to CH A XLR/jack of amplifier 2. Similarly connect for CH B. Speakers can be connected to respective output but ensure that resultant impedance is not less than 2 ohms.

The input can be wired as per fig. 1 & 2 (Input Connections for Balanced and Unbalanced Mode) as mentioned in wiring information on page no. 6.

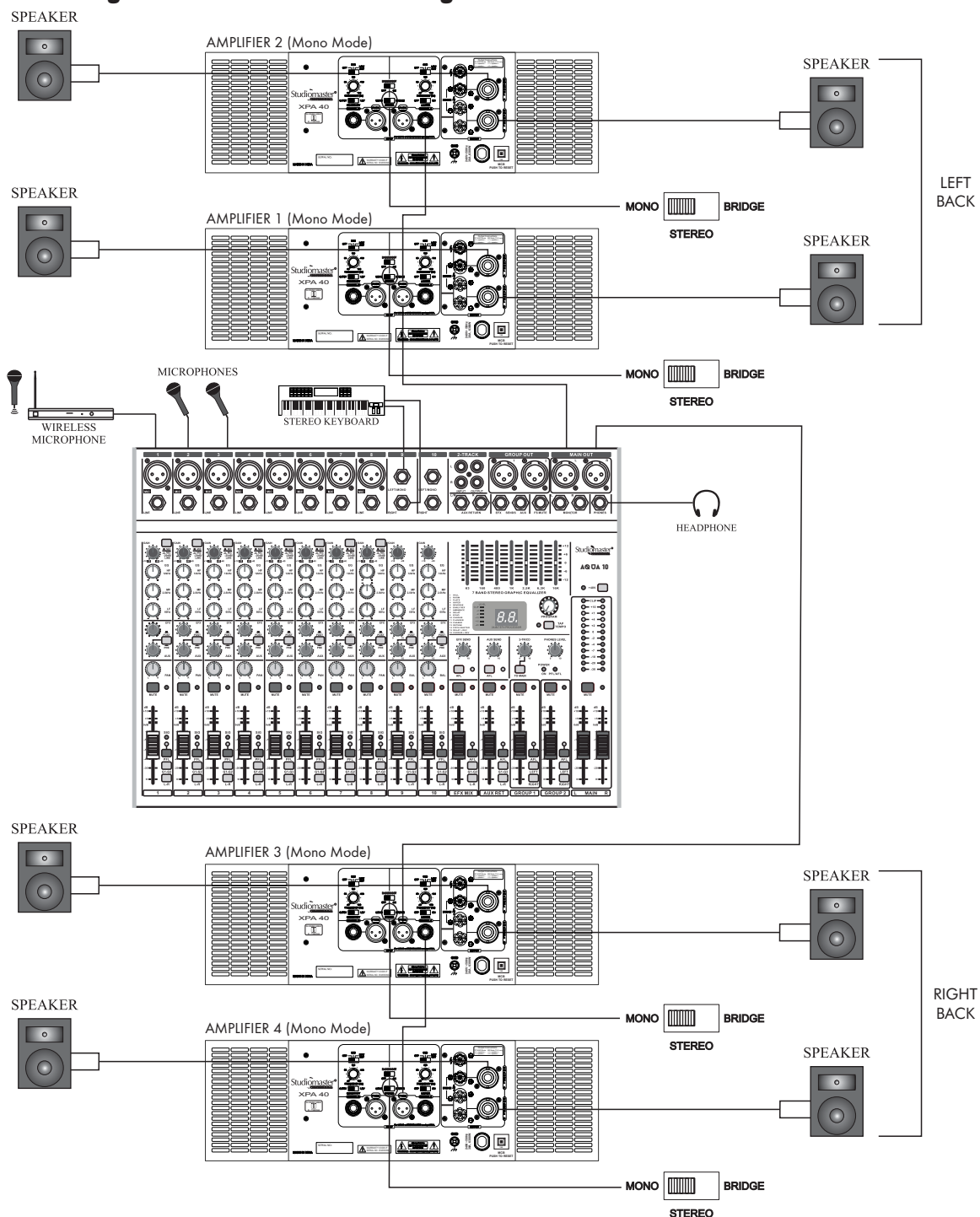
The speaker connections of amplifier 2 are done in a similar way as for amplifier 1.

Amplifier 1 & 2 will be used in STEREO mode. Keep the slide switch of amplifier 1 & 2 in STEREO position.

Adjust the volume controls of channel A & B of both the amplifiers to control the levels of their respective Speakers.

Finally any adjustments in the total quantity of the sound, if required, can be made from the audio mixing console.

Mono Mode - High Power Dual Channel Configuration



Connect the left line output of the Audio mixing console to the channel A input (XLR/jack) of amplifier 1. The XLR & jack inputs of the amplifier are in parallel and either ones can be used.

Connect the unused channel A input (jack/XLR) of amplifier 1 to the channel A input (XLR/jack) of amplifier 2. The jack & XLR inputs can be wired as per fig. 1 & 2 (Input Connections for Balanced and Unbalanced Mode) as mentioned on page no 6.

The Left speaker stack comprises of four nos. speaker systems. Each speaker is individually connected to the four speaker outputs available from amplifier 1 (channel A & B) & amplifier 2 (channel A & B). Output speaker connectors to be wired as per fig. 3 (Output Connections for Stereo/Mono Mode). Amplifier 1 & 2 will be used in mono mode.

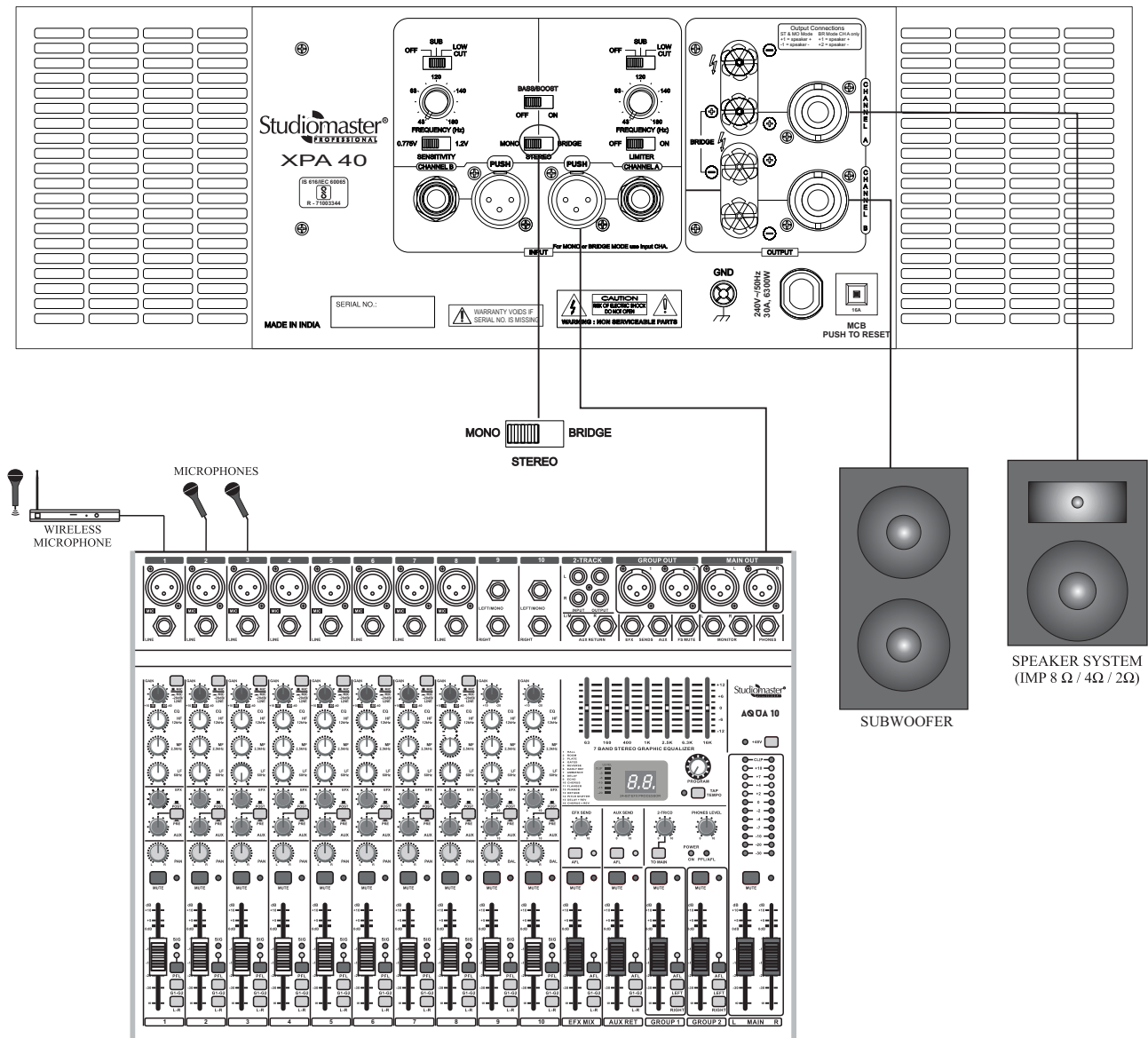
Keep the slide switch of amplifier 1 & 2 in MONO position.

Similarly, connect the Right line output of the Audio mixing console to the channel A input (XLR/jack) of amplifier 3. Also connect the unused channel A input (jack/XLR) of amplifier 3 to the channel A input (XLR/jack) of amplifier 4.

The Right speaker stack's connections are done in a similar way as for left speaker stack's connections. Amplifier 3 & 4 will also be used in MONO mode.

Adjust the volume controls of individual channels of four amplifier to control the levels of their respective speakers. Finally any adjustments in the total quality of the sound, if required, can be made from the audio mixing console.

Mono Mode + Subwoofer Configuration



Connect the left line output of audio mixing console to the channel input (XLR Jack) of amplifier. The XLR & Jack inputs of the amplifier are in parallel and either ones can be used.

The Jack & XLR inputs can be wired as per fig 1 & 2 (input connections for balanced and unbalanced mode) as mentioned on page no. 6.

connect a speaker system (8 ohm / 4 ohm) on the speaker / output binding post of each channel.

It is recommended to use the speakon connector and wire these as per fig 3 (output connection for stereo / mono mode)

Keep mode selection switch at MONO position.

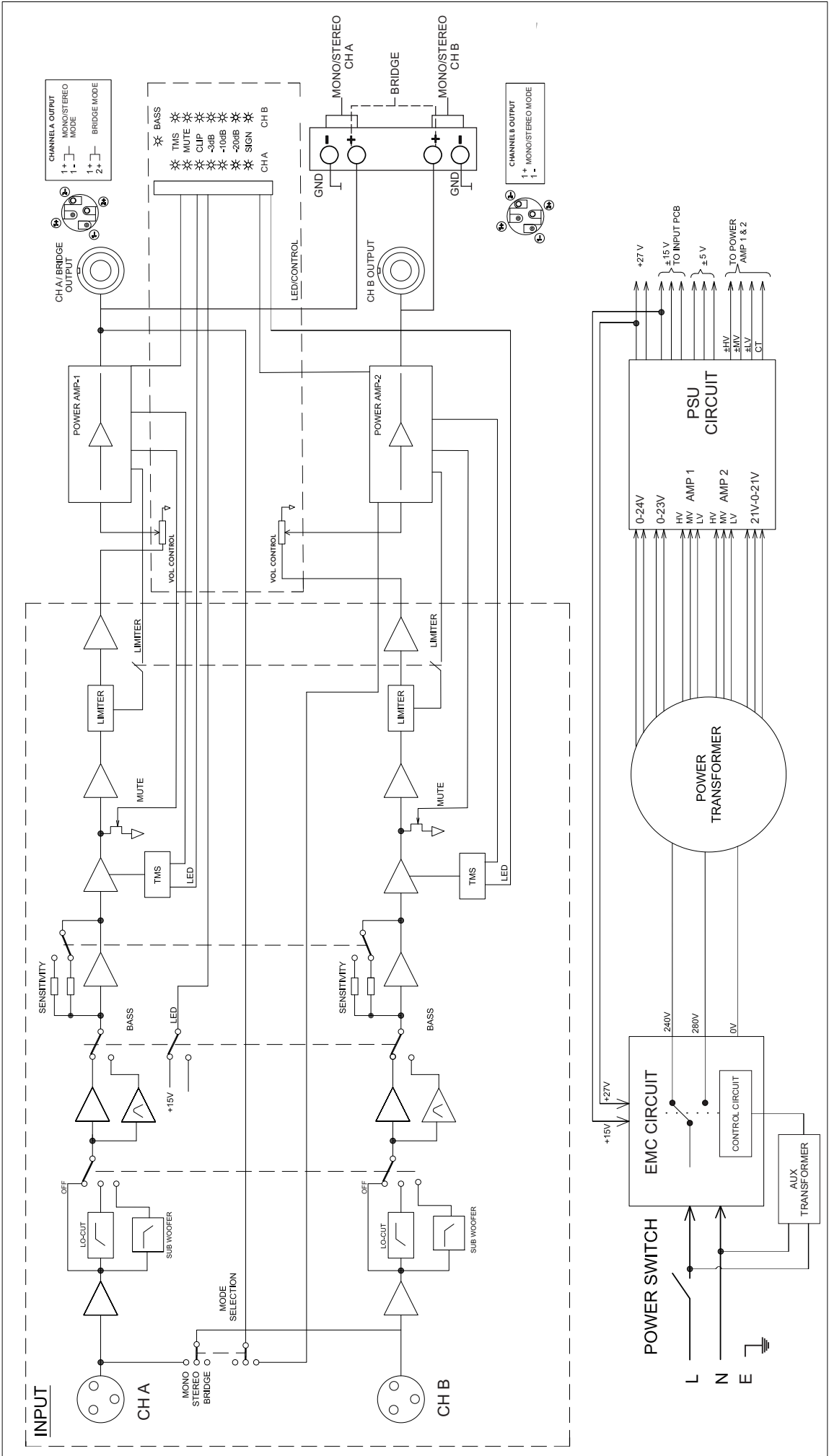
keep channel 2 sub woofer / low cut switch at MID position ie. sub-woofer position.

Change frequency knob for sub woofer frequency as per your choice.

Adjust the individual volume controls of each channel on the front panel to obtain the desired output level.

The level indicator LEDs glow to indicate the presence of signal at the output terminals.

7. Block Diagram.



8. Protections & Installations.

Thermal Protection

• TMS (Thermal Management System)

This amplifier features an innovative temperature controlled gain variation technology called the Thermal Management System (TMS).

When the temperature at the heatsink reaches beyond the permissible limit, the TMS circuit intuitively reduces the gain proportionally without any dropouts. This feature prevents the amplifier from going into thermal protection mode thereby ensuring a smooth and uninterrupted sonic performance.

• Output Devices

Due to excessive heating of output devices, the thermal protection circuit brings the audio signal to mute state. Onset of thermal protection circuit is indicated by glowing of Mute LEDs (yellow) in each channel.

To restore normal operation conditions, it is recommended to switch off the amplifier and rectify the cause.

• Transformer

Due to excessive heating of transformer, the thermal protection circuit brings the audio signal to mute state. Onset of thermal protection circuit is indicated by glowing of Mute LEDs (yellow) in each channel.

To restore normal operation conditions, it is recommended to switch off the amplifier & rectify the cause.

DC, RFI Protection

Inbuilt circuitry is provided to protect the loudspeaker from any offset DC voltages. Also sufficient suppression filters at primary & secondary power supplies have been inbuilt, to overcome RF interferences.

Overload / Short Circuit Protection

Protection circuit is provided in both channels for the safety of output devices in case of overloading or mismatching of impedances at outputs.

Over Voltage Protection

Built in protection against mains over voltage supply. It is especially useful while operating amplifier on Genset. This avoids amplifier failure at higher mains.

19" Rack Installation

The amplifier is designed for use in a standard 19" rack with height of 3U units.

In order to provide sufficient support base to the heavy amplifier, it is essential to use the 19" rack system with side support mounting also in addition to front screw mounting as shown in the figure below.

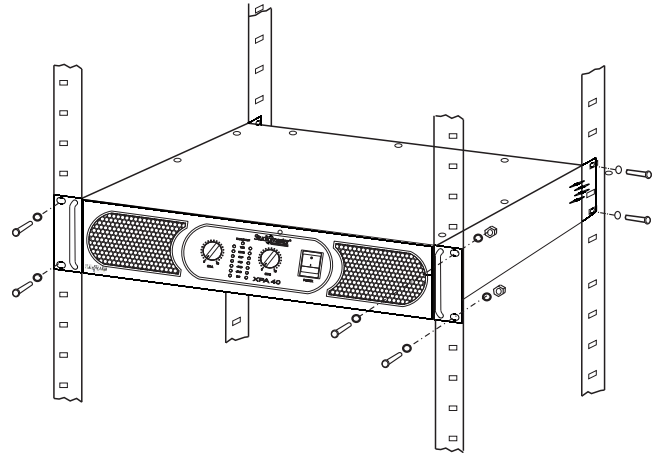
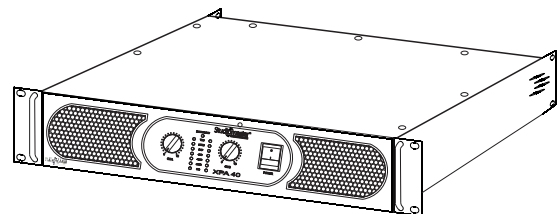
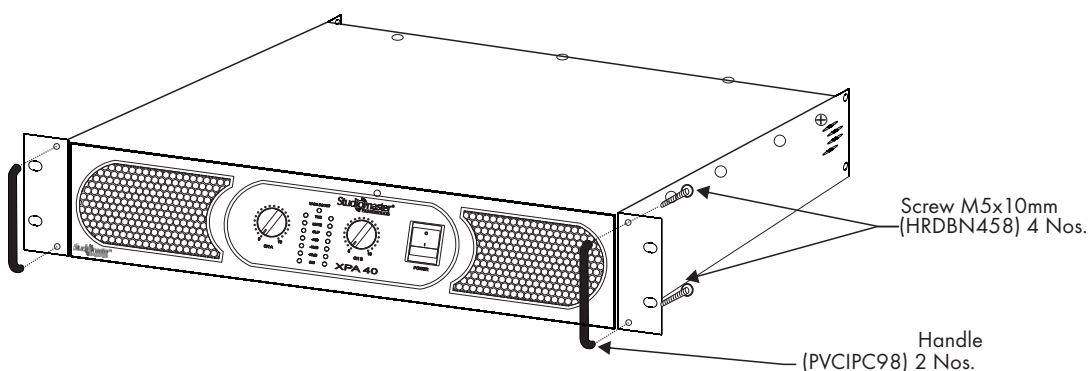


Table Top Usage

The 'U' handles are helpful in easy portability of the amplifier for table top usage. Do not keep the set on an unstable stand or tripod.


































































Handle Fitting Instruction



Note:- 1) Handles to be fitted on both sides as shown in diagram above.

2) Handle (PVCIPC98) 2 nos. & Screw M5x10 (HRDBN458) 4 nos. are included in packing.

9. Trouble Shooting:

Key to LED symbols:				
Indication		Possible Reason		
1. Normal operation				
<div><div><div> BASS</div><div> TMS </div><div> MUTE </div><div> CILP </div><div> -3dB </div><div> -10dB </div><div> -20dB </div><div> SIGN </div></div></div> <div><div>1. The amplifier is in normal operation.</div></div>				
1. Normal operation with TMS LED ON				
<div><div><div> BASS</div><div> TMS </div><div> MUTE </div><div> CILP </div><div> -3dB </div><div> -10dB </div><div> -20dB </div><div> SIGN </div></div></div> <div><div>1.The amplifier is in normal operation. TMS LED shows gain is controlled due to increase in heatsink temperature.</div></div>				
2. No power to the amplifier				
<div><div><div> BASS</div><div> TMS </div><div> MUTE </div><div> CILP </div><div> -3dB </div><div> -10dB </div><div> -20dB </div><div> SIGN </div></div></div> <div><div><div>1. The amplifier power switch may be off.</div><div>2. The amplifier may not be plugged into the power socket.</div><div>3. Confirm that the AC outlet works by plugging in another device.</div><div>4. If too many amplifiers are used on one outlet, the circuit breaker may trip and shut off power.</div><div>5. An overload in bridge mode may cause tripping of the circuit breaker on the rear panel.</div><div>6. An amplifier which keeps shutting off may have a serious internal fault. Turn it off, remove AC power cord and get the amplifier serviced by a qualified technician.</div></div></div>				
3. Low output				
<div><div><div> BASS</div><div> TMS </div><div> MUTE </div><div> CILP </div><div> -3dB </div><div> -10dB </div><div> -20dB </div><div> SIGN </div></div></div> <div><div><div>1. Check if the level of the input signal is too low.</div><div>2. Check if the signal source is operating & the input cable is intact.</div><div>3. The channel volume control setting is not at desired level.</div></div></div>				

4. No Sound		
<div><div><div><div><div></div><div>BASS</div></div><div><div></div><div>TMS</div><div></div></div><div><div><div></div><div>MUTE</div><div></div></div><div><div><div></div><div>CILP</div><div></div></div><div><div><div></div><div>-3dB</div><div></div></div><div><div><div></div><div>-10dB</div><div></div></div><div><div><div></div><div>-20dB</div><div></div></div><div><div><div></div><div>SIGN</div><div></div></div></div></div></div></div></div></div></div></div></div>	<div><div>1. The amplifier goes in mute mode due to excessive input signal, speaker impedance mismatch or output short circuit.</div><div>2. Check the speaker impedance & speaker wiring for stray strands or breaks in the insulation.</div><div>3. Reduce the volume control, for desired output.</div></div>	
5. No Sound		
<div><div><div><div><div></div><div>BASS</div></div><div><div><div></div><div>TMS</div><div></div></div><div><div><div></div><div>MUTE</div><div></div></div><div><div><div></div><div>CILP</div><div></div></div><div><div><div></div><div>-3dB</div><div></div></div><div><div><div></div><div>-10dB</div><div></div></div><div><div><div></div><div>-20dB</div><div></div></div><div><div><div></div><div>SIGN</div><div></div></div></div></div></div></div></div></div></div></div></div></div>	<div><div>The amplifier goes in mute mode due to output short circuit, overloading or poor ventilation resulting into the rise in temperature either of the output devices or the power transformer. Switch off the amplifier to cool down. Check if the fan is working, proper ventilation is provided & output connections are as recommended.</div><div>To restore normal operation, turn down the volume control, power on the amplifier once and increase the volume control for desired output.</div></div>	
6. Distorted Sound		
<div><div><div><div><div></div><div>BASS</div></div><div><div><div></div><div>TMS</div><div></div></div><div><div><div></div><div>MUTE</div><div></div></div><div><div><div><div></div><div>CILP</div><div></div></div><div><div><div></div><div>-3dB</div><div></div></div><div><div><div></div><div>-10dB</div><div></div></div><div><div><div></div><div>-20dB</div><div></div></div><div><div><div></div><div>SIGN</div><div></div></div></div></div></div></div></div></div></div></div></div></div></div>	<div><div>1. The input signal level may be too high. Turn down the amplifier level controls.</div><div>2. Check if the level of the input source. If it is high, reduce the input signal level.</div><div>The amplifier should never be operated at a level which causes the Clip LEDs to illuminate constantly.</div></div>	
8. Hum.		
<div>Move cabling and signal sources to identify the problems areas in the system. Cables with faulty shielding are a frequent entry point from hum. It occurs due to ground loops.</div> <div>If the humming persists, kindly get in touch with our authorised service personnel.</div>		
9. Hiss.		
<div>Unplug the amplifier input to confirm whether the hiss is from the source or a device upstream. The erratic or popping noises indicate an electronic fault in the offending unit.</div>		

10. Technical Specification:

Model	XPA 40
Output power Stereo @ THD 0.1%	2Ω (2 x 2000W RMS) 4Ω (2 x 1400W RMS) 8Ω (2 x 850W RMS)
Bridged	4Ω (4000W RMS) 8Ω (2800W RMS)
EIA Power @ THD 0.1%	2Ω (2 x 3000W) 4Ω (2 x 2100W) 8Ω (2 x 1200W)
Single channel driven @ THD 0.1%	2Ω (2 x 2400 RMS) 4Ω (2 x 1600 RMS) 8Ω (2 x 950 RMS)
Frequency Response	20Hz-20kHz (± 0.5dB)
THD + N @ rated power single channel in 4 Ω load	< 0.5% @ 1kHz < 0.5% @ 20kHz
Damping Factor	> 400 : 1 (@ 8 Ω)
Signal to Noise Ratio	> 90 dB.
Crosstalk	>60 dB @ 1kHz
Input Sensitivity	0.775V/1.2V Switchable
Input Impedance	20kΩ balanced, 10kΩ unbalanced.
Protection devices	Temperature, DC, RFI, short circuit, Soft-Start, Overload, over voltage.
Input Connector (per channel)	XLR, Jack stereo 6.3mm
Output Connector (per channel)	4 WAY SPEAKON Connector with Binding post.
Cooling	2 variable-speed High CFM Fans
Indicators (per channel)	Power On, Bass/Boost, TMS, Mute, Clip & Signal.
Power Consumption Full Power (4Ω, Bridge mode)	6300W
Dimensions (W x D x H)	484 x 575 x 133mm
Net Weight	33 kg

For Your Records

- Model No.....
- Serial No.....
- Dealer's Name.....
- Dealer's Phone No.....Fax No.....
- Date of Purchase.....

Note

[illegible]

Range of Studiomaster Professional Products.

Wired Microphones

SM 100XLR
TRIO 100
SM 200XLR
TRIO 200
SM 300I
SM 400XLR
SM 450XLR
SM 500XLR
SM 600XLR
SM 650XLR
SM 800C
SM 900C
SBM 10
Flex 3
Flex 4

Wireless Microphones

BR 28 Series
BR 48 Series
ER 11 Series
ER 31 Series
ER 58 Series
TR 47 Series
XR 20 Series
XR 40 Series
XR 80 Series
XR 100 Series

Conference System

Vāk 10 System
Vāk 10d / Vāk 10c
Vāk 20

Crossovers

SX-2
SX-321
SX-341
SX-521

Processors

SEQ 152
SEQ 302F
SEQ 312 / SEQ 341
Multi 3 / Multi 6
SFX 8
SPS 8
SDX 4
Phantom 11

Mixers

~ **Cub Series**
CUB 4
CUB 6
CUB 6U

~ **Air Series**

AiR 2
AiR 4
AiR 6
AiR 8
AiR 12
AiR 16
AiR 2U
AiR 4U
AiR 6U
AiR 8U
AiR 12U
AiR 16U

Mixers

AiR Pro 18
AiR Pro 24
AiR Pro 28
AiR Pro 36

~ **Air X Series**

AiR X 10
AiR X 14
AiR X 18

~ **AQUA Series**

Aqua 6
Aqua 8
Aqua 10
Aqua 14

~ **Digital Mixer**
D. Mix 20

~ **Diamond Club Series**

Diamond Club 6.2
Diamond Club 8.2
Diamond Club 8.2 EFX
Diamond Club 12.2
Diamond Club 12.2 EFX
Diamond Club 12.2U
Diamond Club 12.2UX
Diamond Club 16.2
Diamond Club 16.2 EFX

~ **Diamond Supreme Series**

Diamond Supreme 12
Diamond Supreme 12U
Diamond Supreme 16U

~ **Club 2000 Series**

C 142
C 182

~ **Platinum Series**

Platinum 16Fx

~ **Diamond Pro-3 Series**

Pro-3 12.3
Pro-3 16.3

~ **DJ Mixers**

DJX 300
DJX 325
Playmix 300
DJX 825
DJX 925
DJX 975

Amplifiers

~ **P - Series**

PA 1.5
PA 2.0
PA 3.0
PA 4.5
PA 6.0
PA 7.5

~ **DPA Series**

DPA 2000
DPA 3200
DPA 4500
DPA 5000

~ **DJA Series**

DJA 100
DJA 500
DJA 800
DJA 1600
DJA 2500
DJA 3200
DJA 4000
DJA 5000

XJA 2600

~ **Arena Series**

Arena 20
Arena 30

~ **Industrial Amplifier**

ARC 120A
ARC 240A
ARC 120UB
ARC 240UB

Speaker Component

~ **S-Series**

SWF 18120
SWF 18100
SWF 1880
SWF 1560
SMB 1565
SMB 1545
SMB 1530
SMB 1250
SMB 1230
SMB 1220
SHF 0104
SHF 0106
SHF 0210

~ **E-Series**

EMB 1225
EMB 1530
EMB 1535

~ **TITAN Series**

TWF 2115
TWF 1815
TWF 1811
TWF 1810
TWF 1580
TMB 1555
TMB 1535
THF 0208

~ **FURY Series**

F18.120
F15.70
F15.40
F15.50X
F15.40X
F12.30X

Passive Speakers

~ **S-Series**

S5225
S8018
S8118
S8128
S8028

~ **Fire Series**

Fire 21/ Fire 51
Fire 51A
Fire 55

Passive Speakers

~ **Fire Series**

Fire 57
Fire 82
Fire 84

~ **XVP Series**

XVP 1225
XVP 1540
XVP 1540M
XVP 1560
XVP 2250
XVP 2550
XVP 2585
XVP 25A2
XVP 25A6
XVP 1808
XVP 1810
XVP 1812
XVP 2820

~ **ELAN Series**

ELAN 155
ELAN 181

EKS 151

Q 400

Powered Speaker

~ **ARIA Series**

Aria 8
Aria 12
Aria 15

~ **A Series**

A 400
A 500

H 400

~ **B Series**

B 200
B 400

~ **OP Series**

OP 415
OP 515

~ **SUB Series**

12SUB
15SUB

Line Array System

FIRE 92
SLA-40 T
SLA-40 Kit
SLA 30
S 9022

Stabilizers

SVC - S1000
SVC - S2000
SVC - S3000
SVC - S5000
SVC - S6000
SVC - S8000
SVC - S10000
SVC - S12000

* Design and specification are subject to change without notice.

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