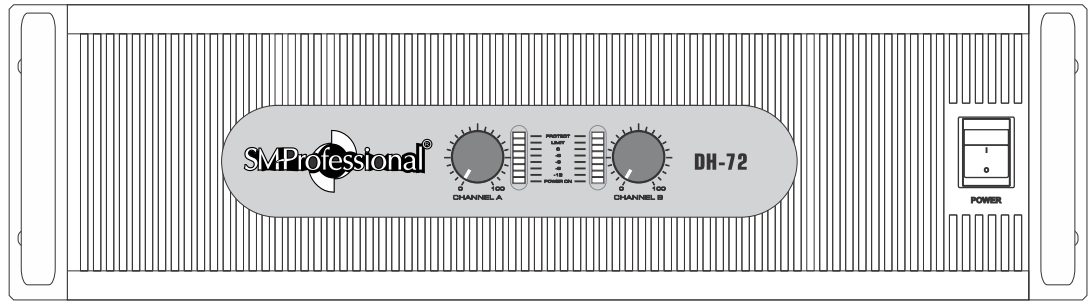
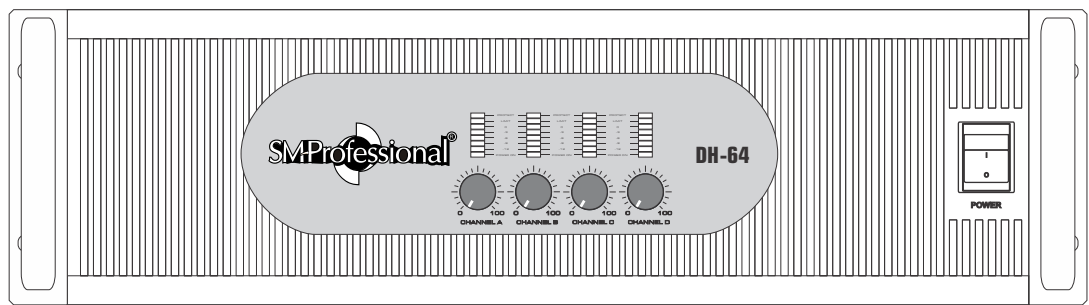
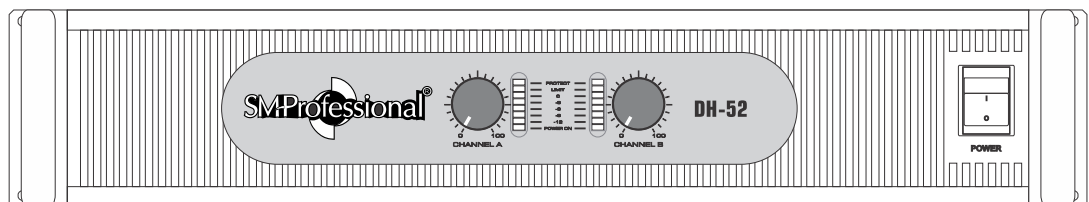




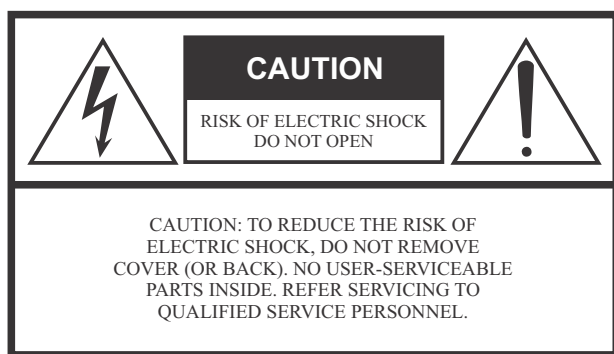
# DH SERIES

## Professional Digital Hybrid Stereo Power Amplifiers



|        |                                |
|--------|--------------------------------|
| 1..... | Warranty Information           |
| 2..... | Introduction                   |
| 3..... | Features at a Glance           |
| 4..... | Input Output Connections       |
| 5..... | Front & Rear Panel Description |
| 6..... | Setup                          |
| 7..... | Technical Specifications       |

**Models: DH-52 , DH-64 , DH-72.**



## 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 continous 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 SMProfessional 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 SMProfessional dealer immediately. We request you to retain the packing/cartons should the product require servicing/maintenance in the future.

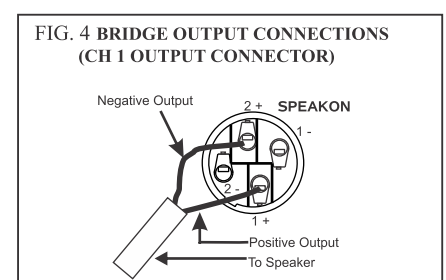
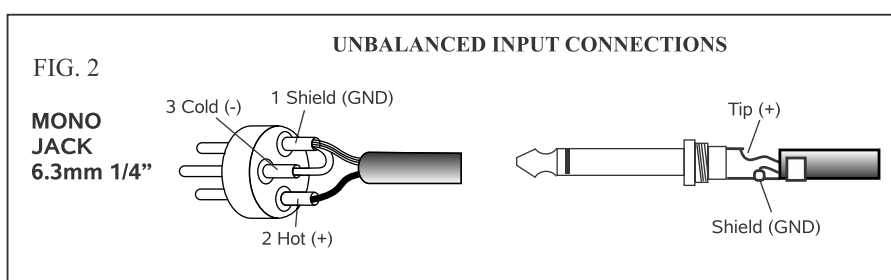
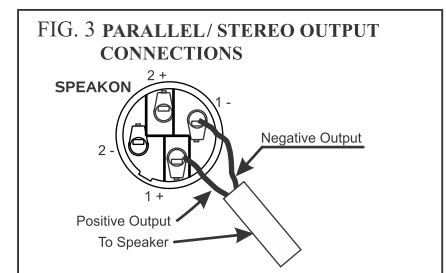
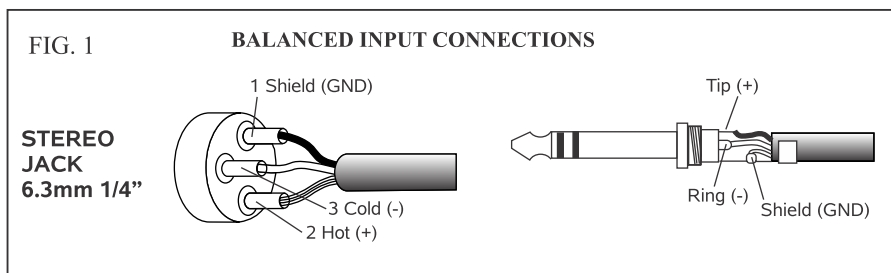
## 2. Introduction

The SMProfessional DH series is our range of digital hybrid stereo power amplifiers designed to deliver high efficiency, definition, dependability and incredible sonic punch.

## 3. Features at a Glance

- Innovative “Tracking Class D” (TD) circuit design to deliver high drive, definition and dependability.
- Delivers efficiency of Class D technology with the sonic punch of class AB amplification.
- Tamper-proof dip switches for finely-graded sensitivity selection.
- Sensitivity range of 26dB to 47dB (+3dB increments) to connect versatile input devices and loudspeaker types.
- High-current toroidal transformers with high-endurance cores for superior transient response.
- 3 switchable operational modes: stereo, parallel and bridge.
- 3 switchable sensitivity mode: 0.7V, 1.2V, 2V (only for DH-64)
- Low THD and high damping factor for excellent sound quality.
- Built-in limiter circuit for speaker protection from damage due to distorted input signals.
- Protection devices: temperature, VHF, DC, short circuit, soft-start and overload.
- Intelligent cooling and heat dissipation using dual variable speed CFM fans.
- 2-colour LED bargraph to indicate power ON, signal (5-segments), limit and protect status.
- Audio-grade balanced XLR input connectors.
- High-performance Speakon and binding post output connectors.
- Wide mains voltage operation 150-240V AC.
- Minimum wiring and standardised layout for easy serviceability.
- Ideal for a wide variety of live, touring, DJ, PA and installation applications.

## 4. Input Output Connections

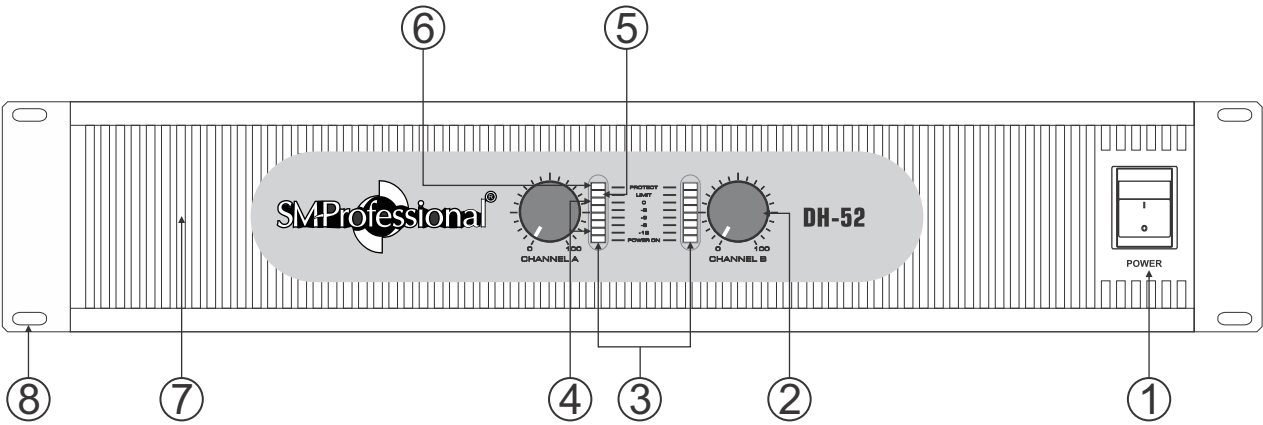


### WARNING:-

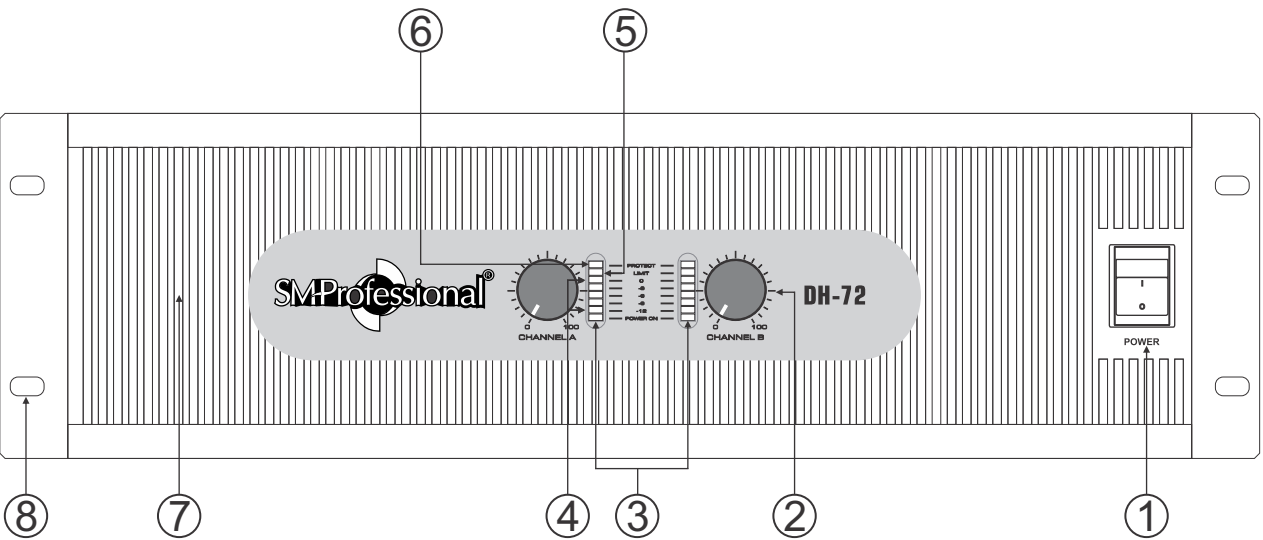
If the power plug supplied with this equipment does not suit the power supply socket in your area, please consult the dealer from whom the equipment has been purchased. Please ensure use of correct plug to support appliance earthing.

5. Front & Rear Panel Description

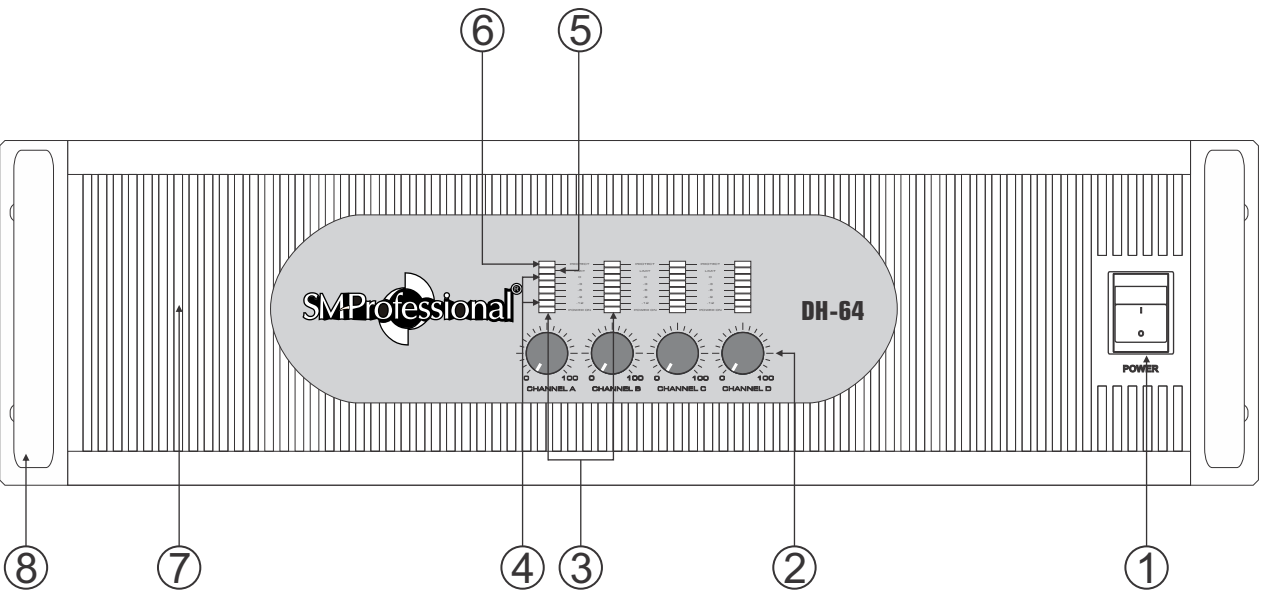
• DH-52 Front Panel



• DH-72 Front Panel



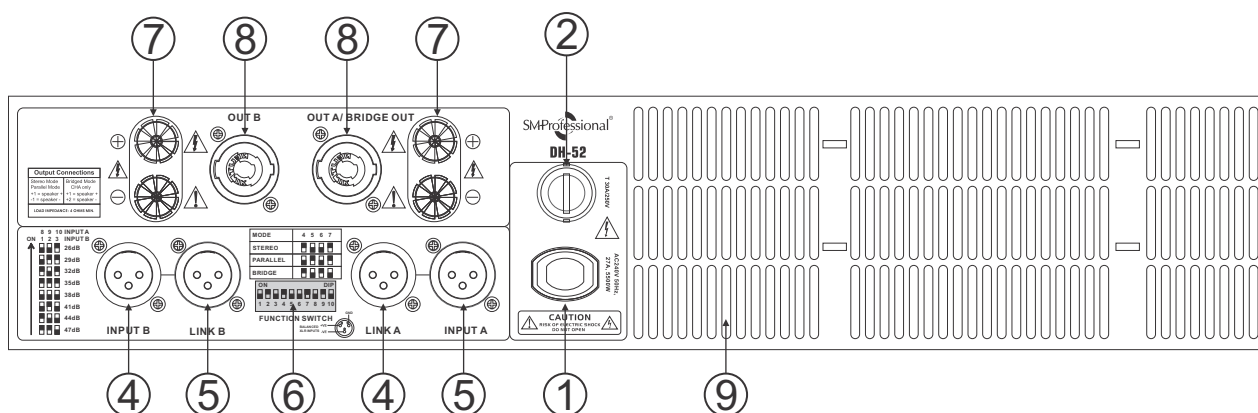
• DH-64 Front Panel



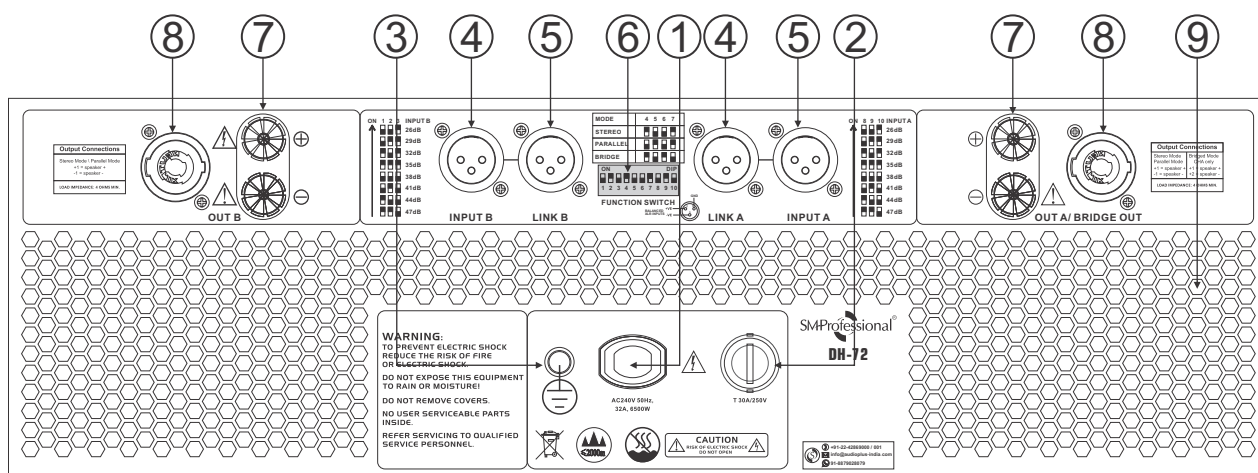
1. **Power Switch:** It switches the amplifier ON or OFF. Kindly reduce the volume to minimum while switching the unit ON or OFF.
2. **Volume Control:** This knob is used to adjust and control the volume and output level of the respective channel.
3. **Power ON Indicator:** When lit, this Green indicates correct operation of the channel.
4. **Signal Level Indicator:** These 5-segment Green LED lights show the output level of the amplifier.
5. **Limiter LED:** This LED lights up to indicates that the internal limiter has been activated to eliminate clip. When the limiter is activated, it indicates that the maximum amplification has been reached. When it lights up continuously, this means there is an excessive signal input. Kindly reduce the output level from the mixer or other connected devices to avoid any damages.
6. **Protection Indicator:** The PROTECTION indicator lights up-and sound output is automatically muted-whenver the unit's protective circuitry is operating i.e. thermal and DC protection
7. **Air Intake Grill:** This intake grill features low-noise high-speeds fans to suck in air and dissipate the heat generated to keep the amplifier running cool.  
 ⚠ For best results, do not obstruct the grill and clean the air filters whenever necessary.
8. **RMC Holes:** The Rack Mounting holes are provided to fix the amplifier on a rack.

## Rear Panel

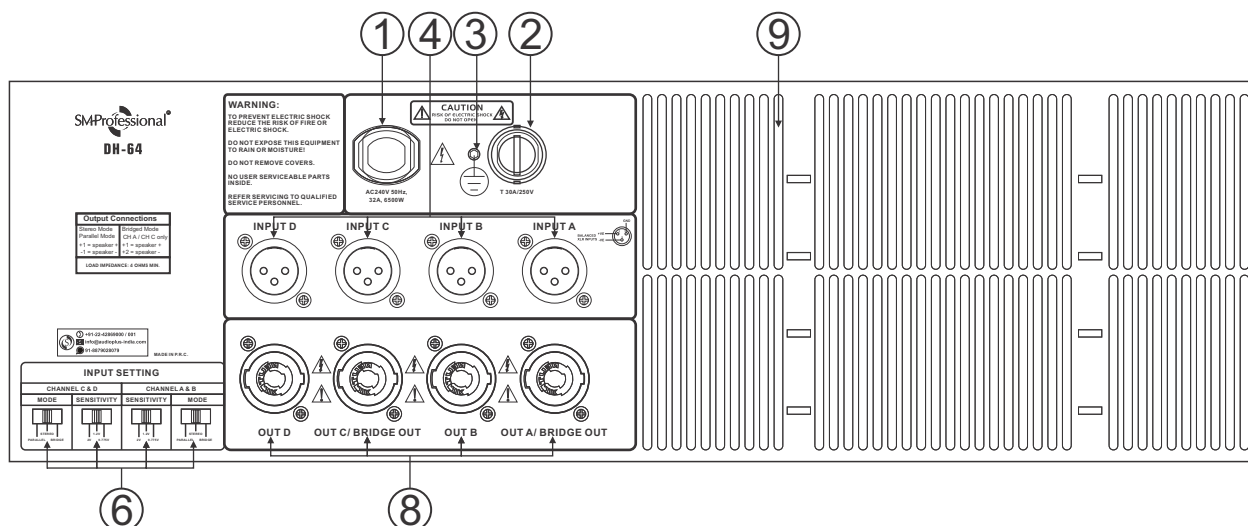
### • DH-52 Back Panel



### • DH-72 Back Panel



## • DH-64 Back Panel



- 1. Power Cable:** Use this cable for supplying power to the unit.
- 2. Fuse Holder Socket:** Replace fuse with same type and rating.
- 3. External Earth Terminal:** For a possible ground connection (e.g. in case of hum problems). (only for DH-64 & DH-72)
- 4. XLR Inputs:** These XLR (F) connectors accept input signals (balanced/unbalanced) to drive their respective channel. If the signal is unbalanced, pin 2 can be used for the signal and pin 3 connected to the earth.
- 5. XLR Link Outputs:** These XLR (M) connectors can be used to connect other amplifiers or audio devices as required. Connect these outputs into the inputs of other/external amplifiers or audio devices.
- 6. Function Switch:** These switches are used to select different operating modes and sensitivity settings as shown below.

ON

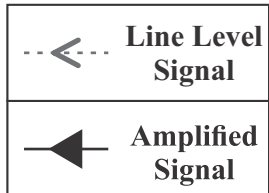
8 9 10 INPUT A

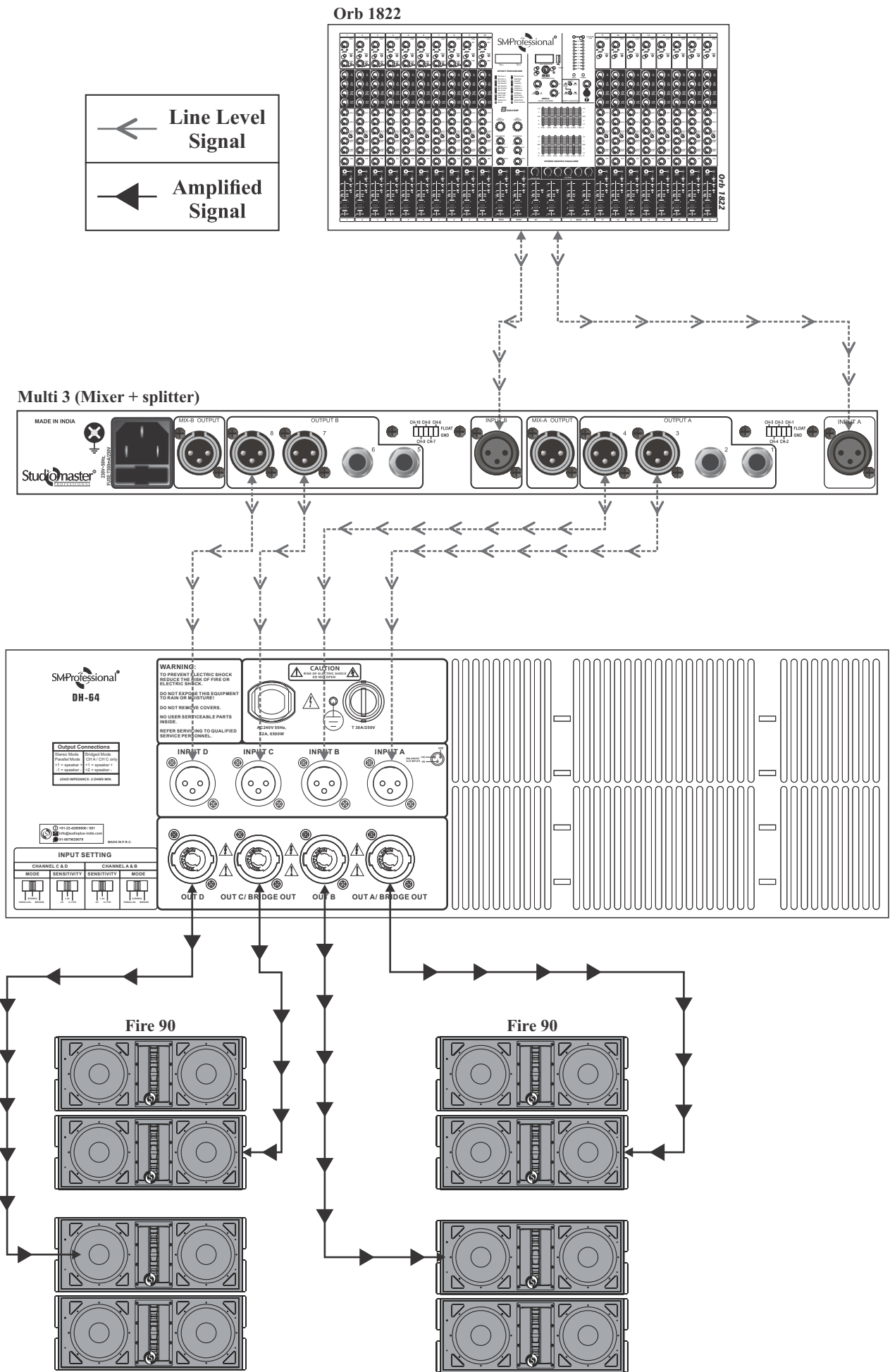
1 2 3 INPUT B

| FACTORY SETTING |             |        |             |          |             |
|-----------------|-------------|--------|-------------|----------|-------------|
| DH-52           |             | DH-72  |             | DH-64    |             |
| MODE            | SENSITIVITY | MODE   | SENSITIVITY | MODE     | SENSITIVITY |
| STEREO          | 41dB        | STEREO | 41dB        | STEREO   | 2V          |
|                 |             |        |             | BRIDGE   | 1.2V        |
|                 |             |        |             | PARALLEL | 0.775V      |

- 7. Output Binding Post:** Use these output for picking up the amplified signals individually & from CH A in bridge mode (For DH-52 & DH-72).
- 8. Output Speakon:** Use these connectors for picking up the amplified signals of their respective channels. Insert and twist the Speakon connectors for safe and secure connection. Use CH A for bridge mode in DH-52 & DH-72 and for CH A & CH C for bridge mode in DH-64.
- 9. Air Exit Grills:** These exit grills feature low-noise high-speeds fans to blow out warm air and dissipate the heat generated to keep the amplifier running cool.  
⚠ For best results, do not obstruct these grills and clean the air filters whenever necessary.

### For DH-52 & DH-72





## 7. Technical Specifications

| TECHNICAL INDICATORS                              |     | DH-52                                                                      |        |       | DH-72                           |        |       | DH-64                          |        |      |
|---------------------------------------------------|-----|----------------------------------------------------------------------------|--------|-------|---------------------------------|--------|-------|--------------------------------|--------|------|
| Stereo RMS Power                                  | 8 Ω | 2 X 1200W                                                                  |        |       | 2 X 1800W                       |        |       | 4 X 900W                       |        |      |
|                                                   | 4 Ω | 2 X 1800W                                                                  |        |       | 2 X 2850W                       |        |       | 4 X 1200W                      |        |      |
| Stereo EIA Power                                  | 8 Ω | 2 X 1700W                                                                  |        |       | 2 X 2350W                       |        |       | 4 X 1100W                      |        |      |
|                                                   | 4 Ω | 2 X 2700W                                                                  |        |       | 2 X 3700W                       |        |       | 4 X 1700W                      |        |      |
| Bridged RMS Power                                 | 8 Ω | 3600W                                                                      |        |       | 5400W                           |        |       | 2 X 2400W                      |        |      |
| Bridged EIA Power                                 | 8 Ω | 5000W                                                                      |        |       | 7000W                           |        |       | 2 X 3100W                      |        |      |
| Input Sensitivity Selection<br>Tolerance : ± 1dBu |     | Gain                                                                       | Input  |       | Gain                            | Input  |       | Gain                           | Input  |      |
|                                                   |     | 47dB                                                                       | 0.39V  | -6dB  | 47dB                            | 0.39V  | -6dB  | 39dB                           | 0.775V | 0dB  |
|                                                   |     | 44dB                                                                       | 0.55V  | -3dB  | 44dB                            | 0.55V  | -3dB  |                                |        |      |
|                                                   |     | 41dB                                                                       | 0.775V | 0dB   | 41dB                            | 0.775V | 0dB   |                                |        |      |
|                                                   |     | 38dB                                                                       | 1.09V  | +3dB  | 38dB                            | 1.09V  | +3dB  | 36.5dB                         | 1.2V   | +4dB |
|                                                   |     | 35dB                                                                       | 1.54V  | +6dB  | 35dB                            | 1.54V  | +6dB  |                                |        |      |
|                                                   |     | 32dB                                                                       | 2.18V  | +9dB  | 32dB                            | 2.18V  | +9dB  |                                |        |      |
|                                                   |     | 29dB                                                                       | 3.09V  | +12dB | 29dB                            | 3.09V  | +12dB | 31.5dB                         | 2.0V   | +8dB |
|                                                   |     | 26dB                                                                       | 4.35V  | +15dB | 26dB                            | 4.35V  | +15dB |                                |        |      |
| Damping Factor                                    |     | 500                                                                        |        |       | 500                             |        |       | 500                            |        |      |
| Frequency Response                                |     | 20Hz-20kHz (±0.5dB, 1Vrms)                                                 |        |       |                                 |        |       |                                |        |      |
| Impedance                                         |     | 20KΩ (BALANCED, STEREO) / 10KΩ (UNBALANCED, PARALLEL)                      |        |       |                                 |        |       |                                |        |      |
| Signal to Noise Ratio                             |     | ≥100dB                                                                     |        |       |                                 |        |       |                                |        |      |
| THD+N                                             |     | ≥0.06%(8Ω, 1kHz, 1%)                                                       |        |       |                                 |        |       |                                |        |      |
| IMD                                               |     | ≥0.05% (8Ω, 1%)                                                            |        |       |                                 |        |       |                                |        |      |
| Slew rate (8Ω, 10kHz                              |     | ≥20V / us                                                                  |        |       |                                 |        |       |                                |        |      |
| Crosstalk                                         |     | ≥70dB (1kHz)                                                               |        |       |                                 |        |       |                                |        |      |
| Input Impedance                                   |     | ≥20KΩ Balanced.                                                            |        |       |                                 |        |       |                                |        |      |
| Indicator                                         |     | Power ON (Green), Signal (Green), Limit (Red), Protect (Red)               |        |       |                                 |        |       |                                |        |      |
| Protection                                        |     | Circuit damage, output Limit, Clip and compress, Short Circuit, Over heat; |        |       |                                 |        |       |                                |        |      |
| Input Connector (Per Channel)                     |     | XLR                                                                        |        |       |                                 |        |       |                                |        |      |
| Output Connector (Per Channel)                    |     | Speakon & Binding post                                                     |        |       |                                 |        |       | Speakon                        |        |      |
| Cooling                                           |     | 2 x Variable Speed fans (80MM)                                             |        |       | 2 x Variable Speed fans (120MM) |        |       | 2 x Variable Speed fans (90MM) |        |      |
| Power Supply                                      |     | AC 240V, 50Hz, 27A, 5500W                                                  |        |       | AC 240V, 50Hz, 32A, 6500W       |        |       | AC 240V, 50Hz, 32A, 6500W      |        |      |
| Dimensions (W x D x H) mm                         |     | 483 X 420 X 88 (2U)                                                        |        |       | 483 X 519 X 132 (3U)            |        |       | 483 X 420 X 132 (3U)           |        |      |
| Net Weight (Kg)                                   |     | 23                                                                         |        |       | 32.5                            |        |       | 30                             |        |      |



\* Design and specification are subject to change without notice.

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