

USER MANUAL



PROFESSIONAL POWER AMPLIFIER

Important Safety Precautions & Explanation of Symbols

- 1- Read these instructions.
- 2- Keep these instructions.
- 3- Heed all warnings.
- 4- Follow all instructions.
- 5- **WARNING:** To prevent fire or electric shock, do not expose this equipment to rain or moisture. Do not use this apparatus near water.
- 6- Clean only with a dry cloth.
- 7- Do not block any ventilation openings.
- 8- Do not install near heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9- 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 plug has two blades and a grounding prong. The wide blade or third prong are provided for your safety. If the provided plug does not fit your outlet, consult an electrician for the replacement of the obsolete outlet.
- 10- Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11- Unplug the apparatus during lightning storms or when unused for long periods of time.
- 12- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, or the power cord or plug has been damaged.



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



The lightning flashes printed next to the OUTPUT terminals of the amplifier are intended to alert the user to the risk of hazardous energy. Output connectors that could pose a risk are marked with the lightning flash. Do not touch output terminals while amplifier power is on. Make all connections with amplifiers turned off.



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 humans.



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.



WARNING: To prevent fire or electric shock, do not expose this equipment to rain or moisture.

PREFACE

Thank you for your purchase of IVA professional audio equipment. Please read the manual carefully before you use the product. It will give you correct guidance, and it is useful for the equipment's normal work and extending its life. All our products are promised one-year quality Warranty. Provided any product found quality defect within one year, we will be responsible for repairing or replacing.

We have always been trying to develop our professional audio equipment with high-tech, high performance and with competitive price. Up to now, we own different models, covering high, secondly, and low three levels and are able to provide high quality equipment for different kinds of occasions. In the process of research and development, we have been trying to in-pour high-tech soul to every product, and to create high quality equipment. We do that only for one purpose: we hope our customers will really benefit from our high-tech, high-performance and competitive price products, as well as good after sales services and technical know-how.

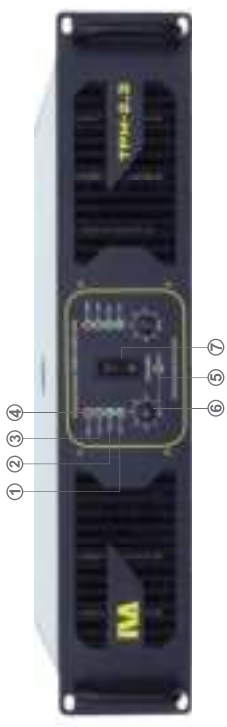
INTRODUCTION

TPM Series Amplifiers hanker for higher speed, bigger damping factor, more rich functions and advanced protection system. It is designed with excellent cooling system, compact and stable mechanical aseismatic capabilities, SMT technology as well as precise components.



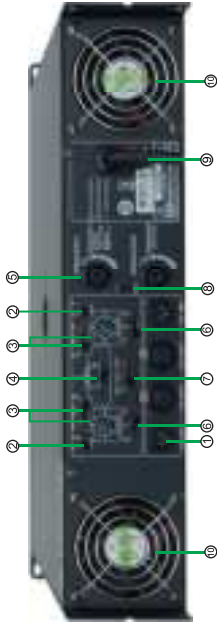
MODEL	TPM-2.3	TPM-2.7
8 Ohm Stereo Output Power	300W	700W
4 Ohm Stereo Output Power	460W	1000W
8 Ohm Bridge Power	960W	2000W
Output Circuitry	H	
Frequency Response (1W@8W)	20Hz-20KHz +/- 1dB	
THD+N (20Hz-20KHz for 1W THD+N)	<0.1%	
Damping Factor	300	
S/N Rate	>100dB	
Input Sensitivity	0.775V/1.4V/2.5V	
Input Impedance	>10 Kohm, Balance Or Unbalanced, All Models.	
Input Connector	Female XLR, Male XLR (Link)	
Output Connector	Speakon Dual CH 1+/-1-, Bridge Mono CH 1+2+	
Front Panel Control	AC Power Switch, Protect (Red LED), Clip (Orange LED) Signal (Green LED), Power (Green LED), Bridge Mode / Parallel (Orange LED), Gain Controls	
Rear Panel Control	Input Mode Switch: Bridge (Red), Parallel (Orange), Stereo (Green); Sensitivity: 0.775V(Red), 1.4V (Orange), 12.5V (Green); Limiter: OFF (Red), ON (Green); Grounding: Lift, Ground; Processing: OFF (Green), ON (Orange)	
Cooling	Variable Speed Fans, Front-To-Rear Airflow	
Product Dimension (W x H x D)	480mm X 89mm X 347mm	480mm X 89mm X 393mm
Net	14.4kg	17.9kg
Shipping	16kg	20.3kg
Power Requirements	240V / 50-60 Hz	

SPECIFICATION SUBJECT TO CHANGE WITHOUT NOTICE



FRONT PANEL FEATURES

- ① **POWER LED (Green)**
 - The Green POWER LED should illuminate whenever POWER is ON.
- ② **SIGNAL LED (Green, Each Channel).**
 - Illuminates when the signal level reaches -35dB, which should produce an easily audible sound in the speakers. If this LED remains illuminated when no signal is expected, there may be interference or some other abnormal condition.
- ③ **CLIP LED (Orange, Each Channel).**
 - The LED glows bright Orange while amp is muted for any reason. This normally occurs each time the power is turned on or off. Muting at other times indicates overheating or other protective behavior.
 - The LED flashes bright Orange during clipping. The intensity and duration correlates with the audibility of the clipping.
 - The LED glows half-bright during limiting. This may occur on all products when the Clip-Limiting circuit is enabled.
- ④ **PROTECT LED (Red)**
 - Indicates that the channel is in protect mode (speakers disconnected by output relay)
- ⑤ **PARALLEL LED / BRIDGE LED (Orange)**
 - Warns that the rear panel Parallel Mode switch has been set. See INPUT MODE SWITCH on next page.
 - Warns that the rear panel Bridge Mode switch has been set. See INPUT MODE SWITCH on next page.
- ⑥ **GAIN CONTROLS**
 - Each channel has a 41-step Gain control with approximately 20dB of input headroom. 1dB steps are maintained down to 14dB of attenuation, with increasingly large steps below this point as marked.
 - Gain reduction may be used as desired to reduce input noise, but will reduce the headroom available to the Clip Limiter. Use the three-position INPUT SENSITIVITY SWITCH (below) to match the dynamic range of the amplifier's input to that of the source, permitting normal nearly-full Gain settings.
- ⑦ **AC POWER SWITCH**
 - Controls all power to the amplifier. The AC Switch must be ON to use. The Green POWER LED should illuminate whenever Power is ON.
- ⑧ **FRONT PANEL VENTILATION SLOTS**
 - This series amplifier pull air from the front, and exhaust it from the rear, thus allowing the heat to dissipate at the rear of the rack. As the amp works harder, the fan will speed up and expel more hot air. The airflow from the front with the dust trap at the front make the dust cleaning easier without going to the rear.



REAR PANEL FEATURES

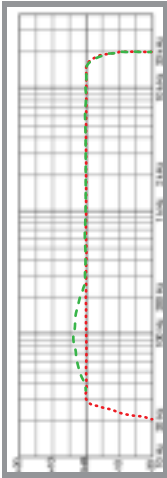
- ① INPUT CONNECTIONS
- Precision balanced inputs offer superior hum rejection, and accept >21dBu input levels on all Sensitivity.
 - Female and Male XLR, Pluggable Terminal Blocks. This XLR input is a balanced input. Connect this input to the output of your mixer.
- ② CLIP LIMITING, ON-OFF SWITCH (Ch1 & Ch 2)
- This switch is used to limit input level. This function can be used to avoid damage for your power amplifier if there is a malfunction in the input device (mixer, CD player,).

- ③ FILTER switch and FREQUENCY adjustment knob (Each channel has it)
- Using these control knobs to select the filter type and cutoff frequency (1 and 2) corresponding to each channel. As follows: Use FILTER switch to select the filter.
- OFF - No filter.
- SUBWOOFER - use low pass filter. Use this setting can filter out unwanted high frequency or mid frequency
- LOWCUT - use high-pass filter. Use this setting can filter out unwanted low frequency or sub-audio.
- If you select the SUBWOOFER or LOWCUT, you can use the FREQUENCY knob to cutoff frequency. Adjustable range is 25Hz to 150Hz



Remark:
If the amplifier is set to BRIDGE mode, use the switches and knob on channel 1 are valid. (Frequency control knob for channel 2 is disabled)

- ④ Processing ON / OFF - switch
- If the switch is set to ON, the amplifier adds low-frequency boost to enhance speaker output, results (the actual change in the low frequency balance) Will vary with the type of speakers varies, please note only when the FILTER switch is set to ON, the mode is in effect.



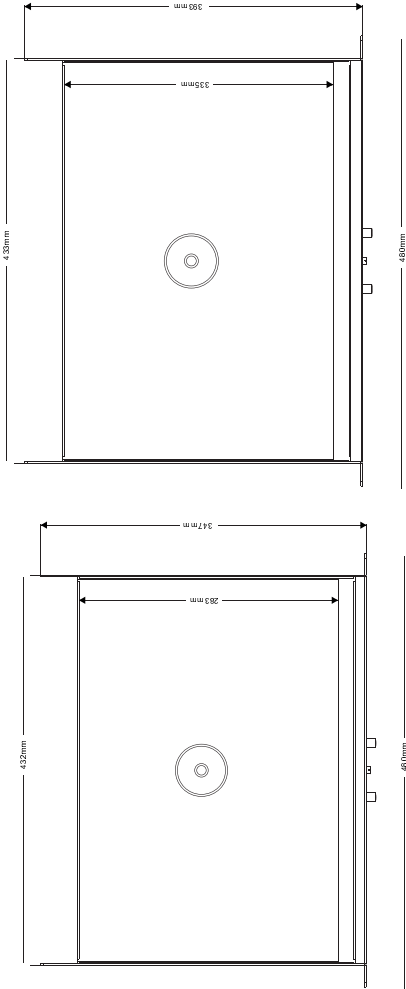
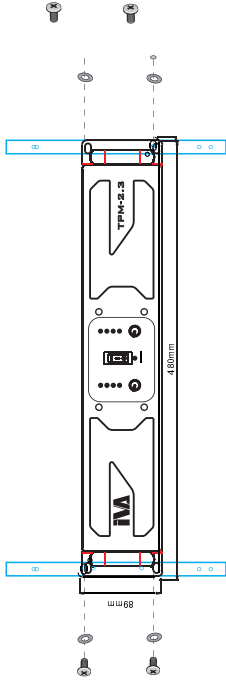
- ⑤ SPEAKER CONNECTIONS - SPEAKERS
- Ch 1 provides "4-wire" access to both channels using the standard convention: Ch 1 uses 1+, 1-, and uses 2+ and 2- for Ch 2.
 - Ch 2 provides "2 wire" access to Ch 2 only, using 1+, 1-.
- ⑥ INPUT SENSITIVITY SWITCH, 3-POSITION: 0.775V, 1.4V, 2.5V
- This selector allows to choose the input sensitivity: either 0.775V, 1.4V or 2.5V.



- ⑦ INPUT MODE SWITCH, 3-POSITION: BRIDGE, STEREO, PARALLEL
- This switch is used to choose the operating mode of the power amplifier:
Mode stereo: 2 inputs (channel 1 and 2) and 2 outputs are used.
Mode parallel: 1 input (channel 1) and 2 outputs are used
Mode bridge: 1 input (channel 1) and 1 output is used.
- ⑧ GROUNDING SELECTOR
- If you have hum or noise in your speaker, put the selection in "ON" position.
- ⑨ AC POWER CABLE AND AC VOLTAGES
- Plug this cord into the power supply socket. (Before using the power amplifier, check if the power supply is 240V).
- ⑩ AIR ENTRANCE
- Air vent part is for cooling. Don't obstruct it.

Rack Mounting and Dimensions

Use four screws and washers to mount the amplifier to the equipment rack rails. To use the amplifier outside a rack, attach the self-adhesive rubber feet to the bottom. (screw & rubber feet not included.)
For portable, mobile or other applications where the rack assembly may be moved, we strongly recommend supporting the rear of the amplifier. Optional rack handles provide finger grips at each end, making lifting and setting into the rack more comfortable.



TPM2.3

TPM2.7

