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# **User's Manual**

## SWITCHING POWER PROFESSIONAL AMPLIFIER



## **Important Safety Instructions**



TO REDUCE THE RISK OF ELECTRIC SHOCK PLEASE DO NOT REMOVE THE COVER OR THE BACK PANEL OF THIS EQUIPMENT. THERE ARE NO PARTS NEEDED BY USER INSIDE THE EQUIPMENT. FOR SERVICE, PLEASE CONTACT QUALIFIED SERVICE CENTERS.

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This symbol, wherever used, alerts you to the resence of un-insulated and dangerous voltages in 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)  $\sim$
- Hazardous Live Terminal 4
- Denotes the product is turned on. ON:
- OFF: Denotes the product is turned off.

#### CAUTION

Describes precautions that should be observed to prevent damage to the product.

- 1. Read this Manual carefully before operation.
- 2. Keep this Manual in a safe place.
- 3. Be aware of all warnings reported with this symbol.
- 4. Keep this Equipment away from water and moisture.
- 5. Clean it only with dry doth. Do not use solvent or other chemicals.
- 6. Do not damp or cover any cooling opening. Install the equipment only in accordance with the Manufacturer's instructions.
- 7. Power Cords are designed for your safety. Do not remove Ground connections! If the plug does not fit your AC outlet, seek advice from a qualified electrician. Protect the power cord and plug from any physical stress to avoid risk of electric shock. Do ot place heavy objects on the power. This could cause electric shodk or fire.
- 8. Unplug this equipment when unused for long periods of time or during a storm.
- 9. Refer all service to qualified service personnel only. Do not perform any servicing other than those instructions contained within the User's Manual.
- 10. 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.

#### WARNING

To reduce the risk of electric shock and fire, do not expose this equipment to moisture or rain.

Dispose of this product should not be placed in municipal waste and should be separate collection.

Before replacing the fuse, make sure that the product is OFF and disconnected from the AC outlet.

11. Move this Equipment only with a cart, stand, tripod, or bracket, specified by the manufacturer, or sold with the Equipment. When a cart is used, use caution when moving the cart/equipment combination to avoid possible injury from tip-over.



- 12. Permanent hearing loss may be caused by exposure to extremely high noise levels.
- The US. Government's Occupational Safety and Health Administration (OSHA) has specified the permissible exposure to noise level. These are shown in the following chart:

Hours x day	SPL	Example
8	90	Small gig
6	92	Train
4	95	Subway train
3	97	High level desktop monitors
2	100	Classic music concert
1.5	102	
1	105	
0.5	110	
0.25 or less	115	Rock Concert

According to OSHA, an exposure to high SPL in excess of these limits may result in the loss of heat. To avoid the potential damage of heat, it is recommended that Personnel exposed to equipment capable of generating high SPL use hearing protection while such equipment is under operation.

The apparatus shall be connected to a mains socket outlet with a protective earthing connection.

The mains plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.

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### Introduction

The product switching power professional Amplifier is designed for professional use on stage. The high-quality components and the carefully designed circuits ensure excellent audio performance and an extremely linear frequency response. In fact, the switching technology offers, together with an increased efficiency and a better control of heat dissipation than conventional power supply systems, a drastic reduction of dimensions and weight, for easier transportation and installation. This Amplifier guarantees total reliability and a trouble-free use even in the most demanding conditions. We believe the product will provide a perfect performance, what you get is unprecedented performance at an incredibly attractive price.

Our Professional Audio Products are designed and tested by a highly qualified engineering team with more than 20 years of experience. Great care is placed in delivering products with excellent performance, specifications and dependable reliability. Also great emphasis is placed in creating and bringing to market products that can fill multiple applications and also offer customers exceptional value.

### **Features**

- High current switching power allowing high power output with low noise and low distortion.
- Substantial protection circuitry like thermal, short circuit, power on/off muting and Therefore protection.
- Built-in limiter.
- Euroblock input and output.
- front mounted gain controls for easy access.
- Signal, Clip protect, and Power LED indicators to monitor performance.
- Amplifier Disable/Prior/Failure Status.
- 2-channel or 4-channel installation amplifier.
- 70/100V line operation.
- Power output (70/100V): 2X150W/4X150W/2X300W/4X300W/2X500W/4X500W.
- 1 U rack 19"size.
- Switching power, class-D amplifier.

## **Usefull Data**

Please write your serial number here for future reference.

Serial Number:

Date of Purchase:

Purchased at:

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## **Technical Specifications**

Output Power	one channel drive	150W*2			
(100V line) all channel drive		135W*4			
Output Power	one channel drive	150W*2			
(70V line)	all channel drive	135W*4			
Input sensitivity	,	0.9-1.1V (0+/-1dBV)			
Input Impedance	ce	20kΩ (balanced) 10kΩ (unbalanced)			
Frequency respo	onse	100 Hz - 15 kHz			
Voltage gain (1	00V)	40 dB			
THD+N		<0.1%			
S/N rate		>95 dB			
Crosstalk		>70dB			
Damping factor		>200			
Power output c	ircuitry	Switching power, Class-D			
Power supply		AC 110-240V, 50/60 Hz			
Protections		Short circuit, open circuit, thermal, ultrasonic and RF			
Connectors		INPUT & OUTPUT: Euroblock			
Controls		Front: AC switch, Input level control for each channel Rear: 70V/100V selector			
Indicators		SIGNAL: green LED CLIP: red LED POWER: green LED PROTECTION: red LED PRIOR:green/red LED			
Dimensions (WxHxD)		483x44x360 (mm)			
Weight		5.4 kg			

## **Control Element**

#### FRONT PANEL



#### 1. Power Switch

It switches ON/OFF the unit main power.

#### 2. Level Control

These volume controls allow you to adjust the volume level.

#### 3. Power/Prior LED

The Green LED light up when the amplifier power on. The Red LED light up when the amplifier input priority.

#### 4. Signal LED

These green LEDs light up when the respective channel's output signal pass through.

#### 5. Protection LED

In normal operation, the LED will not illume; If the LED turns red, it means the unit is in hea t protection without sound output. The speaker system is actually disconnected from the amplifier outputs when this LED is red, the temperature must be reduced by good ventilation and the signal level decreased etc.

If the problem is resolved, the protection output systems will deactivate automatically, and normal amplifier operation is resumed.

#### 6. Clip LED

This red LED lights up when the input signal is too strong. it is time to reduce input level until clip LED turn off.

#### 7. Air Intake Vents

The unit employ a variable speed internal cooling fan to intake the air through front grill to keep it running cool even under extreme operating conditions. Please keep these vents clear and free from obstruction at all times to insure proper cooling.





## **Control Element**

#### **REAR PANEL**



#### 1. AC Input

Use it to connect your unit to the supplied AC cord.

#### 2. Euroblock input

CH A +: CHA balanced signal input + or unbalanced signal input

- CH A G: CHA signal GND
- CH A : CHA balanced signal input- or unbalanced signal not connect

CH B, CH C and CH D are the same

#### Fail: Failure Status output:

Failure Status with +5V high level; disabled/protection/inactive are all with output low level.

#### **DIS:** Amplifier disabled, input control PIN

While Amplifier is operating disabled with +5V high level, linked to GND, the amplifier will be shutdown and with all protection LEDs lighting, at this moment failure status from+5V high level(normal state) turn into low level (amplifier disabled or not connected). Using this amplifier disabled function and than connect speaker output, and amplifier start again after finishing connection.

**PRI:** Input Priority Control PIN

When PRI connect to GND directly, MTEST input has priority, at this moment VR RED LEDs lighting.

- GND: signal GND and control GND
- TEST: Input Priority test/alarm signal

When PRI connect to GND directly, Test/alarm signal will reach the top priority level.

#### 3. Euroblock Output

Connect the amplifier to your speakers using these Euroblock.

#### 4. Operation mode switch

Select the operation mode (70V or 100V) on each channel moving the dip-switches to the desired position.

#### 5. Exhaust Vents

Air is drawn from front grilles, flowing through the unit and heat sink, and then exhausted via the rear vents. Do not block or impede the air flow through these vents and keep the vents areas free of foreign materials.

## **Applications**

This is a connection example. Thanks to it 4-channel/2-channel design, it is possible to separate 4 or 2 zones with different audio sources or to use the same audio on all zones.





100V	100V

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客	È	TOPP PRO				
料	號	NF05244				
р пр	名	說明書-英文	ζ			
規	格		丙無 <b>_V1.C</b>	)		
公司機種(2	客户機種)成品料號	HVA4.150				
重	量/基數	0.02KG/1				
材	質	NH00149 2:1				
紙張	展開性質	■ A3 □ A4	□ A5	口其它	紙張展開	數量 4
核准		審核		校 稿	製 稿	研發部 2018.06.05 馮斌
產品文	、件编號:	I	L. L			
陽片數	发量:8 張					