

HVA SERIES

SWITCHING POWER PROFESSIONAL AMPLIFIER

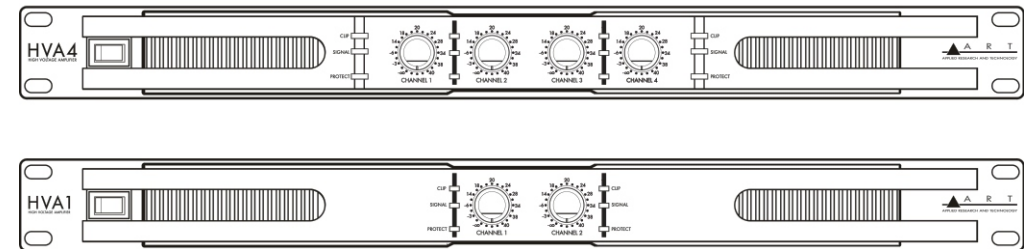


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HVA1 & HVA4

User's Manual





IMPORTANT SAFETY INSTRUCTIONS – READ FIRST

This symbol, wherever it appears, alerts you to the presence of uninsulated dangerous voltage inside the enclosure. Voltage that may be sufficient to constitute a risk of shock.

This symbol, wherever it appears, alerts you to important operating and maintenance instructions in the accompanying literature. Please read manual.

Read instructions: Retain these safety and operating instructions for future reference. Heed all warnings printed here and on the equipment. Follow operating instructions printed in this user guide.

Do not open: There are no user serviceable parts inside. Refer any service work to qualified technical personnel only.

Power sources: Only connect unit to mains power of type marked on rear panel. Power source must provide a good ground connection.

Power cord: Use the power cord with sealed mains plug appropriate for your local mains supply as provided with the equipment. If the provided plug does not fit into your outlet consult your service agent. Route the power cord so that it is not likely to be walked on, stretched or pinched by items placed upon or against.

Grounding: Do not defeat the grounding and polarization means of the power cord plug. Do not remove or tamper with the ground connection on the power cord.

Ventilation: Do not obstruct the ventilation slots or position the unit where the air required for ventilation is impeded. If the unit is to be operated in a rack, case or other furniture ensure that it is constructed to allow adequate ventilation.

Moisture: To reduce the risk of fire or electrical shock do not expose the unit to rain, moisture, or use in damp or wet conditions. Do not place a container of liquid on it, which may spill into any openings.

Heat: Do not locate the unit in a place close to excessive heat or direct sunlight, as this could be a fire hazard. Locate the unit away from any equipment, which produces heat such as: power supplies, power amplifiers and heaters.

Environment: Protect from excessive dirt, dust, heat, and vibration when operating and storing. Avoid tobacco ash, drink spillage and smoke, especially that associated with smoke machines.

Handling: To prevent damage to the controls and cosmetics avoid rough handling and excessive vibration. Protect the controls from damage during transit. Use adequate padding if you need to ship the unit. To avoid injury to yourself or damage to the equipment take care when lifting, moving or carrying the unit.

Servicing: Switch off equipment and unplug the power cord immediately if it is exposed to moisture, spilled liquid, objects fallen into opening, the power cord or plug becomes damaged during a lightning storm, or if smoke odor or noise is noted. Refer servicing to qualified technical personnel only.

Installation: Install the unit in accordance with the instruction printed in the user manual.

TECHNICAL SPECIFICATIONS

Output Power One channel drive HVA1(150W), HVA4 (300W*2)
(100V line) All channel drive HVA1(135W *2), HVA4 (270W*4)

Output Power One channel drive HVA1(150W), HVA4 (300W*2)
(70V line) All channel drive HVA1(135W*2), HVA4 (270W*4)

Input sensitivity	0.9-1.1V (0+/-1dBV)
Input Impedance	20k Ω (balanced) 10k Ω (unbalanced)
Frequency response	120 Hz - 17 kHz (-3dB)
Voltage gain (100V)	40 dB
THD+N	<0.1%
S/N rate	>95 dB
Crosstalk	>70dB
Damping factor	>200
Power output circuitry	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)	19.02x1.73x14.17(inch) 483x44x360 (mm)
Weight	HVA1 10.36 lb, 4.7 kg HVA4 13.67 lb, 6.2 kg

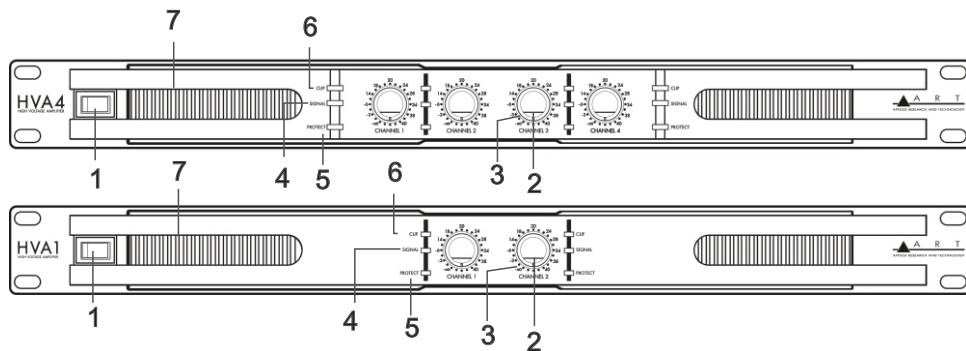
INTRODUCTION

The ART HVA Series 1 and 4 are class-D installation amplifiers. They are suitable for both 70/100V line installations (selectable through dip-switches). Each channel has its own gain control and LED indicators (signal, clip and protection). The input and output connections are made through Euroblock connectors. The amplifiers are a 1U rack 19-inch size is very appropriate for many types of installations, taking advantage of its multichannel design.

Features:

- High current switching power allowing high power output with low noise and low distortion
- Short circuit, thermal and power on/off muting 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.
- Disable Amplifier Outputs remotely
- Priority, remote test trigger
- Remote Failure Status indicator
- 2-channel or 4-channel installation amplifier.
- 70/100V line operation.
- Power output (70/100V): 2X150W/4X300W
- 1 U rack 19-inch size.
- Switching power, class-D amplifier.

FRONT PANEL



1 Power Switch

It switches ON/OFF the unit main power.

2 Level Control

The Level controls allow you to adjust the volume level.

3 Power/Protect LED

The power protect LED is Green for normal operation.
And Red in protect mode.

4 Signal LED

The Green LED light's up when there is signal present in each respective channel.

5 Protection LED

In normal operation, the LED will not illuminate; if the LED turns Red, it means the unit is in thermal protection. The speaker load disconnects from the amplifier outputs when this occurs. The thermal temperature must be reduced either by ventilation and/or the input signal level is reduced. When the amplifier is at a safe operating temperature the output protection circuitry will then connect to the outputs and the amplifier will resume normal operation.

6 Clip LED

The Red LED lights up when the input signal is too high.

7 Air Intake Vents

HVA1/HVA4 has a variable speed internal cooling fan. This allows the air to flow through front grill to keep the amplifier cool even under extreme operating conditions. Please keep these vents clear and free from any obstructions to insure proper cooling.

SERVICE

The following information is provided in the unlikely event that your unit requires service.

1. Be sure that the unit is the cause of the problem. Check to make sure the unit has power, all cables are connected correctly, and the cables themselves are in working condition. You may want to consult with your dealer for assistance in troubleshooting or testing your particular configuration.
2. If you believe that the ART unit is at fault, go to www.artproaudio.com.
3. Select "Support", then "Return Authorization Request" to request a return authorization number.
4. If you are returning the unit for service, pack the unit in its original carton or a reasonable substitute. The original packaging may not be suitable as a shipping carton, so consider putting the packaged unit in another box for shipping. Print the RA number clearly on the outside of the shipping box. Print your return shipping address on the outside of the box.
5. Include, with your unit, a note with the RA number and your contact information, including a return shipping address (we cannot ship to a P.O. box) and a daytime phone number, and a description of the problem, preferably attached to the top of the unit. Also include a copy of your purchase receipt.

Please fill in the following information for your reference:

Date of purchase: _____

Purchased from: _____

Serial Number: _____

WARRANTY INFORMATION

Limited Warranty (USA only)

Applied Research and Technology will provide warranty and service for this unit in accordance with the following warrants:

Applied Research and Technology, (A R T) warrants to the original purchaser that this product and the components thereof will be free from defects in workmanship and materials for a period of **three** years from the date of purchase. Applied Research and Technology will, without charge, repair or replace, at its option, defective product or component parts upon prepaid delivery to the factory service department or authorized service center, accompanied by proof of purchase date in the form of a valid sales receipt.

Online Registration

We recommend that you register your product online to insure prompt warranty repair servicing on any repair issues. Please go to www.artproaudio.com. Select "Support", then "Product Registration" input your information here.

Exclusions

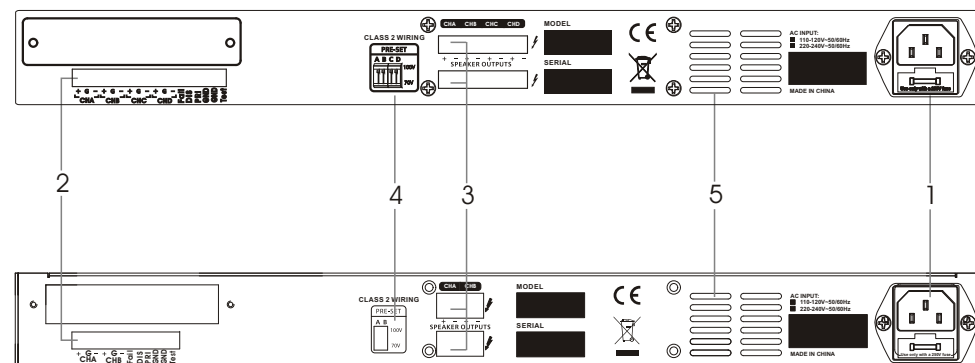
This warranty does not apply in the event of misuse or abuse of the product or as a result of unauthorized alterations or repairs. This warranty is void if the serial number is altered, defaced, or removed.

A R T reserves the right to make changes in design or make additions to or improvements upon this product without any obligation to install the same on products previously manufactured.

A R T shall not be liable for any consequential damages, including without limitation damages resulting from loss of use. Some states do not allow limitations of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific rights and you may have other rights, which vary from state to state.

For units purchased outside the United States, an authorized distributor of Applied Research and Technology will provide service.

REAR PANEL



1 AC Input

This is the mains input for the HVA1/HVA4, The power cord supplied is determined by the Country of operation.

2 Euroblock input

CH A thru D +: Balanced signal input + or unbalanced signal input

CH A thru GND: Signal GND

CH A Thru D: Balanced signal input - or unbalanced signal not connect

Fail: Failure Status output:

This output is low (0V) if either the unit is disabled or in Protect mode

This output is normally high (+5V)

DIS: The amplifier's input is disabled

The disable pin is normally (+5V). When this pin is grounded the amplifier is disabled and all of the Protection lights will light.

Make sure to disable the unit or power in down, when connecting or disconnecting the speaker loads.

PRI: Input Priority Control PIN

The Priority control pin is normally (+5V). When PRI pin is grounded, The TEST input has priority, at this time the Level pot knobs will change from GREEN to RED.

GND: Signal GND and control GND.

TEST: Input Priority test/alarm signal

When the Priority is connected to gnd, the Test/alarm signal will override all input signals and will be present on all the outputs

REAR PANEL

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.

APPLICATIONS

This is a connection example. Thanks to its 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.

