audio resolution

HA-32 VCA

Portable, 2 individual stereo headphone amplifier
Owner's manual

WARNING

Always follow the basic precautions listed below to avoid the possibility of serious injury or even death from electrical shock, short-circuiting, damages, fire or other hazards. These precautions include, but are not limited to, the following:

Power supply/Power cord

- Only use the voltage specified as correct for the device. The required voltage is printed on the name plate of the device.
- Use only the specified AC power adaptor.
- Do not place the power cord near heat sources such as heaters or radiators, and do not excessively bend or otherwise damage the cord, place heavy objects on it, or place it in a position where anyone could walk on, trip over, or roll anything over it.

Do not open

- Do not open the device or attempt to disassemble the internal parts or modify them in any way. The device contains no user-serviceable parts. If it should appear to be malfunctioning, discontinue use immediately and have it inspected by qualified AudioResolution service personnel.

Water warning

- Do not expose the device to rain, use it near water or in damp or wet conditions, or place containers on it containing liquids which might spill into any openings.
- Never insert or remove an electric plug with wet hands.

If you notice any abnormality

- If the power cord or plug becomes frayed or damaged, or if there is a sudden loss of sound during use of the device, or if any unusual smells or smoke should appear to be caused by it, immediately turn off the power switch, disconnect the electric plug from the outlet, and have the device inspected by qualified AudioResolution service personnel.
- If this device or the AC power adaptor should be dropped or damaged, immediately turn off the power switch, disconnect the electric plug from the outlet, and have the device inspected by qualified AudioResolution service personnel.

CAUTION

Always follow the basic precautions listed below to avoid the possibility of physical injury to you or others, or damage to the device or other property. These precautions include, but are not limited to, the following:

Power supply/Power cord

- Remove the electric plug from the outlet when the device is not to be used for extended periods of time, or during electrical storms.
- When removing the electric plug from the device or an outlet, always hold the plug itself and not the cord. Pulling by the cord can damage it.
- To avoid generating unwanted noise, make sure there is 50cm or more between the AC power adaptor and the device.
- Do not cover or wrap the AC power adaptor with a cloth or blanket.

Location

- Before moving the device, remove all connected cables.
- When setting up the device, make sure that the AC outlet you are using is easily accessible. If some trouble or malfunction occurs, immediately turn off the power switch and disconnect the plug from the outlet.
- Avoid setting all controls to their maximum. Depending on the condition of the connected devices, doing so may cause feedback and may damage the speakers.

- Do not expose the device to excessive dust or vibrations, or extreme cold or heat (such as in direct sunlight, near a heater, or in a car during the day) to prevent the possibility of panel disfiguration or damage to the internal components.
- Do not place the device in an unstable position where it might accidentally fall over.

Connections

- Before connecting the device to other devices, turn off the power for all devices. Before turning the power on or off for all devices, set all volume levels to minimum.

Handling caution

- When turning on the AC power in your audio system, always turn on the power amplifier LAST, to avoid speaker damage. When turning the power off, the power amplifier should be turned off FIRST for the same reason.

- Do not insert your fingers or hands in any gaps or openings on the device.
- Avoid inserting or dropping foreign objects (paper, plastic, metal, etc.) into any gaps or openings on the device If this happens, turn off the power immediately and unplug the power cord from the AC outlet. Then have the device inspected by qualified AudioResolution service personnel.
- Do not use the device or headphones for a long period of time at a high or uncomfortable volume level, since this can cause permanent hearing loss. If you experience any hearing loss or ringing in the ears, consult a physician.
- Do not rest your weight on the device or place heavy objects on it, and avoid use excessive force on the buttons, switches or connectors.

XLR-type connectors are wired as follows (IEC60268 standard): pin 1: ground, pin 2: hot (+), and pin 3: cold (-).

AudioResolution cannot be held responsible for damage caused by improper use or modifications to the device, or data that is lost or destroyed.

Always turn the power off when the device is not in use.

The performance of components with moving contacts, such as switches, volume controls, and connectors, deteriorates over time. Consult qualified AudioResolution service personnel about replacing defective components.

Illustrations herein are for explanatory purposes only, and may not match actual appearance during operation.

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Specifications and descriptions in this owner's manual are for information purposes only. AudioResolution reserves the right to change or modify products or specifications at any time without prior notice. Since specifications, equipment or options may not be the same in every locale, please check with your AudioResolution dealer.

⚠️ **CAUTION**

Use only the adaptor included with this AudioResolution. Use of a different adaptor may result in equipment damage, overheating, or fire.

Be sure to unplug the adaptor from the outlet when not using AudioResolution, or when there are lightning storms in the area.

To avoid generating unwanted noise, make sure there is 50 cm or more between the power adaptor and AudioResolution.

HA-32 VCA

Dear customer,

Thank you for purchasing AudioResolution HA-32 VCA, professional analog, High-Fidelity, two stereo studio headphone amplifier with VCA volume control, which guarantees perfect balance between Left and Right channels. Signal path is complete analog with high dynamic headroom and lowest noise and distortion. The unit features three analog inputs (INPUT1, INPUT2, INPUT3) and two headphone outputs from each of two stereo amplifiers. There are three routings to each group: INPUT1 mono, INPUT2 mono or INPUT1 + INPUT2 as L and R stereo channel. INPUT3 can be independently mixed with selected routing. The unit is suitable for professional recording and broadcast studios.

Features:

- 3 balanced XLR inputs
- 4 (2+2) headphone outputs
- 2 output groups
- Input routing switch to each output
- 3 routing possibilities (INPUT1, INPUT2, INPUT3 + 2 stereo)
- Separate INPUT3 mix volume
- High power independent to headphone impedance
- Heavy duty metal case
- Can be mounted on microphone stand with optional adaptor (e.g. Yamaha BMS10A, this is not part of delivery)

VCA volume control   2 channels   4 headphones

The package contains

1. AudioResolution unit
2. Power supply
3. Manual
4. Test report

HA-32 VCA - Rear panel (Output section)

HA-32 VCA - Top panel

HA-32 VCA - Front panel (Input section)

1) Power connector

Power supply connector, 24V DC /4.

2) Analog inputs

Three mono analog balanced inputs on standard XLR connectors (Input A, Input B, Input C).

Pinout: 1 – Ground, 2 – Hot, 3 – Cold

3) Input routing switch

For each output channel it is possible to choose between three routing modes: 1-mono listen of Input A, stereo listen (left – Input A, right – Input B), mono listen of input B

4) INPUT A/B volume

Volume knob for selected input routing by the Input routing switch.

5) INPUT C volume

Volume of Input C which is mixed to both left and right channel.

6) Phones 1 outputs

Headphones outputs for first headphone channel, you can connect two headphones at the same time. Headphones will share the same audio signal.

7) Phones 2 outputs

Headphones outputs for second headphone channel, you can connect up to two headphones at the same time. Headphones will share the same audio signal.

Operation

HA-32 VCA is a 2-channel studio headphone amplifier designed for use as a personal headphone amplifier at studio. It features three mono balanced inputs where first two of them can be routed to headphones as stereo combination – left channel Input A, right channel Input B, or Input A to both channels or Input B to both channels. Input C has its own volume knob and it is mixed to the routed combination of Input A and B.

HA-32 VCA has four headphones outputs, two for each output channel. These two outputs are connected in parallel.

Volume control is made as VCA (voltage control amplifier) so there is no analog signal on the potentiometer but only DC voltage which is regulating gain of signal amplifier in the central unit. Benefit of this method is higher audio quality and also higher regulation range of potentiometer.

Unit is powered from a 24V DC power supply capable delivering of 1 amp. There is no power switch on the unit, so when the power supply is connected, unit is turned on.

Protections

HA-32 VCA has built in several protections. There is protection against DC voltage on the output, overcurrent protection, short circuit protection and thermal protection. Maximum output current for each output channel is around 250mA.

Usage

1. Place the HA-32 VCA on a solid surface or on a stabile stand
2. Connect the audio sources
3. Lower all volumes to its minimum
4. Connect the power supply
5. Connect the headphones
6. Make desired input routing
7. Slowly rise the volume(s) to needed level

Recommendation

Always lower the volume to minimum before connecting your headphones to avoid damage of headphones or your hearing.

WARNING!!!

Headphone amplifier is capable of delivering high power to a low-impedance headphones – more than 1W. So please be careful while you have your headphones on your head and always lower the volume to its minimum and then put your headphones on your head and set the desired volume to protect your hearing. With high-sensitivity headphones it can deliver high acoustic pressures!

Specifications

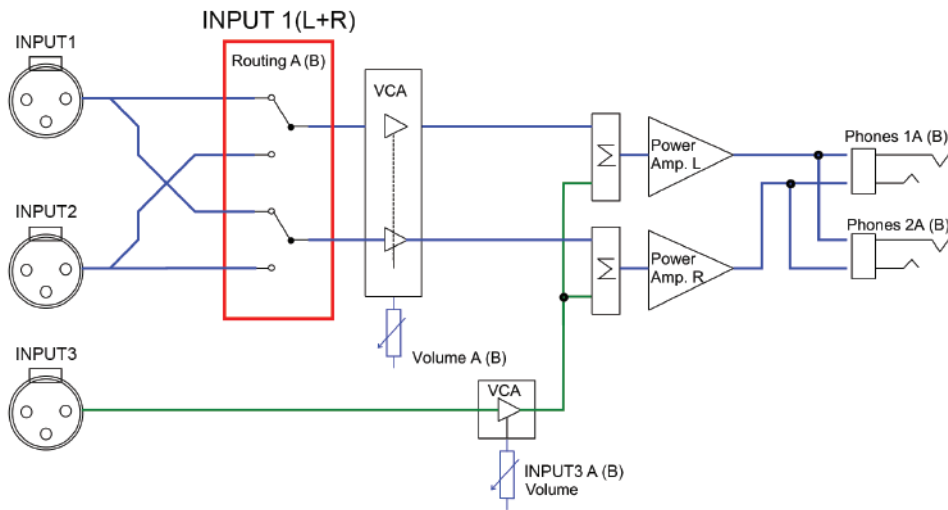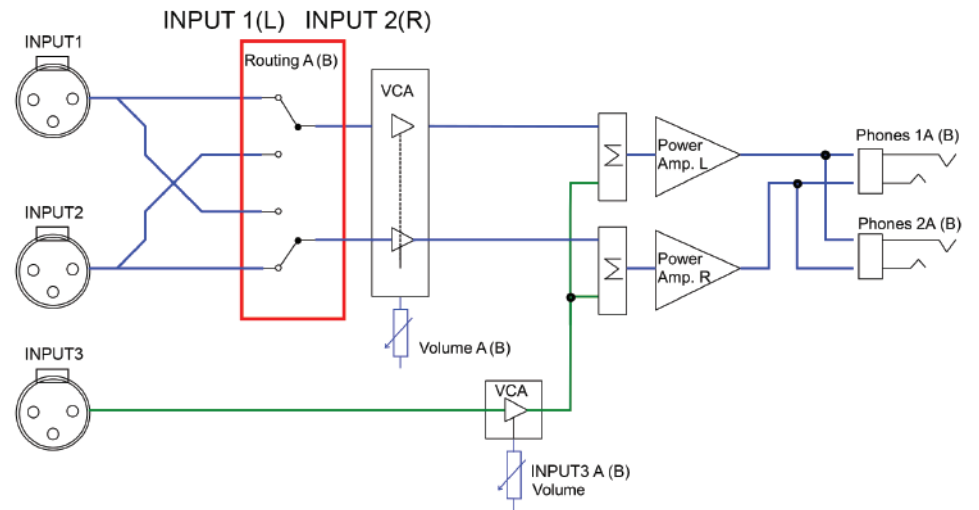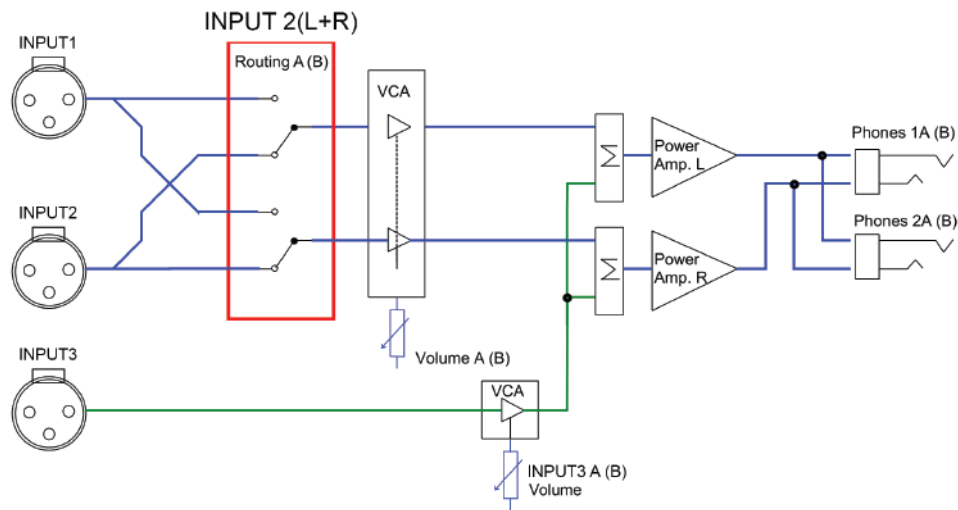| AudioResolution HA-32 VCA	
Input section	
Number of inputs	3x mono
Input connector	3-pin XLR
Input sensitivity	Line level
Nominal input level	0dBu
Input type	Analog
Output section	
Number of outputs	2x 2 stereo
Output connector	JACK 6,3 stereo
Output noise level	< -85dB
THD+N	< 0,04% @15Ω, 1kHz
Output power (THD+N < 1%)	0,9W @15Ω 1,3W @32Ω 0,6W @100Ω 0,1W @600Ω
Frequency response	20Hz - 20kHz /-0,1dB 10Hz - 100kHz /-0,15dB
Cooling	Passive
Controlling the amp	
Control	Volume potentiometers
Controls	Input source switching, volume
Volume control type	VCA (Voltage Controlled Amplifier)
Power	
Power supply	24V DC /1A
Measurements and weight	
Dimmensions HxWxL	55x220x175 mm
Weight	1,6 kg

Block diagram

Routing A set to INPUT 1(L+R)

Routing A set to INPUT 1(L) & INPUT 2(R)

Routing A set to INPUT 2(L+R)