



AMP-150 integrated amplifier

User Manual

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Don't be a stranger

Thank you for purchasing the Gato Audio CDD-1. We are absolutely confident that it will bring you many hours of listening pleasure.

We hereby cordially invite you to join the Gato Audio family by registering your product online. You may also consider signing up for our newsletter to receive information about exciting new products, events and technical updates.

All this and more on www.gato-audio.com

Our very best,

Gato Audio

Package contents

Please check that the following is included in the package:

- 1 Gato Audio AMP-150 integrated amplifier
- 1 mains cable
- 1 Gato Audio RC-1 remote control
- 2 AAA 1.5 V batteries
- 1 hex key for opening the RC-1 remote control
- 1 small screwdriver for display dimming adjustment
- This manual - which you should be reading now ☺

Safety first!

Mains plug and cable:

- Insert the mains plug fully into the mains outlet socket
- Do not use any mains cable other than the one provided with this amplifier
- Do not move the amplifier around while it is connected to mains
- Do not place heavy objects on the mains cable or place the cable near high-temperature objects
- Do not use damaged mains plugs or socket outlets

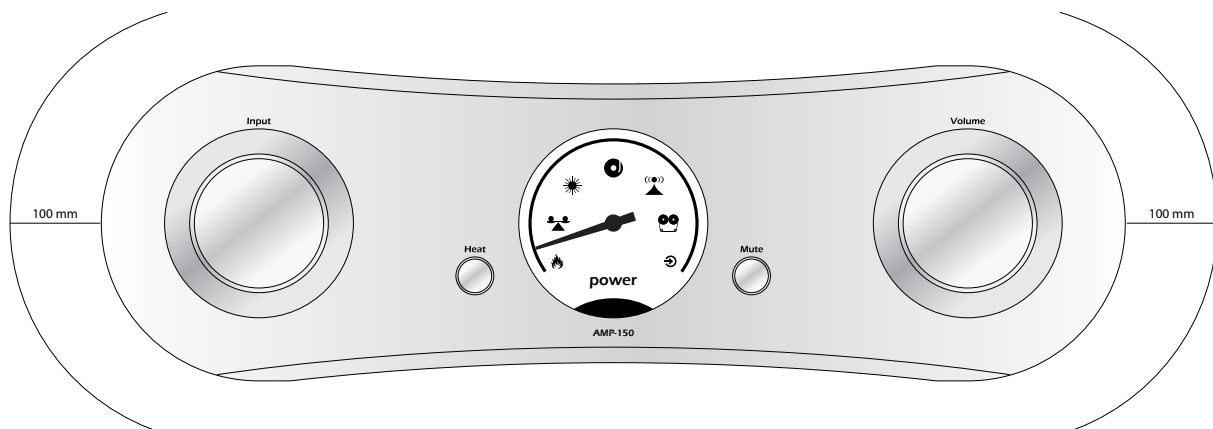
Liquids:

Electricity and liquids is not a safe combination, therefore:

- When cleaning the amplifier, remove the mains plug
- Do not handle the mains plug with wet hands
- Do not spray any liquid directly onto the amplifier
- Do not place liquid containers above or near the amplifier
- Keep liquids away from the amplifier

...And:

- This is not a toy and should not be handled like one (by children OR adults)
- Do not remove the covers of the amplifier (for service see page 10)
- Do not attempt to put foreign objects inside the amplifier (for service see page 10)
- Do not cover the amplifier with cloth or cover up the rear air vents in any way
- Do not place the amplifier on sloped or unstable surfaces
- When the amplifier will not be used for a long time, remove the mains plug
- Do not short the amplifier outputs
- This unit is made for indoor temperature (15-25 degrees Celsius). Let it adjust itself to indoor temperature before use, if it has been exposed to cold temperature
- Make sure that your amplifier is able to breathe by securing a minimum safe distance around the heat sinks of 100 mm
- The amplifier can get hot during use. Normal operating temperature is between 35° - 48° C.





About the amplifier

General design

The main aim for the Gato Audio design team was to create the best sounding integrated amplifier possible inside a compact exterior. Secondly, we wanted to create a line of products where design was not simply a question of a good-looking face plate, but a more complete product design that looks beautiful from every angle and expresses a classic electro-mechanical look.

The top cover in either real wood veneer or painted finish can be chosen to accommodate other design elements in your home or system.

Preamplifier

Mounted on a separate PCB with a separate regulated power supply, the AMP-150's preamplifier is built up of super low-noise, high-bandwidth analogue amplification and special signal relays originally developed to handle the delicacy of telecom signals. The location close to the connectors adds several advantages, which include an extremely short signal path as well as remarkably low levels of noise and distortion interference.

Power amplifier

The amplifier section features a JFET input stage, a separate power supply for the critical driver circuit and a single set of unique high-power MOSFET output devices able to handle current levels of more than 150 amperes. This combines loads of power with softness and the transparent sound of a good tube amplifier.

Protection

We have incorporated several advanced and highly effective protection circuits in the output stage in order to protect your amplifier and the connected speakers from abuse and faults. Heat, current and DC are under constant surveillance by a microprocessor, which will shut down the amplifier if the accepted values are exceeded.

Cooling control

The AMP-150 features an advanced active cooling system to provide the most efficient cooling with the lowest noise possible. The system measures music level and temperature level and processes data individually for each channel. The cooling system activates when music is playing and will adjust the cooling level accordingly to the temperature level. When music stops the cooling system will lower into minimum cooling mode and then go into standby when the amplifier has been cooled to the idle temperature.

Components

Every single component in the AMP-150 must live up to not only stringent production tolerances and over specified values, but equally importantly, it will not be selected before having been approved for its sonic capabilities through many intensive listening tests. Simply put, if it does not sound right inside its circuitry environment, we cannot use it regardless of how good its measurement values are. This is the only way to maintain a natural, crisp and clear soundstage. Most of the components are only working at 30% of their maximum workload capacity under normal use. This will ensure your amplifier a long life with a minimum of stress.

PCB design

The amplifier is divided into three basic parts, each with a separate PCB. The first is dedicated to the delicate small signals from the source, input selection and volume control. The second consists of the mains power supply and high-power amplification, and the third is the microprocessor board that controls the functions and display. All boards are produced from high-quality fibreglass base with a double-sided thick copper layer.

Fine-tuning – by listening

The last 5% of fine-tuning and voicing is by far the most complicated and time consuming part of our development work. Single critical components are replaced, and often voltage and current supplies need to be modified to accommodate them, and consequently, listening starts all over again.

In addition, blind-test listening is used, not just using our own reference system but also in other setups, as measures we have taken to complete this amplifier just as comprehensively as every other product in our range.

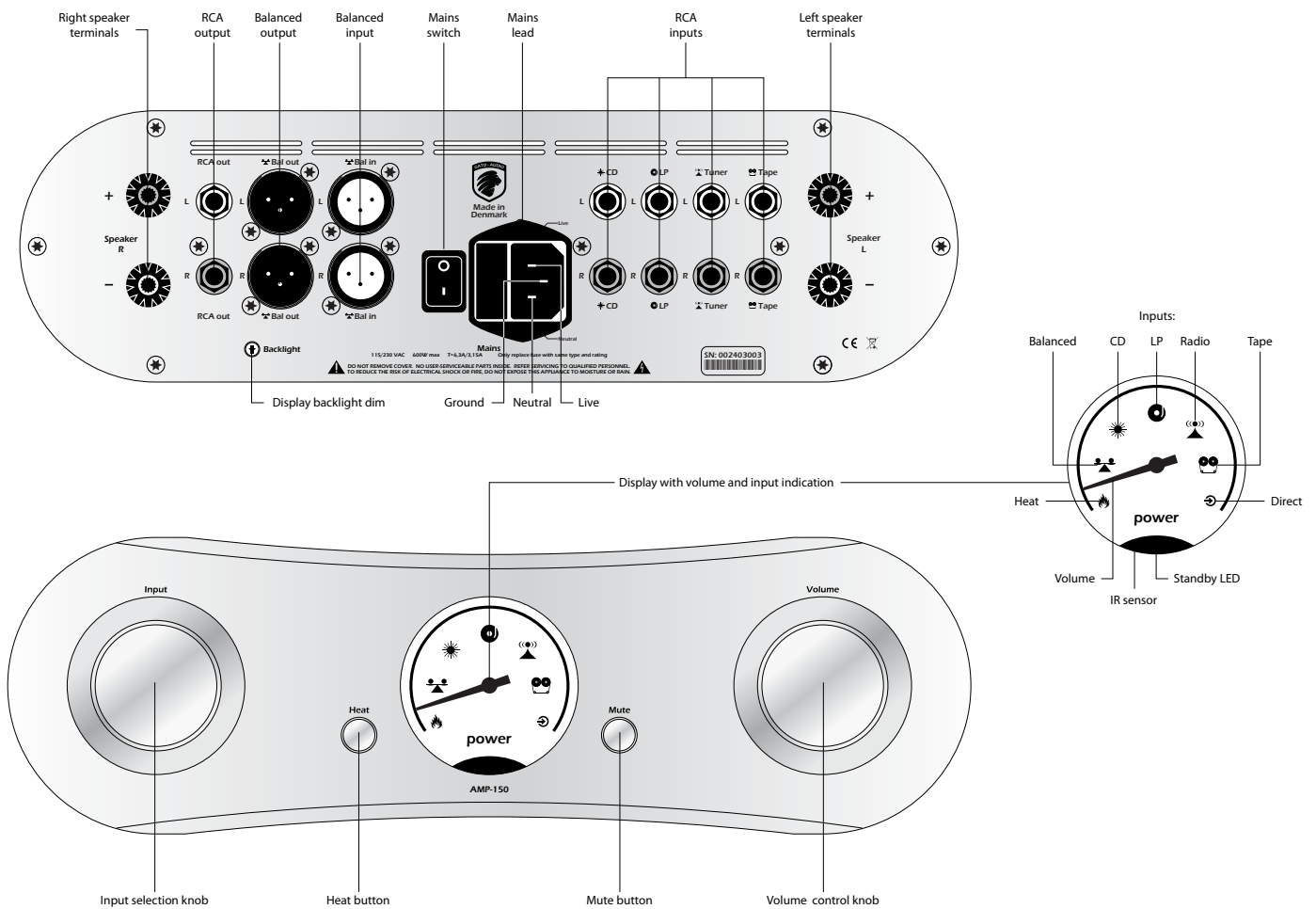
Setting up your amplifier

Basic connection

Follow these steps for setting up your system:

1. Place your amplifier as per the instructions on page 4
2. Connect all inputs to the amplifier
3. Connect your loudspeakers to the amplifier
4. Connect mains power to the amplifier and turn it on. While the amplifier is starting up, the display backlight will flash
5. Select input and volume setting. Enjoy!

Overview






How does it work?

Power on


Use the mains switch on the back of the amplifier to turn it on. The amplifier is now in standby mode.

Standby

The amplifier can enter standby mode only by pressing  on the remote control. Only the microprocessor and the standby LED are powered during standby. Therefore, the AMP-150 has an ultra-low standby power consumption of less than 1W.

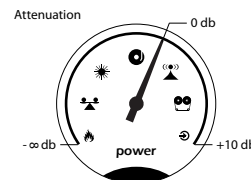
Reactivate the amplifier by pushing the  on the remote control again or pressing the heat or mute button on the amplifier itself.

Heat

By pressing the heat button you will quickly warm up the amplifier to the optimal temperature. This process would otherwise normally take up to 2 hours, but the pre-heating feature reduces this period to about 15-30 minutes at normal room temperature. The heat indicator  will turn off when the optimal temperature has been reached. You will find the pre-heater button on the front panel between the input selection knob and the display.

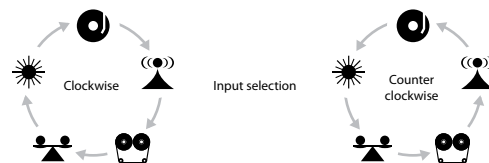
Adjusting the volume

Turning the volume control knob clockwise increases the volume. Turn it counter-clockwise to decrease the volume. The front panel analogue meter displays the volume level.



Input selection

Use the input selection knob to select input channel. You can turn the input selection knob both clockwise and counter-clockwise endlessly. See the order of the input channels when turning the knob in the two figures on the right.





Display dimming


The display backlight can be dimmed by a trimmer on the rear panel. Use a small screwdriver and turn it clockwise to increase light intensity or turn it counter-clockwise to dim it.

Muting

For complete silence simply press the mute button. The selected input channel indicator will blink when muted. Press the mute button once more to return to the previous volume level. The button is located between the display and the volume knob.

Direct

The direct function bypasses the volume control turning this amplifier into a power amplifier. This can be very useful in surround setups. To activate this mode, select the tape input  and press and hold the mute button on the amplifier for 2 seconds. The amplifier is now muted and an indicator  will show that the function has been activated. Press the mute button on the amplifier to disable muting.

To disable the Direct function, press and hold the mute button on the amplifier again for 2 seconds. The Direct indicator  will turn off and the Direct mode is now disabled. Press the mute button on the amplifier again to restore normal listening mode.

This function can only be enabled and disabled on the amplifier itself.

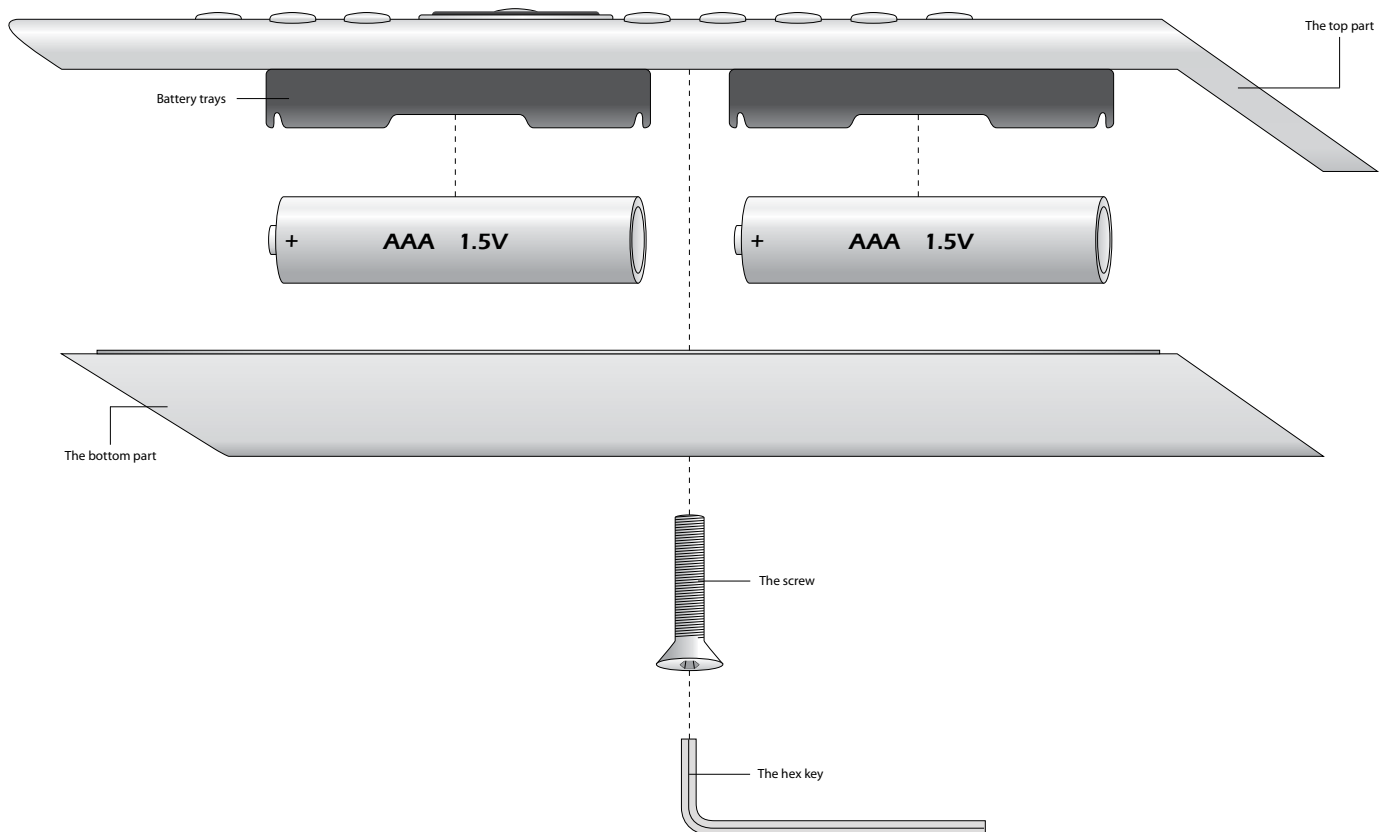
RC-1 remote control

The RC-1 is an infrared remote control for Gato Audio products.

How to insert/replace the batteries

The RC-1 runs on two standard AAA batteries and its standby power consumption is so low that it will operate perfectly even if it has not been used for a whole year.

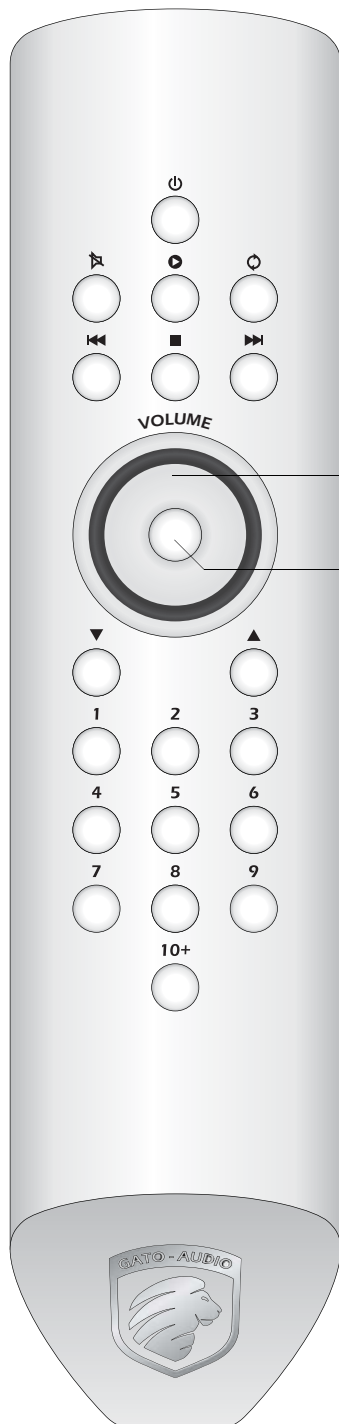
1. Remove the screw on the bottom of the remote control with the enclosed hex key
2. Remove the bottom part of the unit now facing upwards
3. Insert or replace the two AAA 1.5V batteries in the battery trays on the top part
4. Put the bottom and top parts back together again
5. Put the screw back in and tighten. Be careful not to over-tighten it!



The RC-1 has a few sharp edges. Be careful not to cut yourself or anyone else.



Functions



Standby - press the button to put the amplifier in standby. Press it again to turn it on.

Mute - press the button to mute the amplifier. Press it again to return to the previous volume level.

Next input channel
Clockwise input selection.

Previous input channel
Counter-clockwise input selection.

Volume - Turn the wheel clockwise to increase volume. Turn the wheel counter-clockwise to decrease volume

Play / Pause

CD Input Select - Press to toggle between inputs on the CDD-1

Repeat - Press to set the CDD-1 in Repeat mode.

Stop - press the button to stop playing.

Next track / Scan forward - Press the button to select the next track.
Press and hold to scan forward.

Previous track / Scan backward - Press the button to select the previous track.
Press and hold to scan backward.

1-9 / 10+ Direct track selection

These functions are not available on AMP-150

Make it last!

Please apply simple common sense to maintain the sound quality and lifespan of your Gato Audio amplifier. Here are a few guidelines:

- Regular care: wipe the surfaces carefully by using a clean soft dry cloth
- Cleaning: if necessary, wipe the hard surfaces clean using a soft cloth dampened only with clean water.
- Grease stains or finger marks can be removed carefully with a clean soft cloth lightly dampened in a mix of clean lukewarm water and a single drop of household washing-up liquid. Then wipe the surfaces dry using a soft dry cloth
- Be careful never to use hot water or any type of concentrated detergent, solvent, thinner, or any other volatile substance on the surfaces, or you may cause permanent damage to the surface coating
- Keep the cabinet away from prolonged contact with rubber or PVC materials
- Do not expose the amplifier to direct sunlight or other heat sources

If all else fails...

...don't panic! Every Gato Audio product comes with a minimum 2-year warranty. See our website for details.

This warranty does not cover damage or wear directly or indirectly caused by improper use, violence, tampering with or unauthorized access to or servicing of any part of the product.

If you are in need of service or repair, please do not hesitate to contact us at info@gato-audio.com or visit our website www.gato-audio.com for more information.



Technical stuff

Technical specifications

Output power (230 VAC)	2x 150 W RMS 8 Ω / 2x 250 W RMS 4 Ω
Input impedance	20 k Ω RCA or 40 k Ω Balanced
Frequency response	20 Hz-20 kHz \pm 0.5 dB, and 2 Hz-100 kHz \pm 3 dB
Preamplifier output impedance	100 Ω RCA and 200 Ω Balanced
Total Harmonic Distortion	< 0,05 % at rated power
Signal to Noise ratio A-weighted	> 100 dB
Voltage gain	27 dB (+10 db headroom)
Recommended speaker load	4 Ω -16 Ω
Load protection	Speakers < 1.5 Ω

Connectors

Balanced analogue inputs	1 pair gold-plated XLR Neutrik
Unbalanced analogue inputs	4 pairs of gold-plated RCA stereo
Balanced analogue outputs	1 pair gold-plated XLR Neutrik
Unbalanced analogue outputs	1 pair of gold-plated RCA stereo
Speaker output	2 pairs of gold-plated safety banana

Size & Power

Power Requirements	115 VAC or 230 VAC, 50 Hz or 60 Hz
Fuse	20 mm sand filled, 6,3 AT@115 VAC, 3.15 AT@230 VAC
Power Consumption	Standby <1 W, Idle < 40 W, Heat <200 W, Max is 600 W
Dimensions (WxHxD)	325 x 105 x 430 mm / 12.8 x 4.1 x 16.9"
Weight	13.8 Kg. / 30.4 lbs.



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