



CDD-1 CD-player/DAC

User Manual

Contents

Don't Be a Stranger	3
Contents	3
Safety First!	4
About the CDD-1	5
General Design	5
CD Transport	5
Digital Inputs	5
DAC	5
Analogue Stage	5
Components	5
PCB design	5
Fine-Tuning by Ear	5
Set-Up	6
Basic Connection	6
Overview	6
CD Mode	7
Power On	7
Stand by	7
Using the Clamp	7
Loading Disc	8
TOC (Table of Contents) Display	8
No Disc/Read Error	8
Playing a CD	8
Pause	8
Stop	8
Scan Reverse/Forward	9
Direct Track Selection	9
Total Time	9
Repeat	9
DAC Mode	10
Input Selection	10
Digital Input	10
Depth and Resolution	10
Changing Input While Playing a CD	10
RC-1 System Remote	11
Installing USB Driver	12
Requirements	12
Windows PC Installation and Set-Up	12
Mac Installation and Set-Up	13
Make It Last!	14
If All Else Fails...	14
Tech Stuff	15



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

Contents

Please check that the following items are present and accounted for:

- 1 Gato Audio CDD-1 CD-player/DAC
- 1 Gato Audio CDD-1 clamp
- 1 mains cable
- 1 CD-ROM with USB driver for Windows
- 1 small screwdriver for adjustment of display illumination
- This manual - it's in your hand 😊

Safety First!

Mains Plug and AC Cable

- Insert the mains plug fully into the mains outlet socket.
- Use only the original mains cable provided.
- Do not move the CDD-1 while it is connected to mains.
- Do not place heavy objects on the mains cable or place the cable near any source of heat.
- Do not use damaged mains plugs or socket outlets.

Liquids

Electricity and liquids are never a safe combination, therefore:

- When cleaning the CDD-1, remove the mains plug.
- Do not handle the mains plug with wet hands.
- Do not spray any liquid directly onto the CDD-1.
- Do not place liquid containers above or near the CDD-1.
- In short, keep all liquids well away from the CDD-1.

...And

- This is not a toy and should not be handled like one (by children OR adults).
- Do not remove the covers of the CDD-1 (for service, see page 14).
- Do not attempt to insert foreign objects into the CDD-1 (for service, see page 14).
- Do not cover the CDD-1 with cloth or block the air vents in any way.
- Place the CDD-1 only on a stable, horizontal surface.
- When the CDD-1 will not be used for an extended period, disconnect the mains plug.
- The CDD-1 is built for indoor temperatures (15-25 degrees Celsius). Let it acclimate itself to room temperature before use, if it has been exposed to cold temperatures.
- Make sure that the CDD-1 is able to breathe with unobstructed free space on all sides.
- This is a Class 1 laser product. Class 1 is the lowest hazard classification of lasers and poses no threat to skin or eyes - even if you look directly into the beam. But don't be a hero and try to stare into the laser anyway...



About the CDD-1

General Design

Developing CD players and digital-to-analogue converters (DAC's) is almost an art form, a delicate mix of digital and analogue signal circuits that must combine the best of both worlds. Advanced software and microprocessor technology keep track of every movement and build a bridge between man and machine. The CDD-1 is designed to match the Gato Audio AMP-150 amplifier to perfection; together, their performance and styling set them apart from all other contenders in high end audio today.

CD Transport

A stable platform for retrieving data from the CD is essential for playback of the highest fidelity. The renowned Philips CDpro2LF drive is mounted in approximately 1 kg of solid machined aluminium suspended in a tripod of Sorbothane® viscoelastic material to ensure not only ultra-low mechanical resonance, but also high damping of external vibrations.

The special clamp/lid solution secures and stabilises the CD and acts as a protective cover for the delicate mechanics in one simple movement.

Digital Inputs

The selected input source (CD, USB or S/PDIF) is fed into our high quality selector circuit and passed on to the state of the art sample rate converter which upsamples all inputs to 24-bit/192 kHz. This enables the use of gentler and less harsh digital and analogue filters later in the process.

The dual mono, dual-differential coupled D-to-A converter circuit with outstanding technical quality and theoretical 132 dB dynamic range converts and processes the digital data. Specially selected balanced I/V converters and soft HF filters offer precise and dynamic sound that is true to life.

DAC

All retrieved inputs, CD, USB or S/PDIF is fed into our high quality selector circuit and passed on to a state of the art sample rate converter, converting all inputs to 24 Bit/192 kHz. This enables the use of softer and less harsh digital and analogue filters later in the process.

The dual mono, dual differential coupled D to A converter circuit with outstanding technical quality and theoretically 132 dB dynamic range – converts and process the digital data. Specially selected balanced I/V converters and soft HF filters offers precise and dynamic sound that is true to life.

Analogue Stage

Specially selected components and circuits are crucial to achieving the finest analogue performance. The CDD-1 features super low noise, wide-bandwidth amplification and special signal relays originally developed to handle extremely sensitive telecommunications signals. Close proximity to the output connectors ensures a very short signal path, low noise and minimal distortion. Many hundreds of hours have been invested in fine-tuning this critical section of the CDD-1.

Components

Every single component in the CDD-1 must live up to stringent production tolerances and over-specified values, but equally importantly, selection of any component is contingent upon approval of its sonic capabilities through an obstacle course of intensive listening tests. Simply put, if it does not sound right in its circuitry environment, we cannot use it, regardless of how good its measured values are. This is the only way to maintain a natural, crisp and clear soundstage. Most CDD-1 components operate at a mere 30% of their maximum workload capacity during normal use to ensure longevity and minimum stress for the player.

PCB design

Internally, the CDD-1 is divided into three parts, each with its own separate, dedicated printed circuit board:

1. Control board with advanced Motorola Coldfire microprocessor and various interface functions, such as display, knobs, etc.
2. Power supply with a total of three transformers and nine regulated sources for stability and minimal interference between circuits.
3. Digital and analogue audio circuits, connectors and USB device.

Fine-Tuning by Ear

The final 5% of fine-tuning and voicing is by far the most complicated and time-consuming aspect of our development work. Each time a single critical component is replaced, it often requires modification of voltage and current supplies and consequently, listening evaluation starts all over again.

In addition, blind-test listening is used, not just in our own reference installation, but also in various other systems, in order to evaluate the CDD-1 just as thoroughly as every other product in our range.

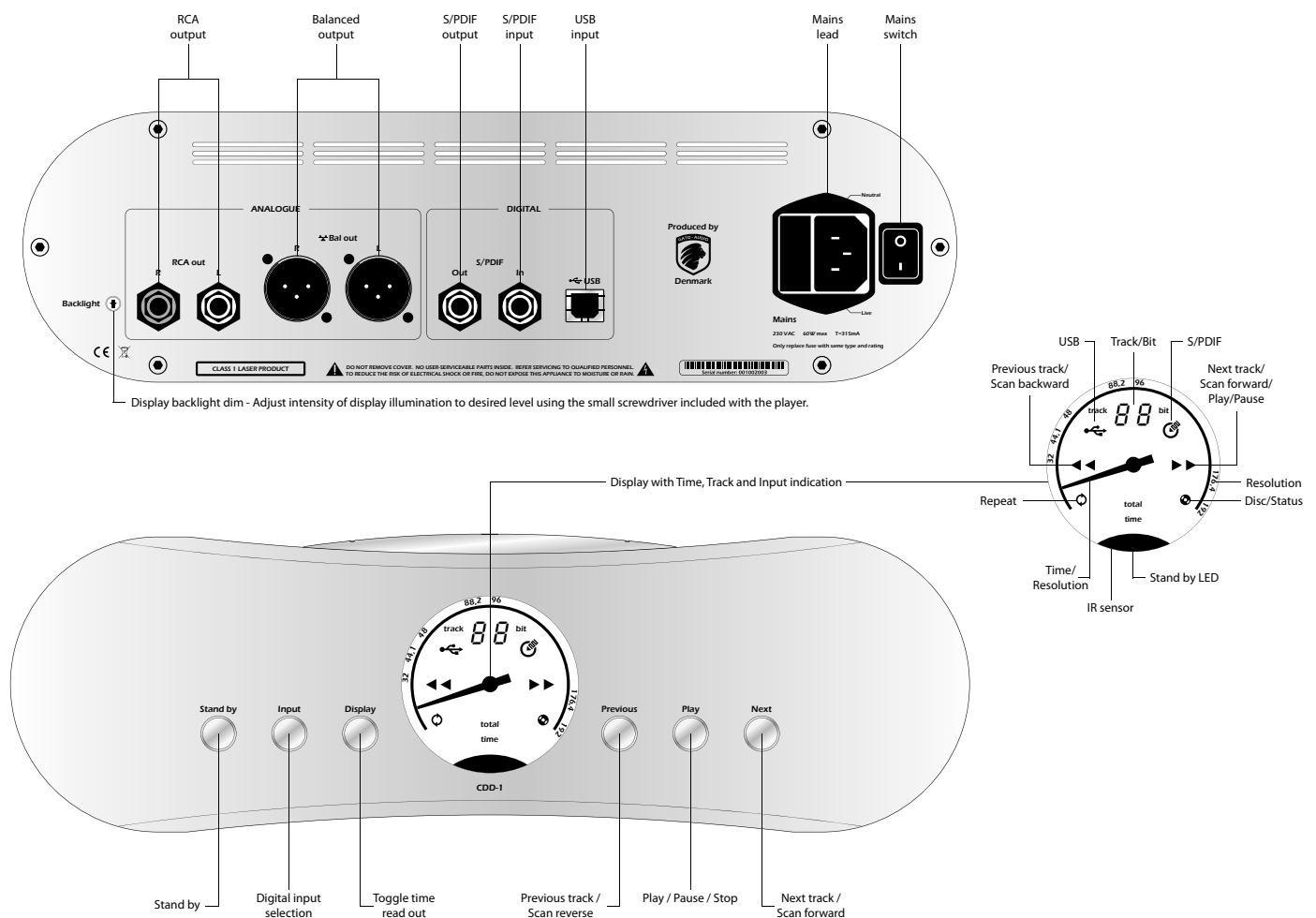
Set-Up

Basic Connection

Follow these steps to install CDD-1 in your system:

1. Place the CDD-1 as per the instructions on page 4
2. Connect digital inputs to the CDD-1
3. Connect the CDD-1 outputs to an amplifier
4. Connect mains power to the CDD-1 and turn it on. While the CDD-1 is starting up, the display backlight will flash
5. Remove the clamp and place CD in the drive, and put the clamp back on. Enjoy!

Overview




CD Mode

The CDD-1 is actually two machines in one: a CD player and a DAC. The following chapter will describe the CD player.

Power On

Use the rear panel mains switch to power up the CDD-1. The CDD-1 is now in standby mode.

Stand by


The CDD-1 can exit or enter stand by mode by pressing Stand by on the front panel or  on the RC-1 system remote. The CDD-1 will need a few moments before it is ready. Only the microprocessor and the stand by LED are powered during stand by. Therefore, the CDD-1 has an ultra-low stand by power consumption of less than 1W.

Using the Clamp

The clamp has several functions. It attaches the disc firmly to the drive motor and protects both drive and disc during playback. The clamp is aligned and held in place by magnets and can be placed in eight different positions. Follow these simple instructions to familiarise yourself with the clamp:

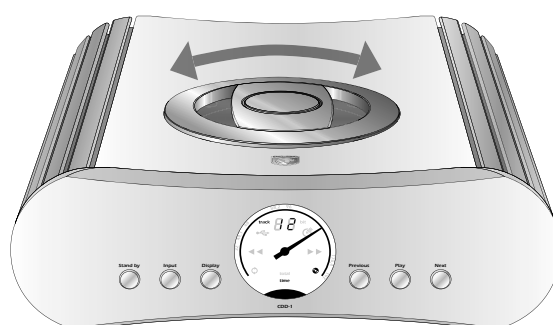
Start by placing a CD in the drive with the label side up.



When the clamp is lifted from the drive, the disc indicator  will blink.



Place the clamp on top of the disc.



Then turn the clamp left or right until it snaps into place.

Reverse these steps to remove the clamp and change disc: Turn the clamp left or right to loosen it, lift it up, change disc.


To protect the CD drive and laser, we recommend leaving the clamp in place on the CD drive, also when it is not in use.



Loading Disc

When the clamp is in place, the CDD-1 will immediately start searching for and reading the disc TOC (Table of Contents). Meanwhile, the display will show a double dash and the **track** symbol will blink.



TOC (Table of Contents) Display

If the CDD-1 is able to read the TOC, it will display the number of tracks on the disc. The disc status indicator  will be lit and the arrow will show how much space is being used on the disc. A full disc contains 80 minutes on this scale. If the disc contains more than 80 minutes, the arrow will go beyond the scale.

If a disc is loaded while the CDD-1 is in another input mode (USB  or S/PDIF ) , the CDD-1 will still search for the TOC, but the TOC will not be displayed until CD input mode is selected.




No Disc/Read Error

If the clamp is placed in an empty drive or if the disc TOC is unreadable, the display will show a double dash and the **track** symbol will blink.




Playing a CD

When the TOC has been loaded successfully, press Play on the CDD-1 or press the centre button on the RC-1 system remote.

The Play symbol  will be lit and the arrow will show the progress of the track - from start to the end of the track. At the end of the track, the arrow will return to zero and start displaying the progress of the next track.




Pause

To pause CD playback, press Play on the front of the player or the centre button on the RC-1 system remote. The play symbol  will start blinking in the display. Press again to continue playing.



Stop

To stop playback, press and hold Play on the front of the CDD-1 or press the  button on the RC-1 system remote.

The display will show the disc TOC when the CD has been stopped.





Select Previous/Next Track

Press Previous or Next on the front panel of the CDD-1 to skip to the previous or the next track or use the or the ◀▶ buttons on the RC-1 system remote.



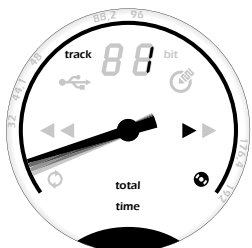
Scan Reverse/Forward

To scan backwards, press and hold Previous on the front of the CDD-1 or press and hold the ◀ button on the RC-1 system remote. To scan forward, press and hold Next on the front of the CDD-1 or press and hold the ▶ button on the RC-1 system remote. Scan speed will increase if the button is held more than 10 seconds.



Direct Track Selection

On the RC-1 system remote, press the number buttons to select a track directly. To select a track number greater than 10, press the 10+ button followed by the appropriate number button (for instance, for track 17, press 10+ and 7). To select a track above 20, press 10+ twice followed by the appropriate number button. And so on...



Total Time

Press Display on the front panel of the CDD-1 to view playback progress for the entire disc - from start to the end of the disc. At the end of the disc, the display will show the TOC information as described earlier.

To return to displaying playback status of the current track, press Display again.



Repeat

Press the button to set the CDD-1 in Repeat mode. Press again to toggle through: Repeat All - Repeat 1 - No Repeat.

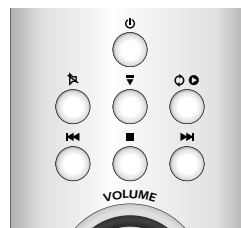
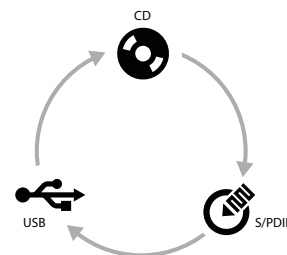
DAC Mode

Before connecting the CDD-1 to your computer via USB, please read installation instructions on page 12.

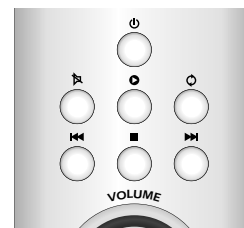
Input Selection

RC-1 Type 1: Press Input on the CDD-1 or the ▼ button on the RC-1 system remote to switch between input sources on the CDD-1.

RC-1 Type 2: Press Input on the CDD-1 or the ● button on the RC-1 system remote to switch between input sources on the CDD-1.



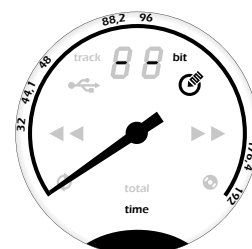
RC-1 type 1



RC-1 type 2

Digital Input

When a digital input has been selected, the display will change. Small numbers will light up outside the scale and track display will show bit rate. If no signal is recognized by the CDD-1, the display will show a double dash and the arrow will point at zero.



Depth and Resolution

When a digital signal has been recognized by the CDD-1, the bit depth will be displayed and the arrow will indicate the resolution, as shown in the example to the right; 24 bit, 48 kHz.



Changing Input While Playing a CD

If you change input on the CDD-1 while playing a CD, the CDD-1 will automatically pause playback. If you return to the CD input within a minute, the CD will automatically resume playing. If you do not return to the CD input within a minute, the CD will stop.

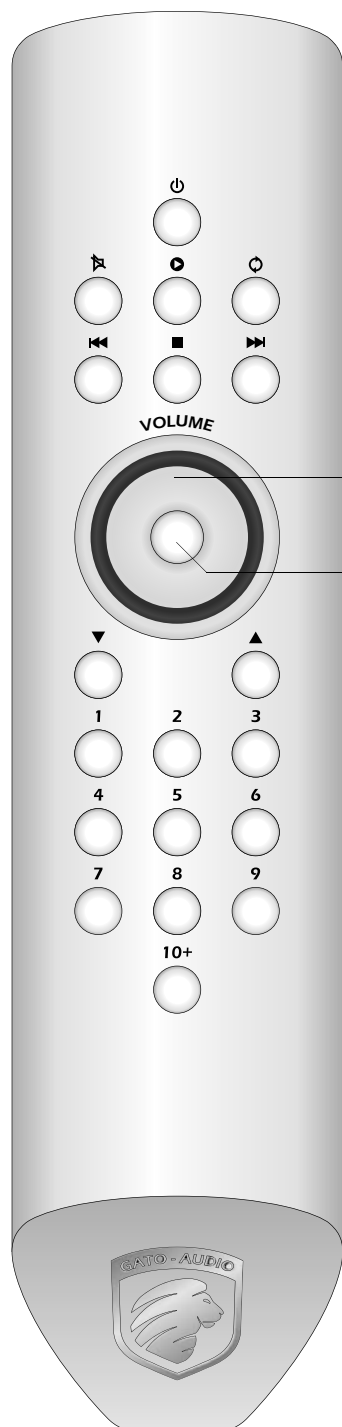




RC-1 System Remote

The RC-1 is the infrared system remote control for Gato Audio products. It is included with the Gato Audio AMP-150 integrated amplifier and is optional for the CDD-1.

Here is a quick overview of the RC-1 layout:



Standby - Press to put the CDD-1 and AMP-150 in standby. Press again to power up.

Mute - Press to mute the AMP-150. Press again to return to the previous volume level.

Next Input - Clockwise input selection on the AMP-150.

Previous Input - Counter-clockwise input selection on the AMP-150.

Volume - Turn the wheel clockwise to increase or counter-clockwise to decrease the volume level of the AMP-150.

Play / Pause - Toggle between play and pause on CDD-1.

CD Input Select - Press to toggle between inputs on the CDD-1: CD - S/PDIF - USB

Repeat - Press to set the CDD-1 in Repeat mode. Press again to toggle through: Repeat All - Repeat 1 - No Repeat.

Stop - Press to stop CDD-1 playback.

Next Track/Scan Forward - Press to select the next track on the CDD-1. Press and hold to scan forward.

Previous Track/Scan Reverse - Press to select the previous track on the CDD-1. Press and hold to scan backward.

1-9 /10+ Direct Track Selection - Press appropriate number button(s) for direct track selection on the CDD-1

Installing USB Driver

Requirements

Minimum computer configuration required for USB audio streaming:

- Intel Core 2 @ 1.6 GHz, or AMD equivalent with 1 GB RAM
- USB 2.0 interface
- One of the following operating systems:
 - Windows XP with SP3 (32 bit)
 - Windows Vista with SP2 (32 bit & 64 bit)
 - Windows 7 (32 bit & 64 bit)
 - Apple OS X 10.6.4 (Snow Leopard) or higher

Because there are so many PC configurations out there, we cannot guarantee that you will be able to stream audio on USB even if your system meets the requirements above.

Windows PC Installation and Set-Up

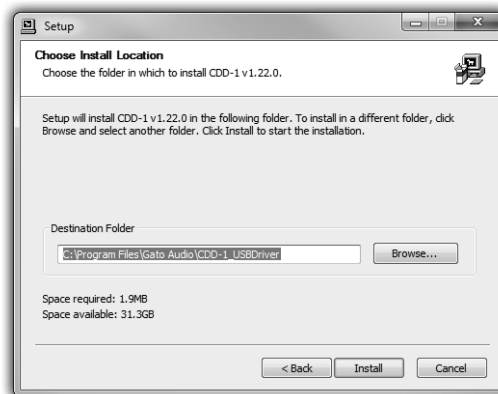
Before connecting the CDD-1 to your PC for the first time, you will have to install the CDD-1 USB driver.

Load the CD-ROM that came with the CDD-1 into your PC. Setup will start automatically - If not, click on **Start** ⇒ **Computer**. Right-click on the icon of your CD/DVD drive and choose **Install program**.

Click **Next** to start installation



Choose your preferred destination for the installation and click **Install**



When prompted, please connect the CDD-1 to a free USB port on your computer.

Click **Finish** to complete the installation



During the installation process on Windows XP, you may see this message. Please just click **Continue anyway**



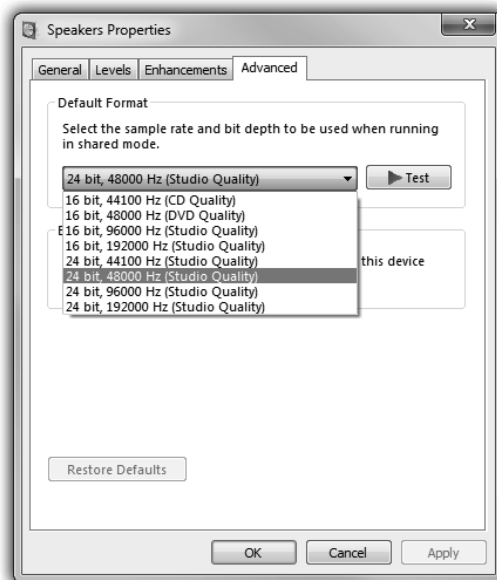


Click **Start** ⇒ open **Control panel** ⇒ Select **Hardware & sound** ⇒ click on **Sound**

Select **Gato Audio CDD-1** as playback device and click **Set Default**



To adjust output format, click **Properties** and select the **Advanced** tab



Mac Installation and Set-Up

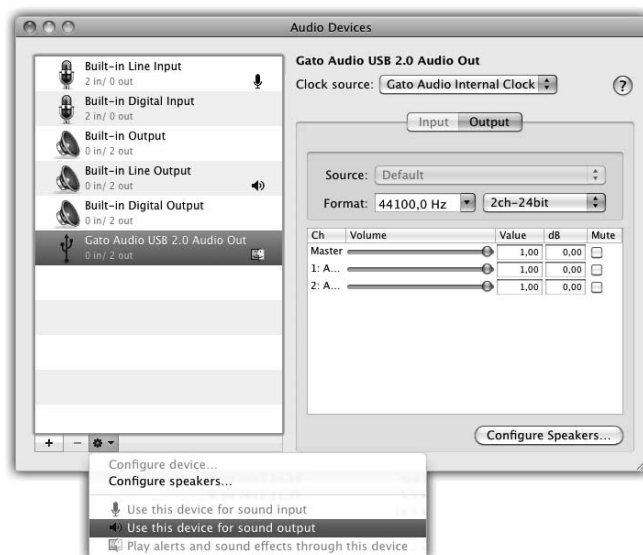
No driver installation is needed on the Mac. The driver will be installed automatically when the CDD-1 is connected to your Mac for the first time.

To set up your Mac to send audio to the CDD-1:



Open **Finder** ⇒ Choose **Utilities** ⇒ Open **Audio MIDI setup**

In Audio MIDI setup select the **Gato Audio USB 2.0** device and then choose **Use this device for sound output**. Set your sample rate and bit resolution at **Format**.



Make It Last!

Please apply simple common sense in order to maintain sound quality and extend the lifespan of the CDD-1. Here are a few guidelines:

- Regular care: wipe the surfaces carefully with a clean, soft, dry cloth.
- Cleaning: if necessary, wipe surfaces clean with a soft cloth dampened only with clean water.
- Grease stains or fingerprints 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 surface dry with a soft, dry cloth.
- Be careful never to use hot water or any type of concentrated cleaning agent, solvent, thinner or any other volatile substance. This could cause permanent damage to the surface.
- Do not expose the CDD-1 to direct sunlight or other heat sources.

If All Else Fails...

...Don't panic! Every Gato Audio product is covered by a minimum two-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.

In the unlikely event that your CDD-1 should ever require service or repair, please do not hesitate to contact us at hello@gato-audio.com or visit our website www.gato-audio.com for more information.



Tech Stuff

Technical Specifications

Output Level	2.2 V unbalanced, 4.4 V balanced
Output Impedance	100 Ω unbalanced, 200 Ω balanced
Frequency Response	20 Hz – 20 kHz \pm 0.2 dB
THD+N	0,002 %
Signal-to-Noise Ratio	120 dB
Digital Inputs	Up to 24 bits @ 192 kHz (S/PDIF and USB input)
Drive	Compatible with red book CD and CD-R
Digital Output	75 Ω coaxial S/PDIF

Connectors

Balanced Analogue Output	1 pair gold-plated XLR Neutrik
Unbalanced Analogue Output	1 pair gold-plated RCA
Digital Output	1 pc. gold-plated RCA
Digital Inputs	1 pc. gold-plated RCA and 1 pc. USB type B

Size & Power

Power Requirements	115 VAC or 230 VAC, 50 Hz or 60 Hz
Fuse	20 mm sand-filled, 630 mA @ 115 V, 315 mA @ 230 V
Power Consumption	Stand by <1 W, Playing <30 W, Max <60 W
Dimensions (WxHxD)	325 x 110 x 375 mm / 12.8 x 4.3 x 14.8"
Weight	10 Kg. / 22 lbs.



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