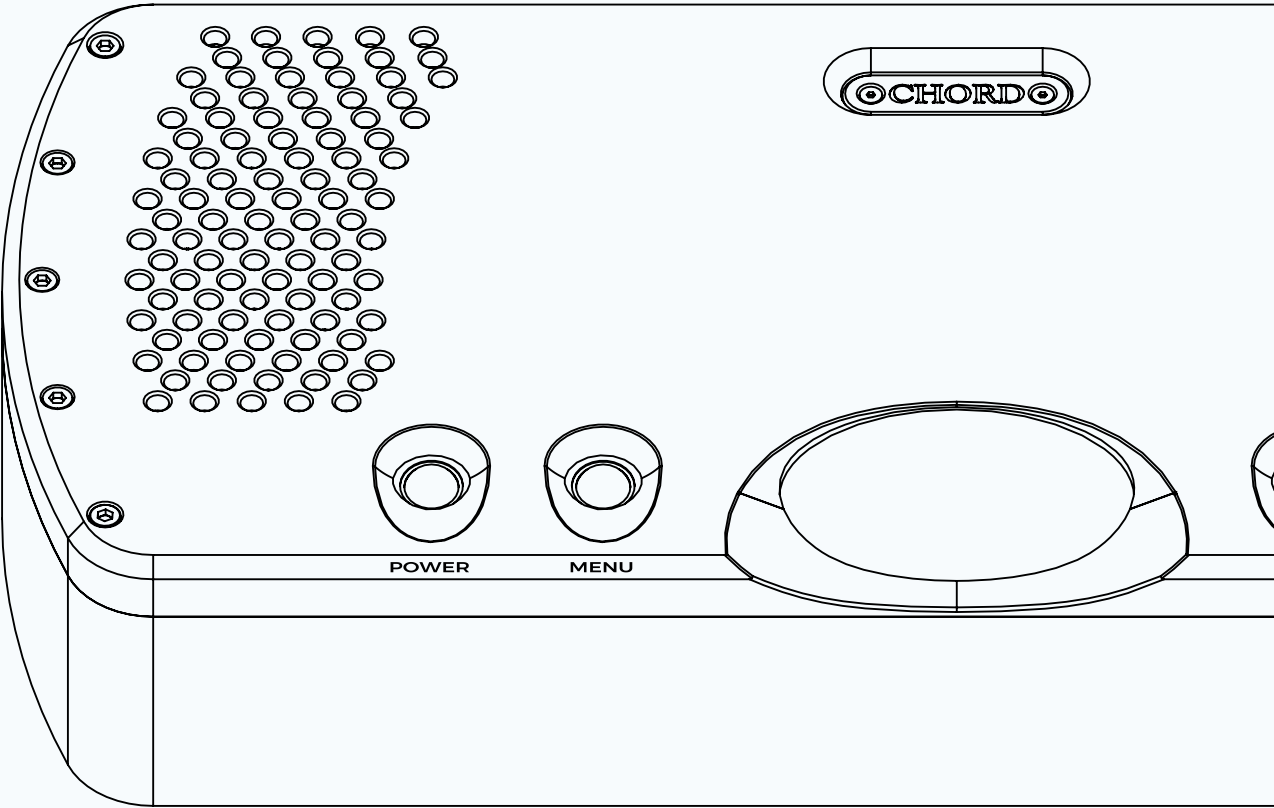


Quartet

Manual

-

V.1.2



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Contents

Safety instructions

1.0

- 1.1 Introduction**
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- 1.3 Dismantling & radio frequency interference**

1.0

Safety instructions

Introduction

1.1



Thank you for investing
in Chord Electronics.

The Quartet has
been designed to offer next-
generation digital audio quality.
It has been optimised for use
with Chord Electronics DACs,
with the DAVE offering the best
possible sound quality from
digital audio files and streams.

Please read this manual carefully
to familiarise yourself with how
the Quartet operates.

Protection against liquids & heat

1.2



Moisture and liquid warnings

The Quartet is not protected against liquids of any kind. Never place containers of liquid on the Quartet. Never allow the device to come into contact with moisture or liquids; doing so could result in electrocution or damage to the device's internal circuitry.

Be aware that liquids, including water that has dried, can leave minerals that can affect the PCB and other components, which could eventually lead to oxidation and short-circuiting. If the Quartet comes into contact with moisture or liquids, immediately disconnect it from the mains power supply and connected equipment, and contact Chord Electronics for further advice.



Thermal protection and heat management

The Quartet has internal thermal protection which will rapidly increase fan speed before shutting down the unit if excessive temperatures are reached. It is critical that the device is well ventilated, with plenty of empty space below, behind and above the device.

Never operate the Quartet near sources of heat or naked flames, as this will decrease the lifespan of the internal components. It is advised that you do not operate the Quartet in an area of direct sunlight or on top of significant heat-producing devices.

Please be aware that it is entirely normal for the Quartet to become hot during use. If you are concerned about the temperatures, please switch the device off or consider a different placement or fan speed setting. See p17 for full details.

Dismantling & radio frequency interference

1.3



There are no user-serviceable components within the Quartet or its power supply. Dangerous voltages/currents exist within both, posing a severe risk of electrocution and/or fire if exposed.

Never attempt to open, dismantle, or apply internal third-party devices to it, or insert anything other than the listed interconnects within this user manual. If the Quartet develops a fault or the casework becomes damaged, immediately disconnect from the mains power supply and connected equipment, and contact Chord Electronics for further advice.



With a thick, solid aluminium chassis, the Quartet's casework largely protects the sensitive internal circuitry from radio frequency interference. However, although it is largely shielded, it can generate radio frequency interference that may have an effect on radio and television reception. If this occurs, please reconsider your placement. For optimal performance, it is recommended that the following points are observed:



1. Consider placing the device away from wireless routers.



2. Separate the device from amplifiers using toroidal transformers.



3. Operate mobile phones at a distance to avoid interference.

Warranty

2.0

2.1 Warranty period and registration

2.2 Support and making a claim

2.0

Warranty

Warranty period and
registration

2.1

At point of sale, Chord Electronics Ltd. provides Quartet with a comprehensive five-year warranty* which covers defects in materials and workmanship through fair wear and tear. The warranty will be void if any other PSU other than that supplied is used.

*The warranty is transferable with proof of purchase, however, warranty on ex-demonstration units begins from the retailer's date of purchase.



Please use the form below to record the details of your purchase in the event that these are required at a later date. We further advise that all purchases are registered with Chord Electronics at: **chordelectronics.co.uk/register-product/**



RETAILER:	
PURCHASE PRICE:	
UNIT COLOUR:	
DATE OF PURCHASE:	
TRANSACTION ID:	

Support and making a claim

2.2

In the unlikely event of a claim, your first point of contact should be your supplying dealer. If this is not possible, you must provide Chord Electronics with the details of the claim, including your original proof of purchase and serial number, in order to validate the nature of the repair.

Upon receipt, Chord Electronics will make an assessment within 30 days and provide a reasonable solution.

All warranty repairs must be carried out by Chord Electronics or an approved service centre, to guarantee the quality and safety of the repair.

WARRANTY EXCLUSIONS: The warranty does not cover connected equipment, personal injury or development natural patina of the metalwork and will be null and void if the following is applied: wilful neglect; modification or tampering of the product; improper use of the product; acts of God; damage caused by a connected device; mechanical shock; fire or application of excessive heat or repair/modification by a non-authorised third-party vendor.

Getting to know the Quartet

3.0

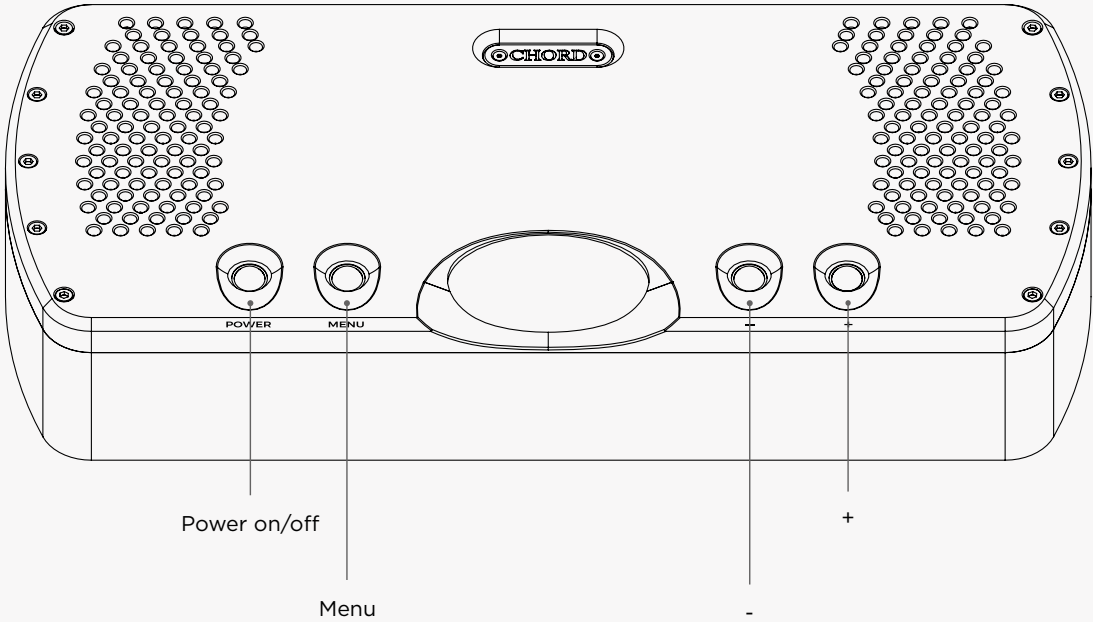
- 3.1 The top panel
- 3.2 The rear panel
- 3.3 The bottom panel
- 3.4 The power supply rear
- 3.5 The remote control

3.0

Getting to know Quartet

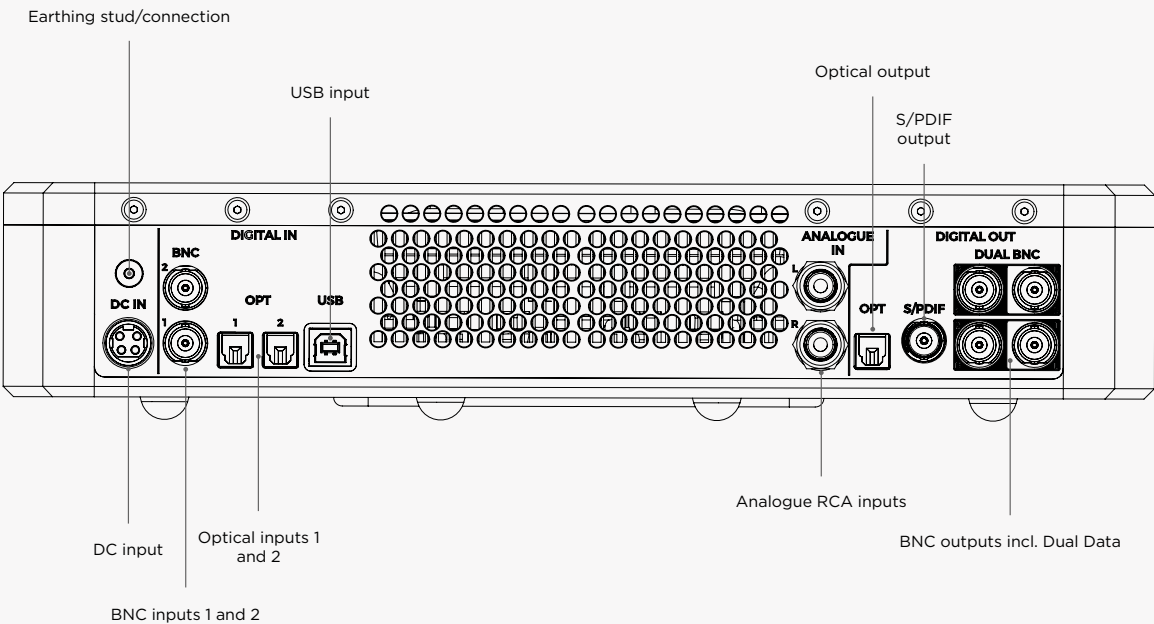
The top panel

3.1



The rear panel

3.2



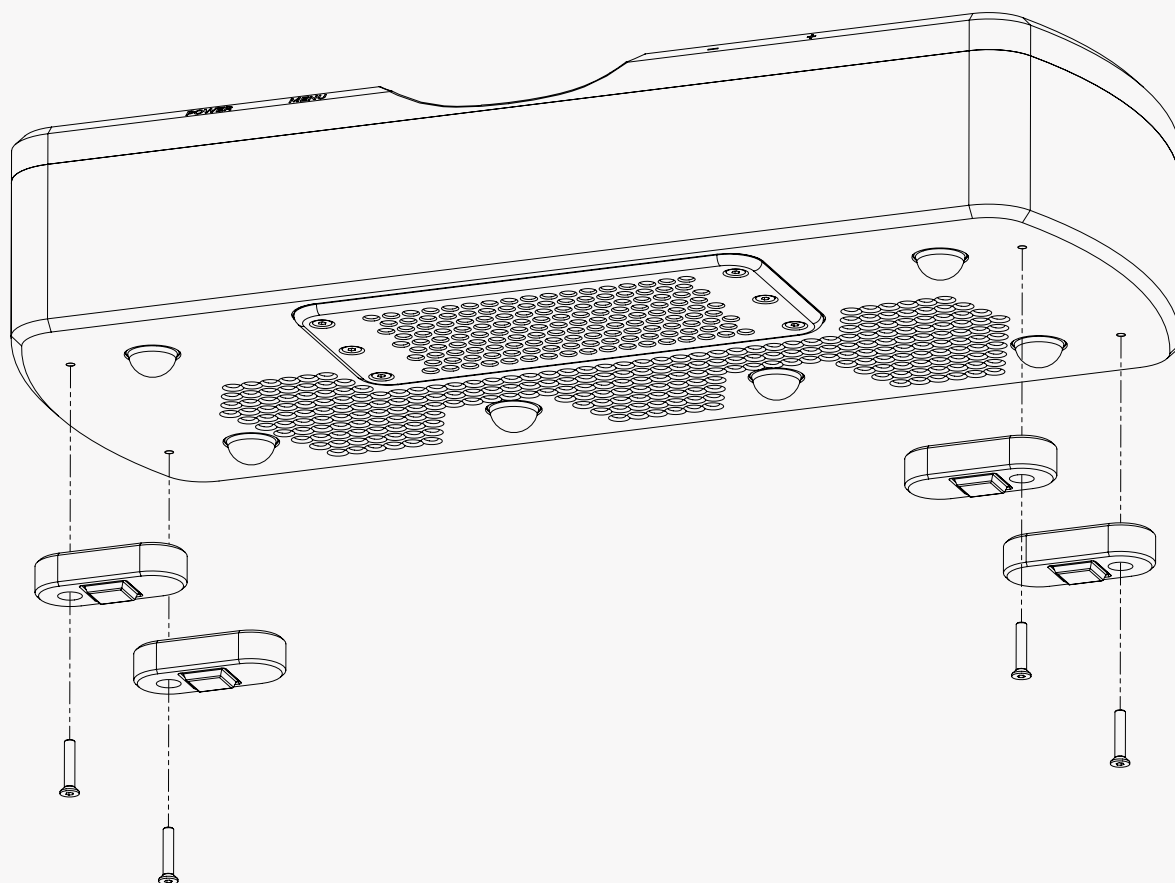
WARNING: Do not use any other power supply other than that supplied. Doing so will invalidate your warranty.

The bottom panel

3.3

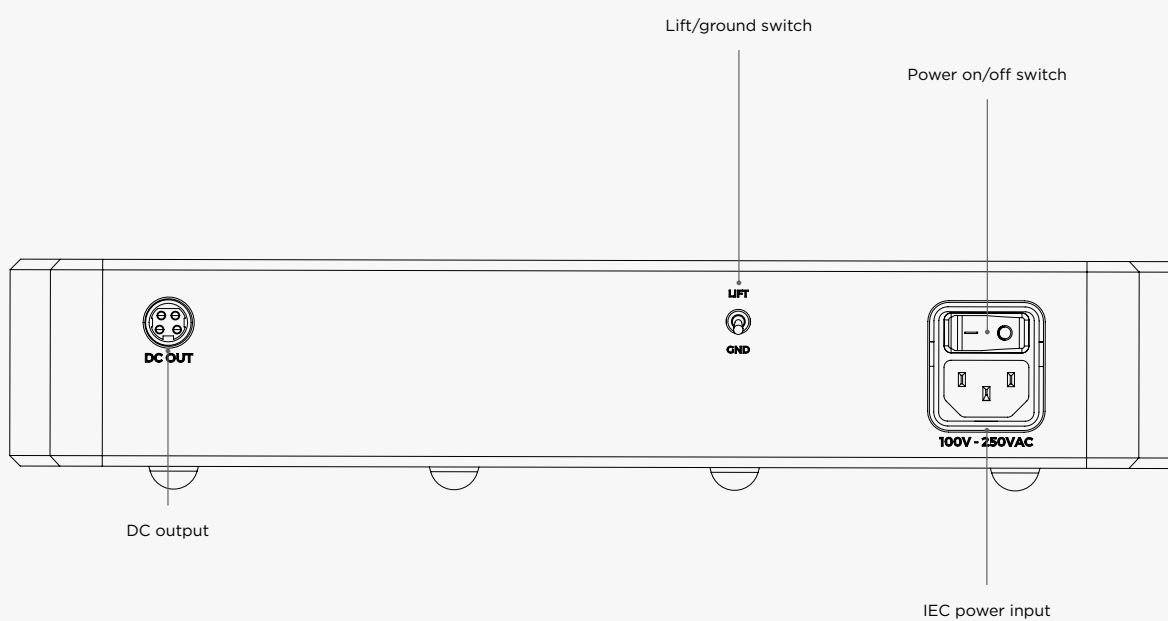


Quartet comes supplied with additional cooling feet as pictured. These are necessary if you are NOT using a Chord Electronics ensemble stand, as they ensure adequate air can pass underneath the product for its active cooling. Use the supplied hex bolts to carefully fit these.



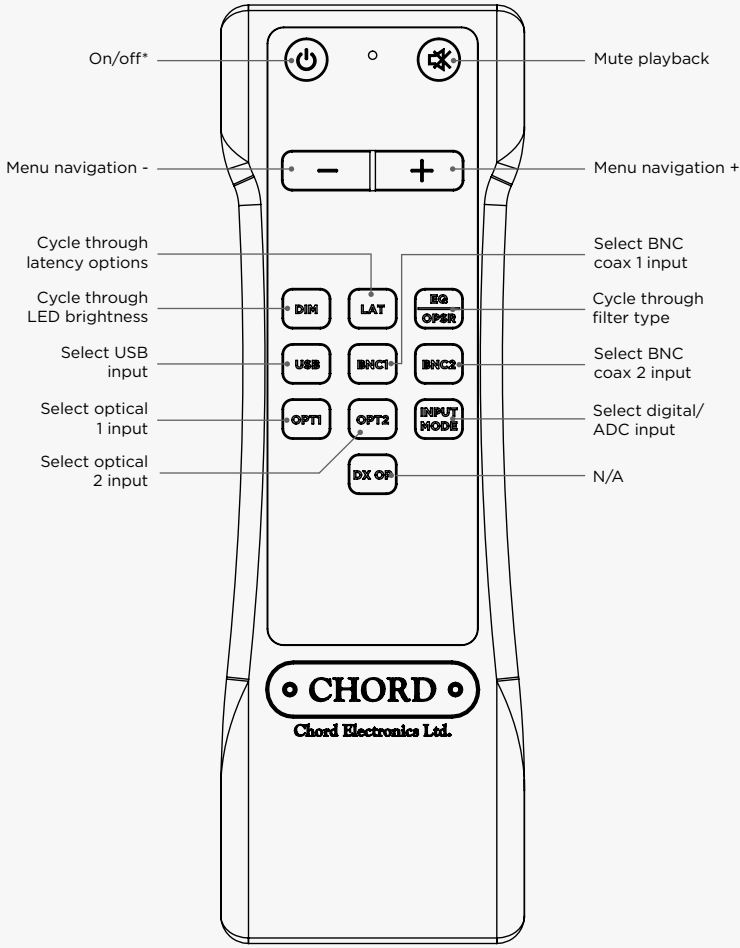
The power supply rear

3.4



The remote control

3.5



*Refer to note on p20

Placement and connections

4.0

4.1 Placement and critical cooling

4.2 USB drivers

4.3 Power supply and earth lift switch

4.4.1 Connecting devices to the Quartet

4.4 Connecting a digital input

4.5 Connecting an analogue input

4.6 Connecting a DAC

4.0

Placement and connections

Placement and critical cooling 4.1

It is important that the Quartet has ample space from all sides to allow good ventilation. This device runs five FPGAs with a potential temperature of more than 80°C per chip. This means good ventilation is critical to the device's function and longevity.

The unit is designed to draw air through the front underside, passing over critical components before exiting from the rear. Please allow space underneath, above, and behind the device for this cooling to function optimally.

The device cannot be sealed in a closed cabinet or be placed on anything that would restrict the air intake at the bottom.

The optimal solution is for the Quartet to be kept in a Chord Electronics Ensemble Stand.

There are three fan speed settings that dictate the FPGA temperature limit. We advise that running the device in **Medium** or **High** is optimal and will result in lower overall internal temperatures. The **Low** setting should be used only for short periods if necessary.

USB drivers

4.2



DRIVERS: The Quartet is driverless with Mac OS X and Linux operating systems and only requires drivers for Windows.

These can be found on the product page at:

chordelectronics.co.uk

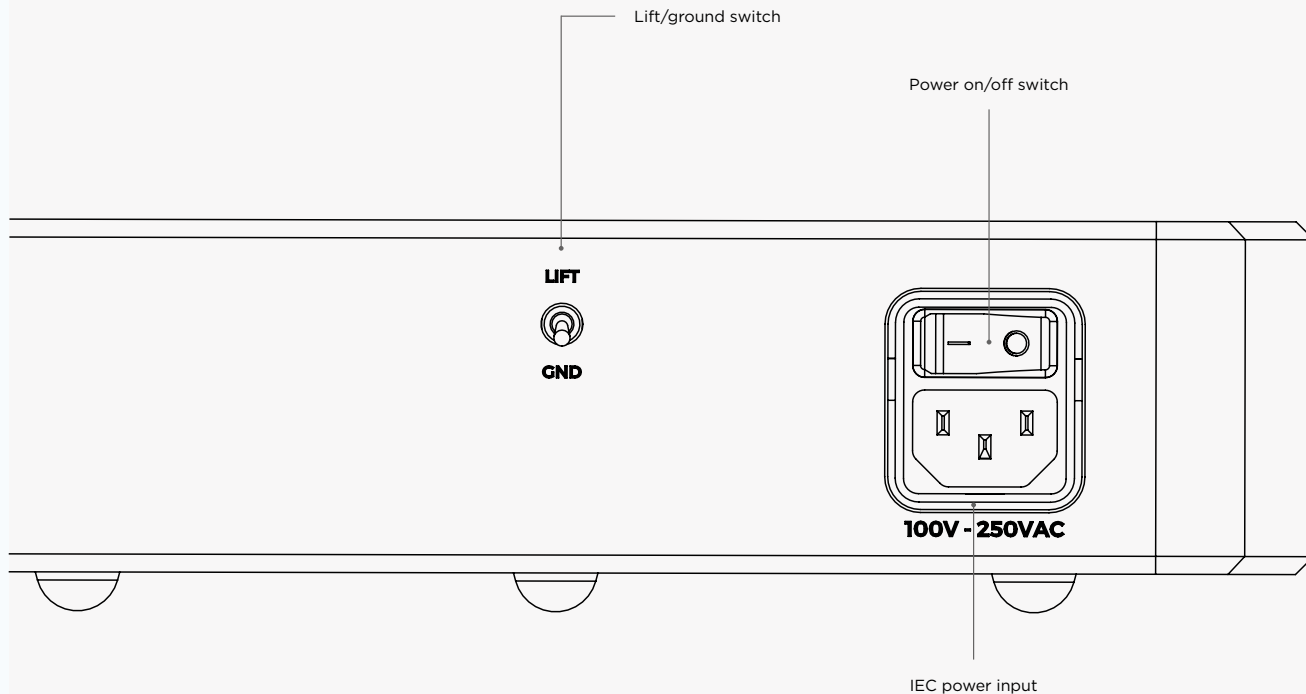
Power supply and earth lift switch

4.3

The external power supply features a ground lift switch:

- **Upper position:** Ensures the earth is lifted and the device will share the earth with other connected equipment. In most cases, this upper position is the most appropriate configuration.
- **Lower position:** Ensures the device is earthed through the mains socket it is connected to.

If you experience earthing issues or unexpected system noise, move the switch to the opposing position.



4.1	Placement and critical cooling	4.4	Connecting a digital input
4.2	USB drivers	4.5	Connecting an analogue input
4.3	Power supply and earth lift switch	4.6	Connecting a DAC
4.4.1	Connecting devices to the Quartet		

4.4.1 Connecting devices to the Quartet

4.4.1

When initially connecting the Quartet to any equipment, make sure that all devices (including the Quartet) are powered off. Once connected, switch all equipment on starting with the source component and ending with the power amplification.

Initially, operate any connected equipment on its lowest gain or volume setting, gently increasing it to a comfortable listening level. Never operate connected equipment at excessive sound levels; permanent hearing damage and loss can occur.

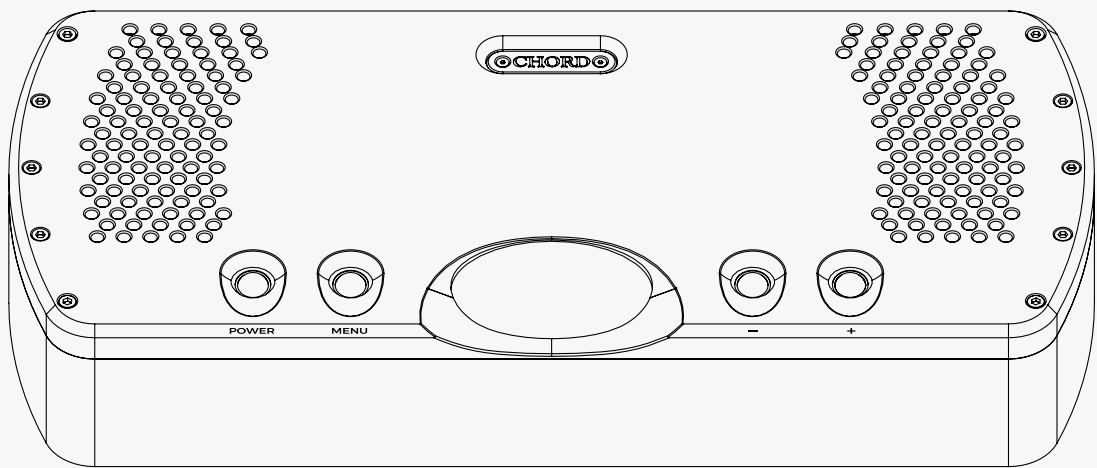
Note: Power button

The front-panel power button acts as a master switch. If the unit is switched off using the front-panel power button, it can only be switched back on using the same power button — the remote will not work. Once the unit is on, both the power button and the remote can be used to turn it on and off.

Power-up sequence

When powering on using the front-panel power button, the

Quartet must be switched on before the DAVE. This sequence is not required when powering on and off using the remote.



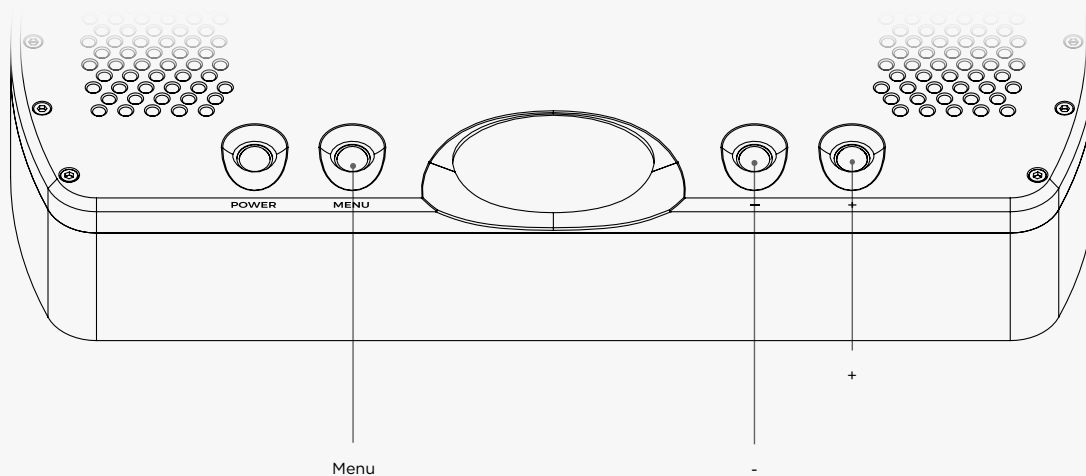
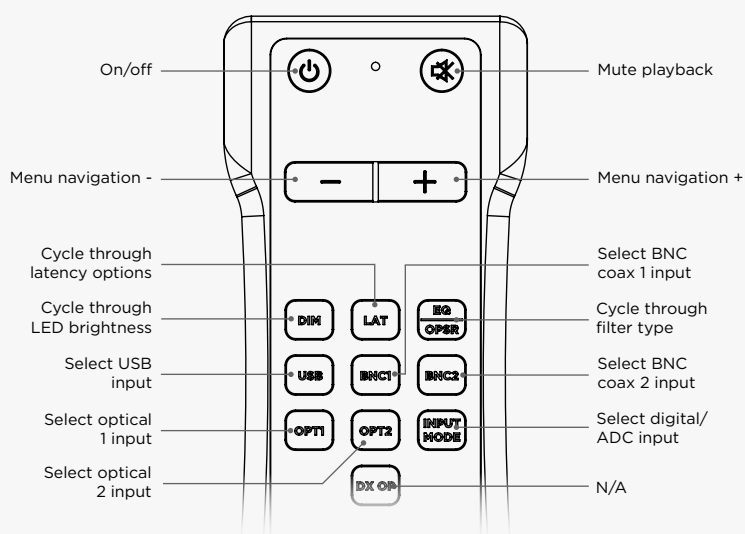
Connecting a digital input 4.4

The Quartet features several digital inputs at the rear. All inputs are selectable using the Menu button. Cycle through the Menu button until 'input configuration' is displayed, then use the + and - buttons to cycle through the input options; simply stop on the input you require and the device will select automatically.

Selecting **AUTO INPUT** ensures any active connection is engaged, with USB taking priority.

Available digital inputs include:

- BNC1
- BNC2
- OPT1
- OPT2
- USB (Type B, Galvanically isolated)



Connecting an analogue input

4.5

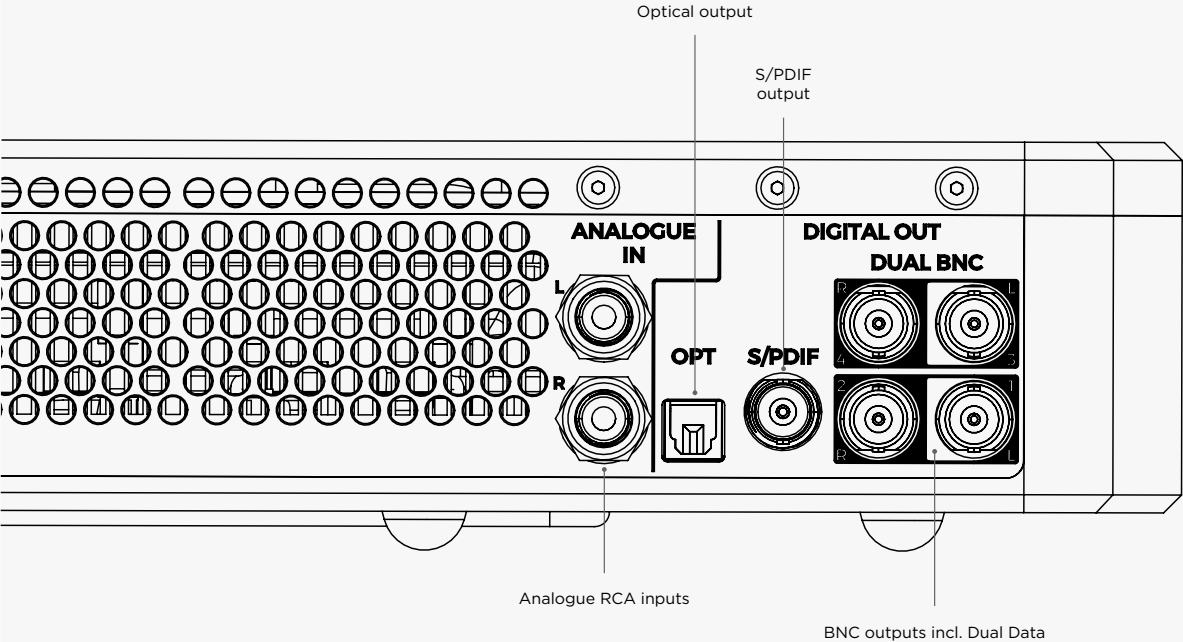
The Quartet includes an advanced Analogue-to-Digital Converter (ADC) featuring gain adjustment.

- Connect an analogue output to the Quartet’s Analogue IN connection. (See **5.0 Global Menu Settings Overview**)
- Manually select **ADC** in the Quartet input options.

Note: The ADC input is excluded from the ‘AUTO’ input selection routine.

You should continue to control your master system volume using your preamplifier. However, minor input sensitivity adjustments can be made using the Menu button once the ADC is engaged. Use the + and - buttons to increase or decrease the gain value displayed on the screen.

Note: When partnered with a first-generation Chord Electronics DAC, you may find the overall volume is decreased with adjustments to ensure internal digital clipping does not occur.



Connecting a DAC

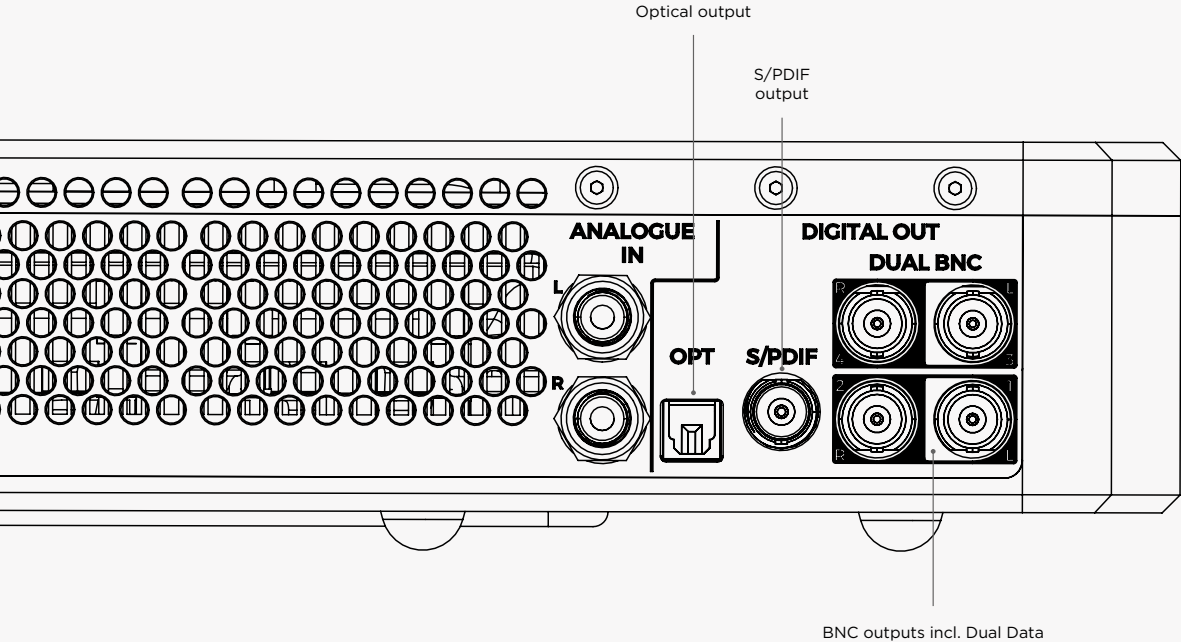
4.6

Optimal performance is achieved when using a Chord Electronics DAC. When connecting the Quartet to a DAC, it is advised to use one of the two dual-data BNC outputs to ensure maximum digital signal quality is achieved. These are labelled on the rear panel.

When connecting to a current-generation Chord Electronics DAC, ensure that **Output 1** connects to Input 1 on the DAC, and **Output 2** connects to **Input 2** on the DAC. This alignment ensures the devices function optimally in both full upscaling mode (3-second latency) and passthrough mode.

Note: Left (L) and Right (R) channel designations are not relevant to current-generation dual-data DAC inputs.

The single BNC output and the single optical output are limited to 192 kHz for A-D recording paths.



Menu navigation and options

5.0

- 5.0 Global menu settings overview
- 5.1 Latency selection
- 5.2 Input selection
- 5.3 EQ / digital signal processing
- 5.4 HF (High Frequency) filter
- 5.5 LF (Low Frequency) filter
- 5.6 Output bitrate
- 5.7 Auto off / stay on
- 5.8 Brightness control
- 5.9 Fan speed settings

5.0

Menu navigation and options

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5.1	Latency selection	5.6	Output bitrate
5.2	Input selection	5.7	Auto off / stay on
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5.4	HF (High Frequency) filter	5.9	Fan speed settings

Global menu settings overview 5.0

To navigate through the menu options, press the Menu button repeatedly. To enter or adjust any of these options, use the + or - buttons on the Quartet front panel or remote.

Option	Settings	Default/Recs.
Latency	3 s/1 s/0.13 s/0.10 s/0.07 s/0.04 s/0.01 s/PASSTHRU	3 s for max quality
Input	BNC1/BNC2/OPT1/OPT2/AUTO/ADC/USB	ADC selected manually
DSP (EQ)	Bank 1-4	Custom profiles
HF filter	40 k/18 k/OFF	To taste
LF filter	15 Hz/10 Hz/3 Hz/OFF	For turntable/ phono use
Output bitrate	24-bit/64-bit/24-bit-ODX/ 64-bit-ODX	24-bit for 1st-gen Chord Electronics DACs
Auto off	Auto OFF/Stay ON	10-min standby
Brightness	Bright/Dim	To taste
Fan speed	Low/Med/High	Med/High recommended

5.0	Global menu settings overview	5.5	LF (Low Frequency) filter
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Latency selection

5.1

This option controls the buffer time and latency between input processing and output delivery. The **3s** (maximum quality) option should always be selected for critical music listening. If audio needs to be synced to video content, we recommend reducing the latency setting to at least **0.7s** or lower to prevent lip-sync errors. The sample rate will remain identical across all latency profiles except for **PASSTHROUGH**, which entirely bypasses the internal upscaling algorithm.

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Input selection

5.2

This controls the primary active interface input on the Quartet. Options include: BNC1; BNC2; OPT1; OPT2; AUTO; ADC and USB.

- The analogue-to-digital converter (**ADC**) is completely excluded from auto input detection. To select it, press the Menu button until 'input configuration' is displayed, then use the + and - buttons to cycle through choices until you reach ADC. Simply stop on the input to engage it.

EQ / digital signal processing

5.3

The Quartet has four preset EQ profile 'banks'. This option allows you to cycle through the saved individual EQ profile banks, as well as make live amendments to the DSP processing within those banks. By default, all frequencies are set to a neutral 0.0 dB.

Accessing and modifying a preset bank

1. Press Menu three times until **EQ** is displayed on the screen.
2. Press + to cycle from EQ OFF through to Bank 1, 2, 3, or 4.
3. To alter settings inside a chosen bank, navigate to that bank and press the - button.
4. The screen will read **640 0.0** (indicating the 640 Hz band is selected at neutral gain).
5. Continue pressing Menu to cycle progressively through the adjustable frequency spectrum:
6. If you wish to make changes to a particular bank, cycle to the desired bank and press the - button. It will now take

you into the first EQ option and display 640 0.0 on the display, if you continue to press the MENU button, it will take you through the following frequencies: 640 Hz; 320 Hz; 160 Hz; 80 Hz, 40 Hz, 20 Hz, 2 kHz, 4 kHz, 8 kHz, 16 kHz and finally + to EXIT.

7. Use the + and - buttons to adjust the target frequency in **0.5 dB increments**.
8. Once finished, press + at the end of the menu loop to **EXIT**.

Tip: If you get stuck inside the advanced EQ submenu, leave the controls untouched for 10 seconds. The device will automatically time out and return to the home screen.

5.0	Global menu settings overview	5.5	LF (Low Frequency) filter
5.1	Latency selection	5.6	Output bitrate
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HF (High Frequency) filter

5.4

The high-frequency filters remove ultrasonic or high-frequency noise from the signal path. Experimentation with these filters is encouraged to find what suits your system acoustics best. They are optional and can be turned off.

- **18K:** Applies a steep low-pass filter at 18 kHz across all incoming sample rates. Anything above this frequency is completely filtered.
- **40K:** Provides a 20 kHz bandwidth when handling standard 44.1/48 kHz material; the filter bandwidth expands to 40 kHz for any incoming sample rates above 48 kHz.
- **OFF:** Delivers a 20 kHz bandwidth for 44.1/48 kHz input; a 40 kHz bandwidth for 88.2/96 kHz input; and an unrestricted 80 kHz bandwidth for any incoming sample rates of 192 kHz and above.

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5.1	Latency selection
5.2	Input selection
5.3	EQ / digital signal processing
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5.5	LF (Low Frequency) filter
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LF (Low Frequency) filter

5.5

The low-frequency filters are designed to eliminate subsonic rumble or low-frequency noise when utilising the Quartet with a turntable and phono stage.

- **15 Hz:** Filters out all signals below 15 Hz.
- **10 Hz:** Filters out all signals below 10 Hz.
- **3 Hz:** Filters out all signals below 3 Hz.

Output bitrate

5.6

Allows the adjustment of the digital output word length between **24 bit** and **64 bit**, alongside toggling the master DSP processing on these digital outputs. Available configurations include:

- 24 bit (Recommended default setting for compatibility with current-generation Chord Electronics DACs)
- 64 bit
- 24 bit- 0 DX
- 64bit- 0 DX

5.0	Global menu settings overview	5.5	LF (Low Frequency) filter
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Auto off / stay on

5.7

Engages or disengages the power-saving auto-standby engine. If engaged, the Quartet automatically shifts down into low-power standby mode following 10 minutes of continuous input signal absence.*

*Refer to note on p20

5.0	Global menu settings overview	5.5	LF (Low Frequency) filter
5.1	Latency selection	5.6	Output bitrate
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Brightness control

5.8

Toggles the illumination levels of the display panel between **Dim** (low brightness) and **Bright** (high brightness). To protect the display panel lifespan, the Quartet display screen automatically blanks out completely after 20 seconds of user inactivity.

5.0	Global menu settings overview	5.5	LF (Low Frequency) filter
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Fan speed settings

5.9

The Quartet features three distinct cooling fan modes. Regardless of the profile chosen, all settings automatically adjust internal RPM values based on real-time internal chip temperatures.

- **LOW:** Restricts fan speeds to the lowest operational RPM possible. This will cause the internal FPGAs to operate at significantly higher temperatures than the other modes. The Low setting should only be used for brief periods or when silence is critical.
- **MEDIUM / HIGH:** Highly recommended for everyday operation. These modes dynamically fluctuate fan speeds to actively manage the thermal environment, keeping the internal processors operating within their optimal engineering ranges without manual adjustment.



Chord Electronics Ltd.

