DacMagic 200M

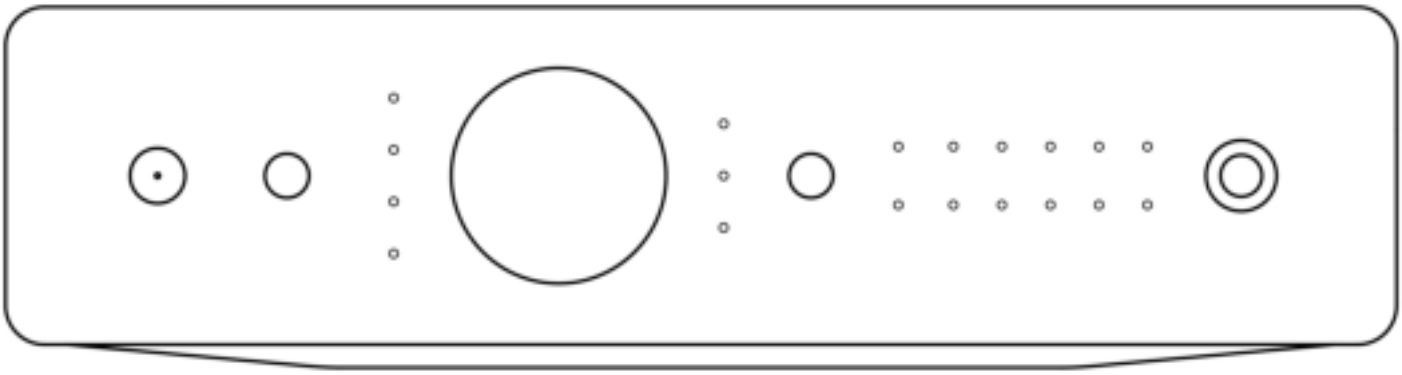
Manual Generated: 01/06/2022 - 16:03

Table of Contents

DacMagic 200M 3
Introduction 4
What's Included With The DacMagic 200M 5
Front panel controls 6
Rear panel connections 7
Getting connected 8
Master Quality Authenticated (MQA) 15
Filters 16
Advanced settings 19
Auto Power Down (APD) 21
TV Mode 22
Frequently Asked Questions (FAQ) 24
Technical specifications 26

DacMagic 200M

Last updated: May 10, 2022 04:42. Revision #4381



User's Manual

Introduction

Last updated: May 24, 2022 02:34. Revision #4385

This guide is designed to make installing and using this product as easy as possible. Information in this document has been carefully checked for accuracy at the time of printing; however, Cambridge Audio's policy is one of continuous improvement, therefore design and specifications are subject to change without prior notice.

This document contains proprietary information protected by copyright. All rights are reserved. No part of this manual may be reproduced by any mechanical, electronic or other means, in any form, without prior written permission of the manufacturer. All trademarks and registered trademarks are the property of their respective owners.

The Bluetooth® word mark and logos are registered trademarks owned by the Bluetooth SIG, Inc. and any use of such marks by Audio Partnership Plc is under license. Other trademarks and trade names are those of their respective owners.

MQA and the Sound Wave Device are registered trademarks of MQA Limited © 2016.

© Copyright Cambridge Audio Ltd

For upcoming news on future products, software updates and exclusive offers, make sure you register your product at http://www.cambridgeaudio.com/register

What's Included With The DacMagic 200M

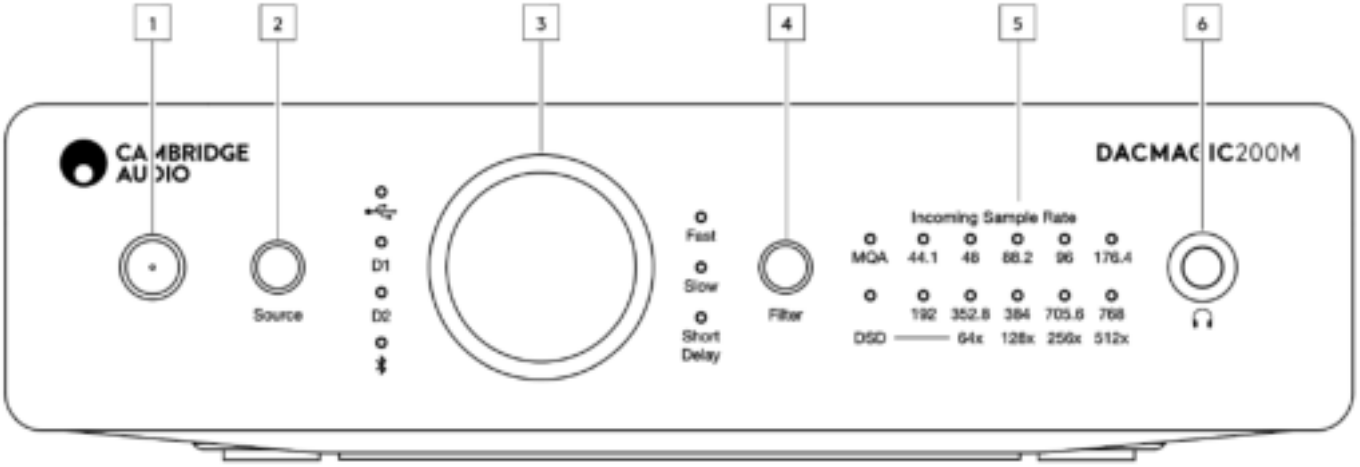
Last updated: May 6, 2022 08:42. Revision #4517

Inside the box of your DacMagic 200M you will receive:

1. DacMagic 200M Digital to Analogue Converter.
2. 12V Power Supply.
3. Bluetooth antenna.
4. Quick Start Guide.
5. Safety Instructions.

Front panel controls

Last updated: June 1, 2022 08:49. Revision #4524



1. Standby/On – Switches the unit between on and low power standby.

2. Source – Select incoming audio source. Toggle between USB, Digital Inputs 1, and 2, and Bluetooth. The selected input will be indicated by the corresponding LED.

3. Digital volume control – Adjust the volume when Digital Preamp (variable) mode is enabled. Pressing this knob will result in a mute toggle.

4. Filter – Press to select between three different filter modes: Fast, Slow, and Short Delay. This selected filter mode will be indicated by the corresponding LED.

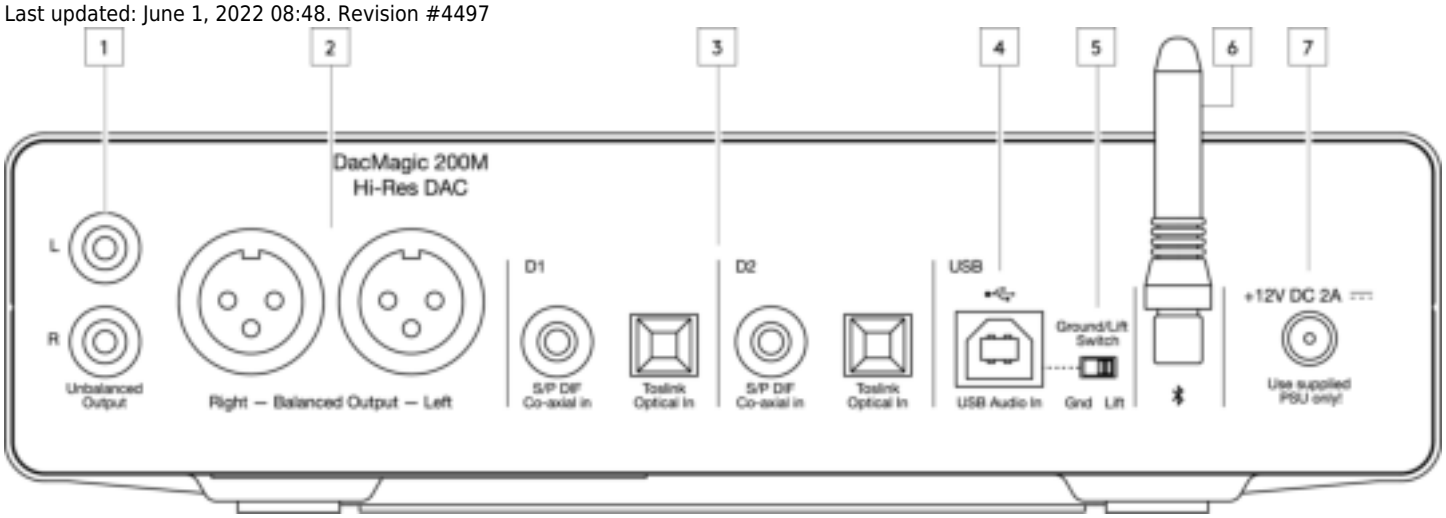
5. Incoming sample rate – When the DacMagic 200M is receiving an incoming digital stream, the relevant LED will light up to indicate the incoming digital sampling frequency. For MQA the LED will light up green for MQA, or blue for MQA Studio. If the LED is magenta, then the unit is rendering an MQA stream or file, completing the processing, and allowing playback at the highest possible audio quality. DSD will light up when native DSD or DoP streams are detected.

Note: The sample rate LEDs reflects the incoming sample rate, and not that of the original source.

6. Headphone connection – Allows the connection of headphones for a direct listening experience.

Rear panel connections

Last updated: June 1, 2022 08:48. Revision #4497



1. Unbalanced audio outputs – Outputs for use with unbalanced RCA cables.

2. Balanced audio outputs – Outputs for use with balanced XLR cables. Suitable for when a longer connection is needed between the DacMagic 200M, and an amplifier.

3. Digital inputs 1 and 2 – The DacMagic 200M offers two digital inputs allowing a wide range of sources to be connected via the use of S/P DIF co-axial, or TOSLINK optical.

4. USB audio in – For connecting to PC/Mac computers for USB Class 2.0 Audio playback. Please note that for Windows devices the Cambridge Audio USB Audio driver must be installed.

5. Ground/Lift switch – When connected to a PC via USB, and with the switch set to ‘ground’, the DacMagic 200M will ground itself via the USB connection. Setting the switch to ‘lift’ will ground the device via an internal network to reduce hum in case of ground loops.

6. Bluetooth antenna – Used for the wireless streaming of Bluetooth audio from most phones, tablets, and laptops.

7. DC 12V 2.0A power adaptor socket – Note: Only use the power supply included with the DacMagic 200M.

Getting connected

Last updated: June 1, 2022 08:50. Revision #4500

Initial setup

1. Connect your chosen digital audio source(s) to the input(s) on the DacMagic 200M via:

   TOSLINK optical - which offers high quality transfer over shorter distances

   OR

   S/P DIF coaxial - which can be used for longer connections

   OR

   USB audio to connect to a PC, or Mac.

2. Connect the audio outputs to the line-input of your amplifier using the unbalanced RCA connections for shorter distances, or the balanced XLR connections for longer distances.
3. Using the appropriate plug for your region, connect the supplied power adaptor to the DacMagic 200M.
4. Power on the unit and select the input source that you wish to listen to using the source button located on the front panel.

Note: For Bluetooth connections, please follow the instructions from the Bluetooth section of the manual.

If there is no power to the unit, please see the following steps

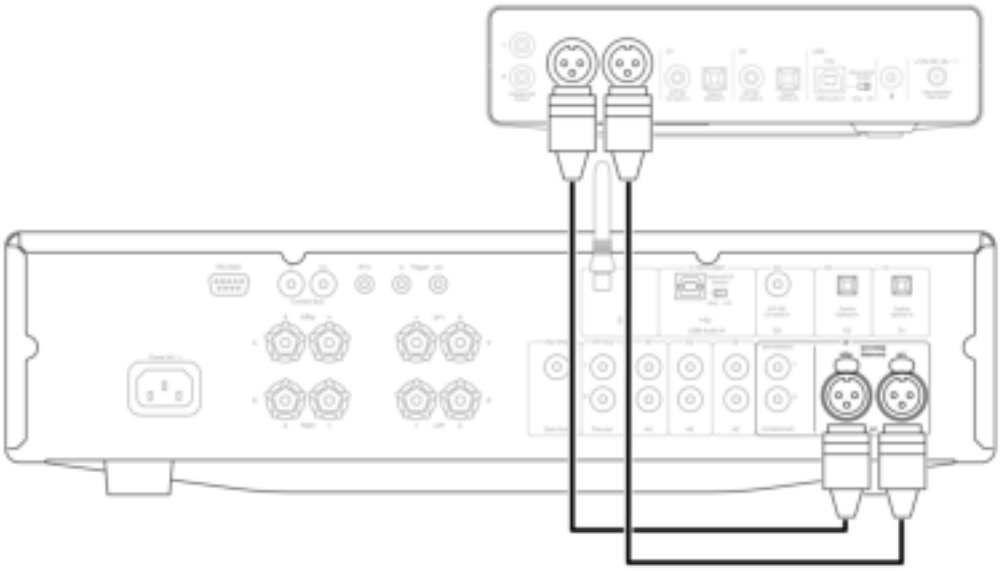
1. Check that the supplied 12V PSU is securely connected to the power adaptor socket on the rear of the DacMagic 200M.
2. Confirm that the PSU is securely connected to the mains socket, and that the socket is switched on.

If a hum or buzzing sound can be heard after setup, please see the following steps

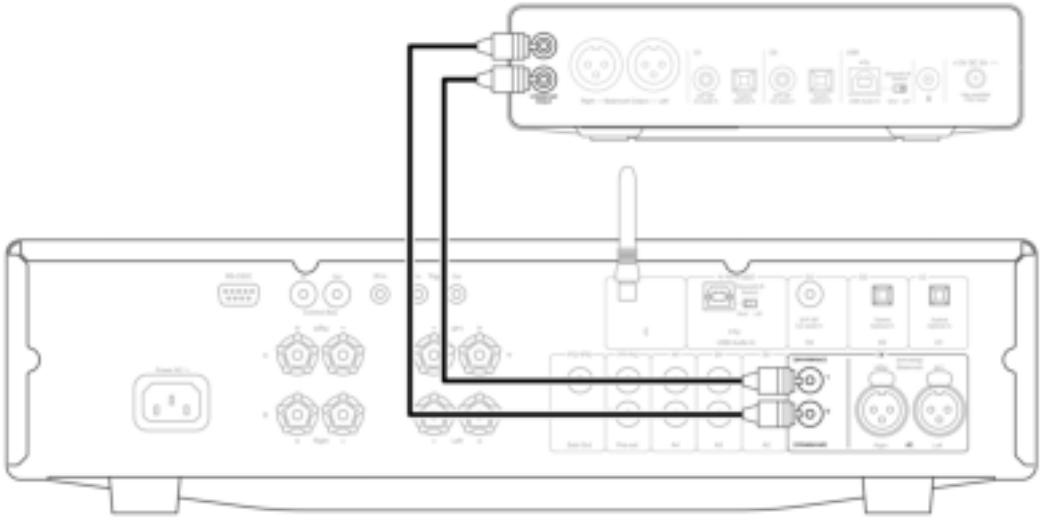
1. Check that all connections between **Source(s) > DacMagic 200M > Amplifier** are secure.
2. Move the unit away from any nearby lighting, or mains cables that could cause interference.
3. If connected to a PC or Mac via USB, switch ‘Ground Lift’ switch to ‘lift’.

Audio output connections

Balanced connection to a CXA81



Unbalanced connection to a CXA81



Note: Do not turn the unit on until all necessary connections have been made.

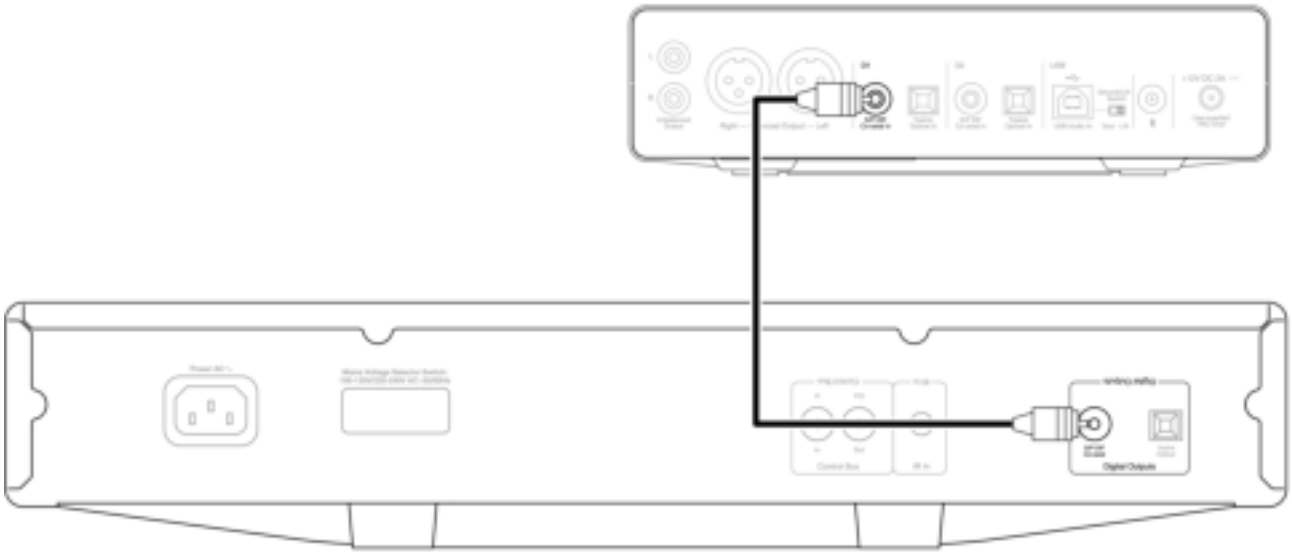
The DacMagic 200M offers both balanced (XLR), and unbalanced (RCA) audio output connections.

In the case of longer connections between the DacMagic 200M and your amplifier we would recommend the use of a balanced connection via XLR as this can help to reject noise, and interference in the cable.

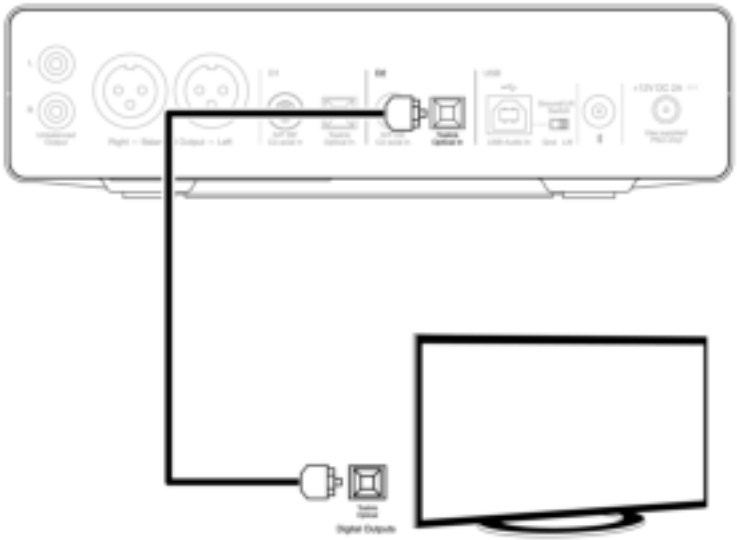
It is possible to use both balanced, and unbalanced connections at the same time, for example: when connecting to multiple amplifiers, or a multi-room setup.

Digital audio input connections

Connection to a CXC using S/P DIF coaxial



Connection to a Smart TV using TOSLINK optical



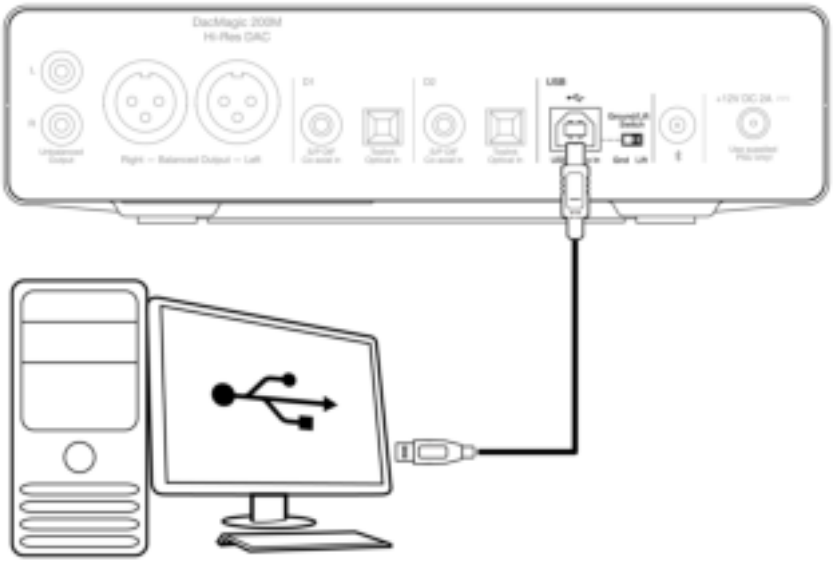
Important Note: Only connect one co-axial OR optical cable to each digital input. The unit will not operate properly if both connections are made (even if only one is active).

This unit only accepts two-channel LPCM/Stereo PCM digital audio, and cannot be used with Dolby Digital 5.1, or DTS signal. If connecting a DVD/BD player, a smart TV or similar device please ensure that the output is set to two-channel PCM.

If there is no sound output once the input, and output connections have been made, please follow the steps below:

1. Check that the interconnects between the DacMagic 200M, and the amplifier are securely connected.
2. Confirm that the correct incoming source is selected via the corresponding LEDs on the front panel of the DacMagic 200M.

USB audio connection



The DacMagic 200M only supports USB audio playback using USB Class 2.0 Audio. For this it is required that the DacMagic 200M is connected to a USB 2.0 port using a suitable USB cable, and we would recommend any USB certified high-speed USB 2.0 ‘A–B’ cable.

Use with Windows PCs

For use with Windows PCs, you will need to install the Cambridge Audio USB Driver to be able to play audio via USB Audio Class 2.0. More information regarding the download, and installation of the driver can be found here:

https://techsupport.cambridgeaudio.com/hc/en-us/articles/207434895-Windows-Audio-USB-Class-2-Driver-

Use with Mac

DacMagic 200M is compatible with Macs without the need for extra drivers.

Use with Linux

Due to the many configuration options and target hardware, we cannot say that Linux is officially supported by the DacMagic 200M.

However, most recent Linux distros are supporting USB Audio Class 2.0 natively, so the DacMagic 200M should work without any specific action required.

Ground/Lift switch

The DacMagic 200M includes a ‘ground/lift’ switch on the rear panel. When connected via USB, and with the switch set to ‘ground’, the DacMagic 200M will ground itself via the USB connection. Setting the switch to ‘lift’ will ground the device via an internal network to reduce any potential hum in case of ground loops.

The switch should be left in the “ground” position unless a hum or noise is heard from the system.

In some instances, the use of audio grade USB cables can cause compatibility issues, and the introduction of glitches. This is because the cable may not fully adhere to USB standards. If you are experiencing noise, hum, or glitches whilst connected via USB it may be necessary for you to set the switch to ‘lift’, which will disconnect the ground from the computer connection.

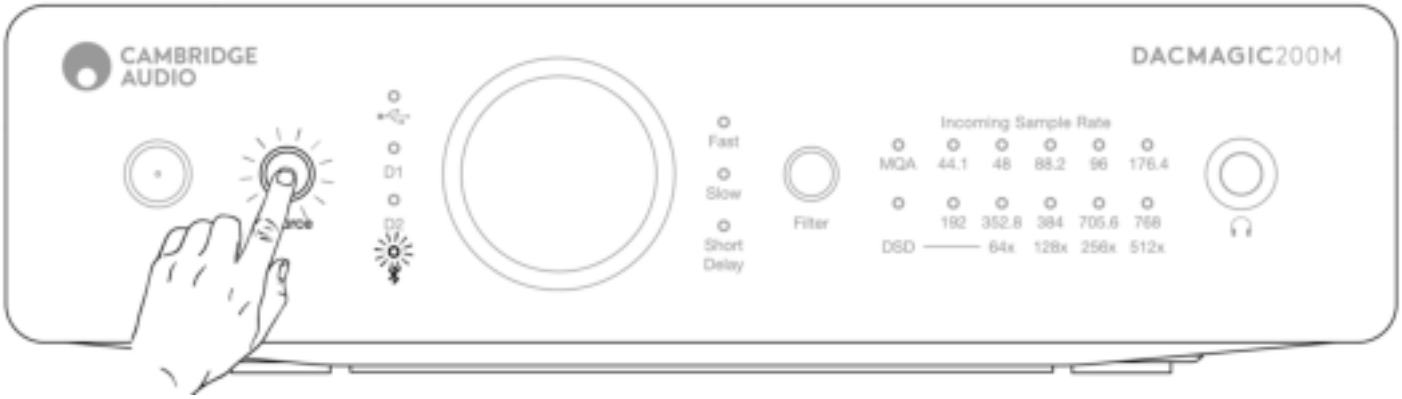
Use with the Apple camera adapter

The DacMagic 200M is not designed for use with mobile devices via wired connection such as an iPhone using the Apple Camera Adapter, or an Android phone using a USB OTG adapter. Therefore, it is not possible for us to guarantee compatibility for a setup of this nature.

In most cases when attempting to use the DacMagic 200M with a mobile device, and an Apple Camera Adapter, the user will receive the following alert: ‘Cannot Use Accessory’.

Bluetooth

Selecting Bluetooth with the source button located on the front panel allows the DacMagic 200M to receive wireless Bluetooth audio from most smartphones, tablets, and laptops.



Pairing

The following procedure will allow you to pair a new Bluetooth enabled device with the DacMagic 200M.

1. Make sure that any previously paired Bluetooth devices are turned off (the DacMagic 200M will auto-connect to the last paired device).
2. Turn on the DacMagic 200M and select Bluetooth as the source (denoted by the Bluetooth symbol).
3. Activate Bluetooth on the desired source device.
4. Scan for available devices on the source device and select ‘DacMagic 200M’.

Unpairing

To unpair a device you can select ‘unpair’ in the source unit’s device list. Alternatively, you can perform a factory reset on the DacMagic 200M which will delete all previously paired devices.

Note: Your device can only be paired and connected to the DacMagic 200M whilst the Bluetooth source is selected.

Paired LED status

Once your device is paired, the Bluetooth Source LED will change to denote the type of codec that is being received.

SBC Codec is represented by a solid light.

aptX Codec is represented with a 2-second solid light followed by a very short light off interval.

Headphone

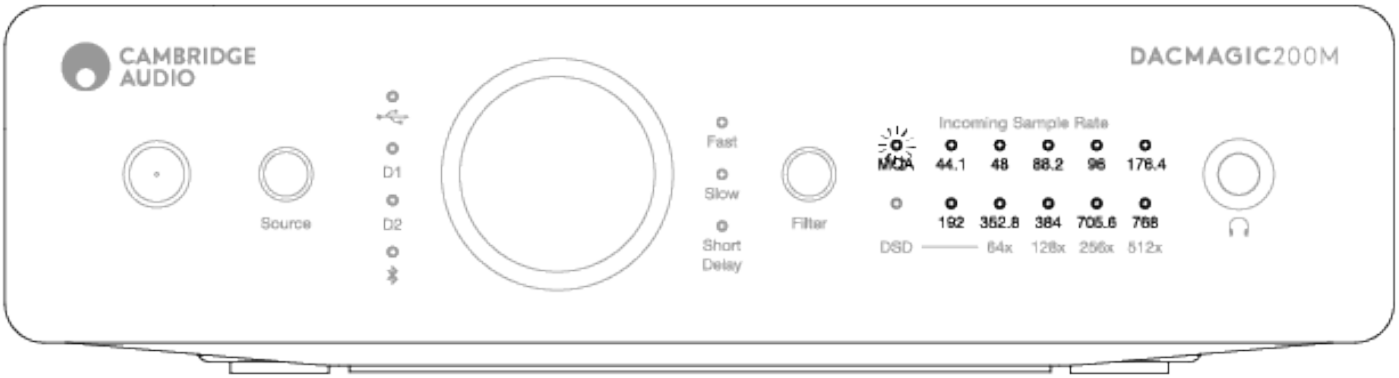
The DacMagic 200M integrates a dedicated headphone amplifier stage for a personal listening experience.

The volume can be adjusted with the front knob, and the volume level will be saved separately from the main output volume (if digital preamp mode is enabled).

Whilst headphones are connected the line out is disabled.

Master Quality Authenticated (MQA)

Last updated: June 1, 2022 08:51. Revision #4501



Master Quality Authenticated is an audio codec using a sophisticated compression algorithm, and a form of file authentication intended for high-quality audio streaming and file download. This allows the listener to receive digital audio at the original studio quality.

Using a unique ‘origami’ folding technique, the information is packaged efficiently to retain all the detail from the studio recording. Hardware or software with MQA decoding capability can ‘unfold’ the MQA file and reveal the original master resolution.

The file is also 'authenticated' to guarantee that it is the definitive master recording from the studio, artist or record label.

MQA tracks are delivered to the listener with all the required data for full studio quality hidden, or 'folded' within the file itself. This means with each unfold, more data is revealed for higher quality playback.

There are essentially four versions of MQA playback. And depending on how your system is configured, each will perform different unfolds to reveal more of the dormant information hidden within the file.

No unfold

This is the raw folded MQA file that can be played back through any device as no decoding is required. This is typically better than CD quality at 44.1 or 48 kHz.

MQA core decode

This is the point at which the first unfold takes place. The MQA Core Decoder authenticates, decodes full dynamic range, and matches to the current playback settings. This can be performed either within software (TIDAL, Audirvana, Roon) or hardware that contains a MQA Core Decoder, and at this point the file is upscaled to 88.2 or 96 kHz.

MQA core decode with hardware rendering

In this method of playback, a combination of software and hardware is used to further unfold the file. As with MQA Core Decoding, the software decodes the MQA 24 bit / 44.1kHz file and unpacks it to 24 bit / 88.2 kHz. This file is then output to the hardware renderer where it is expanded up to 24 bit / 352.8 kHz.

Full decode and MQA renderer

Full Decoding and MQA Rendering is only possible using hardware with MQA certification and is the optimum playback method of MQA files. This will require all stages of the unfold or processing to take place within the hardware, which is fed the untouched MQA file before performing the various decodes and rendering. This is typically the highest possible quality and files can be upscaled to a maximum resolution of 768 kHz.

The DacMagic 200M includes MQA technology and can perform full MQA decoding from all inputs except Bluetooth, enabling you to playback MQA audio files and streams delivering the same quality as the original master recording.

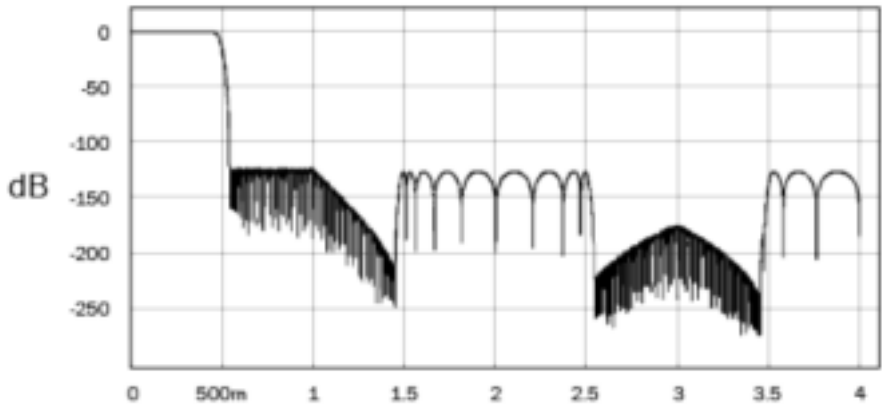
Filters

Last updated: June 1, 2022 08:51. Revision #4502

The DacMagic 200M has three different digital filter functions: Fast, Slow and Short Delay. All three filters are highly sophisticated audiophile topologies, optimised specifically for audio playback. In our opinion, these filters offer excellent sound quality but differ subtly in optimisation, hence we've made all three available to you.

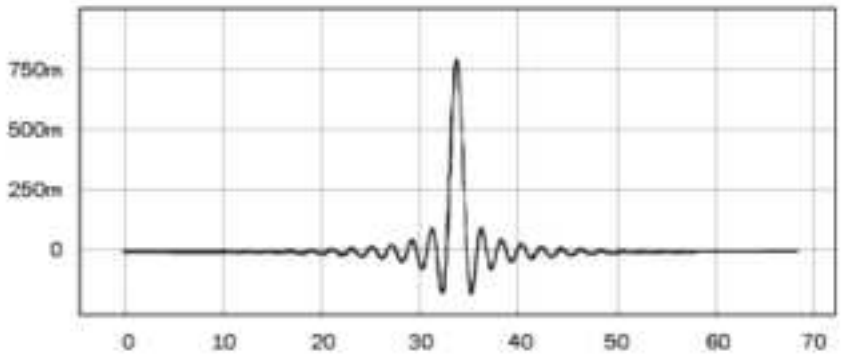
Note: For clarity, all diagrams show the theoretical response of the digital filter itself, excluding any analogue filtering at the DAC output or the antialiasing
filter applied during recording and/or mastering of the digital source.

Fast filter

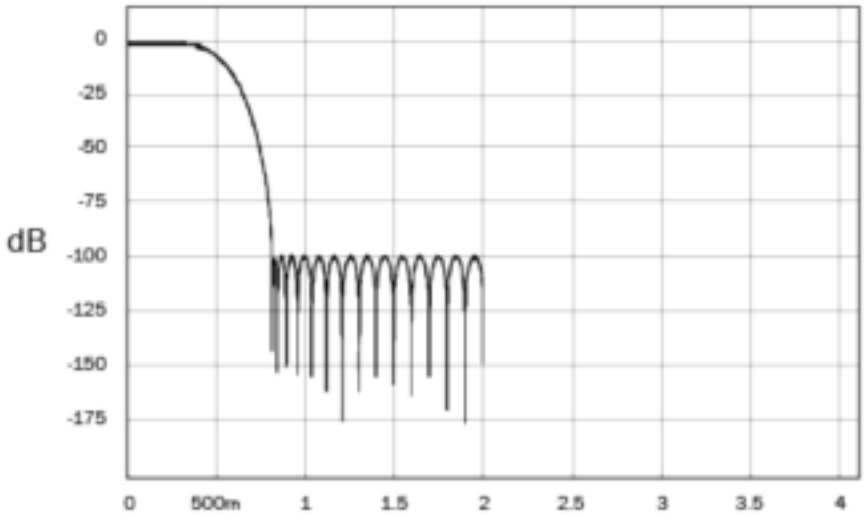


The Fast (Linear Phase) filter is a highly regarded audio filter offering low ripple in both the pass and stop bands, and what is known as constant group delay. Constant group delay means that audio signals of all frequencies are always delayed by the same amount when passing through the filter. All audio is therefore fully time-coherent at the output.

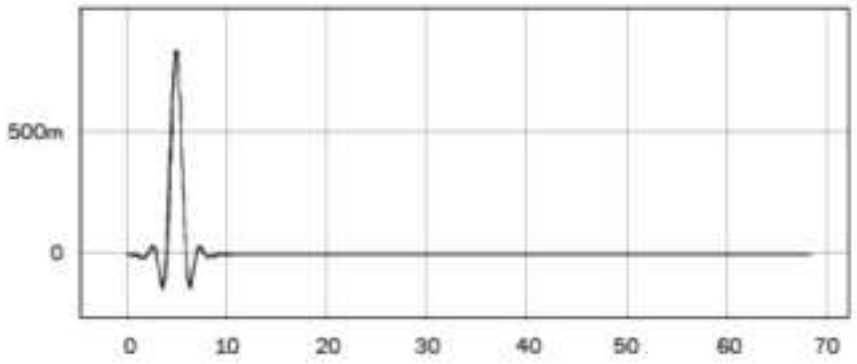
The trade-off with this type of filter is that its impulse response will exhibit some pre-ringing. In other words, when excited with a theoretical impulse, the output has both a small amount of pre- and post-spike amplitude ringing (albeit well damped).



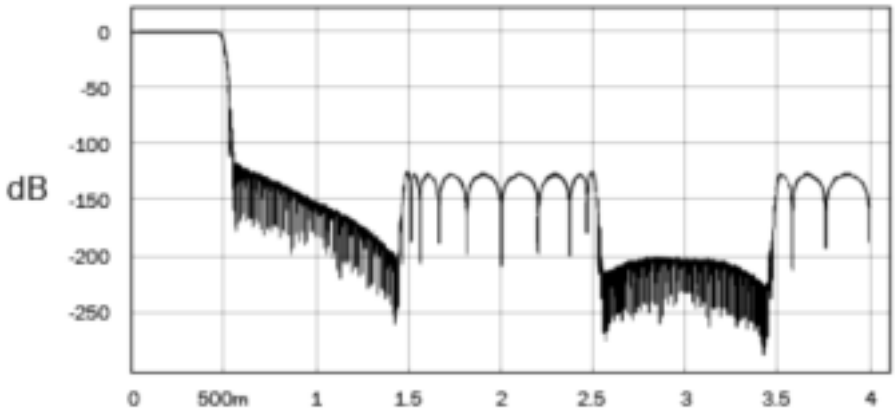
Slow filter



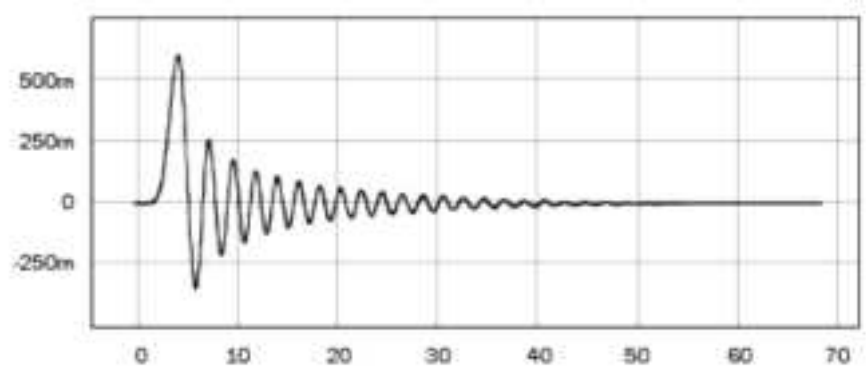
Our Slow filter has a linear phase and is a compromise between some very high frequency roll off and the minimized level of pre/post impulse ringing. Stop band attenuation is less than other filter types, but there's no phase shift and the impulse response is the cleanest.



Short delay filter



The Short Delay (minimum phase) filter is another highly regarded audio filter that offers even lower ripple in the pass and stop bands. Unlike the Linear Phase filter, group delay is not constant; however, phase shift is low and the particular benefit with this filter is that the impulse response exhibits no pre-ringing.



We encourage you to experiment with the filters to determine which sound best to your ears and using your source equipment/programme material. The DacMagic 200M remembers and recalls the selected filter type at power up.

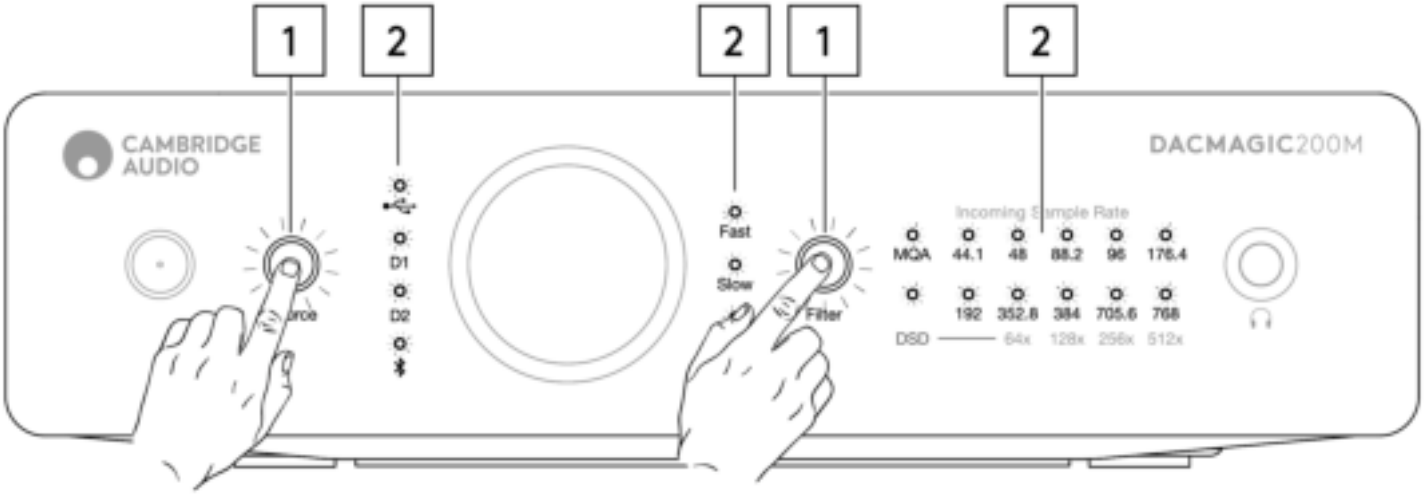
Note: when reproducing MQA contents, the filters selection is disabled.

Advanced settings

Last updated: June 1, 2022 08:52. Revision #4518

Note: Prior to performing any of the following procedures, please ensure that the DacMagic 200M is in standby, which is indicated by only the standby LED being lit.

To perform a factory reset

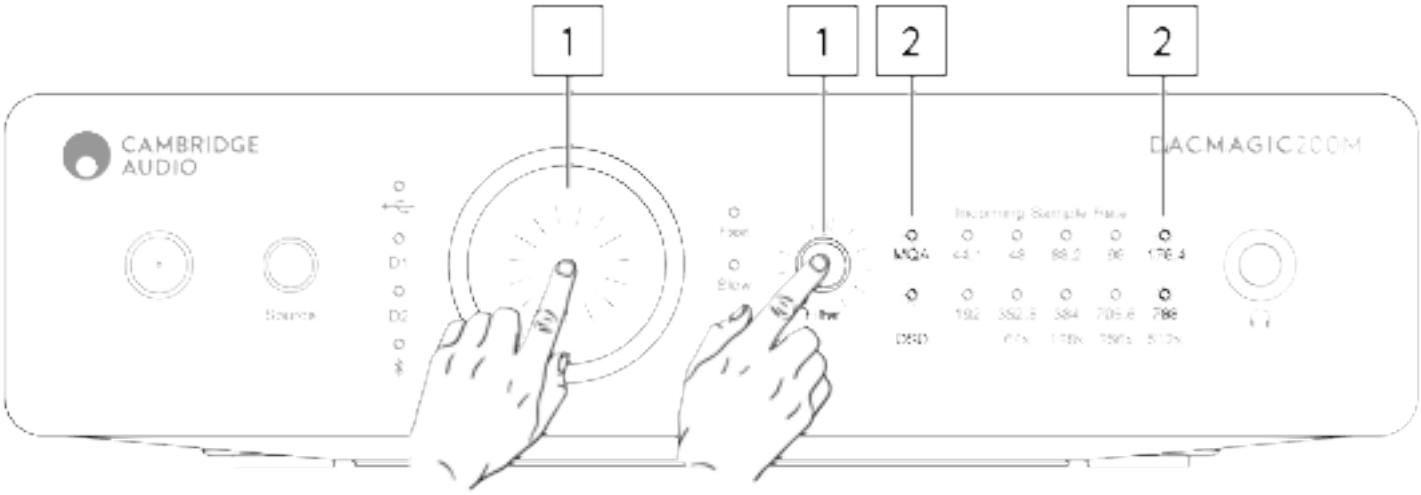


1. Briefly press both the Source and Filter buttons simultaneously.
2. All LEDs will light in sequence, one by one.

Upon performing a factory reset all user-stored settings (input, volume and output mode) will be erased, and replaced by the unit’s default settings after a factory reset.

Toggle between fixed, and variable output modes

The DacMagic 200M can be switched between a fixed output mode which disables the front panel volume control, and variable mode which enables the front panel volume control, allowing volume adjustment on the unit.



1. Briefly press the volume knob, and filter button simultaneously.
2. Two LEDs will light up to indicate the output mode.

RCA/XLR output set to fixed mode with volume knob disabled: MQA/DSD light up for 5s.

RCA/XLR output set to variable mode (default) with volume knob enabled: 176.4/768 LEDs light up for 5s.

Note: Headphone output is always variable.

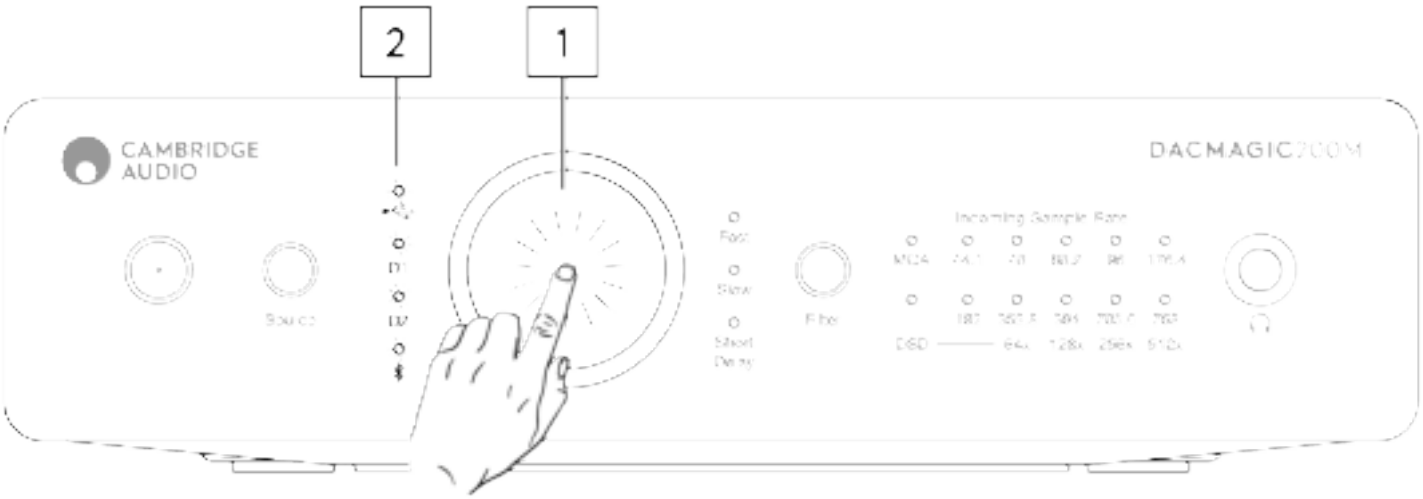
Auto Power Down (APD)

Last updated: June 1, 2022 09:47. Revision #4522

The DacMagic 200M arrives with APD enabled, and this will automatically switch the unit to standby after 20 minutes of inactivity.

To disable, or re-enable this function then please see the below instructions.

Note: The DacMagic 200M must be in standby which is indicated by only the standby LED being lit prior to completing the following procedure.



APD Off

1. Press and hold down the Volume knob for 5 seconds.
2. Wait for the Input LEDs to blink 2 times.

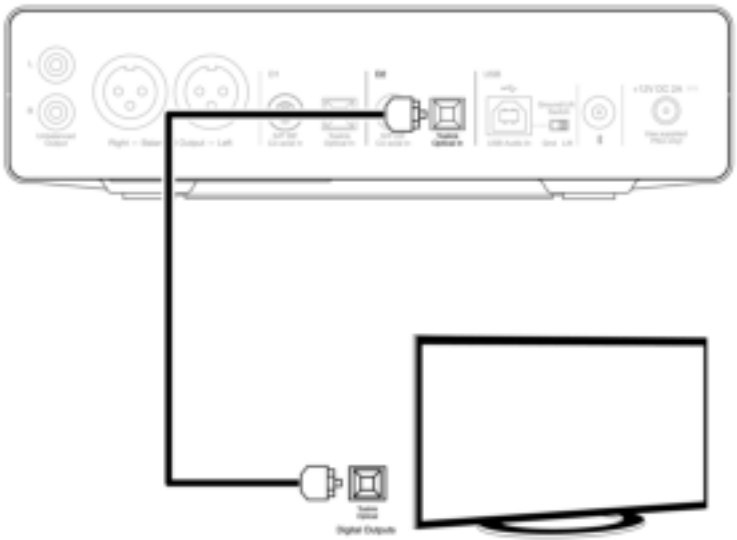
APD On (default)

1. Press and hold down the Volume knob for 10 seconds.
2. Wait for the Input LEDs to blink 5 times.

TV Mode

Last updated: June 1, 2022 08:59. Revision #4505

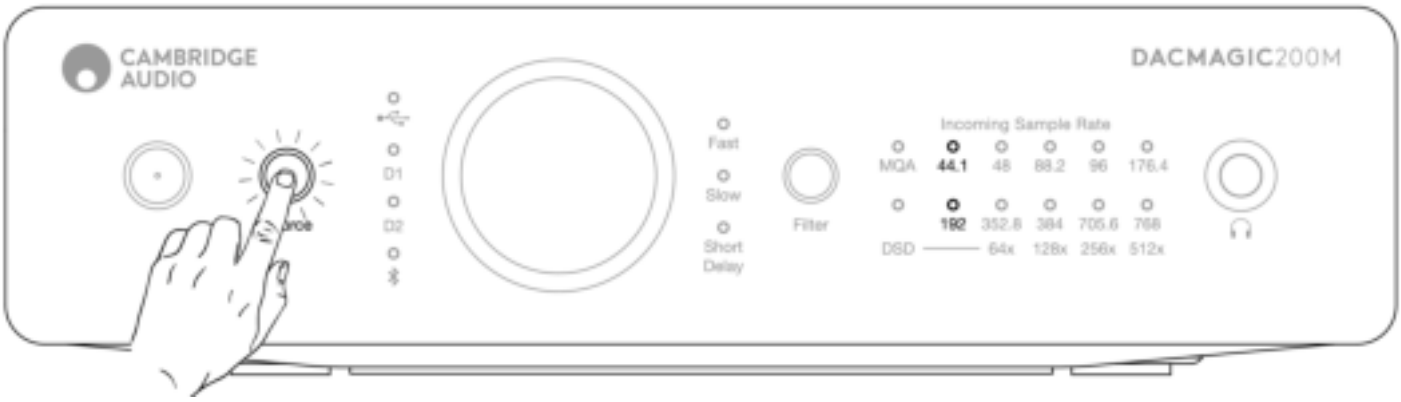
On later units, a switchable TV mode was introduced that improves the performance of the DacMagic 200M whilst using a TV as a source. This configures the DacMagic 200M with a higher bandwidth to reduce glitches and interruptions when connected to a TV.



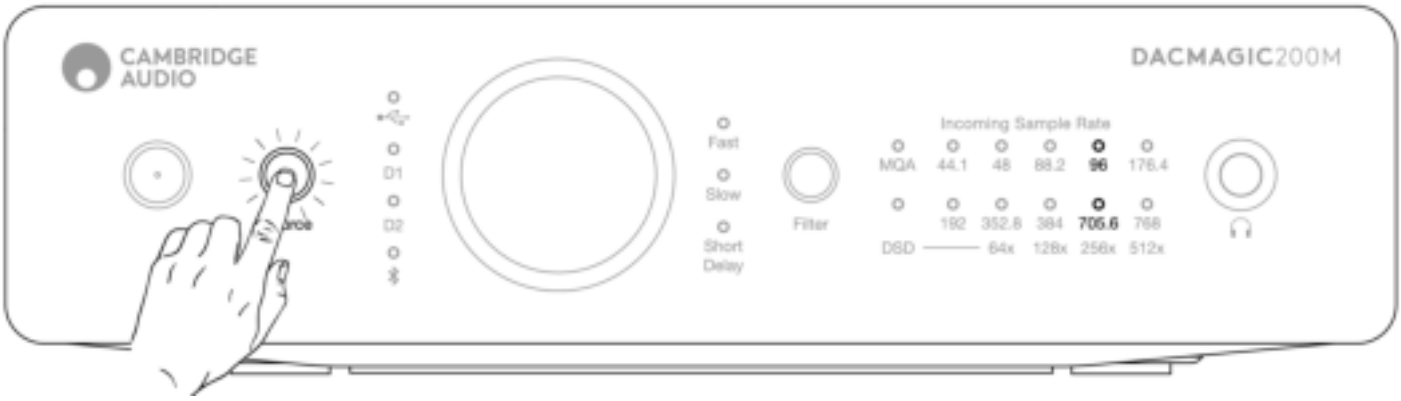
TV mode is only effective on the D2 input and can be enabled and disabled by following the instructions below.

1. With the DacMagic 200M in standby mode, long press the source button.
2. Two LEDs will light up to indicate the TV mode status.

TV mode on enabled: 44.1/192 LEDs light up



TV mode disabled: 96/705.6 LEDs light up


CAMBRIDGE
AUDIO
DACMAGIC200M
D1
D2
Fast
Slow
Short
Delay
Filter
Incoming Sample Rate
MQA
44.1
48
88.2
96
176.4
192
352.8
384
705.6
768
DSD
64x
128x
256x
512x

Frequently Asked Questions (FAQ)

Last updated: June 1, 2022 09:48. Revision #4523

Will the DacMagic 200M playback 32-bit files?

Whilst the DacMagic 200M hardware is capable of handling 32-bit audio, the USB interface is reporting the host to be only 24-bit capable.

If you attempt to play 32-bit files the USB driver will convert them to 24-bit by removing the least significant info.

How can I connect the DacMagic 200M to CXN/851N to allow the playback of MQA files?

If you own a network player such as the CXN/851N, then you may be aware that they do not contain the correct hardware to properly decode MQA files for accurate playback. However, it is possible to perform 'MQA passthrough' with these units, using them alongside the DacMagic 200M which then can 'unfold' the files completely.

You can connect the digital output of your device to one of the digital inputs on the DacMagic 200M either via TOSLINK, or S/P DIF. Please note that CXN and 851N don't support USB audio host functionality, so USB connection cannot be used in conjunction with DM200M.

MQA files will then be passed onto the Dacmagic 200M where full unfolding, and processing can take place, completely bypassing the internal DAC of the connected unit.

The MQA indicator LED on the front panel of the DacMagic 200M will indicate when, and how an MQA file is being processed.

Green:

Signifies the output as an MQA File. This indicates that a full decode is being performed by the 200M.

Blue:

Signifies MQA Studio. Approved in the studio by the artist/producer or verified by the copyright holder as accurate to the original recording. This indicates that a full decode is being performed by the 200M.

Magenta:

The MQA stream is pre-decoded and the unit is operating as a renderer; this means that the unit is outputting a stream that has been decoded by the TIDAL app. Although this is perfectly fine, a better solution is to enable the 200M to execute a full decode.

To do this, turn on MQA passthrough in your TIDAL settings to allow the DacMagic 200M to complete the unfolding process rather than the source device (e.g.: the computer).

How do I install the latest USB Audio driver for the DacMagic 200M?

To install the latest USB Audio driver for your DacMagic 200M, please follow the following steps:

1. Download the correct driver for your Windows operating system from https://techsupport.cambridgeaudio.com/hc/en-us/articles/207434895-Windows-Audio-USB-Class-2-Driver-
2. Unzip the downloaded folder, and double click on the application file to run the installer.
3. Run the installer and follow the on-screen instructions.
4. Allow the installation to progress, click next, and then finish to complete the installation.
5. Confirm the installation by opening the CA Control Panel with the DacMagic 200M connected and checking the driver version.

CA Control Panel
Status
Format
Buffer Settings
Info
About
Driver Info
Version 5.27.0
Release Build
ASIO
COMPATIBLE

Technical specifications

Last updated: June 1, 2022 09:12. Revision #4520

DIGITAL TO ANALOGUE CONVERTERS
Dual ESS ES9028Q2M DACs

DIGITAL FILTER
Selectable, Fast – Slow – Short delay

FREQUENCY RESPONSE
10Hz to 50KHz (±1dB)

THD+N @ 1KHZ 0DBFS
<0.0005% (A-Weighted)

SIGNAL TO NOISE RATIO
>115dB (A-Weighted)

CROSSTALK @ 10KHZ
< -110dB

OUTPUT IMPEDANCE
<50 Ohms (unbal), <100 Ohm (bal)

MAX. OUTPUT LEVEL (UNBALANCED)
2.1V rms (fixed or variable – user selectable)

MAX. OUTPUT LEVEL (BALANCED)
4.2V rms (fixed or variable – user selectable)

DIGITAL INPUT WORD WIDTHS SUPPORTED
16bit (Bluetooth)
16-24bit (Optical, Coaxial)
16-32bit (USB)

DIGITAL INPUT SAMPLING FREQUENCIES SUPPORTED
44.1kHz to 96kHz PCM, DoP64 (Optical)
44.1kHz to 192kHz PCM, DoP64 (Coaxial)
44.1kHz to 768kHz PCM, Native DSD 64x to 512x, DoP 64x to 256x (USB)

MQA COMPATIBILITY
Full decoding (Core + Renderer)

BLUETOOTH
v4.2, A2DP profile, SBC and AptX codecs

HEADPHONE OUTPUT THD+N
< 0.001% at 1kHz 0dBFS @ 100mW into 32 Ohm

S/N
> 115dB (A-Weighted)

MAX OUTPUT POWER
>300mW @ 32 Ohm, >65mW @ 150 Ohm

FREQUENCY RESPONSE
10Hz - 50KHz (±1dB)

RECOMMEND HEADPHONE IMPEDANCE
10 Ohm to 600 Ohm

MAX POWER CONSUMPTION

12W

COLOUR
Lunar Grey

DIMENSIONS (HXWXD)
52 x 215 x 191mm; (2.0 x 8.6 x 7.6”)

WEIGHT
1.2Kg/2.6lbs

CAMBRIDGE AUDIO

DACMAGIC 200M

QUICK START
How to configure a basic system

INBETRIEBNAHME FÜR UNGEDULDIGE
Konfigurieren eines einfachen Systems

DÉMARRAGE RAPIDE
Comment configurer un système simple

GUÍA RÁPIDA
Cómo configurar un sistema básico

AVVIO RAPIDO
Come configurare il sistema di base

KOM HURTIGT I GANG
Sådan konfigureres et almindeligt system

БЫСТРАЯ УСТАНОВКА
Как сконфигурировать основную канальную систему

クイックスタート
ベーシックシステムの設定方法

快速入门使用
如何配置一个基本系统

快速入門使用
如何配置一個基本系統

GREAT BRITISH SOUND
SINCE 1968

CAMBRIDGE AUDIO

Please check the DacMagic 200M support page at **http://techsupport.cambridgeaudio.com** for details of any new features, advice on compatibility with other products, audio formats and the most recent copy of this manual.

Besuchen Sie die Support-Seite für den DacMagic 200M unter **http://techsupport.cambridgeaudio.com** , um Details zu neuen Funktionen, Tipps zur Kompatibilität mit anderen Produkten, Audioformaten und die neueste Version dieses Handbuchs zu erhalten.

De même, pour en savoir plus sur de nouvelles fonctions, obtenir des conseils sur la compatibilité avec d'autres produits et formats audio ainsi que l'exemplaire le plus récent de ce manuel, nous vous invitons à consulter la page de support du DacMagic 200M sur le site **http://techsupport.cambridgeaudio.com**

Visite también la página de soporte para el DacMagic 200M en **http://techsupport.cambridgeaudio.com** para obtener información sobre nuevas funciones, compatibilidad con otros productos y formatos de audio, y la versión más reciente de este manual.

Consigliamo inoltre di consultare la pagina dedicata all'assistenza del dispositivo DacMagic 200M su **http://techsupport.cambridgeaudio.com** dove sono disponibili informazioni dettagliate su qualsiasi nuova funzione, consigli sulla compatibilità con altri prodotti e formati audio e la copia più aggiornata del presente manuale.

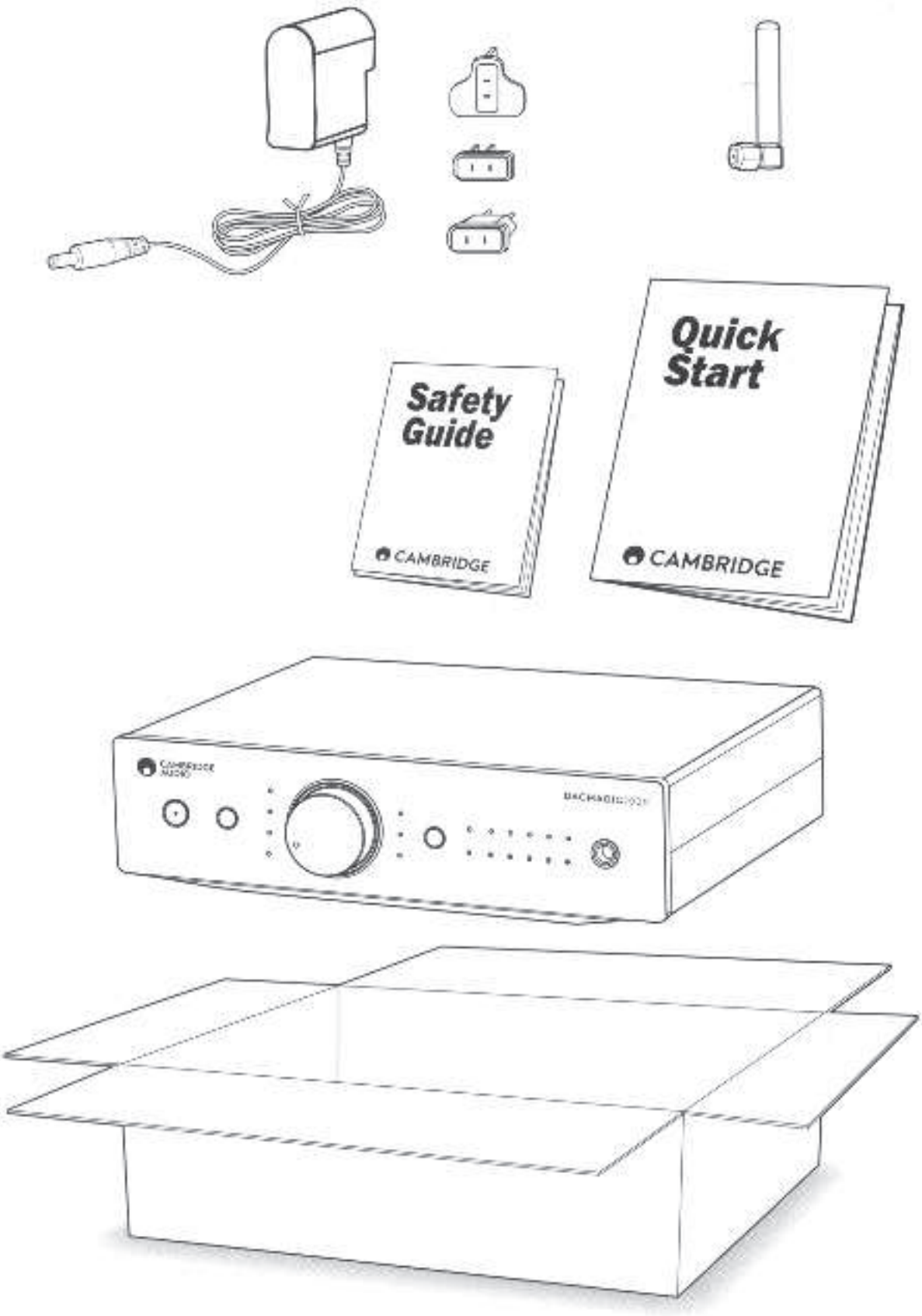
Läs även supportsidan för DacMagic 200M på **http://techsupport.cambridgeaudio.com** för information om nya funktioner, råd om kompatibilitet med andra produkter och ljudformat samt den senaste utgåvan av denna bruksanvisning.

Кроме того, сведения о новых функциях, рекомендации по совместимости данного устройства с другими изделиями и звуковыми форматами, а также последнюю редакцию настоящего руководства можно получить на странице технической поддержки проигрывателя DacMagic 200M по адресу **http://techsupport.cambridgeaudio.com**

http://techsupport.cambridgeaudio.com のDacMagic 200Mサポートページで、新機能や、他製品との互換性についての忠告（推奨）、音声フォーマット、最新版マニュアルの内容を確認してください。

请访问DacMagic 200M支持页面 **http://techsupport.cambridgeaudio.com** 获取新功能详情、与其他产品及音频格式的兼容性建议，以及本说明的最新版本。

請瀏覽 DacMagic 200M支援網頁 **http://techsupport.cambridgeaudio.com** 查閱最新功能、與其他產品兼容資訊、音訊格式和本說明書的更新版本。


Safety Guide
CAMBRIDGE
Quick Start
CAMBRIDGE

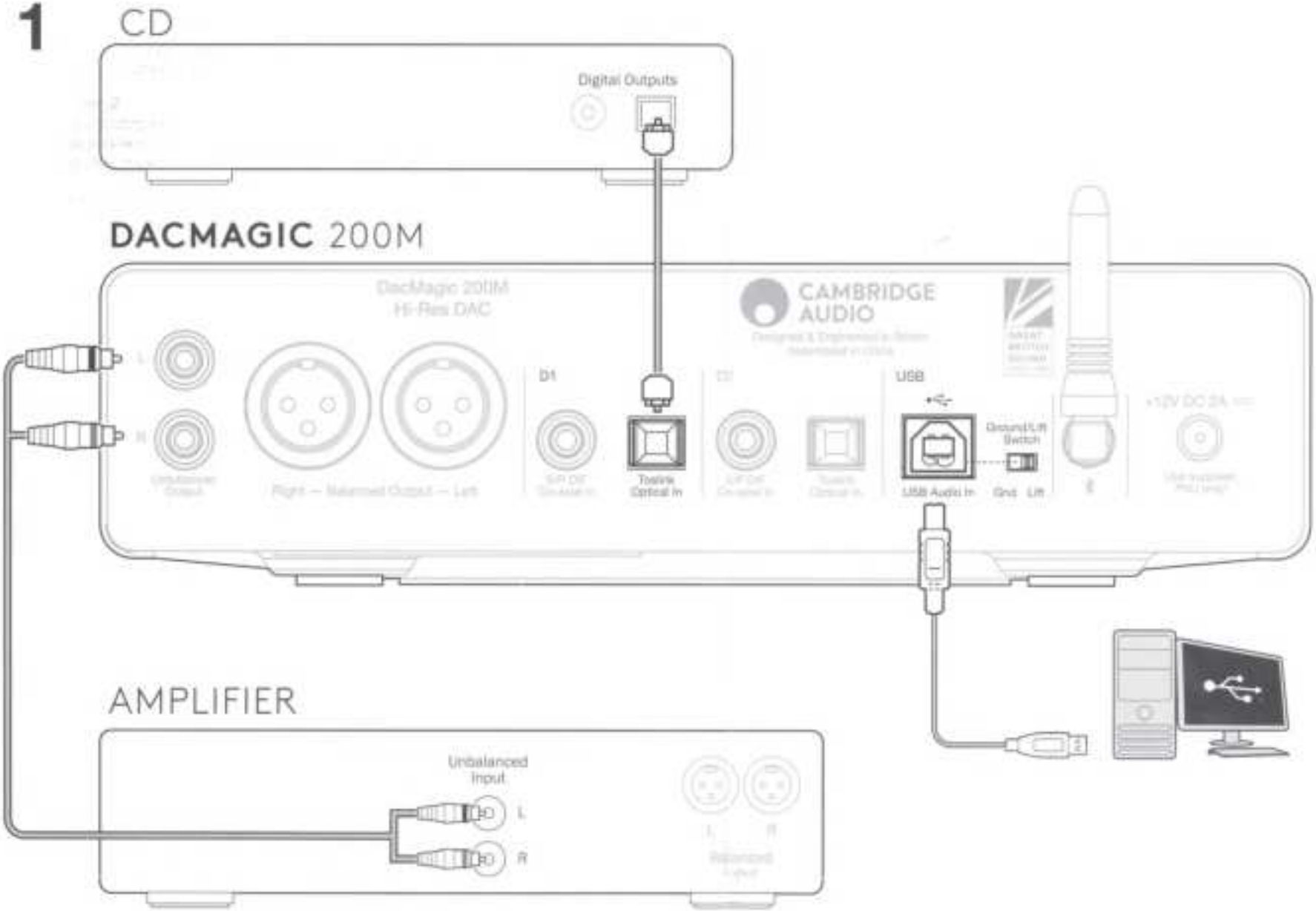
BASIC SETUP

Einrichtung | Instalación | Opsætning | ベーシックセットアップ

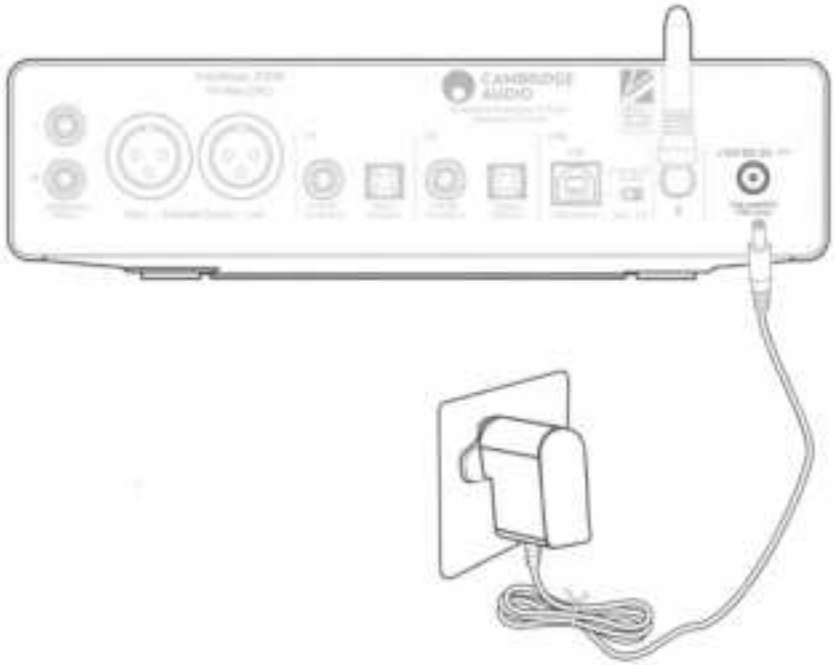
Installation | Impostazioni | Настройка | 安装

DACMAGIC 200M

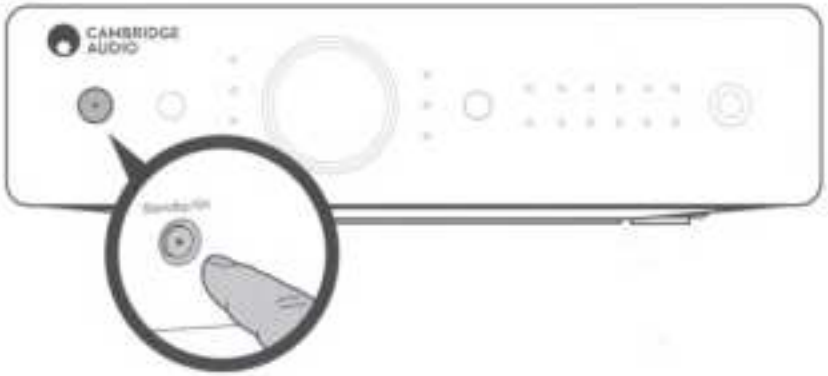
1



2



3



4

To get the best performance from your DacMagic 200M products, please read the online manual. For more information, visit our website http://www.cambridgeaudio.com/

Um die beste Leistung aus Ihren DacMagic 200M Produkten zu erhalten, benutzen Sie bitte das Online-Handbuch lesen. Für weitere Informationen, besuchen Sie unsere Website http://www.cambridgeaudio.com/

Pour obtenir les meilleures performances de vos produits DacMagic 200M, s'il vous plaît lire le manuel online. Pour plus d'informations, visitez notre site Web http://www.cambridgeaudio.com/

Para obtener el mayor rendimiento de los productos DacMagic 200M, por favor lea el manual online. Para obtener más información, visite nuestro sitio web http://www.cambridgeaudio.com/

Per ottenere le migliori prestazioni dai vostri prodotti DacMagic 200M, si prega di leggere il manuale online. Per ulteriori informazioni, visitate il nostro sito http://www.cambridgeaudio.com/

För att få bästa prestanda från dina DacMagic 200M produkter, läsa online-manualen. För mer information, besök vår hemsida http://www.cambridgeaudio.com/

Для того, чтобы получить максимальную производительность от ваших продуктов DacMagic 200M, пожалуйста, прочитайте интерактивное руководство. Для получения дополнительной информации посетите наш веб-сайт http://www.cambridgeaudio.com/

DacMagic 200M 製品が正しく動作するために、オンラインマニュアルを読んでください。
より詳しい情報はウェブサイト http://www.cambridgeaudio.com/でご確認ください。

为获得 DacMagic 200M 产品的最佳性能，请阅读网页说明书。更多信息，请访问我们的网站 http://www.cambridgeaudio.com/

為獲得 DacMagic 200M 產品的最佳性能，請閱讀網頁說明書。更多信息，請訪問我們的網站 http://www.cambridgeaudio.com/

For further information about Cambridge Audio, our products, news, reviews and support, please visit: **WWW.CAMBRIDGEAUDIO.COM**

Weitere Infos zu Cambridge Audio, unsere Produkte, Neuigkeiten, Testberichte und Kundendienst finden Sie unter: **WWW.CAMBRIDGEAUDIO.COM**

Pour obtenir des informations supplémentaires sur Cambridge Audio, nos produits, nouveautés, actualités et assistance, veuillez vous rendre sur notre site: **WWW.CAMBRIDGEAUDIO.COM**

Para obtener más información acerca de Cambridge Audio, nuestros productos, noticias, reseñas y soporte, visite: **WWW.CAMBRIDGEAUDIO.COM**

Per maggiori informazioni su Cambridge Audio e i nostri prodotti, per notizie, articoli e assistenza, visitare: **WWW.CAMBRIDGEAUDIO.COM**

Du kan finde flere oplysninger om Cambridge Audio, vores produkter, nyheder og support på: **WWW.CAMBRIDGEAUDIO.COM**

Более подробную информацию о компании Cambridge Audio, ее продуктах, новостях, обзорах и технической поддержке см. на веб-сайте: **WWW.CAMBRIDGEAUDIO.COM**

ケンブリッジオーディオについての情報や、製品、ニュース、レビュー、サポートなどの情報を詳しく知りたい方は、こちらのURL**WWW.CAMBRIDGEAUDIO.COM**を活用してください。

如欲了解剑桥音响的更多信息，我们的产品，新闻， 评论与支持，
请访问我们的网站：**WWW.CAMBRIDGEAUDIO.COM**

如欲瞭解劍橋音響的更多信息，我們的產品，新聞， 評論與支持，
請訪問我們的網站：**WWW.CAMBRIDGEAUDIO.COM**

OUR FRIENDLY SUPPORT TEAM ARE HERE TO HELP:

support@cambridgeaudio.com

UK: +44 203 514 1521
US: +1 877 357 8204
HK: +852 2499 6018

© 2020 Cambridge Audio Ltd.
Cambridge Audio is a brand of Audio Partnership Plc.
Registered office: Gallery Court, Hankey Place, London SE1 4BB. Reg. No. 2953313. All rights reserved.

CAMBRIDGEAUDIO.COM /CAMBRIDGEAUDIO

AP24497/1

CAMBRIDGE AUDIO

EN

TABLE OF CONTENTS

DacMagic 200M

Home / DacMagic 200M

This guide is designed to make installing and using this product as easy as possible. Information in this document has been carefully checked for accuracy at the time of printing; however, Cambridge Audio's policy is one of continuous improvement, therefore design and specifications are subject to change without prior notice.

This document contains proprietary information protected by copyright. All rights are reserved. No part of this manual may be reproduced by any mechanical, electronic or other means, in any form, without prior written permission of the manufacturer. All trademarks and registered trademarks are the property of their respective owners.

The Bluetooth® word mark and logos are registered trademarks owned by the Bluetooth SIG, Inc. and any use of such marks by Audio Partnership Plc is under license. Other trademarks and trade names are those of their respective owners.

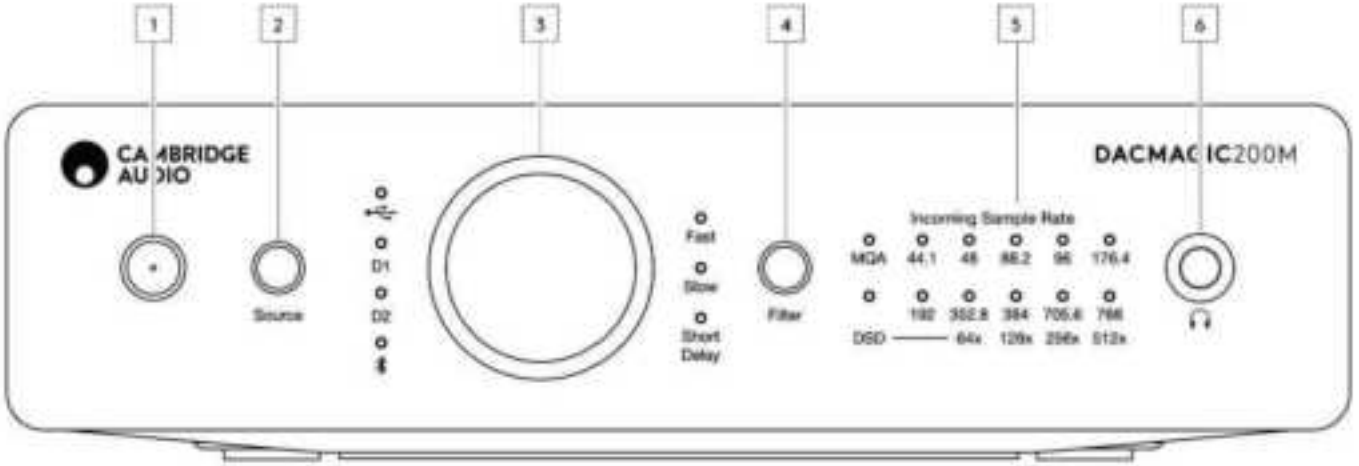
MQA and the Sound Wave Device are registered trademarks of MQA Limited © 2016.

© Copyright Cambridge Audio Ltd 2021.

Make sure you register your CA product:
WWW.CAMBRIDGEAUDIO.COM/REGISTER
For upcoming news on future products, software updates and exclusive offers.

Please check the support page at https://techsupport.cambridgeaudio.com for details of any new features, advice on compatibility with other products, audio formats and the most recent copy of this manual.

Front panel controls



1. Standby/On

2. Source

Press to select between USB, Digital Inputs 1 and 2, and Bluetooth. The corresponding LED will light up to show which source has been selected.

3. Digital volume control

4. Filter

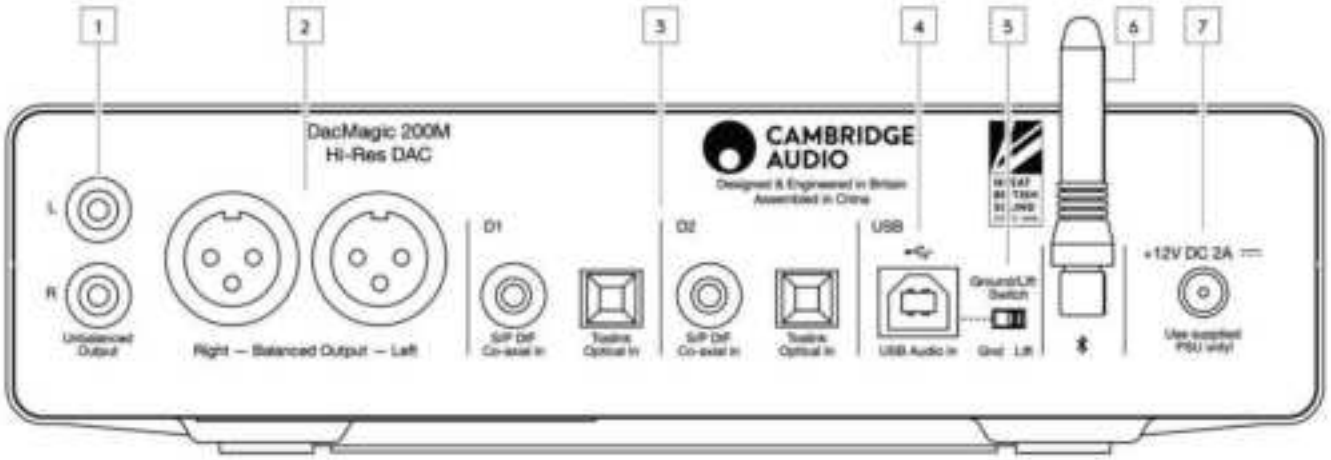
Press to select between three different filter modes: Fast, Slow or Short Delay, see later section for details. The corresponding LED will light up to show which filter has been selected.

5. Incoming sample rate

In the presence of an incoming digital stream, the relevant LED will light up to indicate the incoming digital sampling frequency. MQA has the following variants: Green means MQA, Blue means MQA studio. Magenta indicates that the unit is rendering an MQA stream or file. DSD will light up when native DSD or DoP streams are detected.

6. Headphone connection

Rear panel connections



1. Unbalanced audio outputs

2. Balanced audio outputs

3. Digital inputs 1 and 2

4. USB Audio In

For connecting to PC/MAC computers.

Note: Class 2 USB Audio only. Windows-based PCs require a Cambridge Audio USB driver to be installed before connection.

5. Ground/Lift Switch

Ground – This is the default position if no issues are experienced with USB connection. USB host and DacMagic 200M use a common ground for highest link reliability.

Lift – Lifting the USB host ground can be useful if electronic hum is heard through the speakers. The switch should otherwise be left in the Ground position.

6. Bluetooth Antenna

Used for wireless streaming Bluetooth audio directly from most phones, tablets and laptops. See Bluetooth section for details.

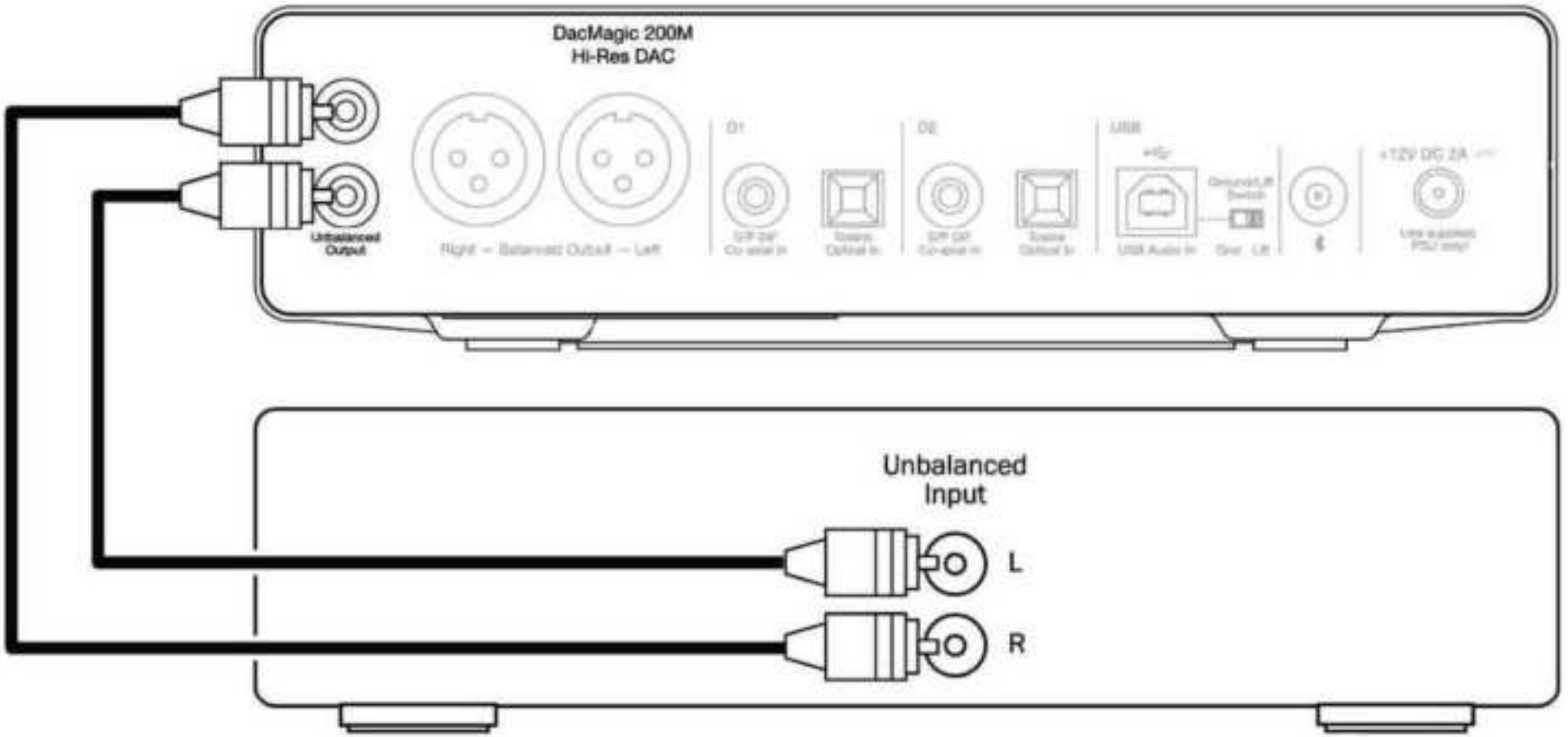
7. DC 12V 2.0A power adaptor socket.

Audio output connections

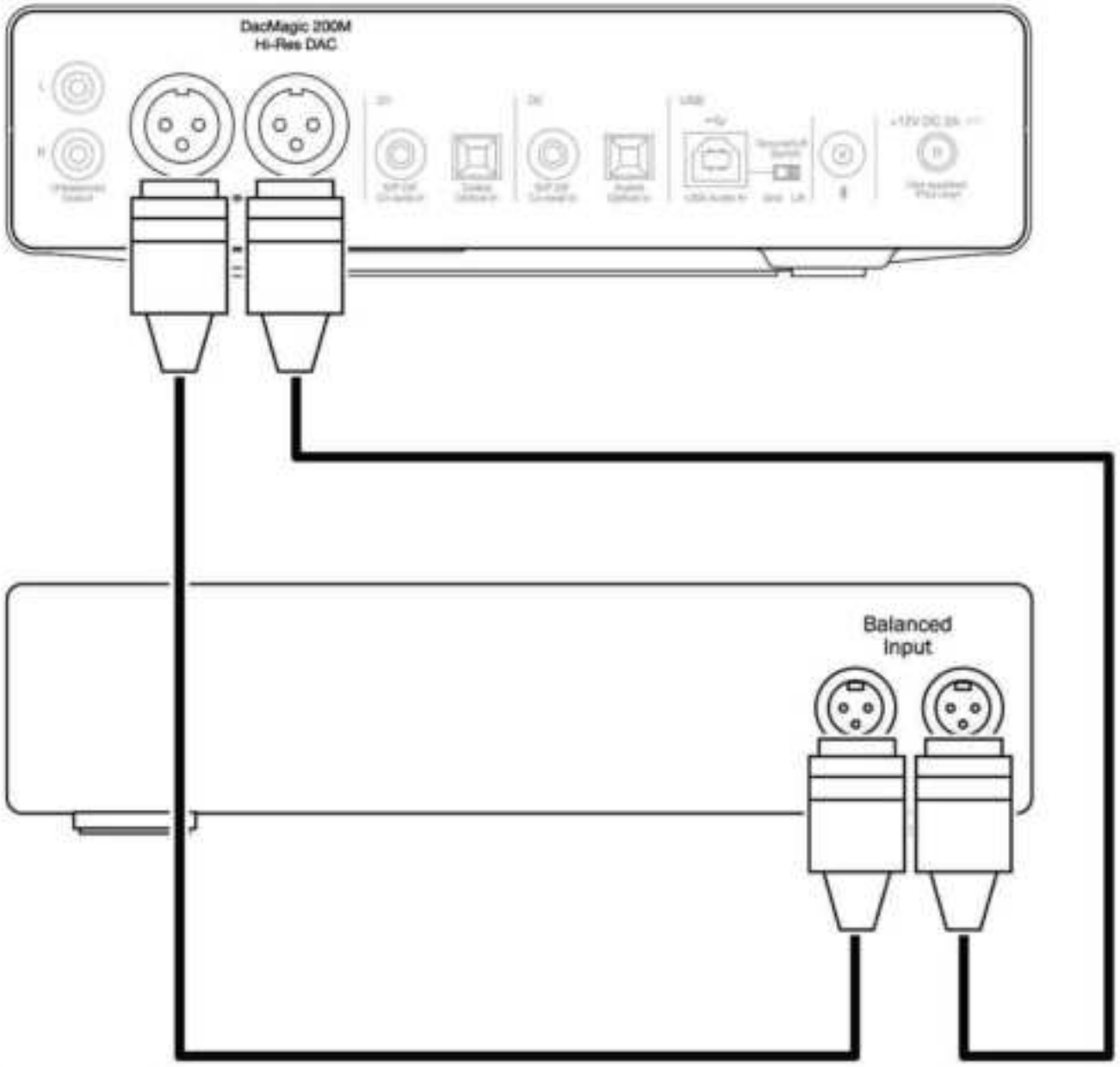
Note: Do not turn on the unit until all connections have been made.

You can use either the unbalanced (RCA/Phono) or balanced (XLR) outputs of the DacMagic.

Unbalanced connections



Balanced connections

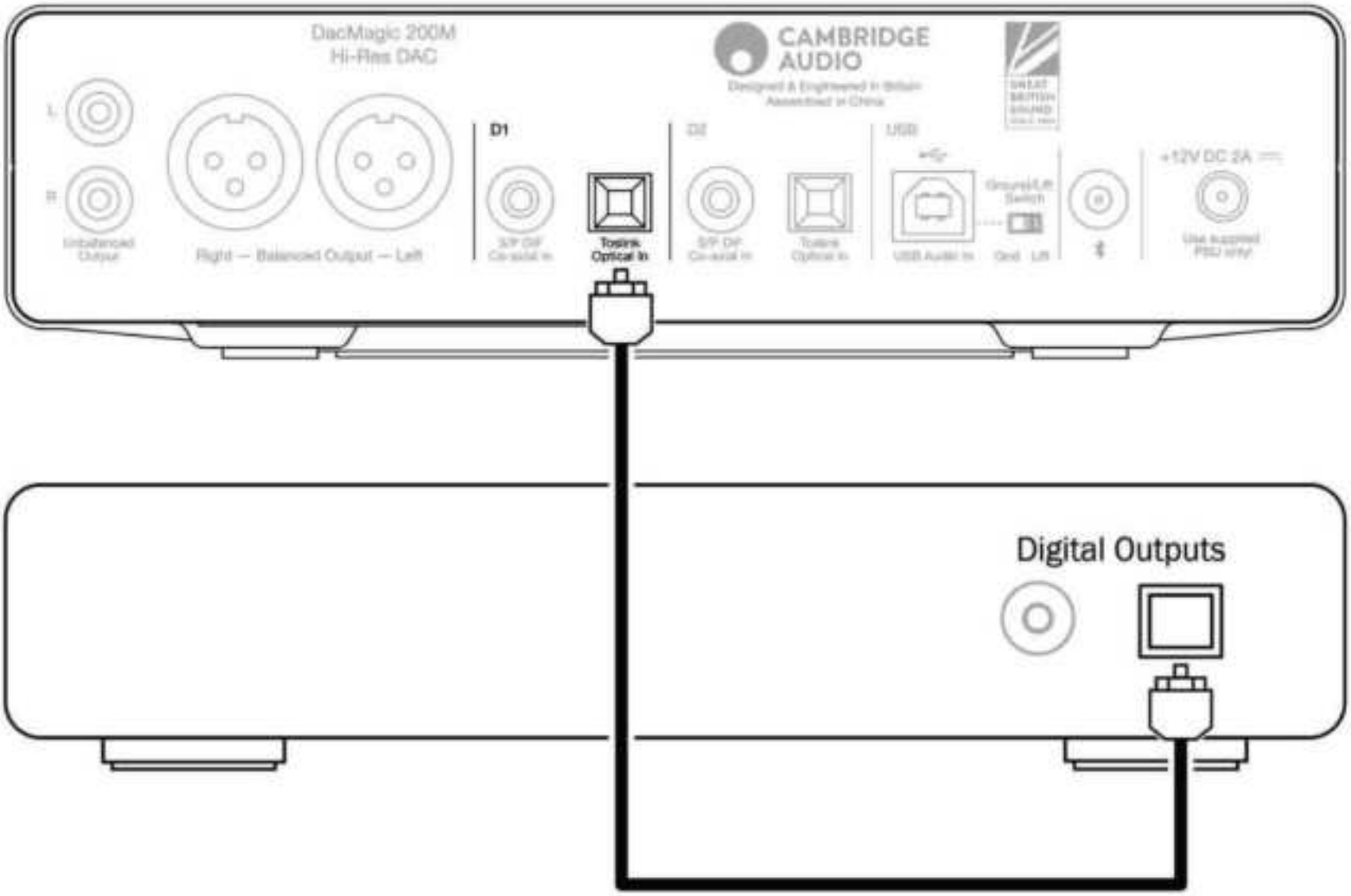


The XLR output is preferable for long connections if your amplifier features balanced XLR inputs. It can better reject noise and interference in the cable. It is possible to use the RCA phono connections and the XLR balanced connections at the same time, e.g. for connecting to different amplifiers or multi-room operations.

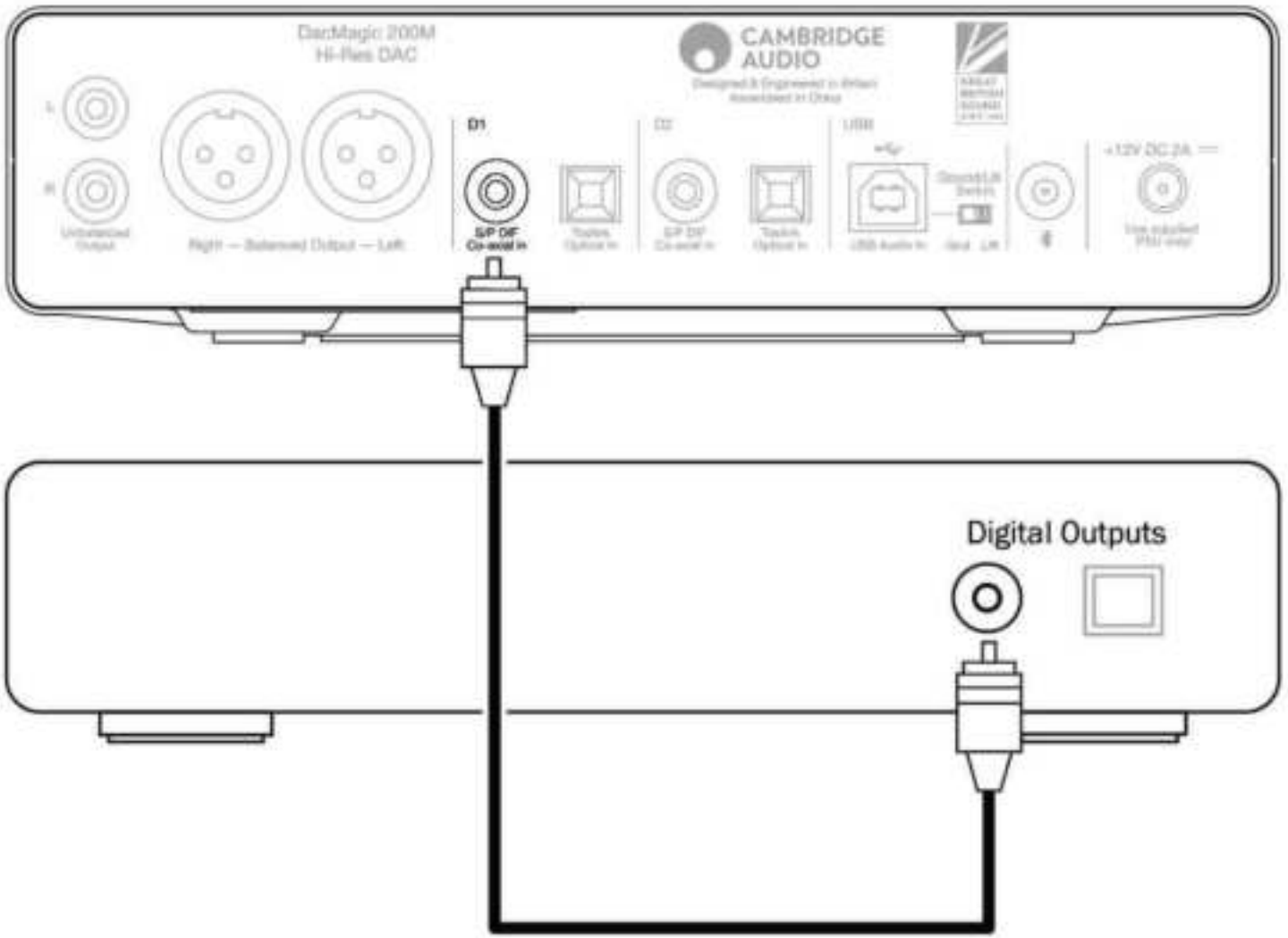
Digital audio input connections

Note: Do not turn on the unit until all connections have been made.

TOSLINK connection



Co-axial connection



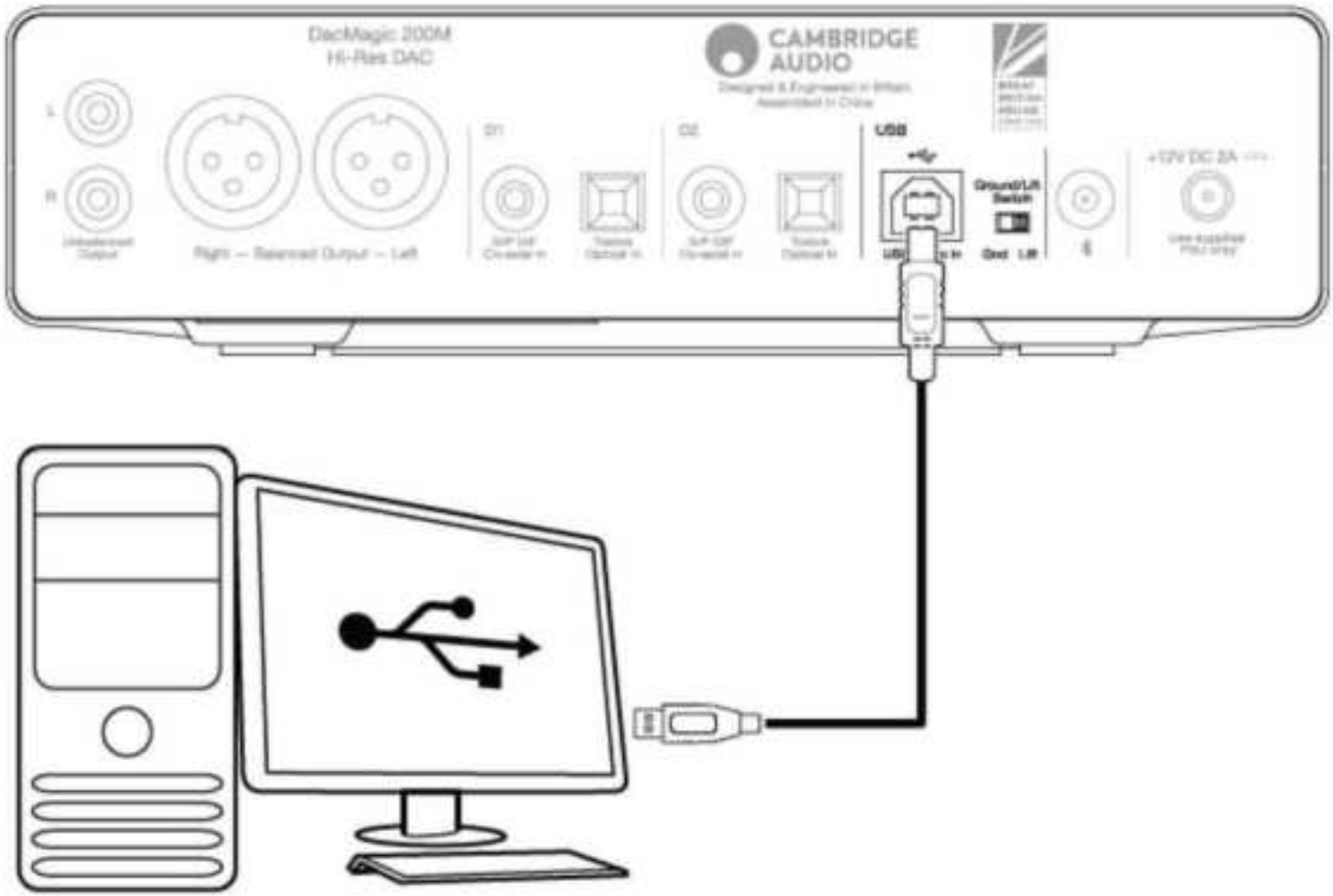
Connect your digital source to Digital Input 1 or 2. Either S/P DIF co-axial or TOSLINK optical types can be used. Optical is best to avoid ground loop noise, but some optical cables may not work correctly at 192kHz.

Important Note: Only connect one co-axial OR optical cable to each digital input. The unit will not operate if both connections are made (even if only one is active).

USB connections

Note: Do not turn on the unit until all connections have been made.

USB Connection



Class 2 USB Audio only. Windows based PCs require a Cambridge Audio USB driver to be installed before connection.

Note: Use a certified high-speed USB 2.0 'A–B' cable.

Master Quality Authenticated (MQA)

MQA is an award-winning British technology that delivers the sound of the original master recording. The master MQA file is fully authenticated and is small enough to stream or download.

Visit mqa.co.uk for more information.

DacMagic 200M includes MQA technology, which enables you to play back MQA audio files and streams, delivering the sound of the original master recording.

The MQA LED glows green or blue to indicate that the unit is decoding and playing an MQA stream or file, and denotes provenance to ensure that the sound is identical to that of the source material. It glows blue to indicate it is playing an MQA Studio file, which has either been approved in the studio by the artist/producer or has been verified by the copyright owner.

The MQA LED glows magenta to indicate that the unit is rendering an MQA stream or file. This delivers the final unfold of the MQA file.

Bluetooth

Selecting this allows the DacMagic 200M to receive wireless Bluetooth audio from most phones, tablets and laptops.

Pairing

To pair a new BT device with the DacMagic 200M you need to:

- Make sure any previously paired BT device is turned OFF (this product will auto-connect to the last paired device)
- Turn on Dac Magic 200M and select BT as a source
- Activate BT on the source device
- Scan for available devices on the source device and select 'DacMagic200M'

Unpairing

To unpair a device, you can select 'Unpair' in the phone's device list, or perform a factory reset on the DacMagic 200M, as this will delete all previously paired devices.

Note: Your device can only be paired and connected to the DacMagic 200M while the Bluetooth source is selected.

Paired LED status

Once your device is paired, below are the LED status of the type of codec that is being received.

SBC Codec is represented with a solid light.

aptX Codec is represented with a 2 seconds solid light followed by a very short light off interval.

Auto Power Down (APD)

The product will automatically switch to standby mode after inactivity of 20 minutes. To enable or disable this function, see below instruction:

Important note: Make sure that the DacMagic 200M is in the Standby state, before performing any APD functions.

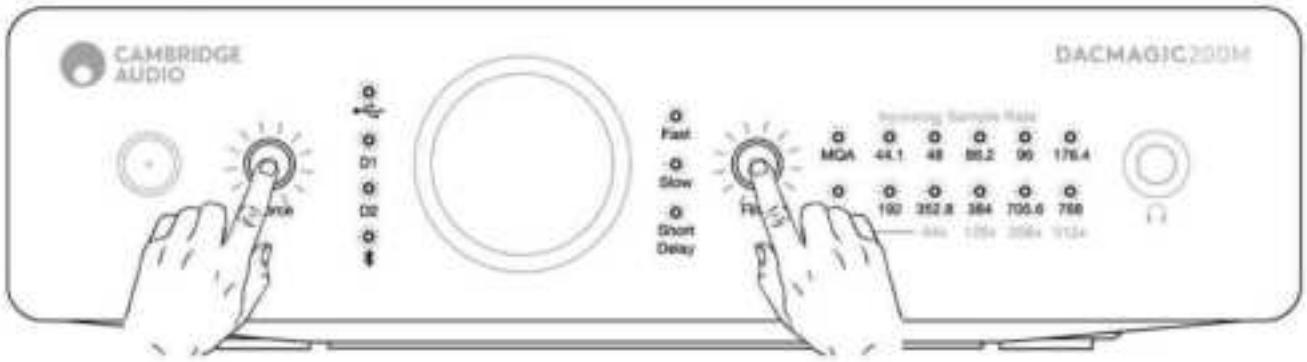
APD OFF - Press and hold down the Volume knob for 5 seconds, and wait for the Input LEDs to blink 2 times.

APD ON - Press and hold down the Volume knob for 10 seconds, and wait for the Input LEDs to blink 5 times.

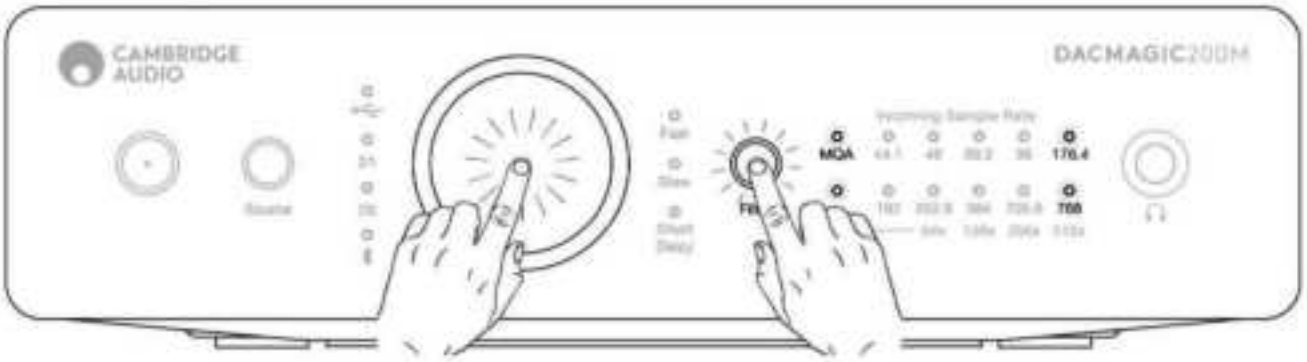
Advanced settings

Important note: Make sure that the DacMagic 200M is in the Standby state, before changing any settings.

Factory reset: All user-stored settings (input, volume and output mode) will be erased and replaced by the unit's default settings.



Short press both Source and Filter buttons. All LEDs will light in sequence, one by one.



Fixed/variable out mode is toggled by short pressing the Volume knob and the Filter button at the same time:

RCA/XLR output set to fixed mode – MQA/DSD light up for 5s.

RCA/XLR output set to variable mode – 176.4/768 LED's light up for 5s.

Note: Headphone output is always variable.

Check MCU SOFTWARE version: Double press Source button first and then double press the Filter button.

For example, if the MCU version is V2.1, then the front panel LED should be showing:

MQA LED – Blink 2 times

44.1k LED – Blink 1 time

Technical specifications

DIGITAL TO ANALOGUE CONVERTERS
Dual ESS ES9028Q2M DACs

DIGITAL FILTER
Selectable, Fast – Slow – Short delay

FREQUENCY RESPONSE
10Hz to 50KHz (±1dB)
THD+N @ 1KHZ 0DBFS
<0.0005% (A-Weighted)

SIGNAL TO NOISE RATIO
>115dB (A-Weighted)

CROSSTALK @ 10KHZ
< -110dB

OUTPUT IMPEDANCE
<50 Ohms (unbal), <100 Ohm (bal)

MAX. OUTPUT LEVEL (UNBALANCED)
2.1V rms (fixed or variable – user selectable)

MAX. OUTPUT LEVEL (BALANCED)
4.2V rms (fixed or variable – user selectable)

DIGITAL INPUT WORD WIDTHS SUPPORTED
16bit (Bluetooth)
16-24bit (Optical, Coaxial)
16-32bit (USB)

DIGITAL INPUT SAMPLING FREQUENCIES SUPPORTED
44.1kHz to 96kHz PCM, DoP64 (Optical)
44.1kHz to 192kHz PCM, DoP64 (Coaxial)
44.1kHz to 768kHz PCM, Native DSD 64x to 512x, DoP 64x to 256x (USB)

MQA COMPATIBILITY
Full decoding (Core + Renderer)

BLUETOOTH
v4.2, A2DP profile, SBC and AptX codecs

HEADPHONE OUTPUT
THD+N
< 0.001% at 1kHz 0dBFS @ 100mW into 32 Ohm
S/N
> 115dB (A-Weighted)

MAX OUTPUT POWER
>300mW @ 32 Ohm, >65mW @ 150 Ohm

FREQUENCY RESPONSE
10Hz - 50KHz (±1dB)

RECOMMEND HEADPHONE IMPEDANCE
10 Ohm to 600 Ohm

MAX POWER CONSUMPTION
12W

COLOUR
Lunar Gray

DIMENSIONS (HXWXD)
52 x 215 x 191mm; (2.0 x 8.6 x 7.6")

WEIGHT
1.2Kg/2.6lbs

Troubleshooting

There is no power
Ensure the supplied AC adaptor is connected securely to the PSU socket on the rear panel.

Ensure that the correct mains transformer is being used and that it complies with the local electrical supply.

Ensure the mains plug is fully inserted into the wall socket and is switched on.

There is no sound
Ensure that the amplifier is set correctly. Check that the interconnects are inserted correctly. Check that the correct digital input is selected (Incoming Sample Rate LED should be on).

A low hum or buzzing sound can be heard
Power cords or lighting placed near this product. Analogue inputs are not securely connected.

For USB try selecting the 'Lift' position by moving the Ground/Lift switch.

CAMBRIDGE AUDIO

IMPORTANT SAFETY INSTRUCTIONS

For your own safety please read the following important safety instructions carefully before attempting to connect this unit to the mains power supply. They will also enable you to get the best performance from and prolong the life of the unit.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarised or grounding-type plug. A polarised plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Unplug this apparatus during lightning storms or when unused for long periods of time.
13. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as: the power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE AND OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHOULD NOT BE PLACED ON THIS APPARATUS.

Batteries (battery pack or batteries installed) shall not be exposed to excessive heat such as sunshine, fire or the like.

TO COMPLETELY DISCONNECT THIS APPARATUS FROM THE AC MAINS, DISCONNECT THE POWER SUPPLY FROM THE AC RECEPTACLE.

POUR DÉCONNECTER COMPLÈTEMENT L'APPAREIL DU RÉSEAU D'ALIMENTATION, DÉCONNECTER LE CORDON D'ALIMENTATION DE LA PRISE MURALE.

THE MAINS PLUG OF THE POWER SUPPLY SHALL REMAIN READILY ACCESSIBLE. LA PRISE DU RÉSEAU D'ALIMENTATION DOIT DEMEURER AISÉMENT ACCESSIBLE.

USE OF THIS APPARATUS IN TROPICAL CLIMATES THE EQUIPMENT SHALL BE USED AT MAXIMUM 45 DEGREE C AMBIENT TEMPERATURE.

Only use the power supply supplied with this unit.

WARNING: Please refer the information on exterior bottom enclosure for electrical and safety information before installing or operating the apparatus.

IEEE SYMBOL

The crossed-out wheeled bin or the lightning mark symbol for indicating separate collection for electrical and electronic equipment. This product contains electrical and electronic equipment which should be reused, recycled or recovered and should not be disposed of with unsorted waste. Please contact your local authority for details about your nearest designated collection point.

CE MARK

The product complies with European Low Voltage (2014/35/EU), Electromagnetic Compatibility (2014/30/EU) and Environmentally Friendly Design of Energy-related Products (2009/125/EC) Directives when used and installed according to this owner's manual. For optimum performance and safety, please use this product in the following manner and do not attempt to modify it in a way not described in this manual.

RCM (REGULATORY COMPLIANCE MARK)

This product meets Australia, New Zealand Safety, EMC and Radio Communications requirements of the EMC and R&TTE.

VENTILATION

IMPORTANT — Any unit will become hot when in use, do not place subject matter on top of unit when in use. Do not place in an enclosed area such as a bookcase or in a cabinet without sufficient ventilation.

Allow the unit ample space (a minimum of 10 cm) around its ventilation grille. If the apparatus ceases all functioning, disconnect from the mains supply and contact your retailer for details.

Please ensure that there is adequate ventilation (at least 10cm) clearance on the four sides and the top. Do not put any material on top of the unit. Do not place on or cover other soft surfaces like rugs and carpets and do not place in small spaces like bookcases and built-in units which could cut off ventilation (ventilation openings).

POSITIONING

Choose the installation location carefully. Do not place it in direct sunlight or close to a source of heat. Do not place it where excessive dust, cold, vibration, moisture or humidity are present. Do not block the ventilation holes on the unit. Also avoid placing objects on the unit.

This unit must be installed on a sturdy, level surface. Do not place it on a soft bed such as a comforter or a blanket. Do not place it on an unstable surface or shelf. The unit may fall, causing serious injury to a child or adult, as well as serious damage to the product. Do not place other equipment on top of this unit.

Due to any magnetic fields, cordless or VHF TVs should not be located where they could be susceptible interference.

Avoid placing audio components directly on a glass surface or a surface of a similar material since they may not be suitable for some wood and lacquer or polished soft surfaces over time.

WARNING: Do not continue using the external power supply if it is broken.

POWER SOURCES

This unit should be operated only from the type of power source indicated on the rating plate. If you are not sure of the type of power supply to your home, consult your product dealer or local power company.

If you do not intend to use this unit for a long period of time, unplug it from the mains socket.

OVERLOADING

Do not overload wall sockets or extension cords as this can result in a risk of fire or electric shock. Overloaded AC power, extension cords, frayed power cords, damaged or cracked wire insulation and broken plugs are dangerous. They may result in a shock or fire hazard.

So long as power cord is sound, never mind security. To prevent loss and wear, do not handle the disconnect cable with the power cord or excess force.

CLEANING

To clean this unit, wipe its case with a dry, soft lint cloth. Do not use any cleaning fluids containing alcohol, ammonia or abrasives. Do not spray an aerosol at or near the unit.

BATTERY DISPOSAL

Batteries may contain substances harmful to the environment. Please dispose of any discharged batteries with due consideration and in accordance with local environmental recycling guidelines.

CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.

SERVICING

There are no user serviceable parts inside. Refer service to repair personnel or accredited dealers. Do not try to repair the unit yourself as you may invalidate your warranty. Unauthorised repairs or attempts to repair the unit may result in a forfeiture of future warranty rights.

FCC ID:YKBCAU77-227 IC:20859A-CAU77227

FEDERAL COMMUNICATIONS COMMISSION

Supplier's declaration of conformity (SDoC)

Equipment: IS Net DAC
Model: DigiMagic (OEM)
Trademark: Cambridge Audio

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The responsible party is UK

Company name: Audio Partnership LLC
Address: 1013 N Milwaukee Ave, Chicago, IL 60647
Phone: (312) 850-4917

Legal Representative Person: Gregg Crosse

Signature:

Electronic Notification: No Battery Replacement Required.

This device shall not cause harmful interference and must accept any interference received, including interference that may cause undesired operation of the device.

FEDERAL COMMUNICATIONS COMMISSION NOTICE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the distance between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

RF Exposure Statement

To maintain compliance with FCC's RF Exposure guidelines, this equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body. Use only the supplied antenna.

MODIFICATIONS

The FCC requires the user to be notified that any changes or modifications to this device that are not expressly approved by Cambridge Audio may void the user's authority to operate the equipment.

CANADA INDUSTRY CANADA (IC)

This Class B digital apparatus complies with Canadian standard ICES-003.

This device complies with Industry Canada License-exempt RSS standard(s). Operation is subject to the following two conditions:

(1) this device may not cause interference and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

This equipment complies with RSS-102 of the Industry Canada rules for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

INDUSTRIE CANADA (IC)

Cet appareil numérique de Classe B est conforme à la norme canadienne ICES-003.

Cet appareil est conforme aux normes RSS standards de licence d'Industrie Canada. Son fonctionnement est soumis aux deux conditions suivantes:

(1) cet appareil ne doit pas provoquer d'interférences nuisibles et (2) cet appareil doit accepter toute interférence reçue, y compris des interférences qui peuvent provoquer un fonctionnement indésirable.

Cet équipement est conforme à la norme RSS-102 relative aux limites d'exposition aux radiofréquences dans un environnement non contrôlé. Cet équipement doit être installé et utilisé à une distance minimale de 20 cm entre le radiateur et votre corps.

L'émetteur ne doit pas être co-placé ni fonctionner en conjonction avec une autre antenne ou transmetteur.

EUROPE EU RF(R&TTE) UNION NOTICE

Hereby, Audio Partnership PLC declares that this product is in compliance with Directive 2014/53/EU. And full text of the EU declaration of conformity is available at the following internet address: https://www.cambridgeaudio.com/EU/DoC

Bluetooth Radio Frequency: 2.402GHz to 2.480GHz, Max. transmitted power: 10dBm.

© 2020 Cambridge Audio Ltd.

Cambridge Audio is a trade name of Audio Partnership Plc.
Registered office: Gallows Corner, Harston Mill,
Harston CB22 7GG, England. All rights reserved.
www.cambridgeaudio.com

AP34xxx