DAC 2.10
USER MANUAL

CANOR DAC 2.10 Tube D/A Converter User Manual
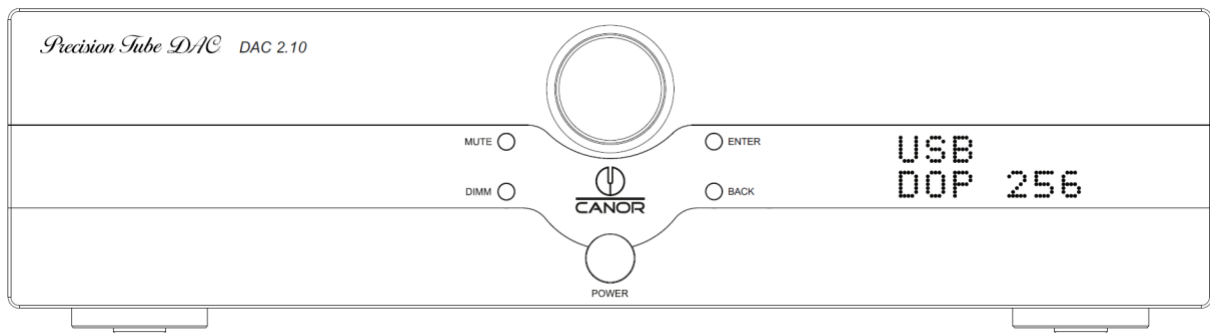
Dear Music Lover,
thank you for purchasing our CANOR DAC 2.10 Tube D/A Converter. To preserve and maintain the best characteristics of your D/A Converter, we recommend you carefully read the following lines.

Canor DAC 2.10 includes MQA (Master Quality Authenticated) technology which enables you to playback MQA audio files and delivering the sound of the original master recording.
Visit mqa.co.uk for more information.

OPERATING INSTRUCTIONS
Before placing your new appliance into operation please read these operating instructions carefully.

1. Read the instructions – all safety information and instructions should be read before using the appliance.
2. Please keep these operating instructions for future reference.
3. Follow the instructions – all the security and user instructions should be followed.
4. Water and moisture – DAC 2.10 should not be placed near water, such as baths, swimming pools, kitchen sinks, etc.
5. Accessories – do not use accessories not recommended by the manufacturer.
6. Location – do not place equipment on unstable surfaces. The device may fall, which may cause serious injuries to children or adults, as well as damage to the appliance. Use only pads or stands recommended by the manufacturer or sold by dealers simultaneously with this device. Any location of the device should be in accordance with the manufacturer's instructions and only accessories recommended by the manufacturer should be used.
7. Ventilation – the appliance should be placed in a place that guarantees proper airflow. This means that it must not lie on the sofa or upholstered furniture. When in operation it must not be covered. It would then prevent proper airflow around the vent holes of the device.
8. Heat – ensure the appliance is away from any sources of heat (direct sunlight, electric stove, etc.). The distance from the rear wall of the device may not be less than 20 cm, and 20 cm above the area of the compact disc player may not be an obstacle. Alongside the equipment should be ensured min. distance of 20 cm from other objects.
9. Power source – the device must be connected only to a power supply, for which it is designed.
10. Power cord – it is necessary to pay particular attention to a power cord, it must be positioned to avoid stepping on it and to ensure it is protected against mechanical damage.
11. The longer the period during which you do not use the DAC 2.10 you should disconnect the power cord from the main supply, or at least turn off the main power switch located on the back of the device.
12. Subjects containing liquid – do not place these objects (vases, flowerpots), so that they can fall on the device, possibly a fluid could leak out of them onto the appliance.
13. Damage requiring service – equipment should be repaired only by qualified service once:
    a. The power cord is damaged.
    b. The device fell into water or was poured.
    c. The device was exposed to rain.
    d. The device works incorrectly.
    e. The device fell to the ground or is otherwise mechanically damaged.
14. Repairs – all repairs must be entrusted to qualified service.
15. General warning – use the device only following the instructions.

The manufacturer declines any liability should these safety measures not be observed. To help you avoid an electric shock, do not expose the DAC 2.10 to rain or moisture!

DELIVERY CONTENT
- Shipping packaging
- CANOR DAC 2.10 D/A converter
- Remote control (CR2032 battery required)
- Power cord
- Textile gloves
- CANOR DAC 2.10 User manual

CAUTION!

The Waste Electrical and Electronic Equipment Directive -Regulation of the European Union 2002 / 96 / EC governing the issue of separate waste collection.

This device may not be disposed of in unsorted municipal waste. Devolve the appliance into a collection center for recycling and disposal of electrical and electronic equipment waste. Correct disposal of waste does not cause negative impacts on the environment and human health. You will thus contribute to the protection of the environment.

REMOTE CONTROL

Do not expose the sensors of your remote control to direct sunlight or to other strong light sources. Remote control operates at an angle of 60 ° to about 5 meters. Aim your remote control at the sensor on the device. There may not be any obstacles in the way between the sensor and remote control. If the appliance is placed behind glass, it may result in shortening the operating distance of a remote control (according to the color and strength of the glass). The keys on the remote control have the same function as the keys at the front panel of the device.

REMOTE CONTROL BUTTONS

- **ON / OFF** – Turning on and off DAC 2.10.
- **INPUT -** – Decrement selected input.
- **INPUT +** – Increment selected input.
- **FILTER -** –Decrement digital filter or enable / disable analog filter in DSD mode.
- **FILTER +** – Increment digital filter or enable / disable analog filter in DSD mode.
- **UPSAMPLE** – Enable/disable the up-sampling function.
- **RECLOCK** – Enable/disable the re-clocking function.
- **THEME** – Switch display theme.
- **OK** – Enter the menu / submenu or activate the selected item.
- **ARROW UP** – Enter the menu or move up in the menu.
- **ARROW DOWN** – Enter the menu or move down in the menu.
- **ARROW LEFT** – Enter the menu / submenu or activate the selected item.
- **ARROW RIGHT** – Return from the previous submenu or return to the main view.
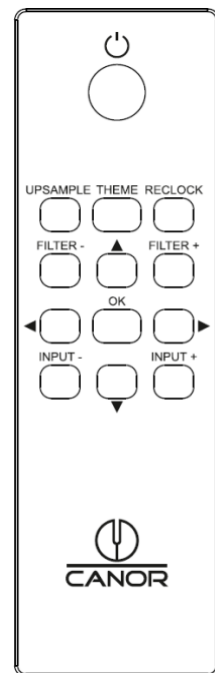
FRONT PANEL

- **MUTE** – Mute / unmute audio output.
- **DIMMER** – Set the desired brightness of the display.
- **ENTER** – Enter the menu / submenu or activate the selected item.
- **BACK** – Return from the previous submenu or return to the main view.
- **ENCODER KNOB** – Rotate to browse and select item or push encoder to enter to the menu / submenu or activate the selected item.

CANOR

BACK PANEL

- **POWER** – Mains power inlet / mains switch with mains fuse.
- **INPUT** – 4 x Digital Input—1 x Coaxial, 2 x Optical, 1 x AES / EBU, 1 x USB.
- **OUTPUT** – Analog XLR Balanced Outputs and Unbalanced RCA

DAC 2.10 MENU

- **INPUTS** – Direct access to the inputs

AUDIO SETTINGS
- **RECLOCKING** – Technology that synchronizes digital audio signals with the master clock.
- **UPSAMPLING** – All data from digital inputs are up-sampled to 352,8 / 384 kHz sampling frequency.
- **ANALOG FILTER** – Enable / disable 25 kHz low pass filter or automatically enable low pass filter for DSD64.

DIGITAL FILTERS

Filter	Filter name	Remarks
1	Linear Phase Fast	Pre and post echo
2	Linear Phase Slow	Minimal echo, original sound
3	Minimum Phase Fast	No pre-echo, more post echo than linear phase filters
4	Minimum Phase Slow	No pre-echo, more post echo,
5	Apodizing Fast	Pre and post echo
6	Corrected Phase Fast	Low pre-echo, more post echo than filters 1,2 and 5
7	Brick Wall	Pre and post echo, no phase shift
8	Oversampling Bypass	The oversampling FIR filter is bypassed, and source data are up sampled to 352,8 / 384 kHz

Note: When playing MQA files, the user´s filter setting is not active, the MQA filter is always used. The MQA filter is custom-made for our DAC to ensure the best possible MQA experience.

SYSTEM SETTINGS
- **THEME** – Switch between Classic or Simple themes.
- **BRIGHTNESS** – Adjust display brightness or turn it off.
- **FACTORY RESET** – Set the device to default settings.
- **ABOUT** – License and software versions information

SPECIFICATIONS

Frequency Response at Fs = 192 kHz	- /+ 0,03 dB at 20 Hz to 20 kHz
	- 0,2 dB / + 0,03 at 10 Hz to 50 kHz

THD 20Hz to 20kHz at 0 dBFS	< 0.01 %
THD+N 20Hz to 20kHz at 0 dBFS	< 0,01 %
THD+N 1kHz at 0 dBFS	> 0.008 %
THD+N 1kHz at - 3 dBFS	> 0.006 %
THD+N 1kHz at - 6 dBFS	> 0.004 %

XLR output

Output voltage at 0 dBFS	4 VRMS
SNR 20 Hz to 20 kHz at 0 dBFS	< 108 dB
SNR A-wt. 20 Hz to 20 kHz at 0 dBFS	< 111 dB
Crosstalk 10 kHz at 0 dBFS	> - 117 dB

RCA output

Output Voltage at 0 dBFS	2 VRMS
SNR 20 Hz to 20kHz at 0 dBFS	< 95 dB
SNR A-wt. 20 Hz to 20 kHz at 0 dBFS	< 98 dB
Crosstalk 10 kHz at 0 dBFS	> - 104 dB

Analog outputs

Analog balanced output	2 x XLR connector
Analog unbalanced output	2 x RCA connector
Output buffer	Balanced tube
Tubes	4 x 6922

Digital Inputs

Supported PCM bit depth	16 / 24 bit
Supported PCM sampling rates	44,1 k / 48 k / 88,2 k / 96 k / 176,4 k / 192 k / 352,8 k / 384 k / 705,6 k / 768 kHz
DSD over PCM support	DoP DSD64/ 128 / 256
DSD Native support	Native DSD64 / 128 / 256 / 512
MQA support	Full MQA decoding by hardware from all digital inputs
USB data transfer	Asynchronous USB 2.0 Audio Class 2 standard
S/PDIF Optical input	2 x (24-bit / 192 kHz)
S/PDIF Coaxial input	1 x (24-bit / 192 kHz)
AES/EBU input	1 x (24-bit / 192 kHz balanced)
Digital to Analogue converter	2 x ESS9038Q2M (dual mono)
Filter settings	8 x Digital Filter

Display	TFT module, IPS technology
Power consumption	38 W, < 0,5 W in standby
Power supply	230 V, 50 Hz / 44 VA
Dimensions W x H x D	435 x 120 x 420 mm
Weight (Net)	12 kg
Weight (Gross)	17 kg

CANOR

DAC 2.10 MAINTENANCE

For cleaning use a dry piece of fine linen cloth. In case of large pollution, moisturize the cloth with a detergent solution. Do not use ragged materials (sand for washing dishes), alcohol, gasoline, dissolvent or other chemicals!

WARRANTY CONDITIONS

The warranty period for this appliance is 24 months, calculated from the date of purchase. The warranty applies to the first owner of the product only. Moreover, the warranty only applies if an original proof of purchase and an acknowledged certificate of warranty can be furnished. The warranty covers defects in materials and labor but does not cover misuse, unauthorized modifications, and external causes such as acts of nature. The manufacturer accepts no responsibility for damage caused by not adhering to these instructions for use. Modification or changes to any part of the product by unauthorized persons release the manufacturer from any liability over and above the lawful rights of the customer.

Caution! There are no user-serviceable parts inside your CANOR DAC 2.10 tube D/A converter!

SERVICE

Should you encounter a problem that you are not able to alleviate or identify, please contact your distributor for further advice.

COPYRIGHT, TRADEMARKS

The information was correct at the time of going to press. The manufacturer reserves the right to make changes to the technical specification without prior notice as deemed necessary to uphold the ongoing process of technical development.

Windows®, Windows 7®, Windows 8®, and Windows 10® are trademarks of the Microsoft group of companies. Mac® and Mac OS® are trademarks of Apple Inc., registered in the U.S. and other countries. TOSlink® is a registered trademark of Toshiba corporation. DSD and the DSD logo are trademarks of Sony Corporation. MQA and the Sound Wave Device are registered trademarks of MQA Limited.© 2016

Waste from Electrical and Electronic Equipment (WEEE): This directive mandates the collection and recycling of electronics and component materials to reduce the amount going to landfills. Outside North America, when the user decides to discard this product, it must be sent to a separate collection facility for recycling. Please contact your point of purchase for more details.

DECLARATION OF CONFORMITY

We, declare under our responsibility that the product is in conformity with the provisions of Directives:
2014/35/EU including amendments
2014/30/EU including amendments
2014/53/EU including amendments

The following harmonized standards were applied:
Health: EN62479:2010
Safety: EN60950-1:2006+A11:2009+A1:2010+A12:2011+A2:2013, EN62368-1:2014/A11:2017, EN61558-1:2005/A1:2009, EN61558-2-16:2009/A1:2013
EMC: EN301489-1 V2.2.0: 2017-03, EN301489-17 V3.2.0:2017-03, EN55032:2015, EN55035:2017, EN61000-3-2:2014, EN61000-3-3:2013
Radio Spectrum: EN300328 V2.1.1 (2016-11)

EUROPEAN COMMUNITY DIRECTIVES

This product is designed and manufactured to comply with existing laws of the European Community.