MATRIX

www.matrix-digi.com

User Guide
用户手册

QUATTRO AUDIO SYSTEM
QUATTRO 桌面音频系统

ASRC 192KHz 24bit

Class A

Thank you for becoming a member of MATRIX users.

Please take a few minutes to read this manual booklet carefully before installing and using the product.

And enjoy the infinite auditory pleasure brought to you by the superb performance of MATRIX QUATTRO.

Be sure to keep all user documentation handy for future reference, including the Model No. & Serial No.	CAUTION: For the prevention from fire and electric shock, do not let the appliance drench with rain and get wet.

MATRIX QUATTRO is a set of high-quality desktop audio playback system through the meticulously designed.

QUATTRO audio system includes a QUATTRO DAC and a QUATTRO AMP with the same exterior design and dimensions, both can simultaneously combination worked and also be used independently.

QUATTRO DAC is a multi-functional D/A converter, equipped with high-speed digital signal processing technology and a variety of input and output ports, which fit different kinds of devices.

QUATTRO AMP is a balanced / unbalanced headphone amplifier with four fully independent channel amplifiers. It has the function of headphone detection peculiar to MATRIX products, which is designed for balanced drive, but also compatible with non-equilibrium headphones.

Elaborate circuit design and high-quality components elevate QUATTRO audio system's professional playback effect to a new level.

QUATTRO DAC
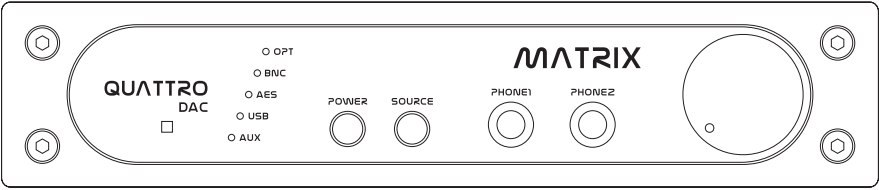
CONTENTS

● FEATURES

MATRIX QUATTRO DAC has a fully balanced structure. It is equipped with top AD1853 24bit/192kHz D / A conversion units and super-sampling units inside the ASRC. With **MATRIX**'s unique CPLD algorithm, QUATTRO DAC can effectively reduce the input signal jitter. Four-layer high-speed signal ESD protects the PCB routing of QUATTRO DAC. Sophisticated designs give QUATTRO the following features to explore every detail of the music, and provide you with a tactile sensation of its sound performance to fully meet your demands for a high-quality Hi-Fi:

● Ultra-low shaking-rate digital receiver chips and an independent clock;
● USB / AES / EBU / optical / coaxial / analog input, Automatic input signal detection;
● USB supports up to 24bit/96kHz sampling input, and the other ports support up to 24bit/192kHz;
● Automatic de-emphasis control of 32k, 44.1k, 48k, 96k sampling rate;
● **MATRIX**'s unique Internal XILINX high-speed CPLD algorithm, with ASRC sampling rate increase circuit, can effectively reduce the input signal jitter;
● The balanced and unbalanced analog outputs can be connected to different interfaces;
● High-quality LME49600 headphone amplifier can easily drive any headphones of up to 600 Ω;
● Digital input ports equipped with Electro-Static Discharge protection and transformer isolation protection;
● Analog output with ultra-low distortion operational amplifiers dedicated to get the best signal playback;
● High-quality toroidal power transformer for NORATEL audio, An independent multi-level power supply for each circuit unit;
● Superb NEUTRIK audio connectors;
● Outstanding ALPS volume potentiometer;
● Infrared remote-control.

● INTRODUCTION

Please put **MATRIX** QUATTRO in a well-ventilated place away from heat source, and avoid dust accumulation and excessive vibration.
For the prevention from fire, please reserve some secure space around QUATTRO according to the following requirements:
● At least 5cm on both sides and its back.
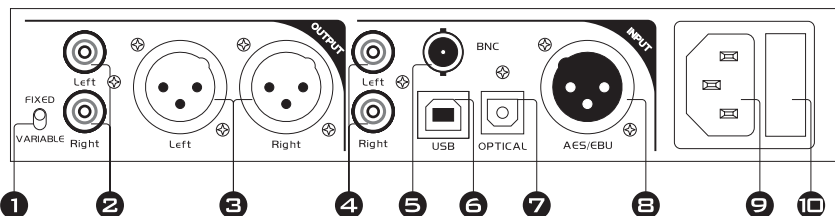● At least 10cm from its top.

Do not stack QUATTRO with other equipments which generate lots of heat, otherwise it may lead to the decline of QUATTRO's working stability. It may even damage QUATTRO, or cause other serious accidents.

● FRONT PANEL
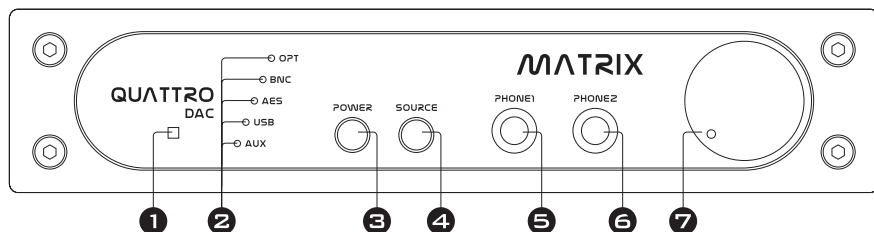
1 Remote control receiver
2 Input channel indicators
3 Power on/off
4 Input channel switch

5 Headphone jack 1 (output associated)
6 Headphone jack 2
7 Volume

● BACK PANEL

1 Gain control
2 RCA analog output
3 XLR analog output
4 RCA analog input
5 Coaxial input

6 USB
7 Optical input
8 AES/EBU
9 Power
10 Fuse

● REMOTE CONTROL

1 Power

2 Input channel switch

3 Mute

4 Volume up

5 Volume down
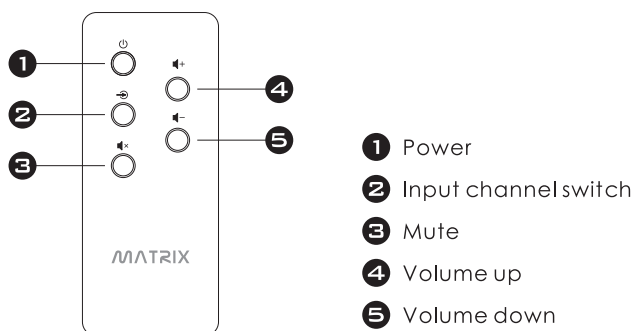
●SETTINGS & USAGE

ON/OFF

Connect AC power into the power socket on the back panel of QUATTRO DAC, and it will enter the standby mode.

Press the power ON/OFF button on the front panel or on the remote controller to turn on QUATTRO DAC.

When the currently selected input channel indicator flashes, press the power button again to enter standby mode (standby power consumption is less than 2W).

If you do not use QUATTRO DAC for a long time, please unplug it to reduce power consumption.

INPUT CHANNELS

Press the channel buttons on the front panel of QUATTRO DAC to switch the current input channel.

While you are switching the channels, the corresponding indicator will light up, cycling by the order of 1-2-3-4-5.

If the currently selected channel is not connected to an external device, the corresponding indicator will flash, showing there is no signal input (when analog inputting, the channel indicator is always lit up.)

VOLUME CONTROL

By turning the volume knob on the front panel of QUATTRO DAC, you can adjust the headset volume level in real time.

There is a gain-control switch on the back panel, by which you can choose the PWL mode of the analog output.

20

When the gain-control switch is in the position of VARIABLE, the volume knob will control the output PWL of the analog output port on the back synchronously.
When the gain-control switch is in the position of FIXED, the volume knob can only control the headphone output, and the PWL of the analog output port is of standard value.

HEADPHONE OUTPUT

QUATTRO DAC has two standard 1/4" stereo headphone jacks of high quality on its front panel, which can drive any headphones of up to 600 Ω, you can easily use the headset to listen to the output of the decoder.
Headphone output jack 1 is an associated interface, by default, when this port is connected to a headset, the analog output on the back will be automatically turned off.
Headphone output jack 2 is a general interface, when connected to headphones, the analog output on the back remains.
By inserting the internal jumpers on the left of the headphone socket, JP6, JP7, you can set the Headphone output jack 1 to be a general interface.

REMOTE CONTROLLER

QUATTRO DAC can be operated with its ΜΛΤRΙΧ RM-1 remote controller to adjust volume, channels and so on.
Make sure that nothing blocks the signals between QUATTRO and the remote controller within 5m.
When the remote controller is not in use, please put it away in order to prevent the buttons from being pressed by mistake, which results in unnecessary battery consumption.
When QUATTRO DAC does not respond well, please unscrew the remote controller on the back and replace the CR2032 button battery with a new one. Please watch the battery polarity.

XLR GAIN SETTING

XLR analog output level can be set inside QUATTRO DAC, the gain level is divided into four grades: 0dB,-10dB,-20dB,-30dB. To set it, insert the four jumper wires in corresponding contact pin.The default setting of the gain is -10dB.

USB INTERFACE

When QUATTRO DAC is connected to a PC by USB, its internal IC will automatically install the driver in any Microsoft windows7, Vista, XP, 2000, Mac

OS X system. After the installation is complete, QUATTRO DAC options will appear in the system audio device. This USB interface supports up to 24Bit 96kHz audio playback.

● INTERFACES

AES/EBU input

XLR analog output

SIGNAL   GND

GND   HOT

GND

COLD
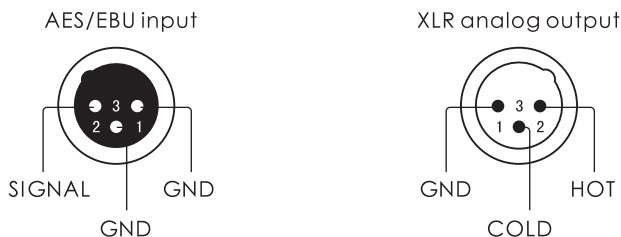
● TROUBLESHOOTING

Check the following before calling for repair:
● Whether all the connections have been done correctly.
● Whether you operate QUATTRO according to this manual.

Common breakdowns might be caused by an interrupted AC power. Or the device is troubled by static electricity. Under these circumstances, turn it off and unplug the AC power for at least a minute, then reconnect and restart it.

PROBLEMS	POSSIBLE CAUSES	RESTORATION
Power off	● Power cable is disconnected from AC outlet ● Power is turned off	● Plug power cable into a proper AC outlet ● Check the fuse
Channel indicator keeps flashing	● Digital input cable is disconnected ● Digital source output abnormally	● Connect digital input cables properly ● Check the Digital source output ● Unplug the main power then restart after at least 1 minute
No sound from analog output	● Analog port is disconnected ● Volume is turned to minimum ● Muted	● Connect the audio cables appropriately ● Turn up the volume ● Press the mute button again on the remote controller
Remote control failure	● Signal receiver is blocked ● Battery is running out	● Remove the block ● Replace the battery with a new one

If your problems cannot be solved by the remedies listed in the table above, it might due to the malfunction of QUATTRO's internal circuitry. In that case,

please immediately unplug the power cable and contact MΛTRIX Customer Service.

● TECHNICAL SPECIFICATION

INPUT PORTS:
- Optical: Sealed optical input   24Bit 32kHz~192kHz
- BNC: BNC 75 Ω   24Bit 32kHz~192kHz
- USB: USB-B Port   24Bit 44.1kHz~96kHz
- AES/EBU: XLR 110 Ω   24Bit 32kHz~192kHz
- Analog input: RCA terminal   20Hz~20kHz 47 kΩ

OUTPUT PORTS:
- RCA Output PWL: 0V~ 2.0V adjustable
- XLR Output PWL: 0V~ 4.0V adjustable
                          (XLR interface: 1=ground, 2=hot, 3=cold)
- Frequency response: 20Hz~20KHz
- SNR: 114dB A-Weighting
- Dynamic Range: 110dB
- Distortion: <0.00056%(1kHz)

HEADPHONE AMP:
- Output impedance: < 0.11 Ω
- Maximum output current: 300mA
- Gain Bandwidth: > 500kHz
- SNR: 106dB A-Weighting
- Distortion: <0.00056%(1kHz)

POWER REQUIREMENTS:
- Power: AC 220V~240V 50/60Hz
                             (AC 110V~120V 50/60Hz)
- Working power consumption: < 25W
- Stand-by power consumption: < 2W

OTHER SPECIFICATIONS:
- Working temperature: 0~+40℃
- Weight: 1.6kg
- Dimensions: 205×245×44mm (L×W×H)
- Fuse: 5×20mm 250V 0.5A

NOTE: Specifications subject to changes without prior notice.

● CUSTOMER SERVICE

From the date of purchase, MΛTRIX provides you with a one-year-limited warranty.

This warranty is confined to the malfunction of our products which is due to the quality problems of the original components or manufacturing issues. Any failure and losses result from ignoring the cautions mentioned in this instruction or misusing as follows are not covered by the warranty:

● Inappropriate connection to the power.
● Attempts to disassemble the product.
● Circuit modification done by customer.
● Unauthorized replacement of the original components.
● Other unauthorized changes done by customer.
● Damage of the accessories.

● ACCESSORIES

User guide   RM-1 remote controller   BNC/RCA connector

MATRIX

www.matrix-digi.com