

MATRIX
AUDIO

DSD
Direct Stream Digital

X-SABRE

DIGITAL AUDIO CONVERTER

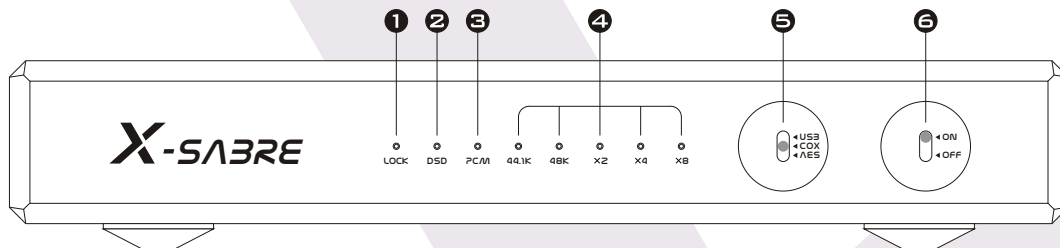
USER MANUAL

INTRODUCTION

The X-SABRE is high quality D/A converter which support the DSD and DXD signal playback. It used the ESS Technology ES9018 Sabre Reference 32bit chip, and cooperates with XMOS 32BIT/500MIPS high performance digital signal processing unit, make it easy to playback the DXD (352.8kHz/384kHz) and the DSD (DSDx64/DSDx128) signals via the USB interface, it will provide you the ultra high-quality audio playback with the 1bit 2.8224MHz or 5.6448MHz and the 32bit 352.8kHz or 384kHz sampling rate.

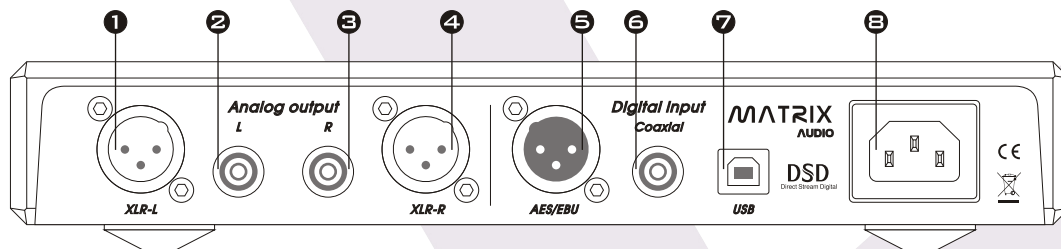
DSD (Direct Stream Digital) is the Sony and the Philips joint developed the high-resolution digital audio specifications, it used 1bit 2.8224MHz or 5.6448MHz sample rate which is 64 times or 128 times of CD format (44.1kHz) sample rate, so the amount of data is far more than traditional CD format. The dynamic range up to 120dB at 20-20kHz frequency domain, it can be included in the frequency domain above 100kHz. Due to high sample rate, it make the analog signal waveform in a pulsed manner convert into a digital signal, the sampled waveform is extreme close to the original analog waveform, so the DSD audio specifications can provide more excellent sound effects to you.

FRONT PANEL



- ❶ Signal Lock LED
- ❷ DSD LED
- ❸ PCM LED
- ❹ Sample Rate LEDs
- ❺ Input Switch
- ❻ Power Switch

BACK PANEL



- ① L XLR Output
- ② L RCA Output
- ③ R RCA Output
- ④ R XLR Output
- ⑤ AES/EBU Input
- ⑥ Coaxial Input
- ⑦ USB Input
- ⑧ AC Power

INPUT STATUS DISPLAY

- Working Mode

LOCK: LED lit - The current input channel signal has been detected.

Flashing LED - The current input channel has no signal input.

DSD: LED lit - The current input channel is the DSD signal.

PCM: LED lit - The current input channel is the PCM signal.

- Sample Rate

44.1kHz = 44.1k LED

48kHz = 48k LED

88.2kHz = 44.1k and ×2 LEDs

96kHz = 48k and ×2 LEDs

176.4kHz = 44.1k and ×4 LEDs

192kHz = 48k and ×4 LEDs

352.8kHz = 44.1k and ×8 LEDs

384kHz = 48k and ×8 LEDs

DRIVER INSTALLATION AND CONFIGURATION

1. Install Matrix X-SABRE driver for windows.

Find and double click "setup.exe", click "Next".

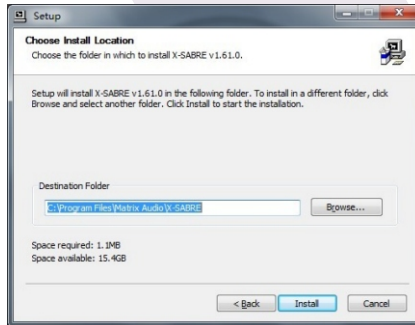


Please unplug and replug USB cable, click "Next".

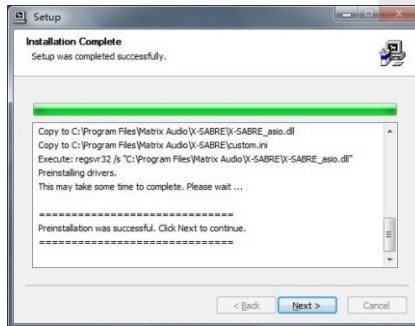


DRIVER INSTALLATION AND CONFIGURATION

Click "Install" and start installing the driver for X-SABRE.



Installation is complete, click "Next".

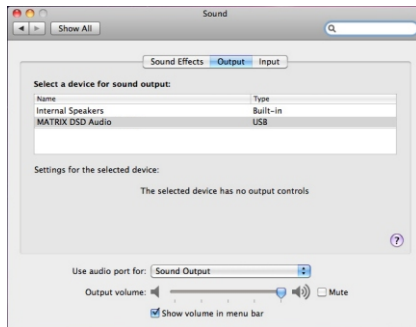


DRIVER INSTALLATION AND CONFIGURATION

Click "Finish", installation is done.



2. There is no need for driver installation based on Mac OS X 10.6.4 above, Go to "SYSTEM PREFERENCES", click on "SOUND", choose "MATRIX DSD Audio", you are ready to use play software on your Mac OS X.



DRIVER INSTALLATION AND CONFIGURATION

3. Playback Software Configuration

Example: add X-SABRE ASIO or WASAPI output device in foobar2000.

- Please install the play software foobar2000 on your PC.
- Please go to <http://www.foobar2000.org>, click "component" and download components of "ASIO support" or "WASAPI output support".
- Please open and unzip the file, named "foo_out_asio.zip".
Please save the file into C:→Program Files→foobar2000→components.
Please go to above folder and check if there is "foo_out_asio.dll" in it.
- Please start "foobar2000", go to: "File→Preference→Playback→Output→Device", click "ASIO: Matrix Audio Pro ASIO" or "WASAPI: Matrix Audio Pro".

SPECIFICATIONS

- DAC Specifications:

ESS Technology ES9018 SABRE³² Reference 32-bit DAC
8 mono to 2 stereo configuration, four D/A converters per channel

- Digital Input:

Coaxial: 16-32bit/44.1k、48k、88.2k、96k、176.4k、192k

AES/EBU: 16-32bit/44.1k、48k、88.2k、96k、176.4k、192k

USB: 16-32bit/44.1k、48k、88.2k、96k、176.4k、192k、352.8k、384k
DSD×64(2.8224MHz)、DSD×128(5.6448MHz)

Support windows XP/vista / 7/8, MAC OS system.

Windows XP/vista/7/8 system need to install the driver.

Support Mac OS X 10.6.4 above version, no need to install the driver.

- Analog Output:

RCA Output Level: 2.2Vrms at 0dBFS

XLR Output Level: 6.8 Vrms at 0dBFS (XLR: 1=GND, 2=hot, 3=cold)

Frequency Response: 20Hz~20kHz +/- 0.1dB

SNR: 124dB 0dBFS Unweighting

127dB 0dBFS A-weighting

THD+N: 0.0003% @1kHz 0dBFS

0.0003% @1kHz -1dBFS

0.0003% @1kHz -3dBFS

SPECIFICATIONS

Channel Separation: -145dB @20Hz
-143dB @1kHz
-136dB @20kHz

- Power Requirements:

Power: AC 220V 50/60Hz (AC 110V 50/60Hz)

Power consumption: < 10W

- Other Specifications:

Size: 205mm×260mm×48mm (L×W×H)

Weight: 3.6kg

NOTE: Specifications subject to changes without prior notice.

CUSTOMER SERVICE

From the date of purchase, **MATRIX** 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.

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