INPUT SELECT

AES COAX 1 COAX 2 TOS 1 TOS 2 USB AUDIO

meitner

44.1 88.2 176.4

LOCKED SAMPLE FREQUENCY in KHz

48 96 192

ma 1 dac
mdat technology

Safety Instructions

Prior to Installing you new Meitner Audio product please read the following safety instructions:

- Read and follow all instructions.
- Keep these instructions.
- Do not use or install product near any sources of water, rain and/or moisture.
- Clean using only a dry cloth.
- Install only in accordance with the manufacturer's instructions.
- Refer all servicing to approved service personnel.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not install product outdoors or in direct sunlight.
- Leave at least 10cm or 4 inches around product to ensure proper ventilation.
- Do not place product near strong electrical or magnetic radiation/em missions or near a power amplifier.

This Meitner product must be connected to a mains socket outlet with a protective earthing connection (grounding pin).

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO WATER OR MOISTURE.

EEC: This product has been designed and tested to comply with the limits set out in EN55013, EN55020 and EN 60065:2009 (electrical safety).

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Introduction

Welcome and congratulations on purchasing a Meitner Audio product.

We at Meitner Audio have strived to build and perfect the absolute best product using our award winning technology and decades of experience.

We are confident that our products will bring you musical joy and enjoyment for many years to come.

This manual provides important information regarding the use, installation and care of your new Meitner Audio product.

Table of Contents

Warranty

Meitner Audio warrants the MA-1 product against defects in material and workmanship under normal use and service for a period of time specified by the product's serial number from the date of first delivery to the owner. The warranty time period is 5 years. Warranty is limited to the original owner and is non-transferable.

Meitner Audio will pay for return shipping charges back to the owner when the product is sent to Meitner Audio within the first 90 days after purchase (US and Canada end-users only). Otherwise, owner will be responsible for all shipping charges to and from Meitner Audio.

For all warranty claims, a copy of the original invoice must accompany the product.

Opening the product or modifying it in any way by the owner, including but not limited to cryogenic treatment, will void any warranty.

Please contact Meitner Audio (support@meitner.com) for RMA number and shipping instructions before shipping any product to Meitner Audio.

Meitner Audio products are sold worldwide through authorized dealers with restricted territories. Meitner Audio product purchased from non-authorized dealers or from a dealer selling outside his/her authorized territory will automatically void product warranty.

MA-1 Stereo Digital Converter

The MA-1 is a high-performance stereo digital converter with a wide variety of user selectable digital inputs. It has been refined from our high end and acclaimed professional converter systems which are used worldwide in professional studios to create some of the finest recordings.

The MA-1 provides near instantaneous digital to analog conversion from a host of digital inputs.

The MA-1 includes digital inputs for USB, AES, TOSLINK and SPDIF.

Word lengths up to 24bit, and sample frequencies up to 192kHz are supported on all digital inputs.

Features & Specifications

2-Channel Digital to Analog Conversions (All Digital Inputs):
- 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz & 192kHz
- Word lengths up to 24bit

Available Digital Inputs:
- 1x USB
- 1x AES/EBU (XLR)
- 2x SPDIF (RCA)
- 2x TOSLINK (Optical)

Analog Outputs:
- Balanced (XLR)
    Output Line Level (0dBfs signal on AES/EBU input): 4.6Vrms
    Output Impedance: 300Ω
- Un-Balanced (RCA)
    Output Line Level (0dBfs signal on AES/EBU input): 2.3Vrms
    Output Impedance: 150Ω

Note: XLR analog outputs are balanced with pin 2 hot, pin 3 cold and pin 1 ground.

System:
- System control via serial RS-232
- USB data port for software upgrades

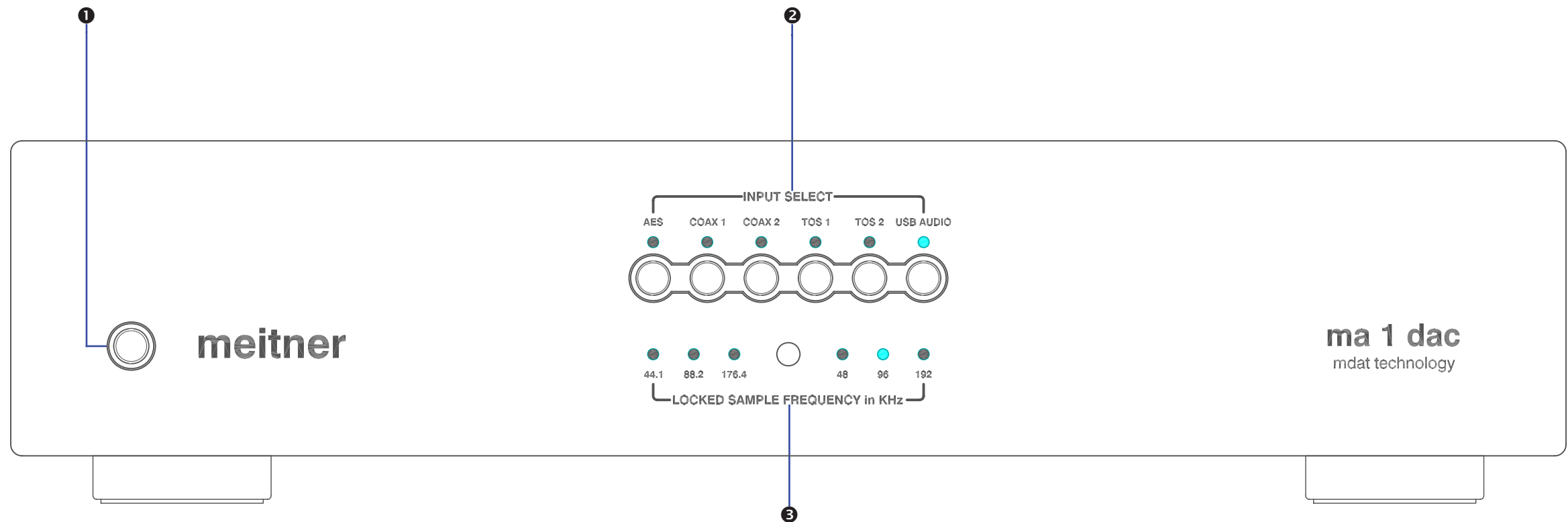## Features & Specifications

Power supply:
- Power factor corrected
- Universal 90V-260V, 50/60Hz operation
- Power consumption: 50W
- CE Approved

Remote control: Infrared

Dimensions: W x D x H: 435 x 400 x 92mm

Weight: 7.43kg

Front Panel & Functions

1. Standby/Power-Save button:
    Toggles the operation between on and power-save mode. In power save mode the remote control and all front panel functions become inactive.

2. Locked Sample Frequency Indicators:
    The appropriate sample rate indicator is lit when the unit detects valid digital audio data at the selected digital audio input.

Front Panel & Functions

3. Digital Input Selector Buttons:

    • AES: Selects AES/EBU (XLR) format PCM digital input .
    • COAX 1: Selects SPDIF (RCA) format PCM audio from COAX 1 connector.
    • COAX 2: Selects SPDIF (RCA) format PCM audio from COAX 2 connector.
    • TOS 1: Selects SPDIF (TOSLINK) format PCM audio from TOS 1 connector.
    • TOS 2: Selects SPDIF (TOSLINK) format PCM audio from TOS 2 connector.
    • USB Audio: Selects USB PCM audio (computer, media player, media server).
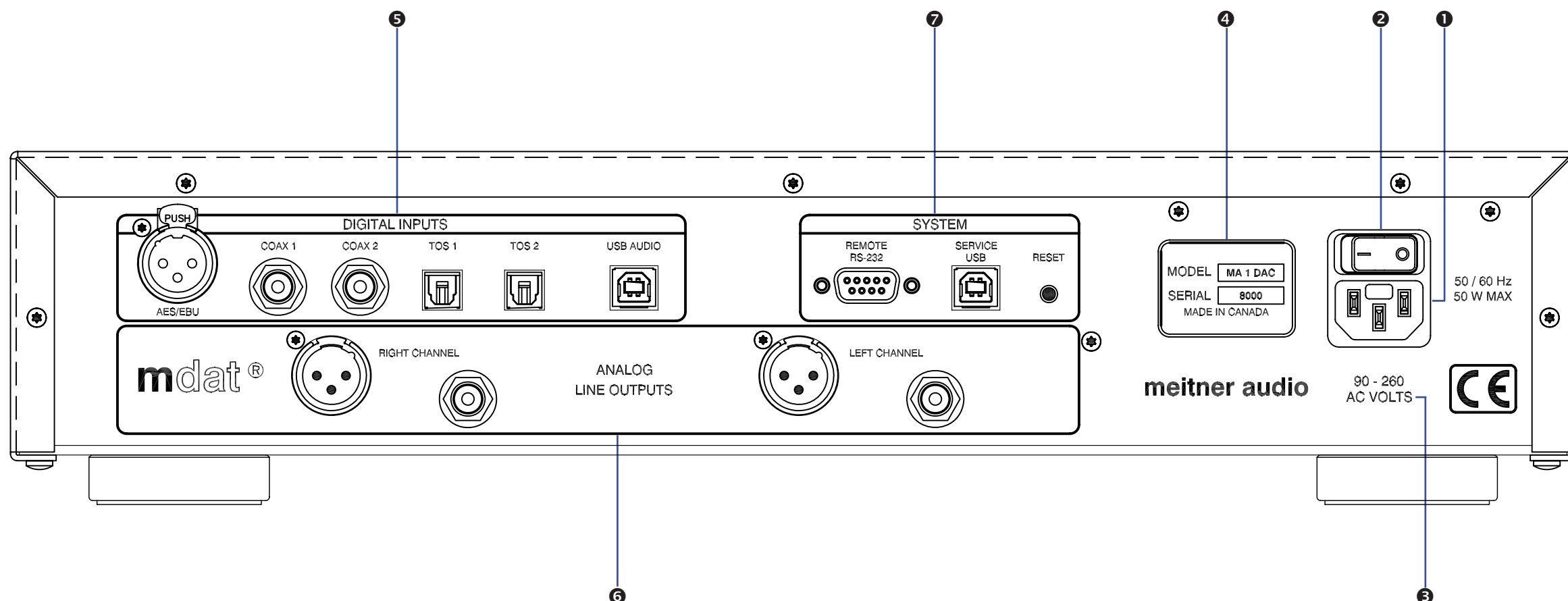
All digital inputs support 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz and 192kHz.

All digital inputs support word lengths up to 24bit.

Please note:

1. The Meitner Audio MA-1 is a Class 2.0 USB Audio device. Class 2 audio devices are supported natively in OSX 10.5.7 and higher, and on Linux with ALSA 1.0.23 and higher.

2. For Windows XP, Vista and Windows 7, Class 2 USB Audio device drivers are included with the MA-1. Please see page 14 for installation instructions.

3. Please use USB 2.0 compliant devices for maximum high resolution audio compatibility. Using the MA-1 with a USB 1.0 and 1.1 device/interface may limit digital audio bandwidth to 44.1/48kHz sample frequencies.

4. For proper high definition audio transfer (especially 176.4 and 192kHz sample frequencies) using the TOSLINK interfaces please ensure that your digital source device and optical cables support sample frequencies above 48kHz.

Rear Panel & Functions

1. Main Power connector
2. Main Power Switch.
3. Product VOLTAGE indicator: Indicates working voltage of the MA-1.
4. Product model and serial number indicator:
   Warranty void if model/serial number indicator is not attached to unit, missing or damaged whereby serial number cannot be seen.

Rear Panel & Functions

5. Digital Inputs:
    *   AES/EBU: AES/EBU (XLR) PCM digital input.
    *   COAX 1: SPDIF (RCA) format PCM audio.
    *   COAX 2: SPDIF (RCA) format PCM audio.
    *   TOS 1: SPDIF (TOSLINK) format PCM audio.
    *   TOS 2: SPDIF (TOSLINK) format PCM audio.
    *   USB Audio: USB PCM audio from a computer, media player, server

6. Analog Line Output:
    *   Left and Right Balanced (XLR) Connectors
    *   Left and Right Un-Balanced (RCA) Connectors
    *   Level (Output Line Level with 0dBfs signal on AES/EBU input):
        XLR outputs: 4.6Vrms (+15.45dBu)
        RCA outputs: 2.3Vrms (+9.45dBu)

7. System
    Remote:
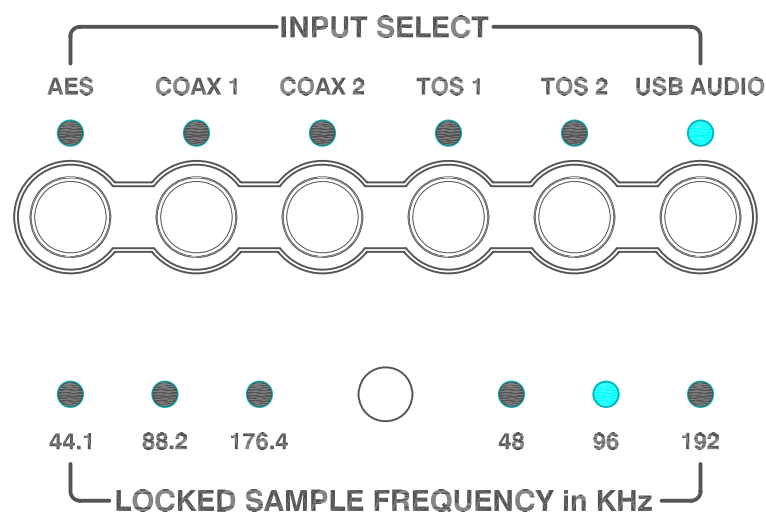   *   Wired RS232: RS232 communication port
    Service:
    *   USB: Software update port.
    *   RESET: Used to access the backup BIOS in connection with software upgrades via the USB port. Should not be used during normal operation.

Connecting & Operating the MA-1

Please see next page with regards to installing the MA-1's USB Audio drivers.

1. Connect the included power cable to the MA-1 power connector than to a free power receptacle.
2. Connect the appropriate digital source connections up to the MA-1's digital inputs using the appropriate high quality digital audio and USB cables.
3. Connect the appropriate analog outputs of the MA-1 to your pre-amp or integrated amplifier.
4. Turn on the MA-1 using the main power switch and select a digital input by pressing one of the digital input selector buttons.
5. Once the MA-1 receives a valid digital audio stream from the digital source, the detected frequency LED will light up signifying that the MA-1 has started its conversion process.

5. Please see example above. The USB Audio input is selected hence the USB Audio LED is lit. Once the MA-1 detects a valid digital audio stream the appropriate sample frequency LED will be lit. In this case the MA-1 has a detected a valid 96kHz digital audio stream.

Connecting & Operating the MA-1

6. Once locked to a sample frequency the MA-1 will start its conversion process and you will almost instantaneously be able to listen to music.
7. The MA-1 remembers the last digital input it was switched too prior to being switched off.

USB Audio Input:

1. First you will need to obtain the appropriate USB cable to connect the MA-1 to any USB digital audio source component (computer, laptop, media server etc.).
2. The MA-1's USB Audio interface uses the B-type USB connector similar to connectors used on printers. Please see image below:

3. Connect the MA-1 USB Audio interface to a USB digital audio source component using the appropriate USB cable.
4. Select the USB Audio input using front panel input selector buttons.
5. For MAC OSX systems, no driver is needed. OSX has the appropriate USB driver already installed.
6. For Windows XP, Vista (32 or 64bit) and Windows 7 (32 or 64bit) systems install the provided USB driver by double clicking the "setup.exe" file located on the software CD included in the accessories box. Read and follow the driver installation instructions.
7. Kernal, ASIO and WASAPI (Vista and Windows 7) drivers will be installed.

Connecting & Operating the MA-1

8. For Windows Media Player playback; in Windows Control Panel set the default sound playback to the MA-1 USB Audio device (XMOS XS1-L1 Audio).

9. In general for most audio applications you will be able to select the MA-1 USB Audio device (XMOS XS1-L1 Audio) from within the application and choose the appropriate driver (Kernal, ASIO and WASAPI).

10. We recommend using the ASIO drivers (TUSBAudio ASIO Driver) for its low latency properties.

11. Additionally in order to use the MA-1's ASIO drivers you will need to download and install the appropriate ASIO plugin (if needed) for the audio/media file playback application you are using.

Infrared Remote Control

Included with the MA-1 is an infrared remote control. You can use the infrared remote control to select or toggle between the various digital inputs available on the MA-1.

Please see remote guide provided to the right:

AES : Selects the AES/EBU input via AES/EBU XLR connector.

USB : Selects the USB Audio input via USB Audio interface.

COAX 1 : Selects the COAXIAL 1 SPDIF input via COAX 1 RCA connector.

COAX 2 : Selects the COAXIAL 2 SPDIF input via COAX 2 RCA connector.

TOS 1 : Selects the TOSLINK 1 SPDIF input via TOS 1 optical connector.

TOS 2 : Selects the TOSLINK 2 SPDIF input via TOS 2 optical connector.

meitner

(AES) (USB)

(COAX 1) (COAX 2)

(TOS 1) (TOS 2)

ma 1 dac