



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/emmissions 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).



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 enjoyment for many years to come.

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

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Warranty

Meitner Audio warrants the MA3 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 3 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.

MA3 Integrated D/A Converter

Introducing Meitner Audio's ground breaking MA3 Integrated D/A Converter. The first of our next generation products.

The MA3 integrates our 16xDSD DACs and DSP, with our VControl™ high resolution volume control, and combines this with our network audio streaming functions based on our popular, and simple to use NS1 Streamer product.

The MA3 features a multitude of inputs and support for PCM up to 24bit/192kHz, DSD, 2xDSD, DXD. It is also the first Meitner product to have full MQA® unfolding via USB Audio and Network inputs.

The MA3 is our first product with an integrated streamer to support streaming services like TIDAL, QOBUZ, SPOTIFY, DEEZER, vTUNER etc. Along with USB inputs for direct audio file playback, it supports UPNP/DLNA for connection to NAS devices. ROON READY/ROON ENDPOINT support is also built in.

Features & Specifications

2-Channel Digital to Analog Conversions (All Digital Inputs):

- 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz and DSD
- Word lengths up to 24bit

2-Channel 2xDSD/DSD128 and DXD (352 and 384kHz) Digital to Analog Conversion is supported using the USB Audio input.

2- Channel full MQA[®] unfolding supported via USB Audio and Network inputs.

Available Digital Inputs:

- 1x USB Audio
- 1x AES/EBU (XLR)
- 1x COAX (SPDIF RCA)
- 1x TOS (TOSLINK Optical)
- 1x Network (RJ45)
- 2x USB Media (Type A, USB storage and/or WiFi ports)
- 1x Network/Ethernet interface(RJ45)

Output Impedance: 300Ω balanced (XLR), 150Ω unbalanced (RCA)

Output Levels:

Balanced XLR outputs: 4.36V (+15.0dBu)

Unbalanced RCA outputs: 2.19V (+9.0dBu)

System: System control via serial RS-232

Note:

1. XLR analog outputs are balanced with pin 2 hot, pin 3 cold and pin 1 ground.
2. For proper digital audio data transfer (176, 192kHz and DSD) appropriate high quality AES/EBU, COAX, TOSLINK and USB 2.0 cables recommended.

Features & Specifications

Power supply:

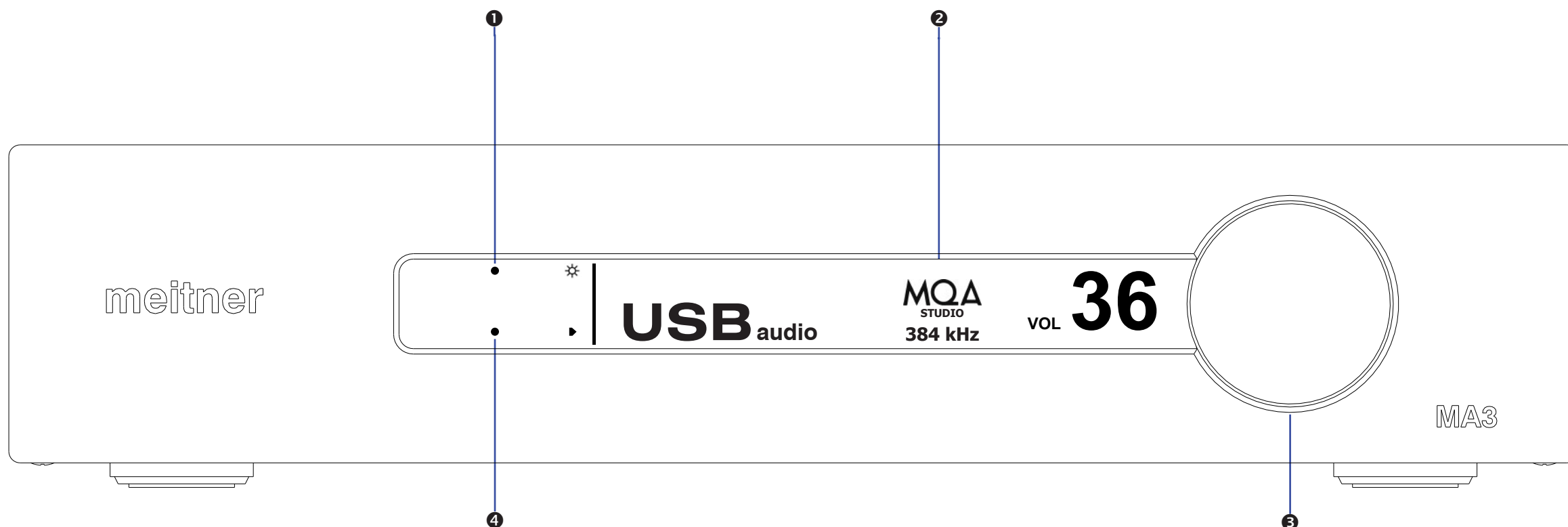
- Power factor corrected
- Universal 90V-260V, 50/60Hz operation
- Power consumption: max. 50W
- CE Approved

Remote control: Infrared

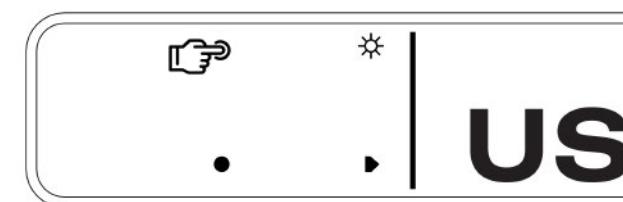
Dimensions: W x D x H: 435 x 400 x 92mm

Weight: 7.43kg

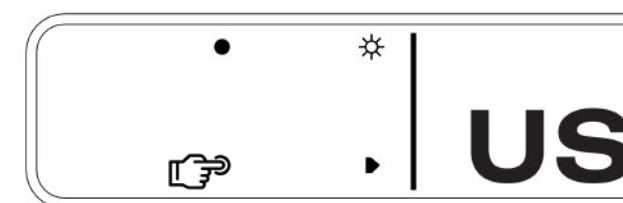
Front Panel & Functions



1. Display brightness touch button, toggles the display brightness settings between “Normal”, “Dim” and “Off”. “Off” turns display off. Only the brightness touch guide led will stay on.
2. Display shows digital input, file/stream and samplerate information and volume setting.
3. Volume control knob.
4. Input touch button, cycles between all available digital inputs:
 - AES : Selects AES/EBU (XLR) format digital audio input
 - COAX : Selects SPDIF (RCA) digital audio from COAX connector
 - TOS : Selects SPDIF (TOSLINK) digital audio from TOS connector



Brightness touch button



Input touch button

Front Panel & Functions

4.
 - USB : Selects USB digital audio (USB B Type connector)
 - NET : Selects Network/Streaming digital audio (RJ45 connector)
5. The screen saver function engages after 2 minutes of inactivity. It dims the screen for 3 seconds before turning the screen off. Engaging the remote, touch buttons or volume, returns screen brightness to previous state. Function is disabled when display brightness is set to off.
6. Enable/disable the screen saver by pressing and holding the brightness touch button until you see the screen saver function page. Except when NET(network) is selected.
7. Pressing and holding the input touch button, displays the firmware version on the left display along with copyright notice.

Please note:

1. The Meitner Audio MA3 is a Class 2.0 USB Audio device. Class 2 audio devices are supported natively in Windows 10 UAC2 and higher, OSX 10.5.7 and higher, and on Linux with ALSA 1.0.23 and higher.
2. For Windows 7 and higher, Class 2 USB Audio device drivers are included with the MA3 or you can download it from our website. Page 14 has installation instructions.
3. Please use USB 2.0 compliant devices for maximum high resolution audio compatibility. Using the MA3 with a USB 1.0 and 1.1 device/interface will limit digital audio bandwidth to 44.1/48kHz sample frequencies.
4. For proper high definition audio transfer (176.4,192kHz sample rates or DSD) using the AES, TOSLINK or SPDIF interfaces please ensure that you use high quality cables and your digital source device supports those sample frequencies using those inputs.

▶ **EXIT**

▶ **CHANGE**

**Screen Saver
Enabled**

Screen Saver Enable/Disable

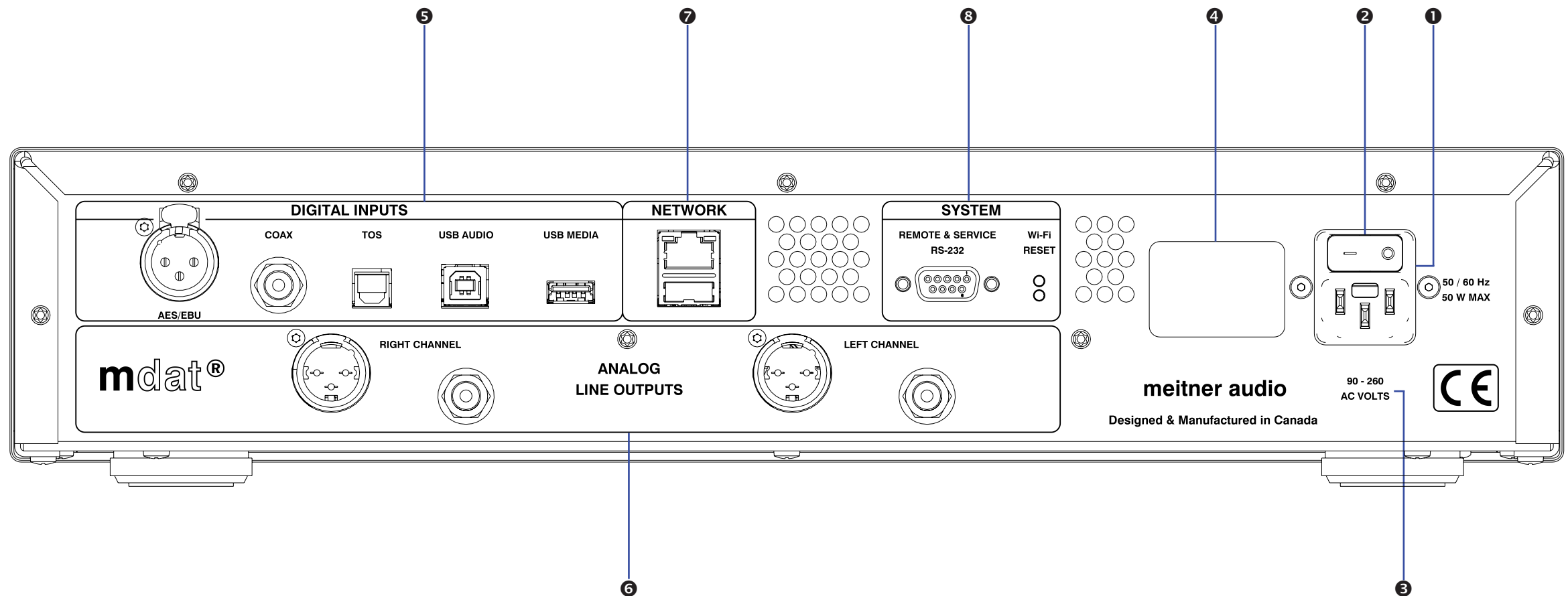
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**Firmware Revisions
1.08 - 126:004
©Meitner Audio**

Firmware and Copyright

Rear Panel & Functions



1. Main Power connector
2. Main Power Switch.
3. Product **VOLTAGE** indicator: Indicates working voltage of the MA3.
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 (All inputs support up to 24bit, 192 kHz and DSD):
 - AES/EBU: AES/EBU (XLR) digital audio input
 - COAX: SPDIF (RCA) digital audio input
 - TOS: SPDIF (TOSLINK) digital audio input
 - USB Audio: USB Audio digital input (DSD128, DXD and full MQA® unfolding)
 - USB Media: USB Media input port supports thumbdrive/stick direct file playback, supports up to 24bit, 192kHz and accepts AAC, AIFF, ALAC, FLAC, MP3, WAV, WMA, MQA® and DSD in DSF or DFF file formats
6. Analog Line Output:
 - Left and Right Balanced (XLR) Connectors
 - Left and Right Un-Balanced (RCA) Connectors
 - Output Levels:
XLR outputs: 4.36V (+15.0dBu)
RCA outputs: 2.19V (+9.0dBu)
7. Network/Ethernet interface(RJ45) for streaming and network media playback using mConnect Control app. Stream and playback files up to 24bit, 192kHz and DSD plus full MQA® unfolding. The MA3 is UPnP/DLNA compatible and is Roon Ready/Roon Endpoint.

Auxiliary USB type A connector located below the Ethernet port is an optional WiFi port (WiFi adaptor not included)

8. System
 - Remote:
 - Wired RS232 communication port
 - Service:
 - RESET: Factory Reset button (for support purposes only)

Connecting & Operating the MA3

Please see page 15 with regards to installing the MA3 USB Audio drivers.

1. Connect the included power cable to the MA3 power connector than to a free power receptacle.
2. Connect the appropriate digital source connections up to the MA3 digital inputs using the appropriate high quality digital audio, USB, network cables and USB drive.
3. Connect the appropriate analog outputs of the MA3 to your power amplifier.
4. Turn on the MA3 using the main power switch and select a digital input by pressing/toggling the input touch button or using the included remote.
5. Once the MA3 receives a valid digital audio stream from the digital source, the display will show a valid samplerate and you can adjust the volume. If it does not receive a valid digital audio signal “NO LOCK” is displayed.



6. Please see example above. The USB Audio input is selected. Once the MA3 detects a valid digital audio stream sample frequency will be displayed. In this case the MA3 has detected a valid MQA Studio track and has unfolded it to full 384kHz resolution.
7. When streaming from a streaming service, playing files back from a USB thumb drive or from a networked device like a NAS, information about the stream/file will be displayed above the input.

Connecting & Operating the MA3

The MA3 has a host of digital inputs :

- USB Audio (USB) : USB Audio connection supports up to 24bit, 192kHz PCM, DXD 352 and 384kHz, DSD64 and DSD128 (2xDSD) and MQA[®] using USB 2.0 cables
- AES : Balanced digital interface supports up to 24bit, 192kHz and DSD via XLR 110Ω digital cables.
- COAX : COAX S/PDIF interface which supports up to 24bit, 192kHz and DSD via RCA 75Ω digital cables.
- TOS : TOSLINK optical interface supports up to 24bit 192kHz and DSD via TOSLINK optical interface.
- NET : Ethernet (RJ45) network interface. Networking connection for both streaming media, network file playback using mConnect Control app. Stream files up to 24bit, 192kHz and DSD plus full MQA[®] unfolding. It is UPnP/DLNA compatible and is Roon Ready/Roon Endpoint.
- USB Media : For connection to USB flash drives (FAT32 or NTFS formatted). Connect USB flash drives to playback audio files using the mConnect Control app. For Android and IOS tablets use the mConnect Control HD app to use the landscape interface option. File playback supports up to 24bit, 192kHz and accepts AAC, AIFF, ALAC, FLAC, MP3, WAV, WMA, MQA[®] file formats. It also accepts DSD64 playback (via DoP streaming) in DSF or DFF file formats. The MA3 provides full MQA[®] unfolding when playing back MQA[®] files (up to 192kHz).

Connecting & Operating the MA3

8. The MA3 remembers the last digital input and volume it was switched too prior to being switched off. Volume settings above 60, will default back to 60, when the MA3 is turned back on, as a precaution/protection feature.

USB Audio Input:

1. First, use only well-shielded certified USB 2.0* cables to connect from any USB digital audio source component (computer, laptop, media server etc.) to the MA3 USB Audio input.
2. The MA3 USB Audio interface uses the B-type USB connector similar to connectors used on printers. Please see image below:



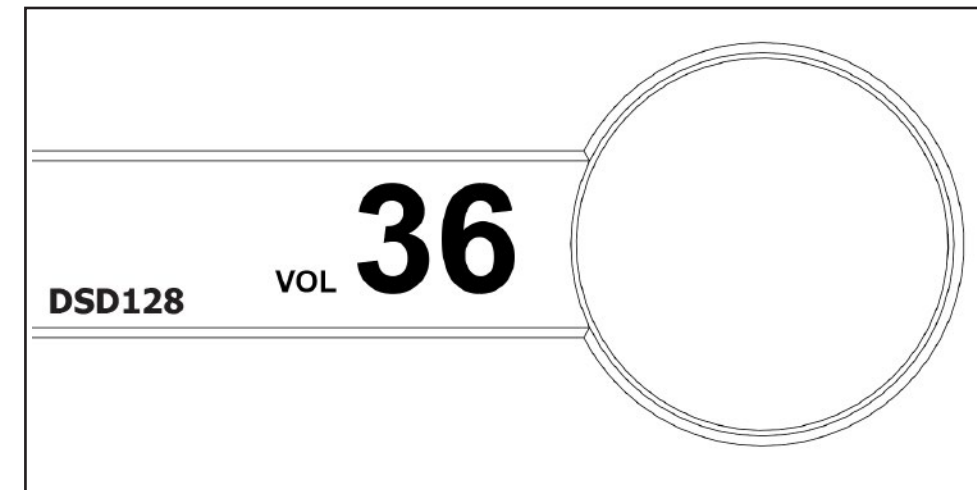
3. Select the USB input using the front panel touch button or the remote.
4. For Windows 10 UAC2 and higher, MAC OSX 10.5.7 and higher, and on Linux with ALSA 1.0.23 and higher, the appropriate USB Audio 2 drivers will be used or automatically installed.
5. For Windows 7 (32 or 64bit) or higher please install the provided USB Audio driver located on the included software CD or USB Key, or download it from our website.
6. ASIO, WASAPI and Kernel (Windows 7 and higher) drivers will be installed.

For Windows Media Player playback; set the Windows Control Panel default sound playback to the listed MA3 USB Audio device as per the installation instructions.

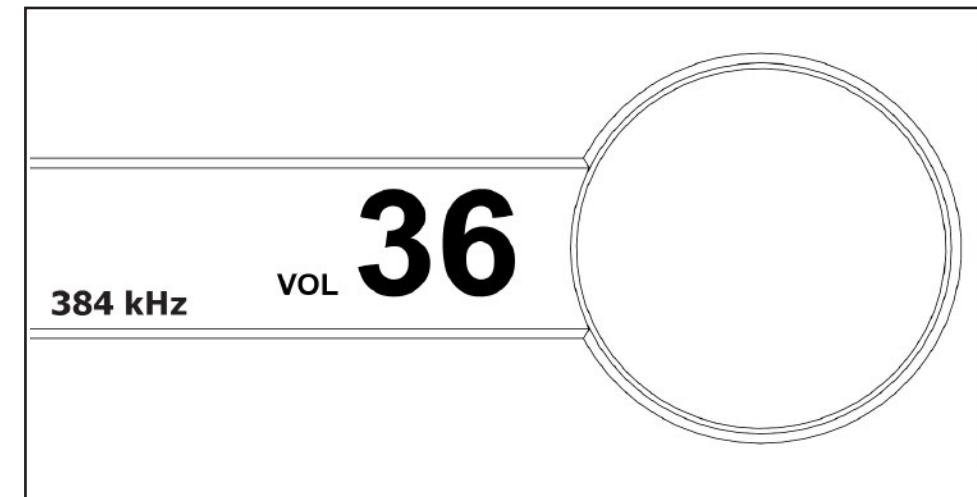
*Not using proper cables will cause audio issues between digital source and DAC.

DSD, DXD and MQA® Audio

1. The MA3 supports DSD (DSD64), 2xDSD (DSD128) and DXD over USB Audio input. DSD streaming uses the DoP specification.
2. The MA3 also supports full MQA® unfolding over USB Audio and Network (streaming and file playback).
3. DSD and 2xDSD audio files have the extension DFF and DST. DXD files (PCM 352 and 384kHz) and MQA® are available in standard filetypes like WAV, FLAC or MQA®. You can use any media player like JRiver, Roon, Audivarna or a standalone media/network player to play these files to the MA3.
4. Every media player will have specific installation and setup procedures for enabling DSD, DXD and MQA® file streaming. Please consult its specific setup procedures to properly enable these features.
5. Some software/hardware manufacturers also provide quickstart and software setup guides. Please consult these prior to installation.
6. When setup correctly samplerate and file types will be displayed on the MA3 display. Please see guide pictures to the right.
7. Depending on the digital source, when playback of DSD material is paused or stopped, the display may indicate a PCM samplerate rather than DSD. This is normal for DoP functionality. Once playback is restarted the MA3's display will once again show that it is receiving DSD information.
8. The MA3 supports the full unfolding of MQA® audio files using its custom implementation of the MQA® decoder and renderer.



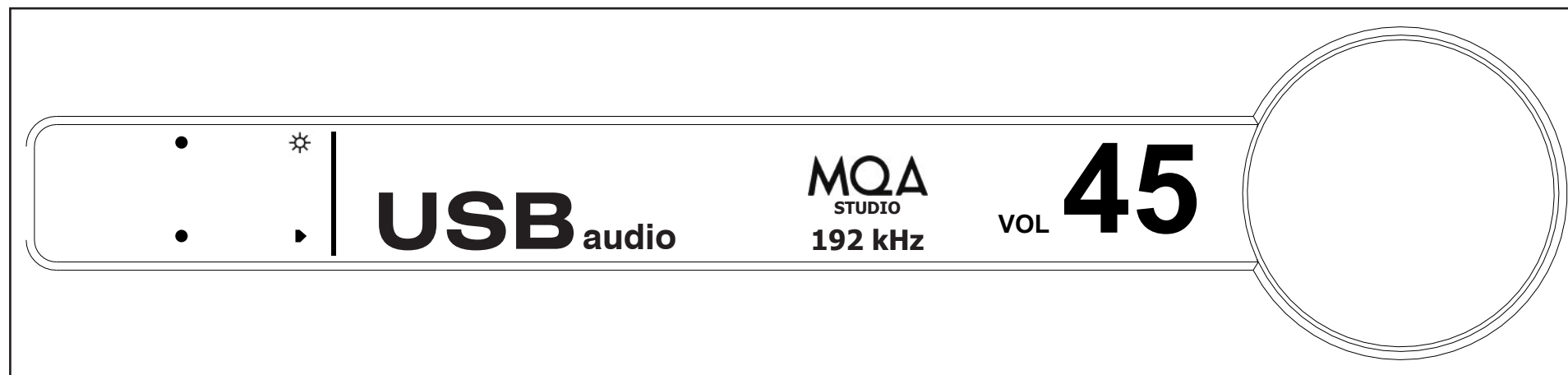
Receiving 2xDSD via DoP



Receiving DXD 384kHz

DSD, DXD and MQA® Audio

9. Depending on the media player and source material, the display will show the type of MQA® file ('MQA' or 'MQA Studio') and the maximum unfolded sample rate. 'MQA' or 'MQA Studio' indicates that the product 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. 'MQA Studio' indicates 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.

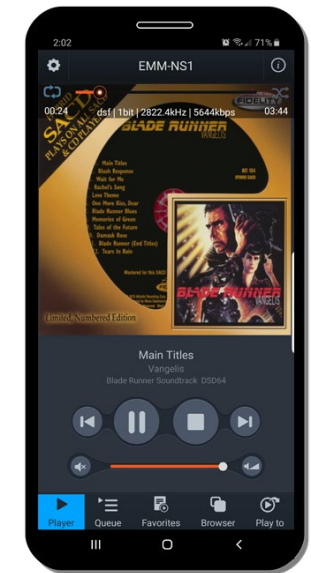
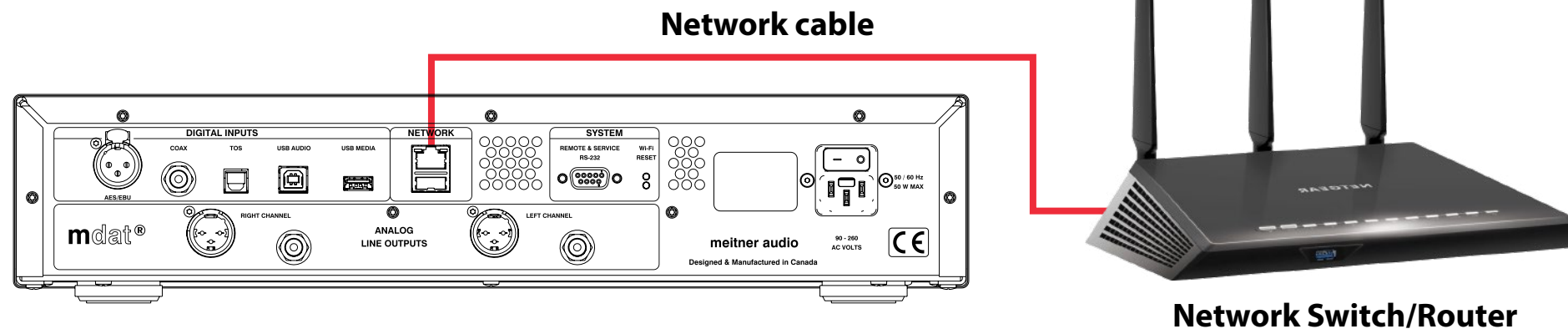


MQA® (Master Quality Authenticated) is an award-winning British technology that delivers the sound of the original master recording. The master MQA® file is fully authenticated and is small enough to stream or download.

Visit mqa.co.uk for more information.

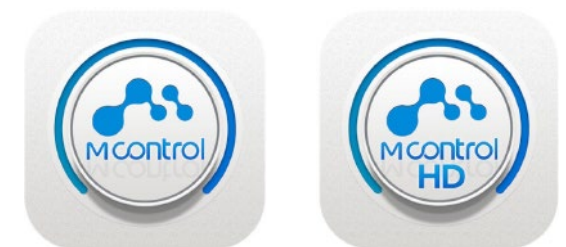
Network and Streaming

1. Connect the MA3 via the ethernet/network (RJ45) port to a network router or switch using a suitable ethernet cable. Make sure network is working and enabled.



**mConnect Control
app Mobile/Tablet for
Playback and Control**

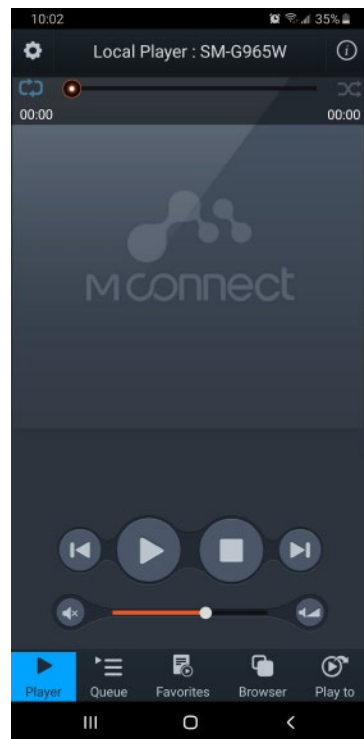
2. Select the "NET" input on the MA3 either using the remote or the front panel input touch buttons.
3. You can also install a USB flash drive (FAT32 or NTFS formatted) by attaching it to the MA3's USB Media input port for direct audio file playback.
4. Download and install **mConnect Control** app for mobile Android or IOS. For tablets and to use the landscape interface install the **mConnect Control HD** app. The mobile device or tablet must be connected on the same network as the MA3. Do not install the mConnect Player Lite, mConnect Player (paid app) or mConnect Player HD.



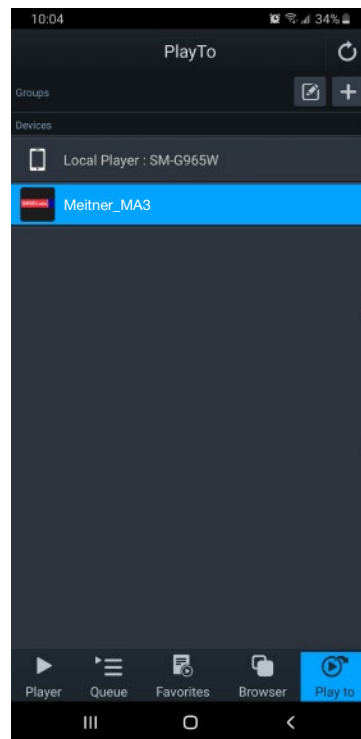
**mConnect Control
Mobile and tablet/iPad app**

mConnect Control App

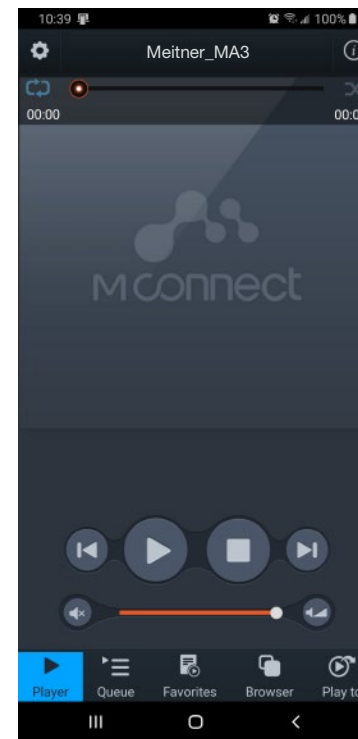
1. Start the mConnect Control app from your mobile phone or tablet. Mobile or tablet must be connected to the same network as the MA3.



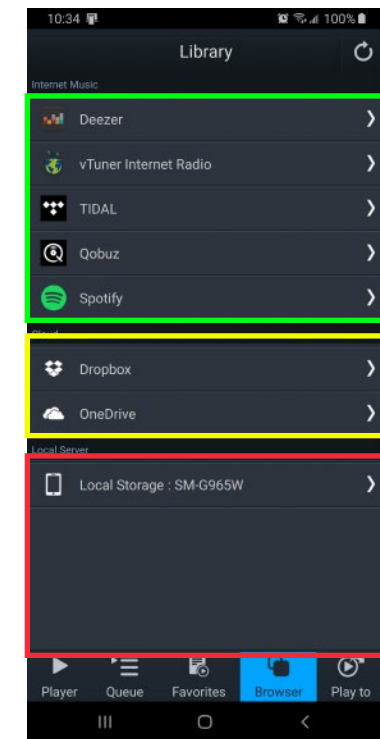
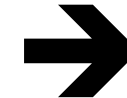
mConnect Startup



Select MA3 from “Play to”



Meitner MA3 Selected



Browser Page

**Internet
Streaming
Services**

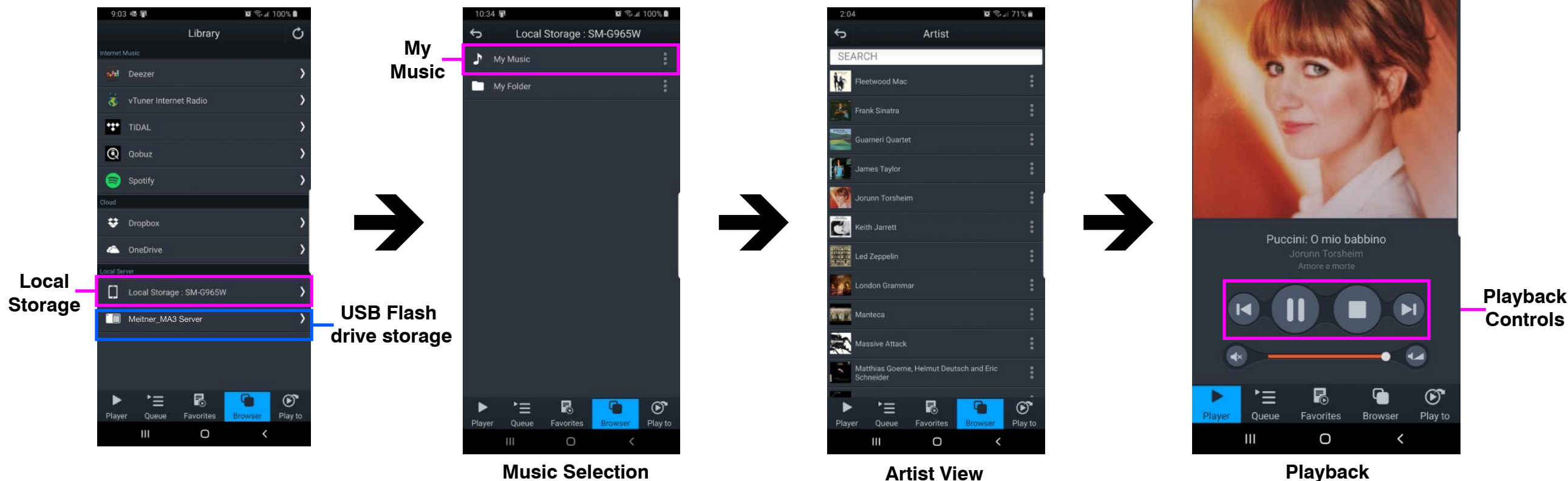
**Cloud
Storage**

**Local phone
tablet storage,
USB Media,
UPNP/DLNA
network storage**

2. Start the mConnect Control app, press the “Play to” button on the bottom right. Select the device with the EMM icon or named “Meitner_MA3” which would be the MA3.
3. Select and press the “Browser” button. You can then then select:
 - “Internet Music” streaming music services eg. Tidal, Quboz and Spotify
 - “Cloud” play files from online storage services eg. Dropbox or OneDrive
 - “Local Server” play files from local storage (mobile/tablet), USB drive connected to the MA3, detected DLNA/UPnP enabled network storage

File Playback and Control

4. In our example we select tracks from the “Local Server” which show audio files on the mobile/tablet device, USB storage connected to the MA3 or any DLNA/UPnP enabled storage on the network.



5. Select “My Music”, and select how you would like to display the files. Eg. by artist, by album or by genre. Once a file is selected playback will start. Playback controls are available below the track art. At the top, the track jump function, playback status, type of file, bitrate, sample rate, stream rate and length of file information.
6. On the right is a usage guide with regards to the Repeat and Shuffle functions. Press the icons to select appropriate function.

Repeat and Shuffle Functions



Play Through



Repeat All



Repeat Track



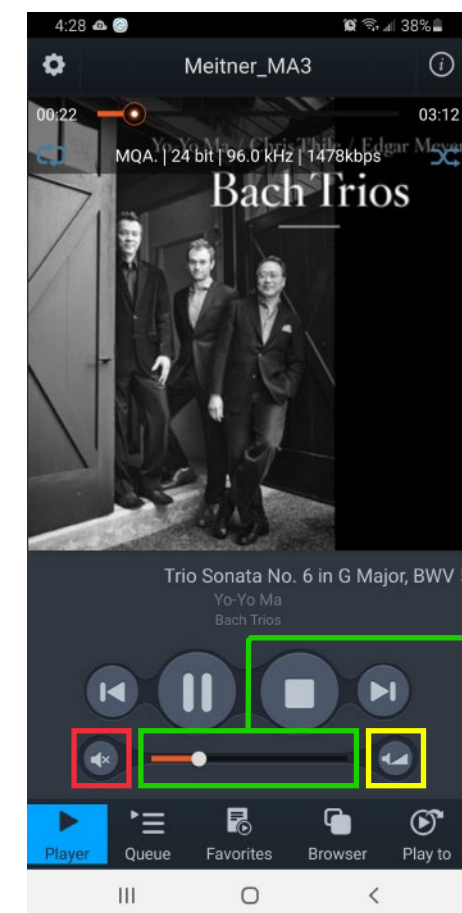
Shuffle off



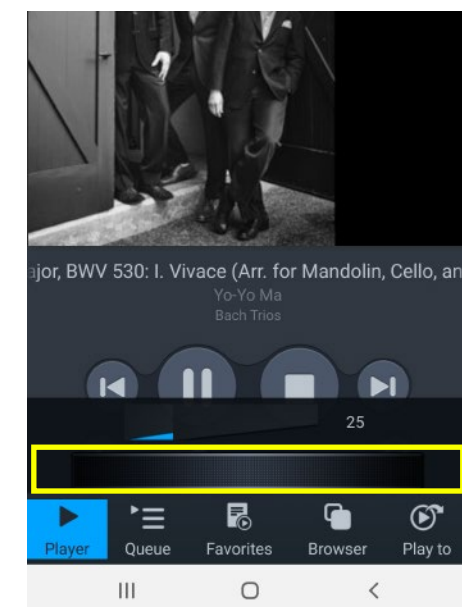
Shuffle on

Sync, Volume and Mute Features

1. Once playback is initiated using the mConnect app, the MA3 will sync and automatically switch to the “NET” (network) input. Prior stored volume settings will be used, or the initial factory default volume setting “10” will be set. “NET” volume is displayed as a numerical value (0 to 100) instead of dB.
2. Please see mConnect interface pictures to the right:
 - Mute control button (outlined in red), mutes and unmutes the MA3
 - Coarse volume control (outlined in green). **Please note: Coarse volume control is touch/click based. Accidentally setting the volume to maximum or a high setting may cause damage to your speakers or system. It is strongly recommend to use the fine volume interface, remote or volume knob to to more precisely control volume settings.**
 - Enables the fine volume control interface (outlined in yellow). Touch and drag style interface for fine volume control (bottom picture).
3. Volume and mute control is bi-directional, any change made using the app will be reflected on the MA3’s display. Similiarly, changes made using the volume knob or remote will be shown on the app.
4. If the input is switched away from the “NET” input while playing a track, playback of that track will be paused. Track playback can then be resumed using mConnect with the last stored “NET” input volume/mute settings.
5. Sync, volume and mute functions using the Roon app behave the same way when using the MA3 as a Roon Endpoint.



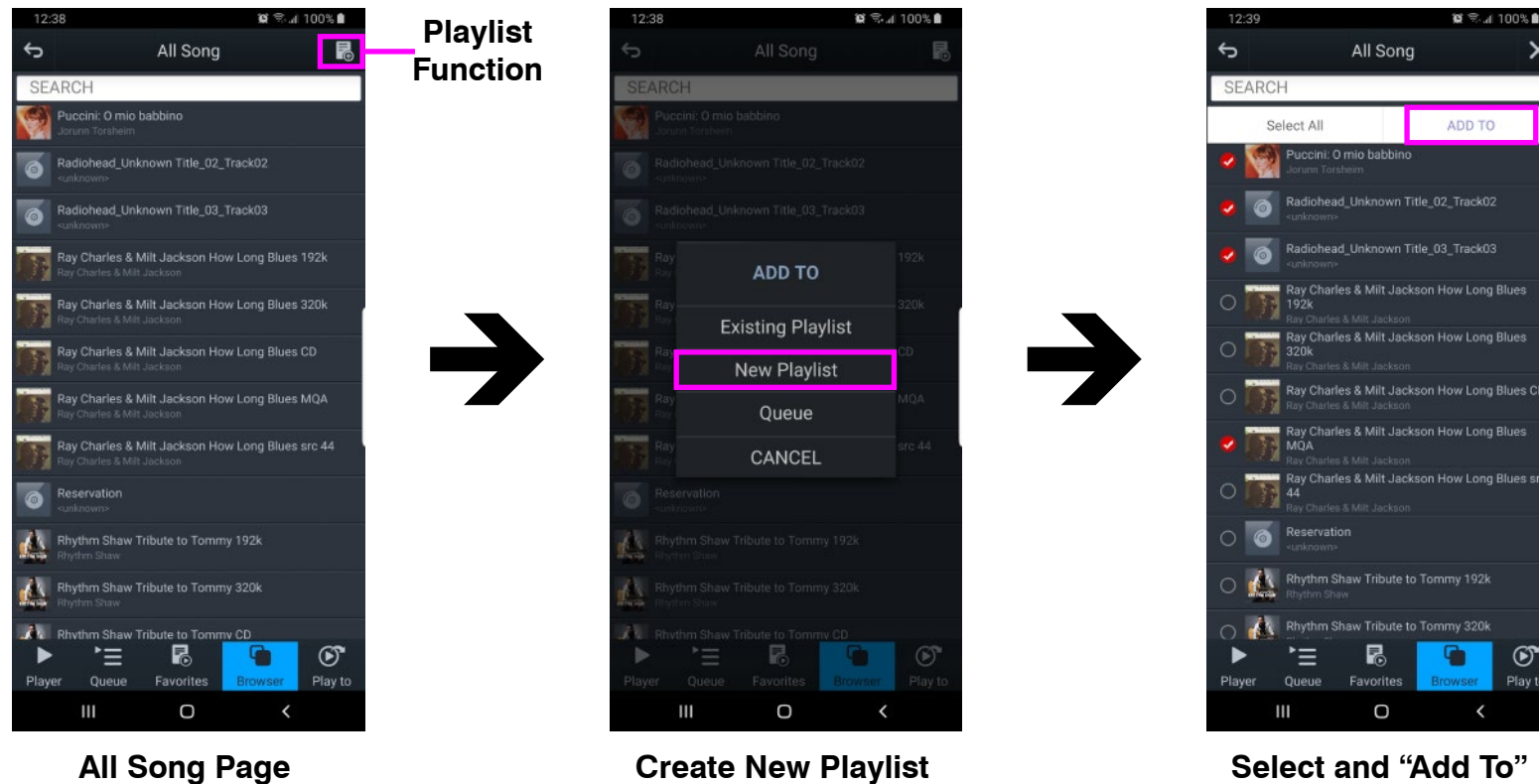
Coarse touch volume control



Fine drag volume control

Making a Playlist

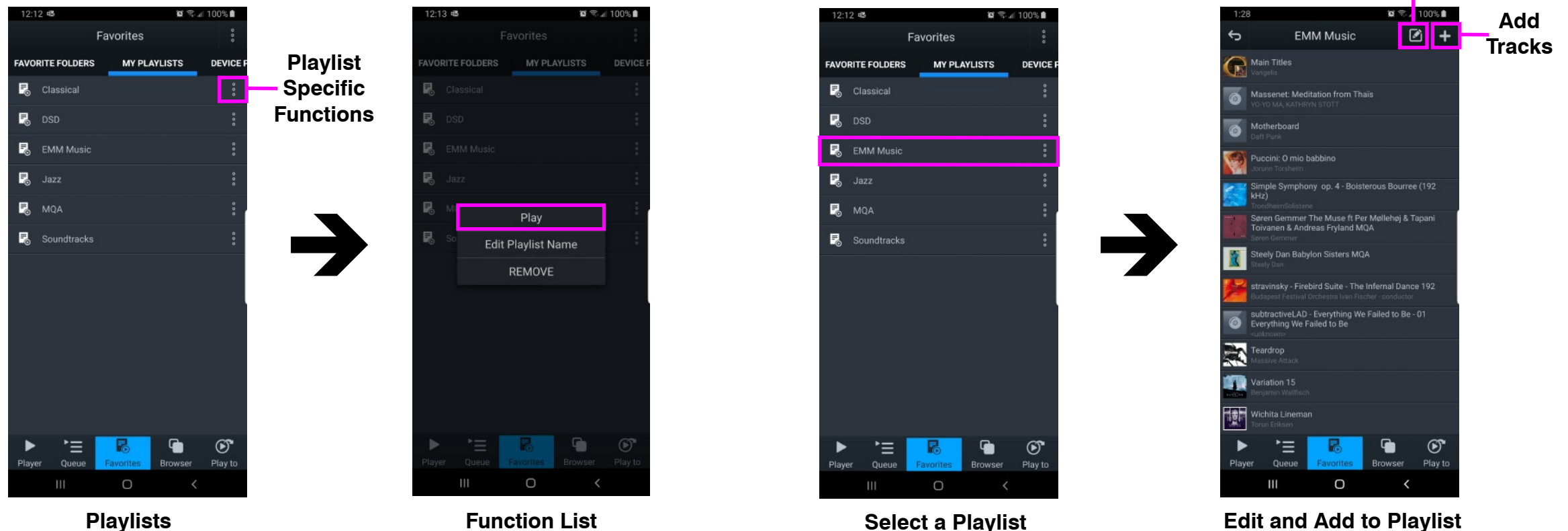
1. As an example select “My Music” from the browser menu then select “All Song”. Select the playlist function located in the top right. Select “New Playlist” and name it.



2. The display will show the file selection option to the left of the audio files list. Select the tracks and press the “Add To” button to add the tracks to the specific playlist.
3. You can also add tracks to a specific playlist using “Artist”, “Album”, by using the folder option and/or using search functions.

Making a Playlist

4. Multiple playlists, pre-selected favourite folders and device specific playlists can be created pressing “Favourites” button and accessing the favourites and playlist functions.



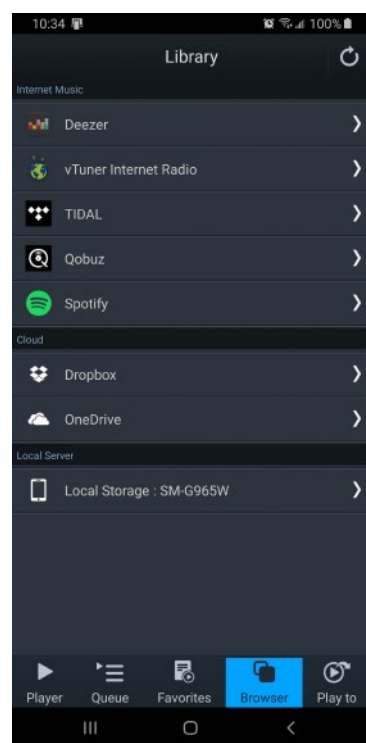
5. In the “Favourites” page select “MY PLAYLISTS” tab and locate a specific playlist and press the function button to the right of the playlist. Press “PLAY” to start playback.
6. From this function list you can also edit playlist name or remove/delete the playlist.

Making a Playlist

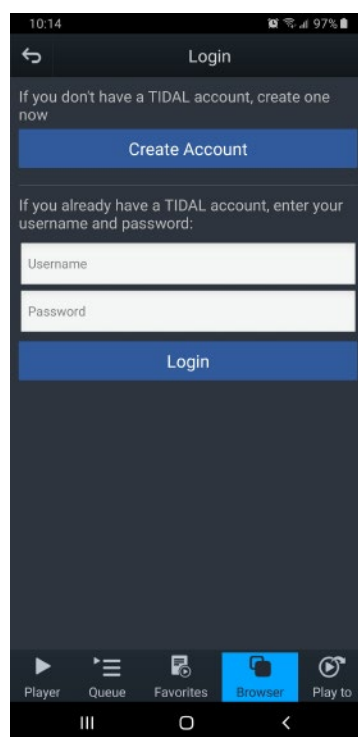
7. If you select a playlist you will be able to see its contents. Use add tracks function, “+” button located at the top right of the display to add tracks to the specific selected playlist.
8. To the left of the add tracks function is the remove/edit playlist function. This allows for the removal of specific tracks in the playlist.

Streaming Services: Tidal, Quboz, Deezer, Spotify and Online/Cloud Storage

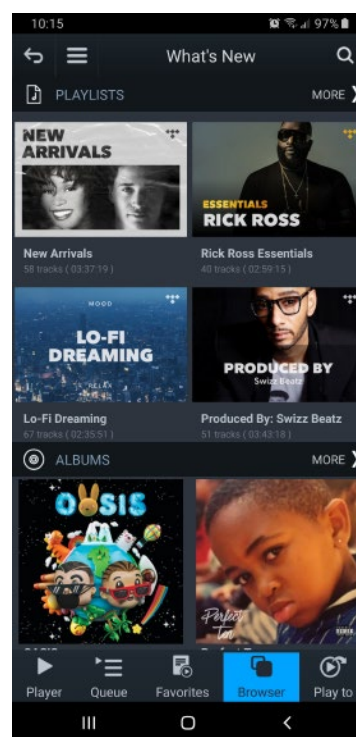
1. Use the mConnect Control/HD apps to access online streaming services.
Eg. select Tidal from the “Browser” page, login with your account.



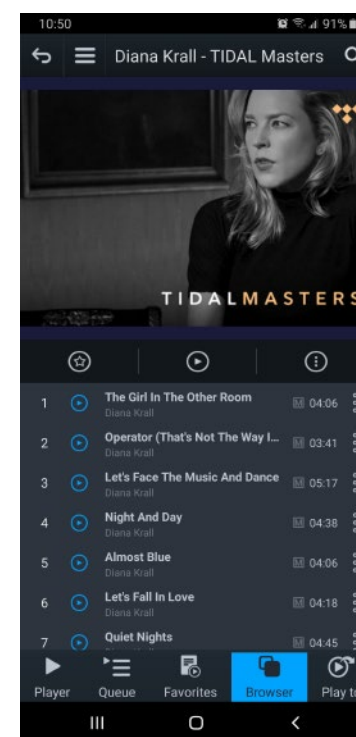
Browser Page



Login to Service



Browse

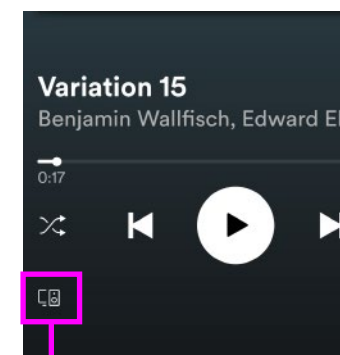


Search

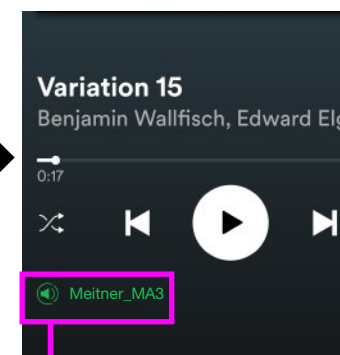


Play

2. Once logged in you can browse, search and playback files like normal.
3. Other streaming services like Quboz, Deezer and the online storage services like DropBox and OneDrive are accessed the same way using the mConnect app.
4. Spotify uses its own app to stream audio to the MA3. Within Spotify select the “Connect to device” page and select the MA3 from the list. See Spotify eg. on the right.



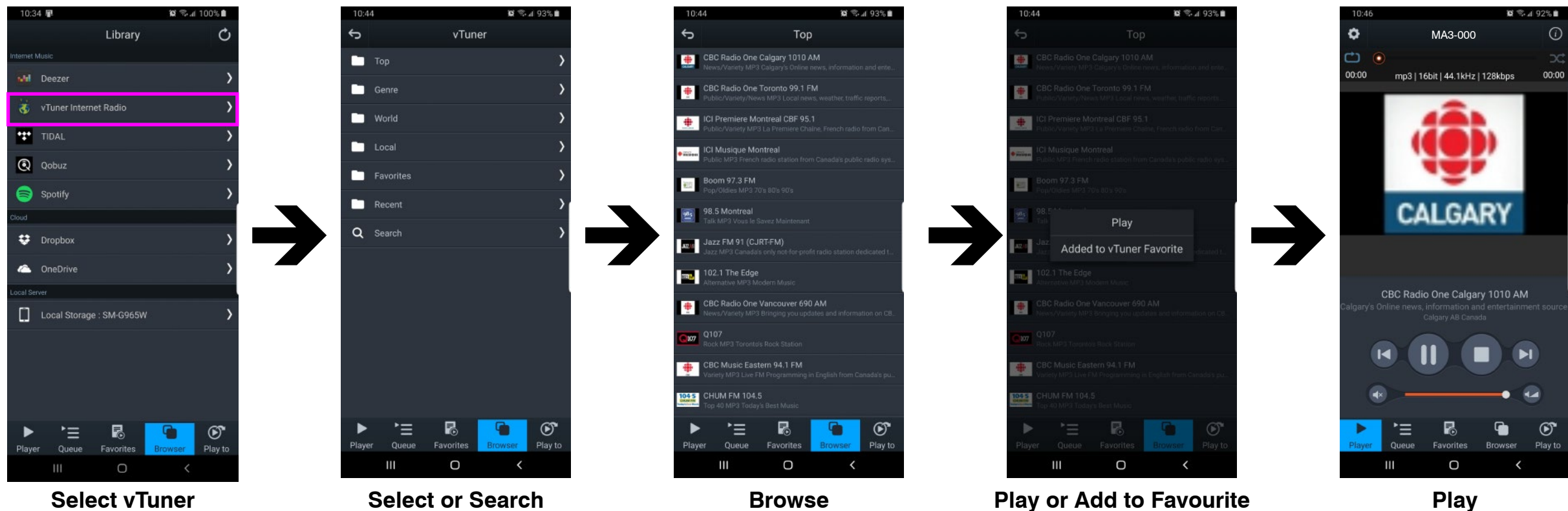
Spotify Connect to Device



Spotify Connected to Meitner MA3

Streaming Services: vTuner Streaming Radio

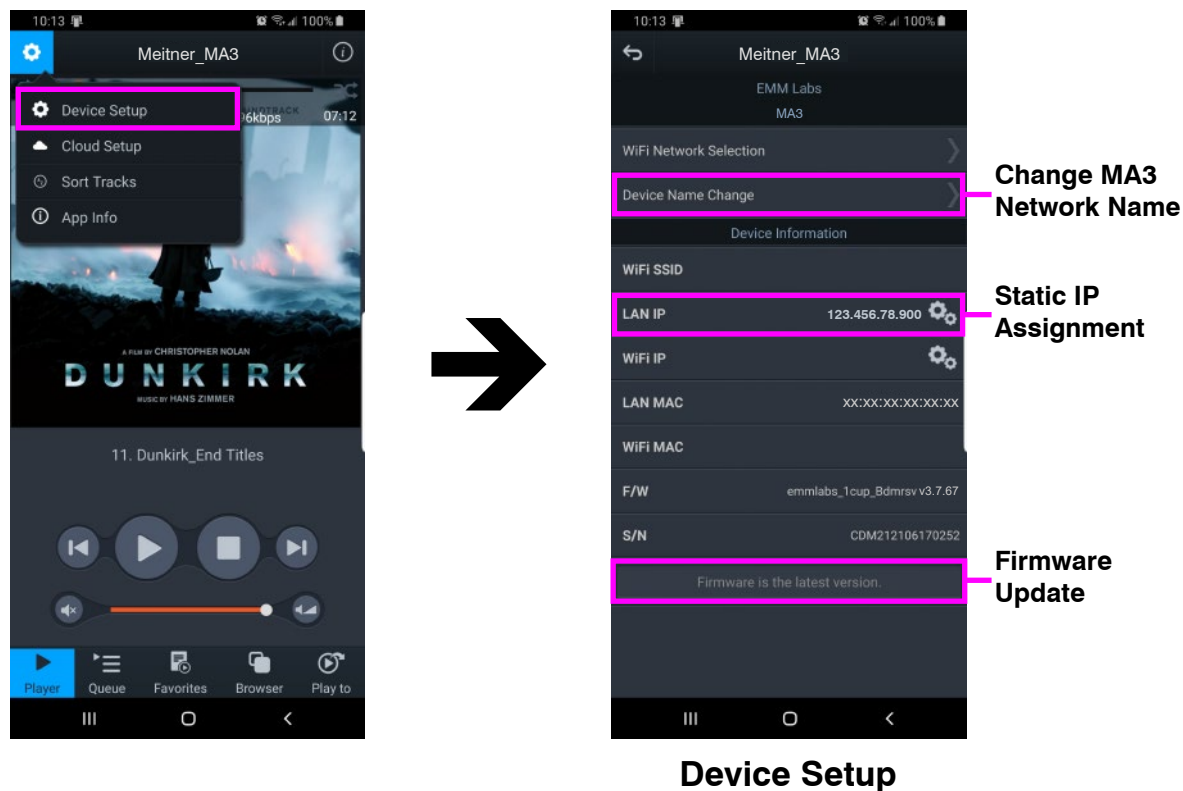
1. vTuner is a free radio streaming service included with the MA3 streamer. No account nor subscription is required to use stream radio stations.



2. Select the vTuner service and search or browse using the different types of streaming radio stations available throughout the world.
3. You can then select the radio station to play or save the selection to your favourites list.
4. When you select a streaming radio station to play, the player will show you the format, bitrate, sample frequency and stream size. The radio streaming information will also be displayed below the radio station icon/art.

Setup and Information

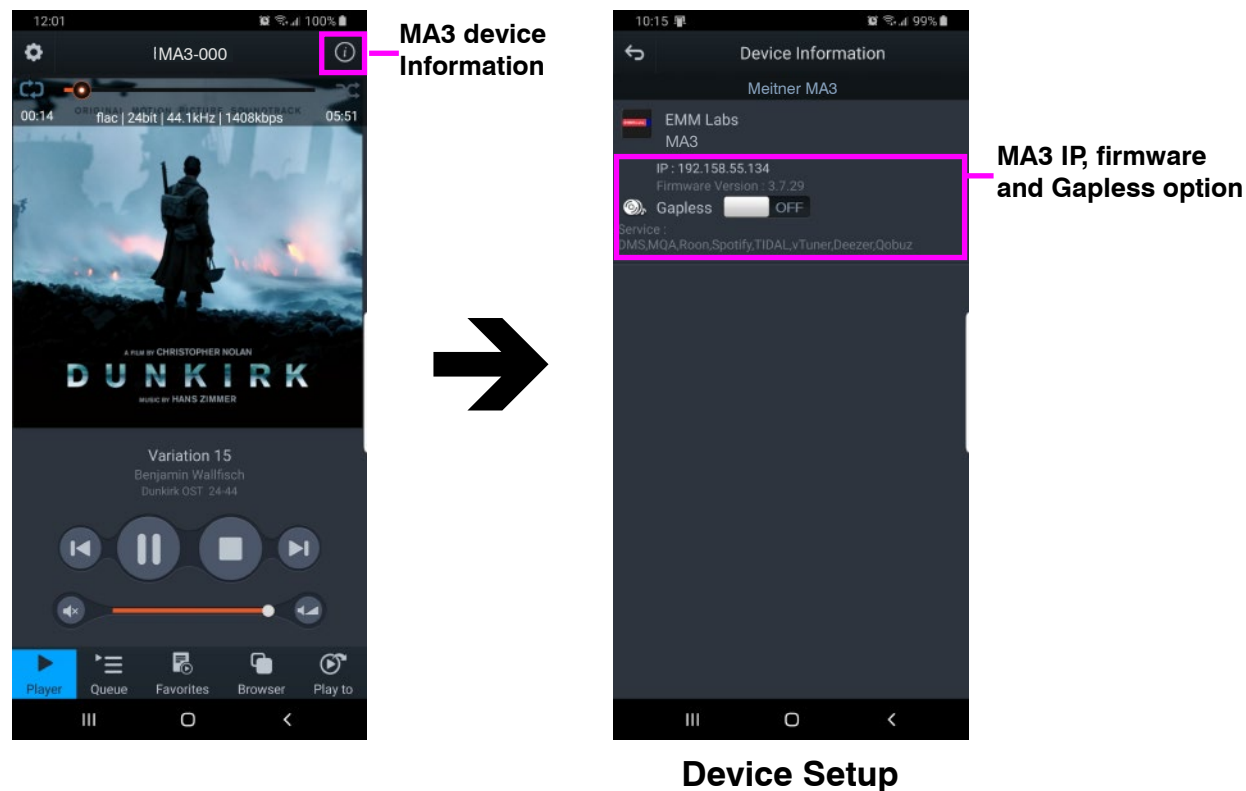
1. Access the MA3's device setup for detailed network information, change the MA3's network name, set a static IP or to update the MA3's firmware.



2. MA3 has a pre-assigned default factory set network name, in this case it is “Meitner_MA3”. You can change this by selecting the “Device Name Change” option.
3. Set a static IP for the MA3 by pressing the cog on right of the “LAN IP” setting.
4. If a firmware update is available you will be notified at the bottom of the page, and you can just press this option to update.

Setup and Information

5. Selecting the info icon, top right side of player, shows device information including IP address, firmware version and gapless playback option.



6. Using the “Gapless” option button, you can turn gapless playback on or off. Default is on where there is no gap between tracks.
7. You can use this feature to quickly check that the mConnect Control/HD app is connected to the Meitner Audio MA3, and if the MA3 is properly connected to your network.

Roon Setup

The MA3 Integrated D/A Converter is Roon Ready and can be setup as a Roon Endpoint. To start you will need the following:

1. A Roon account. If you don't have an account please subscribe their service from their website:

<https://roonlabs.com/>




2. Roon or Roon Server needs to be installed on a networked computer or a network attached storage (NAS) device. Please check the Roon website for appropriate computer and NAS specifications and configurations.
3. Roon remote software can then be used to control playback from any computer or mobile device.
4. Sync, volume control and mute functions of the MA3 can be controlled using the Roon app. Please refer to page 21 for details.

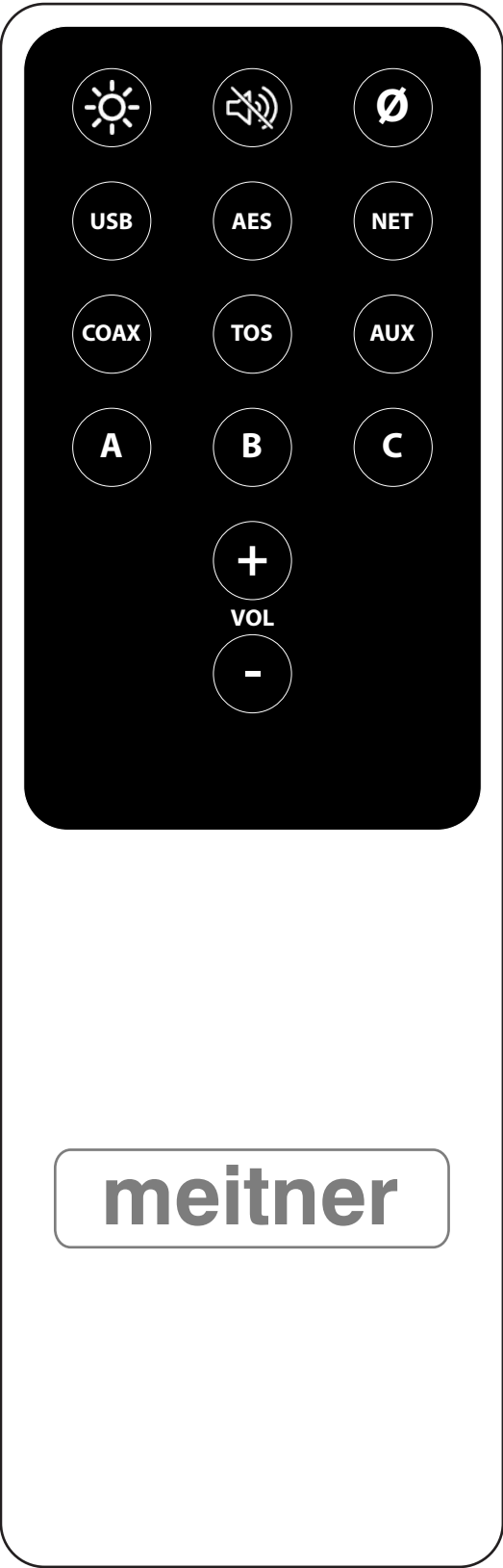
The logo consists of the word "roon" in a lowercase, rounded, sans-serif font, with the "o"s being circles. Below it, the word "READY" is written in a bold, uppercase, sans-serif font.

Infrared Remote Control

Included with the MA3 is an infrared remote control. You can use the infrared remote control to select or toggle between the various digital inputs available on the MA3.

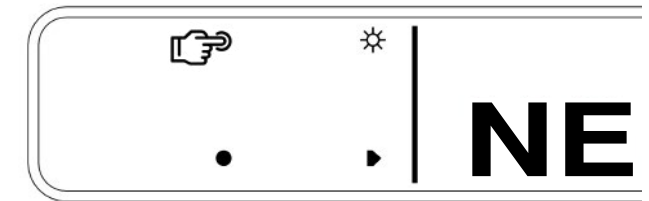
Please refer to a picture of the remote control to the right, as reference:

-  : Display brightness settings
-  : Mutes/Unmutes the outputs. When engaged “MUTED” will be displayed below a dimmed volume setting
-  : Polarity inversion is performed in the digital domain. When engaged “INV” will be displayed below the volume setting
- USB : Selects the USB Audio input via USB Audio interface
- AES : Selects the AES/EBU input via AES/EBU XLR connector
- NET : Selects the Ethernet/Network input via RJ45 connector
- COAX : Selects the COAXIAL SPDIF input via COAX RCA connector
- TOS : Selects the TOSLINK SPDIF input via TOS 1 optical connector
- AUX : Not in use
- VOL : Use the +/- buttons to increase/decrease the MA3’s analog output
- A, B, C : Not in use



Network Reset

1. In order to manually reset the network interface, first switch to the “NET” (network) input using the input touch button or the remote.
2. Press and hold the display touch button until you see the “Network Reset” page.
3. Press the RESET button to reset the network interface.
4. Press EXIT to exit the Network Reset page.
5. DO NOT immediately turn off the MA3 after doing a network reset. Please wait 90 seconds for the network interface to reboot and reset itself.



Network Reset Access

► **EXIT**

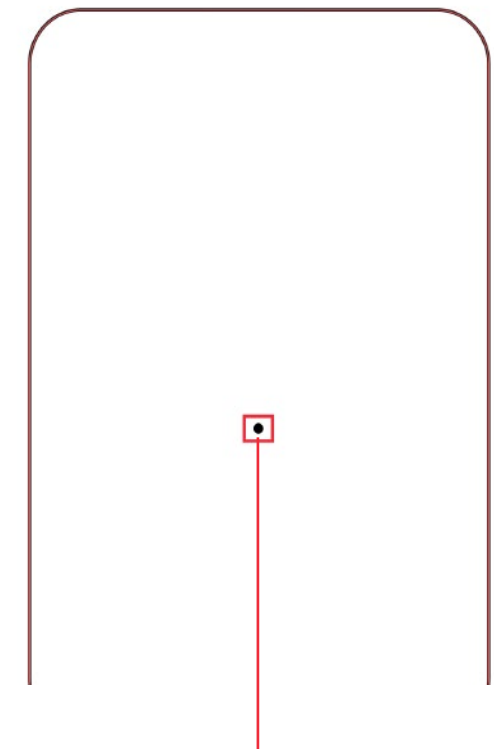
**Reset the Network
Interface**

► **RESET**

Network Reset

Remote Battery Change

1. Please prepare a new replacement CR2025 battery and either a fine small tip screw driver or paperclip.
2. Locate the battery compartment pinhole in the back of the remote. Please see picture on the right.
3. Insert the screw or paperclip into the pinhole and press. This will release the back cover from the magnets holding the cover in.
4. Please locate the battery and note how it is installed in the remote.
5. Remove and replace with new battery. Replace cover back onto remote.



Battery Compartment Pinhole