



*Thank you for choosing EMM Labs*

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## Safety Instructions

Prior to Installing you new EMM Labs 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/emissions or near a power amplifier.

This EMM Labs 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).



## Warranty

EMM Labs warrants the NS1 Streamer 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 2 years. Warranty is limited to the original owner and is non-transferable.

EMM Labs will pay for return shipping charges back to the owner when the product is sent to EMM Labs 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 EMM Labs.

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 EMM Labs ([support@emmlabs.com](mailto:support@emmlabs.com)) for RMA number and shipping instructions before shipping any product to EMM Labs.

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



## NS1 STREAMER

The NS1 Streamer acts as a powerful and versatile bridge between the internet, your network and your music system. The NS1 Streamer enables you to access the vast libraries of music available via the many internet streaming services. It also provides playback of audio files attached via USB stick and network attached storage.

The NS1 Streamer:

- UPNP/DLNA Support
- Roon Ready / Roon End Point
- High resolution streaming using Tidal and Quboz services
- Popular streaming services Spotify, Deezer, vTuner and many more
- MQA® and DSD file playback support
- Network and USB storage input
- EMM Labs Optilink output for hardware galvanic isolation
- AES and Toslink digital outputs
- Media and track information display using DV2 and DA2 converters
- 24bit,192kHz and DSD support on all outputs
- AAC, AIFF, ALAC, FLAC, MP3, WAV and WMA file playback
- mConnect app for control on Android and IOS
- Networked firmware updates
- Precision machined chassis and custom power system



## Features & Specifications

### *File Streaming and Playback:*

- from PCM (44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz)
- MQA® Core decoding up to 24bit, 96kHz\*
- Single rate DSD (via DoP)
- AAC, AIFF, ALAC, FLAC, MP3, WAV and WMA file playback

### *Inputs:*

- Network (RJ45)
- 2x USB type A (for USB storage and WiFi)

### *Digital Outputs:*

- EMM Optilink
- AES/EBU
- TOSLINK SPDIF

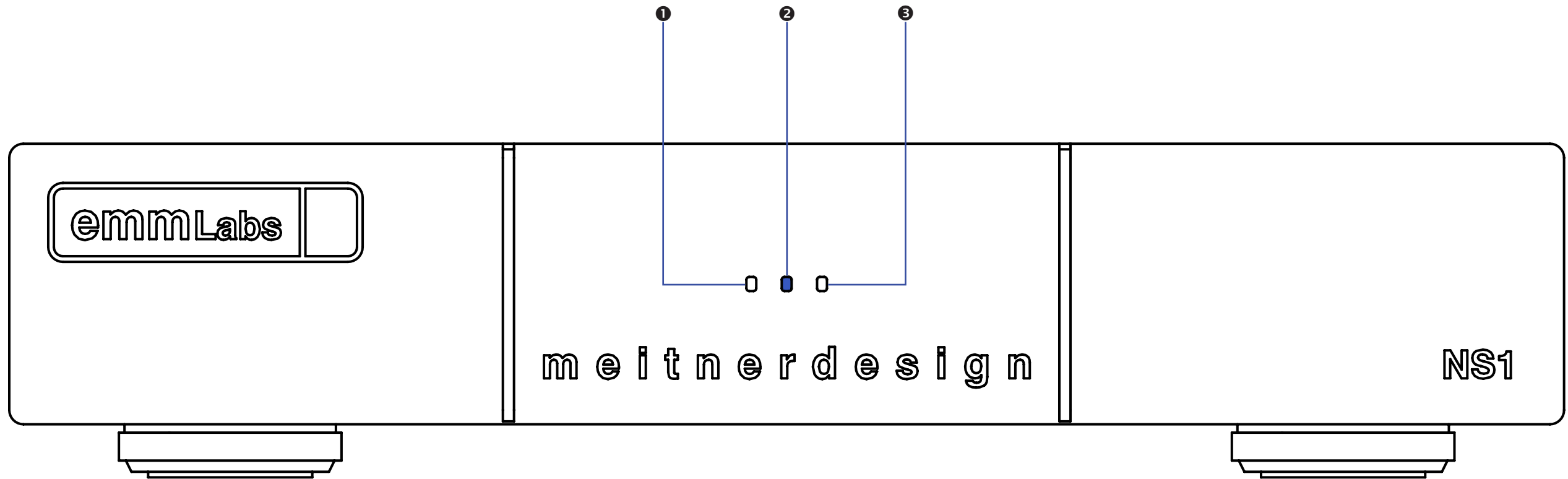
### *Serial RS-232 port for Data Communication to EMM D/A Converters*

### *Power supply:*

- Power factor corrected
- Universal 100V to 240V, 50/60Hz operation
- Power consumption: 10W
- Dimensions W x D x H: 280 x 268 x 60mm
- Weight: 5kg

\*When playing MQA® through the NS1 coupled with MQA®-enabled DAC, the NS1 will output MQA® Core decoded signal. The MQA®-enabled DAC will display the original sample rate of the MQA® stream. In case of the DV2 DAC, the Optilink input currently cannot fully render MQA® streams beyond the Core decoding of 24bit, 96kHz.

## Front Panel & Functions



### 1. Network Indicator

WHITE: Connected to a network and has received a valid IP.

### 2. Power Indicator

RED: NS1 has power but not available for control, is booting or network/IP is updating.

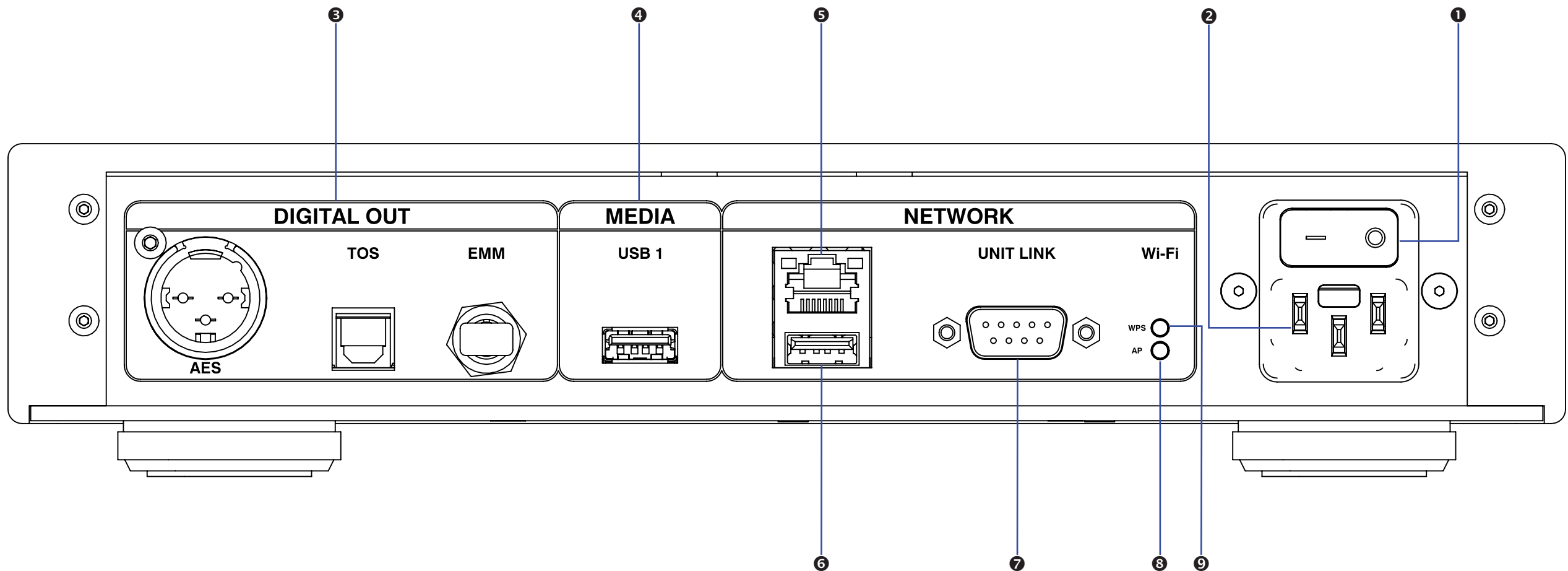
BLUE: NS1 is booted up, has proper network/IP and ready for control.

### 3. NS1 Link Indicator

Linked LED is WHITE when communication established via RS232



## Rear Panel &amp; Functions



1. *Main Power switch.*
2. *Power inlet.*
3. *Digital Outputs (All outputs support up to 24bit, 192kHz and DSD)*
  - EMM Optilink: Output for interconnection to an EMM Labs D/A Converter
  - AES/EBU: AES/EBU (XLR) PCM digital audio output
  - TOS: SPDIF (TOSLINK) format PCM digital audio output

## Rear Panel & Functions

4. *USB Type A interface for connection to USB sticks (FAT32 or NTFS formatted)*

Connect USB sticks with audio files to the EMM Labs NS1 for playback using the mConnect Control app for Android and IOS or the mConnect HD app for tablets. File playback supports up to 24bit, 192kHz and accepts the following files AAC, AIFF, ALAC, FLAC, MP3, WAV, WMA, MQA® and DSD64 (via DoP) in DSF or DFF file format.

5. *Ethernet network interface (RJ45) connector.*

Networking connection for both streaming media, firmware updates and remote control using mConnect Control or HD app. Stream files up to 24bit, 192kHz and DSD64 (via DoP). It also supports MQA®, is UPnP/DLNA compatible and is a Roon Ready endpoint.

6. *Auxiliary USB Type A*

WiFi adaptor port (optional, WiFi adaptor not included)

7. *RS232 communication port.*

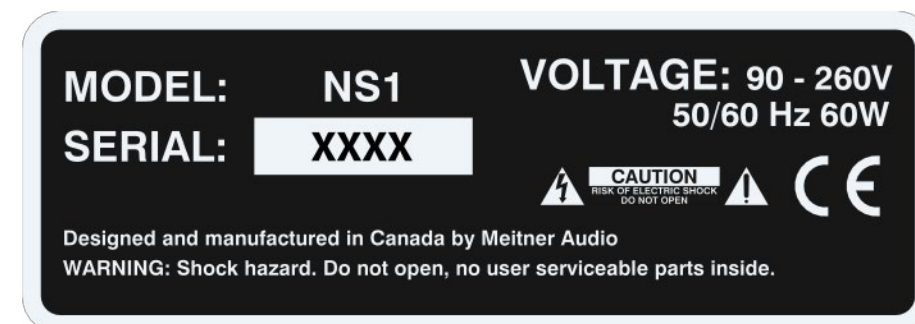
Remote and data communication between EMM products.

8. *AP Factory Reset button (for support purposes only).*

9. *WiFi WPS setup button.*

10. *At the bottom of the NS1 is the model, serial number, and voltage indicator.*

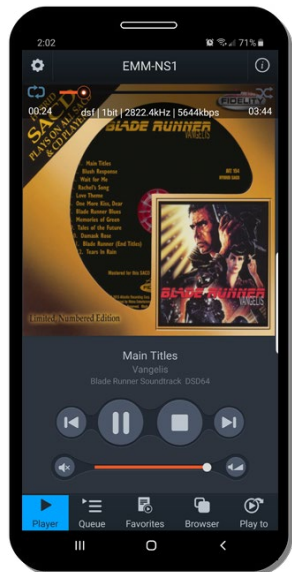
*Tampering or removal of this lable will void factory warranty.*



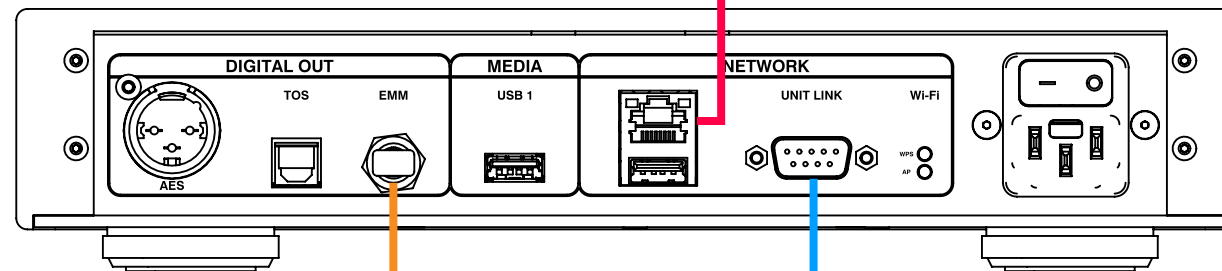
## Network and Audio Connections

1. Connect the NS1 to a network router or switch using suitable ethernet cable. Attach power cable and turn NS1 on. Make sure network is working and enabled.

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



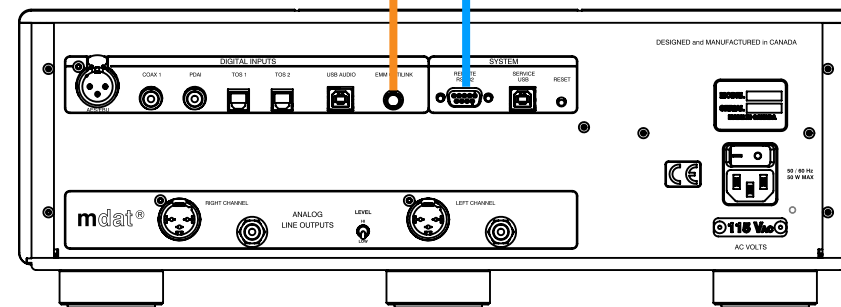
### EMM Labs NS1



Network Switch/Router

EMM Optilink  
Cable

RS232 Cable

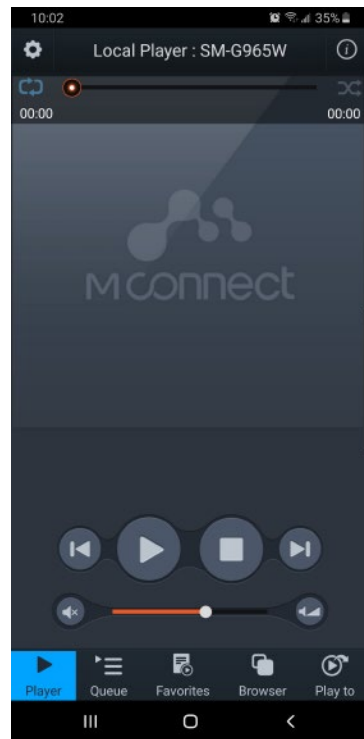
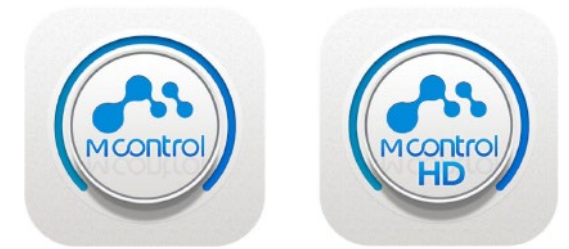


EMM Labs D/A Converter

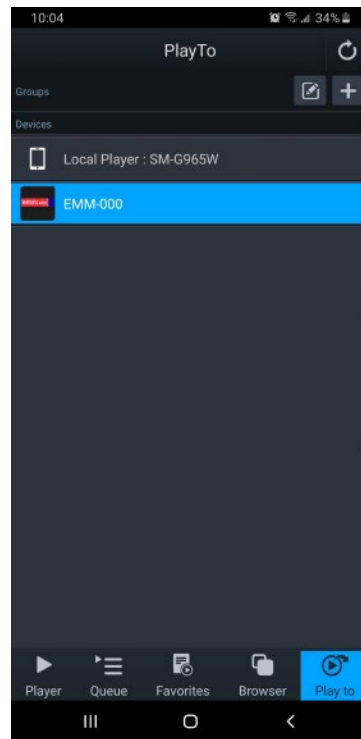
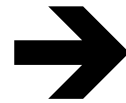
2. Connect suitable digital output to your D/A converter. If used with an EMM Labs D/A Converter connect the EMM Optilink output and the RS232 together. If used with Meitner or any other D/A converter connect either the AES (110 Ohm balanced digital) or TOSlink optical digital output.
3. You can also install a USB stick (FAT32 or NTFS formatted) to the NS1 by attaching it to the MEDIA USB 1 input for direct audio file playback.

## mConnect Control

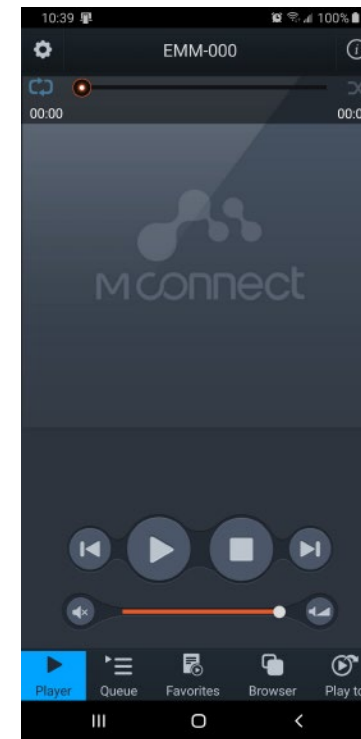
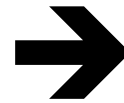
1. Download and install **mConnect Control** for mobile Android or IOS. For tablets download the **mConnect Control HD** app. Mobile or tablet must be connected to the same network as the EMM Labs NS1 to work.



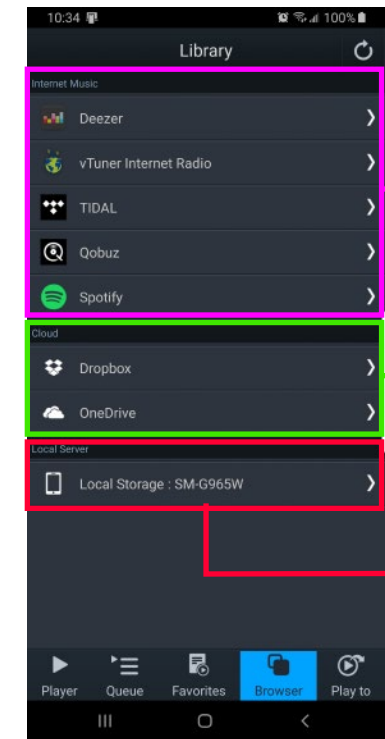
mConnect Startup



Select NS-1 from "Play to"



EMM-NS-1 Selected



Internet  
Streaming  
Services

Cloud  
Storage

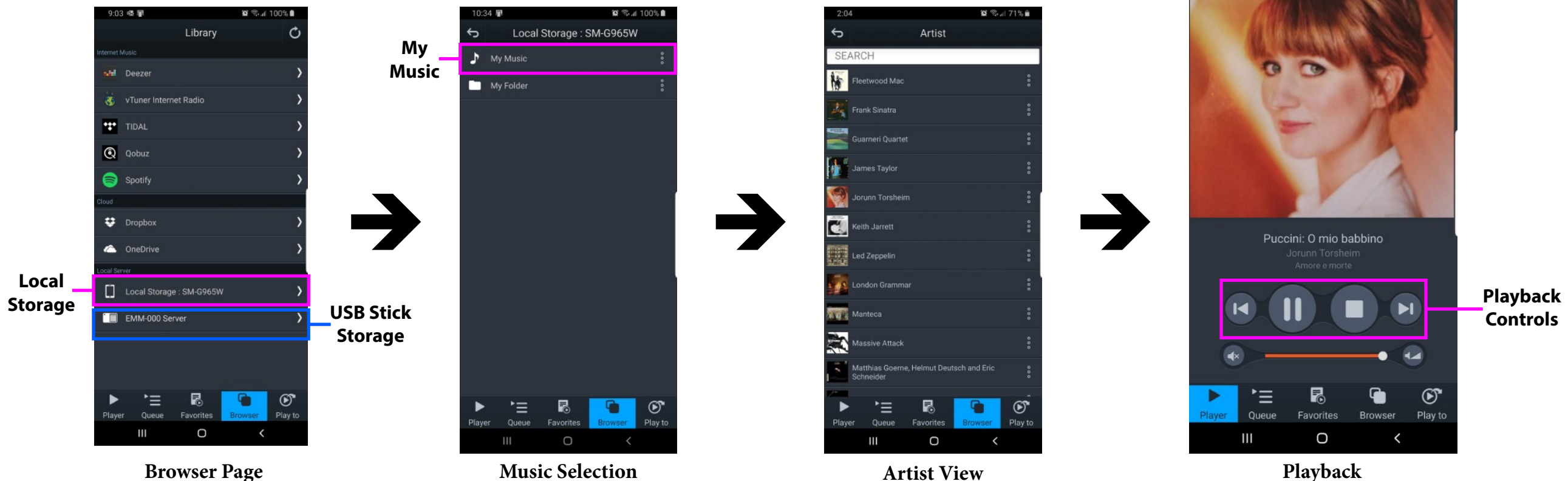
Local, USB,  
DLNA enabled  
Storage

Browser Page

2. Start the mConnect Control app, press the "Play to" button on the bottom right. Select the device with the EMM icon or named "EMM-000" which would be the NS1.
3. Select and press the "Browser" button. You can then then select:
  - "Internet Music" for 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 stick or drives connected to NS1 and DLNA/UPnP enabled network storage

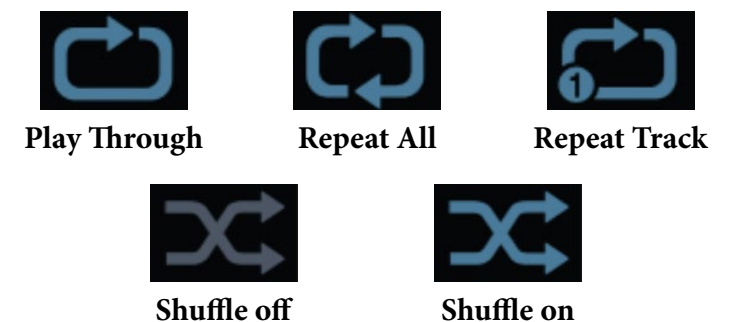
## File Playback and Control

5. In our example we will select tracks from the “Local Server” which will show audio files on the mobile/tablet device, USB storage connected to the NS1 or any DLNA/UPnP enabled storage on the network. Selecting files stored on mobile.



6. 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. Volume is disabled for bit perfect playback. At the top is the track jump function, playback status, type of file, bitrate, sample rate, stream rate and length of file information.
7. On the right is a usage guide with regards to the Repeat and Shuffle functions. Press the icons to select appropriate function.

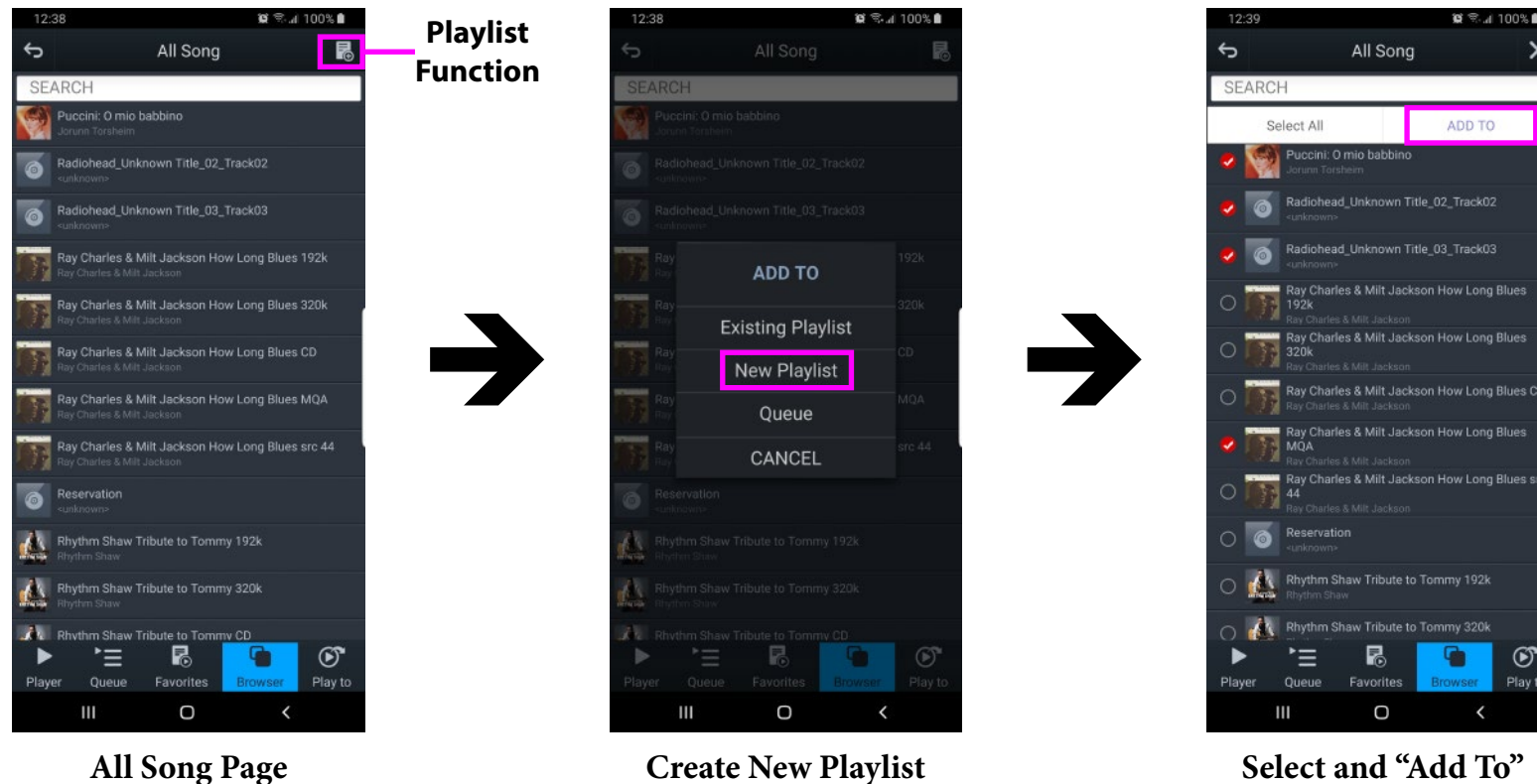
### Repeat and Shuffle Functions





## 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.

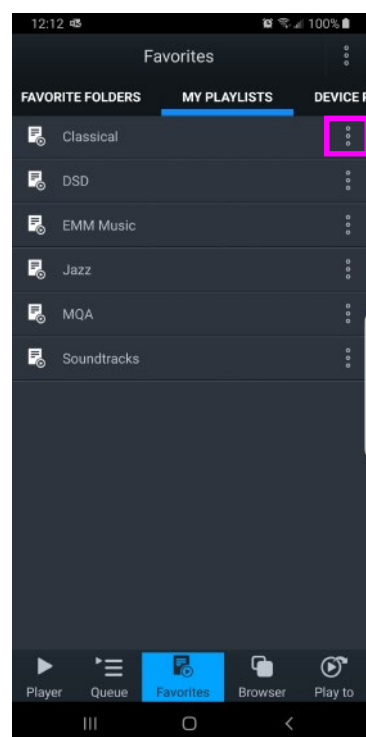


2. The display will show the file selection option to the left of the audio files list. Select the tracks and press the “Add To” button to add the tracks to the specific playlist.
3. You can also add tracks to a specific playlist using “Artist”, “Album”, by using the folder option and/or using search functions.
4. Multiple playlists, pre-selected favourite folders and device specific playlists can be created pressing “Favourites” button and accessing the favourites and playlist functions.

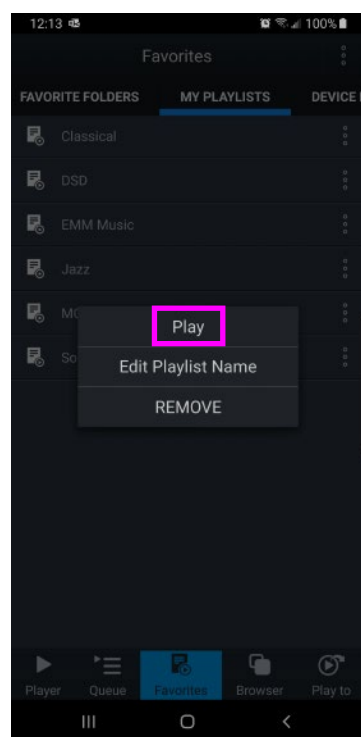


## Making a Playlist

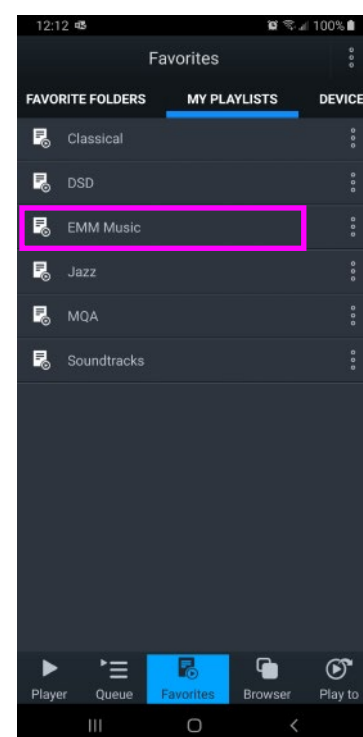
5. In the “Favourites” page select “MY PLAYLISTS” tab and locate a specific playlist and press the function button to the right of the playlist. Press “PLAY” to start playback.



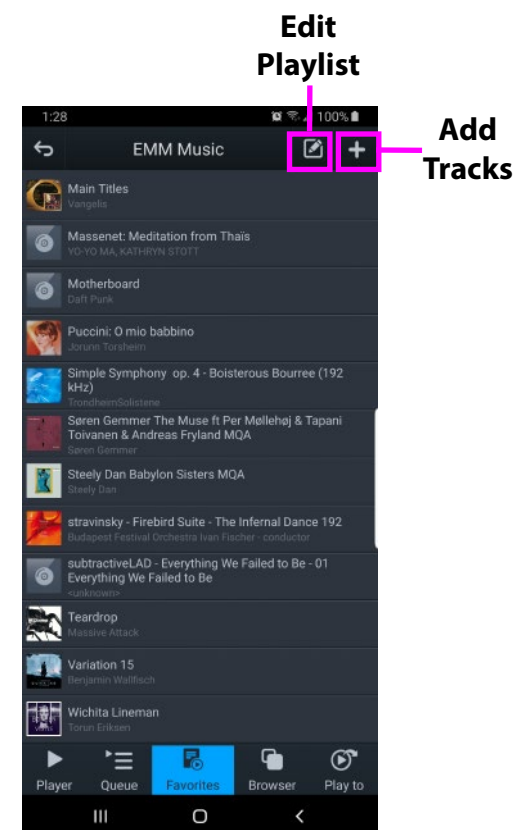
**Playlist  
Specific  
Functions**



Function List



Select a Playlist

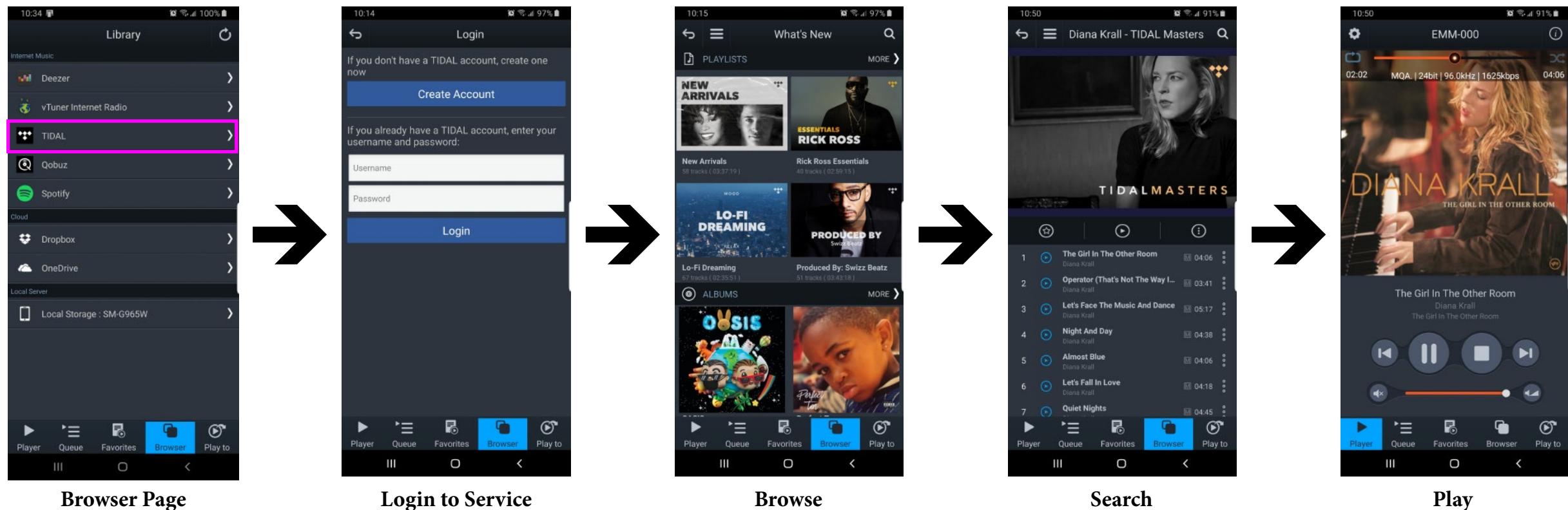


Edit and Add to Playlist

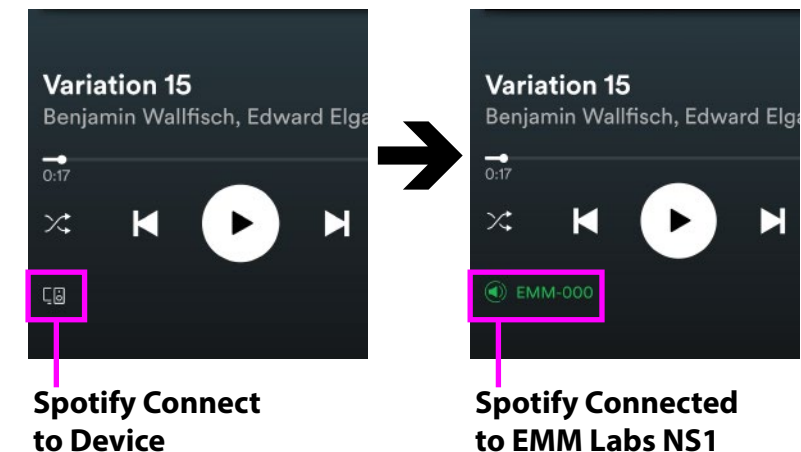
6. From this function list you can also edit playlist name or remove/delete the playlist.
7. If you select a playlist you will be able to see its contents. Use add tracks function, “+” button located at the top right of the display to add tracks to the specific selected playlist.
8. To the left of the 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 mConnect Control or mConnect HD (tablets) to access online streaming services. Example, select Tidal from the “Browser” page and login with your account.

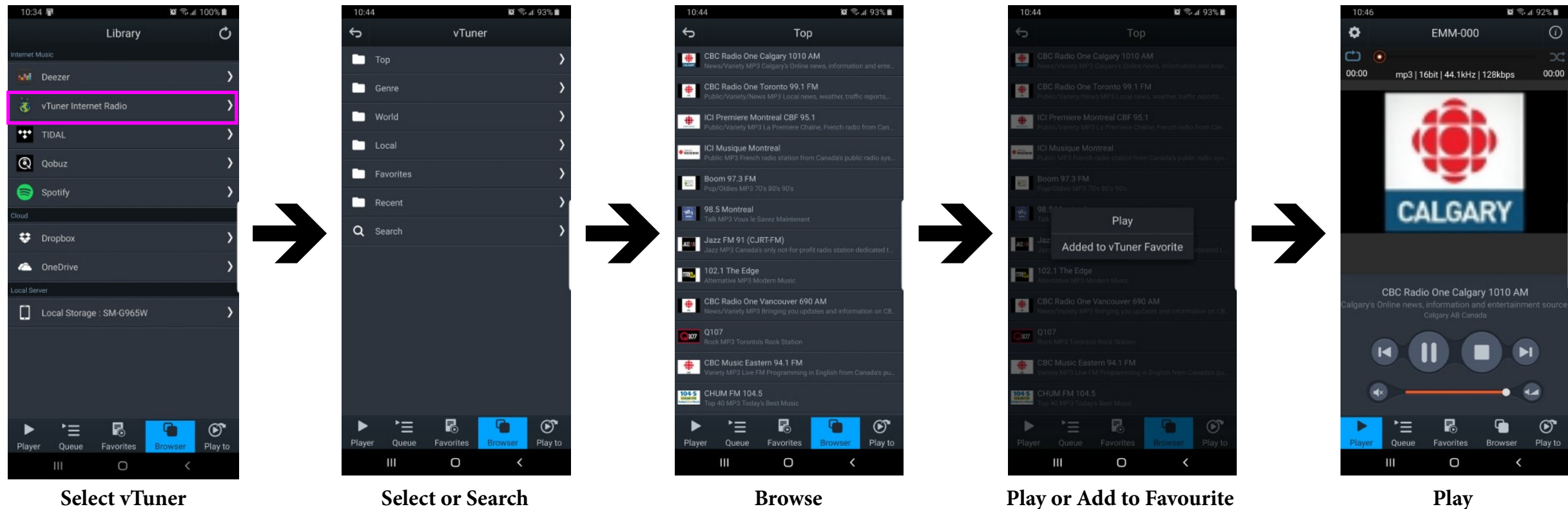


2. Once logged in you can browse, search and playback files like normal.
3. Other streaming services like Quboz and Deezer and the online storage services like DropBox and OneDrive are accessed the same way using the mConnect app.
4. Spotify uses its own app to stream audio to the NS1. Spotify app will launch if available or you will be asked to install it and login. Within Spotify select the “Connect to device” page and select the NS1 from the list. See example on right.



## Streaming Services: vTuner Streaming Radio

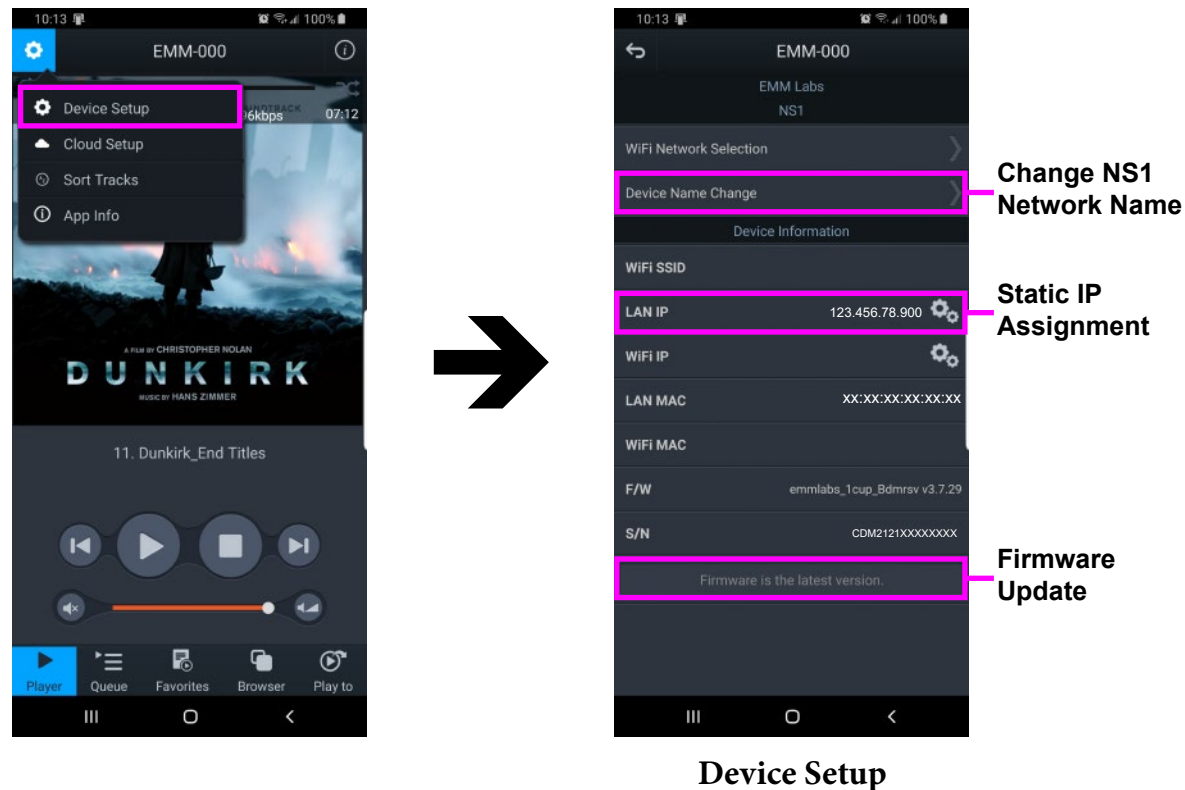
1. vTuner is a free radio streaming service included with the NS1 streamer. No account nor subscription is required to use stream radio stations.



2. Select the vTuner service and you can search and 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 NS1's device setup for more detailed network information, to change the NS1's network name, to set a static IP for the NS1 or to update the NS1's firmware.

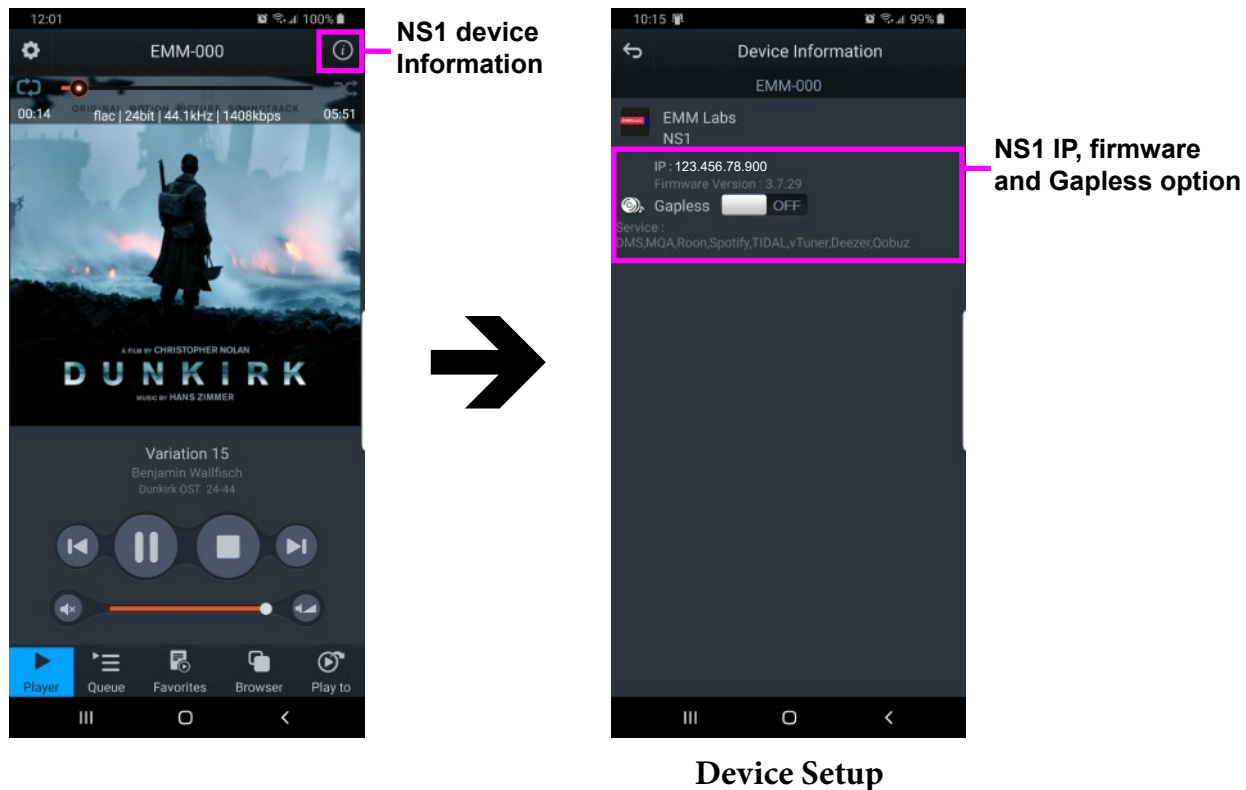


2. NS1 has a pre-assigned default factory set network name, in this case it is “EMM-000”. You can change this by selecting the “Device Name Change” option.
3. Set a static IP for the NS1 by pressing the cog on right of the “LAN IP” setting.
4. If a firmware update is available you will be notified at the bottom of the page, and you can just press this option to update.



## Setup and Information

5. Selecting the info icon on the top right side of player accesses the NS1's device information. This includes 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 EMM Labs NS1 and if the NS1 is properly connected to your network.

## Roon Setup

The NS1 Streamer is Roon Ready.

To start you will need the following:

1. A Roon account. If you don't have an account please subscribe on 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.
3. Roon remote software can then be used to control playback from any computer or mobile device.

