

# MANO (ULTRA) MK2 MUSIC NETWORK ROOM PLAYER USER MANUAL

“Mano Music Streamer for high-end streaming developed to connect via I2S to Audio-GD & Holo Audio or other I2 LVDS compatible DAC’s”

*High-End music  
streaming for  
S/PDIF & I2S DAC's*

## Introduction

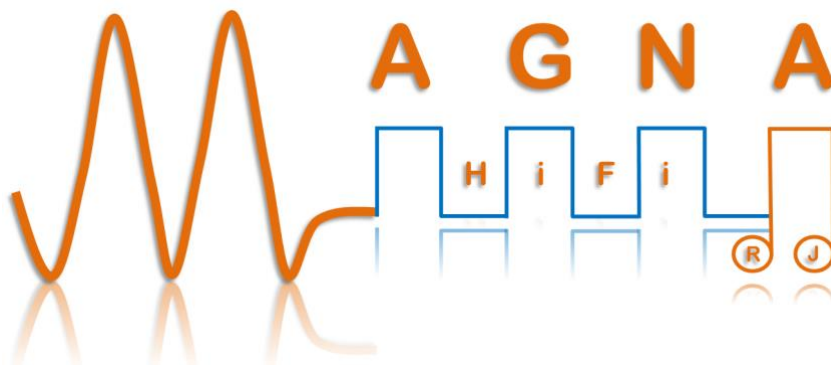
This document describes the installation and configuration of the Mano Music streamer.

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# Table of Contents

<b>Introduction</b> .....	<b>3</b>
<b>Roon Software</b> .....	<b>4</b>
<b>Apple iPhone / Android Apps</b> .....	<b>4</b>
<b>Supported Media Servers</b> .....	<b>4</b>
<b>Install and configure</b> .....	<b>5</b>
Before you Begin.....	5
<b>Connect for 1st time</b> .....	<b>5</b>
*Find the Mano IP address .....	6
<b>Enable Audio Device in ROON</b> .....	<b>7</b>
<b>Renew software (Clean image)</b> .....	<b>8</b>
Flash micro-SD Card on MAC .....	8
Flash micro-SD Card on Windows.....	8
Replace micro SD CARD .....	8
<b>Replace Fuse</b> .....	<b>9</b>
<b>Features</b> .....	<b>10</b>

## Introduction

The Mano ULTRA mk2 music streamer is a open hardware device which supports both S/PDIF and HDMI I2S (PS-Audio Compatible) digital audio outputs.

Several software solutions are possible with this device:

- **[Logitech Media Server solution \(piCore\)](#)**
  - iOS iPeng9 and Android app Squeeze Orange
  - Tidal, Qobuz, Spotify, and Deezer, Spotify Connect
  - local USB / NAS storage
  - Radio Stations (TuneIn Radio)
  - Localized in many languages including France, German, Dutch, Spanish
  - Song Lyrics in app
- **Ropieee (XL) [a ready-to-go solution](#)**
  - Roon bridge Software - RoPieee is specific endpoint software
- **Volumio [Audiophile music player](#)**
  - Supports all filetypes: FLAC, Alac, Aac, Vorbis, Mp3, DSD etc
  - UPNP Playback
  - Airplay Playback
  - DSD Over PCM support
  - Integrated WebRadio
  - Mount USB drives and NFS Network Attached Storage, with an auto-discovery function
  - Localized in many languages including France, German, Dutch, Spanish
  - Native TIDAL and Qobuz Integration (MyVolumio Virtuoso)
  - TIDAL Connect (MyVolumio Virtuoso)
  - Alexa Integration (MyVolumio Virtuoso)
- **MoOde™ [audio player](#) (supports Airplay, Spotify, Squeezelite)**
  - Radio Stations
  - Mount USB drives and NFS Network Attached Storage, with an auto-discovery function
  - Airplay, Spotify, Squeezelite
  - UPnP A/V and OpenHome renderer for MPD
  - MiniDLNA UPnP A/V media server
  - UPnP browser with folder scan
  - Qobuz and Tidal access via UPnP

Both Apple (iPeng Application) and Android (Squeeze Orange for example) can be used. The Mano works completely independently and can also be operated via a web interface from any device with a network browser.

We have a complete image configured available. Both Apple (iPeng Application) and Android (Squeeze Orange for example) can be used. The Mano works completely independently and can also be operated via a web interface from any device with a network browser.

## Roon Software

Roon bridge software is available for the Mano ULTRA mk2 and will function as Roon Audio Device. A separate Roon Server with valid license (not included) is required in your network. More information about Roon Software <https://roonlabs.com/howroonworks>

### DAC Support

#### D/A Converter (DAC) Requirements:

- DAC must include I2S HDMI Input (Audio-GD, PSAudio, Singxer & Holo Audio Spring DAC compatible)
- Supported Audio-GD DAC's are all supporting HDMI I2S input
- SPDIF Input

## Apple iPhone / Android Apps

Roon apps on all your devices are used as remote controls for your Roon Core.

## Supported Media Servers

The Roon Core is the brain of your system. It manages your music files, streaming services, and your audio devices. The simplest, most powerful way to set up a Core is to purchase a Nucleus. You can also download and install the Roon Core for free on Mac, Windows, Linux, select QNAP and Synology NAS, and Intel NUC running ROCK.

## Install and configure



LAN Port = Connect to local network

USB Port = Connect USB drive

I2S OUT = HDMI I2S LVDS Audio Output (Holo Audio Standard)

SPDIF OUT = RCA / BNC S/PDIF Output

Power IEC = 220VAC / 110VAC Power Inlet

### Before you Begin

Your Mano is shipped with a fully prepared Ropieeee (ROON) software image.

### Connect for 1st time

When connecting your Mano for first time, please follow these instructions for proper setup.

1. Connect an Ethernet LAN cable from the Mano to your LAN/router.\*
2. Connect power cable to the Mano
3. Connect SPDIF or HDMI to the Mano and your DAC
4. Turn on the Mano (check if blue front LED is on and LAN LED's are blinking at back panel near Ethernet cable)
5. After one minute start your ROON application on your smartphone/tablet.
6. Enable the Mano ULTRA mk2 as ROON audio device

The IP address\* can be found when the Mano is detected by your Squeeze remote application easily. Alternatively the IP address of the Mano is shown in the connection list of your router / switch.

### \*Find the Mano IP address

Advanced configuration needs to be done in the WEB GUI. In order to do this you will need to know the IP address of your player. To find the IP address of your Mano player:

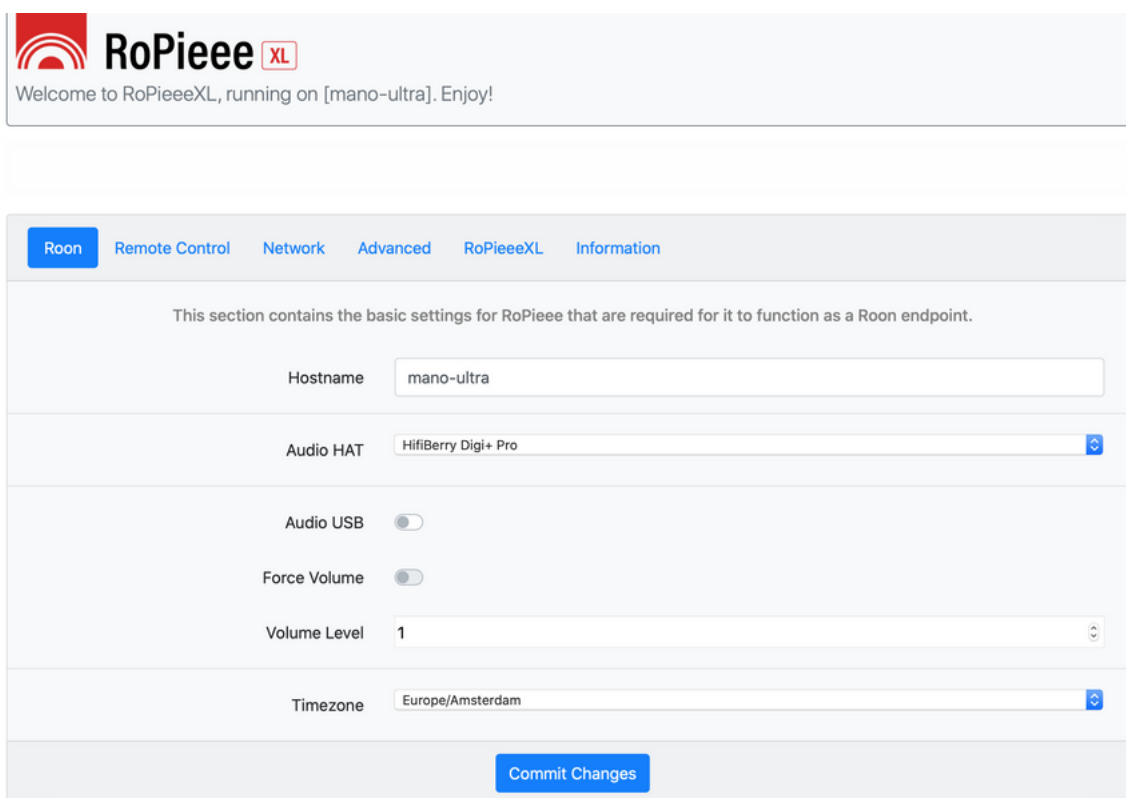
- In your remote app go to “settings” -> “Advanced Settings” ->”Player Information” **Error! Reference source not found. )**

Now, you're going to use your web browser on your computer to talk directly with the player. Open a new tab in the browser, and enter your Player's IP address. (i.e. <http://192.168.123.11>)

Alternatively, you can download “IPScan” application (Windows only) or “Angry IP Scanner” (Windows and MAC)

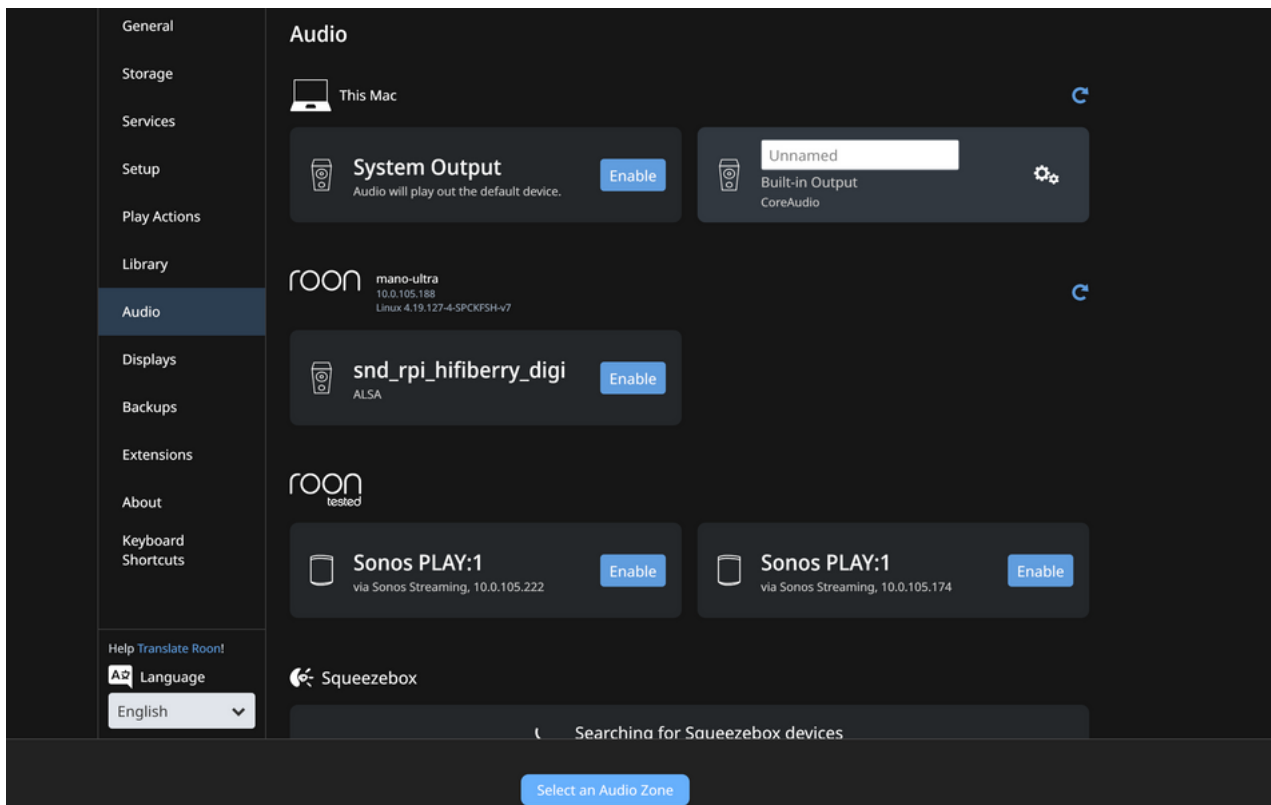
Browse to the Mano web GUI in order to change settings and set library locations an lots of other settings!

This will take you to the piCorePlayer's web interface (See picture below)

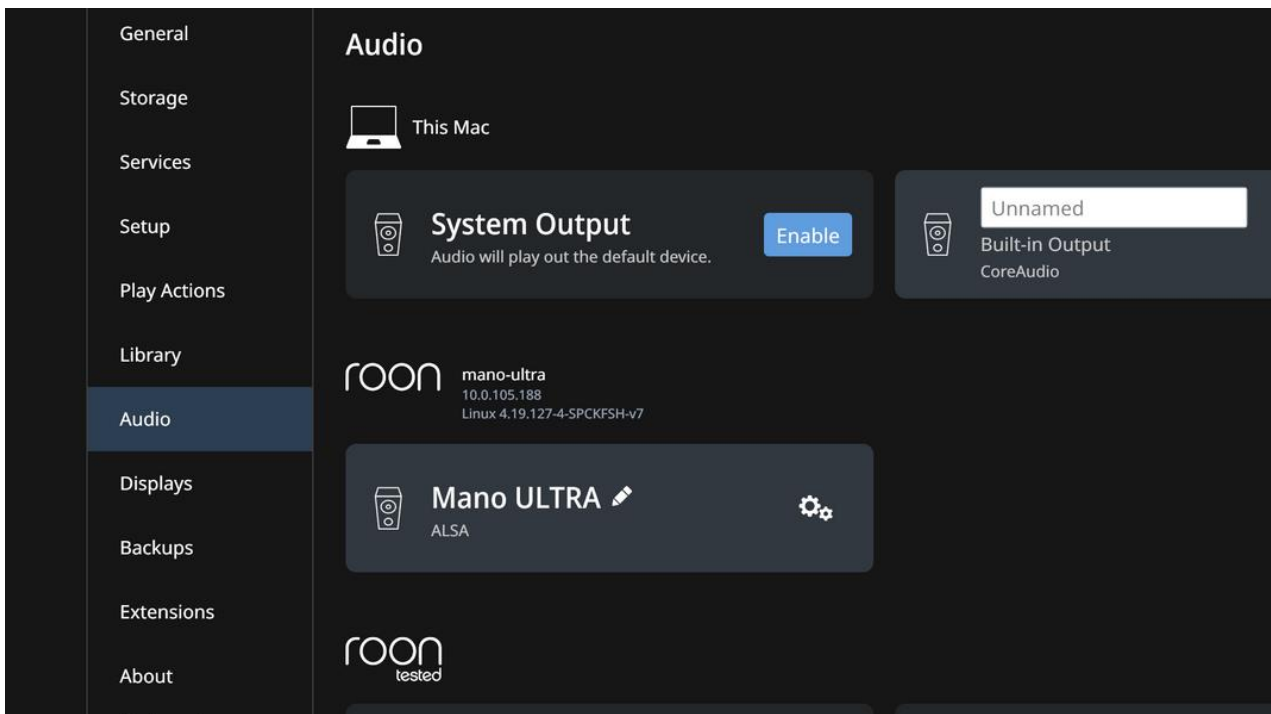


## Enable Audio Device in ROON

Before you can playback with your Roon system to the Mano ULTRA mk2 you'll need to enable the audio device in ROON



Give your audio device a name so you'll recognize it easily



## Renew software (Clean image)

Download fully prepared, latest version, pre-configured and tested image download from Magna Hifi free of charge.

Once you've downloaded the image, put it in a folder on your hard drive in which the path has no spaces or weird characters. This will just make things a bit less complicated during the flash process.

### Flash micro-SD Card on MAC

1. Choose a flash utility. These instructions assume you are using RPI-sd card builder v1.2 on your Mac. Other utilities are available and work in much the same way, though there may be differences in detail. See the sidebar.
2. Launch RPI-sd card builder. You'll immediately be presented with a navigation screen. Navigate to the location of the .img file to be loaded, and select it. (Remember: there should be no spaces in the file path/name.)
3. If your SD card is not already in its slot, you will be asked to connect it. Slide it in.
4. If your Mac is set up to require a root password for this action, you will be asked for your admin password.
5. You will see a message instructing you not to remove the SD card. OK so don't remove it yet! But check that the card has been unmounted (disappeared from your Disk Utility) and then don't forget to click the Continue button or nothing else will happen.
6. Wait patiently. You will see nothing happening for a while. Eventually a COMPLETE message will appear. You can just slide the SD card out (no need to eject it in Finder, as the app has already done that).
7. Your new SD card is ready. Take it to your Mano, slide it in and power up.

### Flash micro-SD Card on Windows

1. Launch Win32diskimager. Download SD CARD Disk Manager <http://sourceforge.net/projects/win32diskimager/>
2. You'll be presented with a navigation screen. Navigate to the location of the .img file to be loaded, and select the Mano image
3. If your SD card is not already in its slot, you will be asked to connect it. Slide it in.
4. Confirm, then wait till the image copy is complete. Eject it.
5. Your new SD card is ready. Take it to your Mano, slide it in and power up.

More info: Flashing SD Cards for Raspberry Pi <http://www.easysqueezebox.com/index.php/projects/flashing-sd-cards-for-raspberry-pi/>

## Replace micro SD CARD

The micro-SD card can be found at the bottom.

## Replace Fuse

The Fuse is located below the power inlet.

Type of Fuse: 2A Slow Blow (T) 5x20mm / 250V



Location of Fuse

## Features

- High-end quality: bit perfect playback
- Sample rates: 44,1 / 16 till 192 / 24 bit PCM formats (Supports up to 192kHz / 24bit)
- Supports DSD playback with DSD-over-PCM
- FLAC, WAV, MP3, AAC, ALAC, PLS support
- Music libraries on Samba, NFS and USB drives
- Web radios support out of the box
- Spotify from App or via Spotify Connect (Only compatible with Master series and DAC 19)
- LAN access
- Wi-Fi support (External Wi-Fi adapter required)
- Control it via integrated Webgui with PC, Smartphone, Tablet
- Airplay capability