

Str@mbo NOHTA





Thank you for buying the Str@mbo.

In designing and implementing it we have pursued two objectives:

- the highest quality in music reproduction
- the ease of use

We are convinced that we have hit the first and we sincerely hope that this manual is useless, so we will also hit the second.

In addition, the aim of this manual is to provide guidance on the use of the Str@mbo management web interface, whose purpose is to enable the different functionalities of the installed third-party software products.

It is not meant to be, and certainly not a Logitech Media Server or Roon user manual, for example, although we will provide guidance on this at some point.

The manual does not replace the individual support that we will always be happy to provide you at any time.

Do not hesitate to contact us for any eventuality or just to chat about Str@mbo.

Play and... enjoy!



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Architecture

The Str@mbo can be used in different configurations, both as a player, that is as a machine that simply receives from the network the flows that then sends to the DAC via USB, that as a server, that is, managing the music library, retrieve files both locally and on remote devices or from streaming services, if necessary by converting, resampling or applying Digital Signal Processing (DSP).

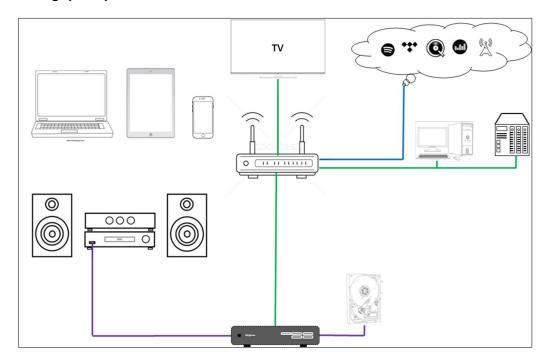


Figure 1 Integrated Str@mbo, well

In some configurations (with Logitech Media Server or Roon) it can also work as an integrated, performing both tasks, paying only a small price in terms of absolute quality.



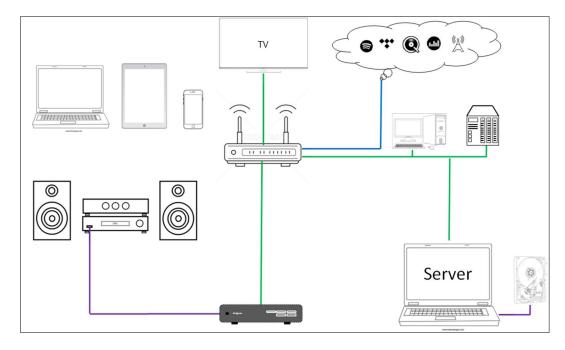


Figure 2 Str@mbo player, better

We recommend its use as a player only, leaving, where necessary, to a second pc the task of server, better if a Str@mbo Server.



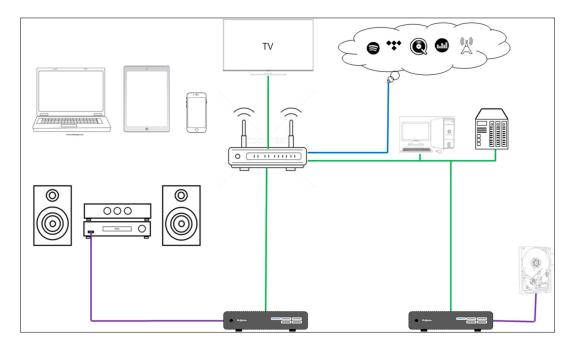


Figure 3 Str@mbo player + Str@mbo server, TOP

For precise design choice the Str@mbo is headless, that is it is not equipped with a screen and keyboard, therefore for its use it is always necessary at least a controller, typically a phone, a tablet or the browser of any pc on the network. Each application provides its different control tools, we will see it at specific points.



First Start

Connect the Str@mbo to:

- 1. The router via network cable
- 2. The DAC via USB cable
- 3. The supplied power supply or, better, the OPTIONAL LINEAR

Press the power button and wait a few seconds (15 is usually enough) for the Str@mbo to start and the DAC to be recognized correctly.

The Str@mbo, when used as a player, is ready to play.

Use your favorite app from your phone, player, PC or MAC to access one of the active modes (Squeezelite-R2, UPNP, Airplay, Spotify connect) and...

Enjoy Music!

Note:

A video tutorial on unboxing and linking is available here.



Access to the Web Interface

If you want to use the Strambo as integrated, as server or simply want to select different modes of use as a player or set the operating parameters of the DAC, you can access the WEB Interface from any Browser at:

strambo.local/



Figure 4 Str@mbo Network address

<u>WARNING:</u> some routers or in some special conditions (for example if there are several subnets) the method indicated does not work and you must type the IP address that the router will have assigned to the Str@mbo.

Refer to the section "Troubleshooting: Finding the Str@mbo on **the network"** for a description of some of the possible alternative methods.



The Web Interface

The features are identical from any device, it changes only slightly the arrangement of the elements that constitute it:

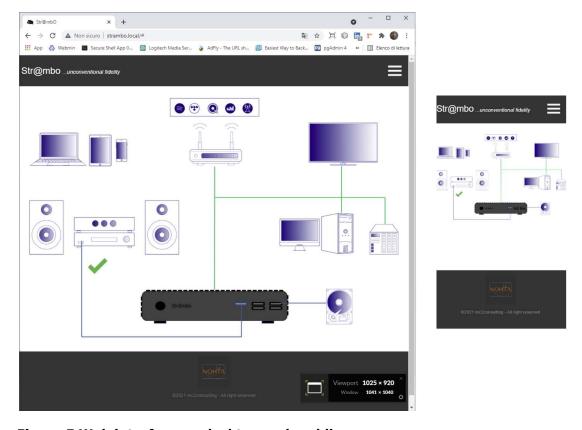


Figure 5 Web interface on desktop and mobile



Updating the System

If recommended updates are available to the software in use, the Web interface reports it by means of a small icon on the menu button:

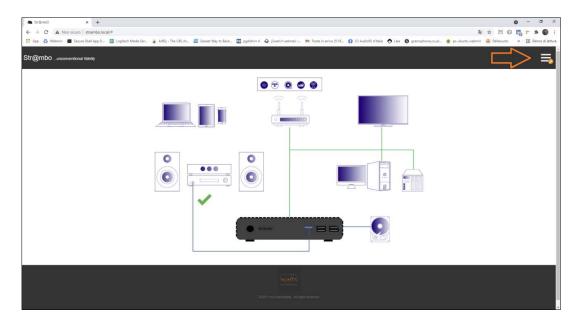


Figure 6 Available Update

It is always possible to upgrade the system even when it is not expressly stated, you will get an update of all the components of the operating system, bad does not, but it is not strictly indispensable.



By clicking the drop-down menu from which you can select the relevant item "Update":

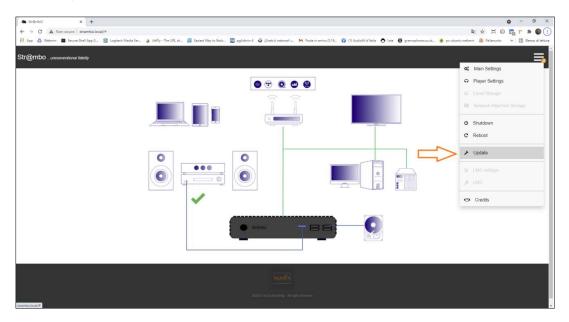


Figure 7 Update

Once started, it will take a few minutes and <u>it is important NOT to interrupt the operation.</u>

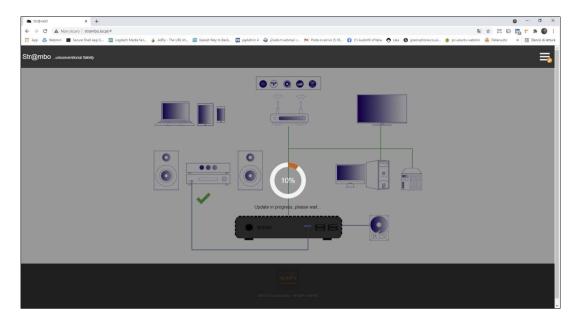


Figure 8 Current Update



At the end, if everything went correctly, a warning appears, confirming that the system restarts and is ready to operate.

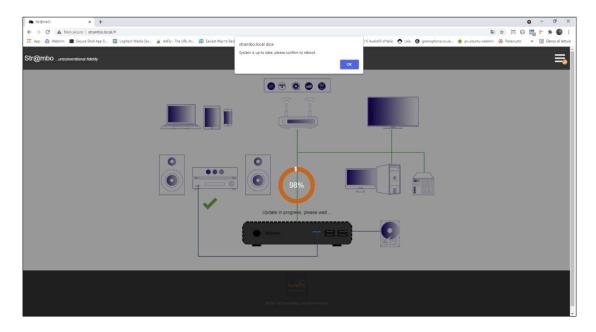


Figure 9 Succesfull Update

<u>WARNING</u>: it may happen that for network or other problems the update fails, normally it is not a problem, the system warns and asks to repeat the operation.

If the problem does not resolve, please contact support.



Connection with the DAC

In the case of use as a player or integrated, when the connection with the DAC has been successfully established, the WEB interface signals it with a green check:

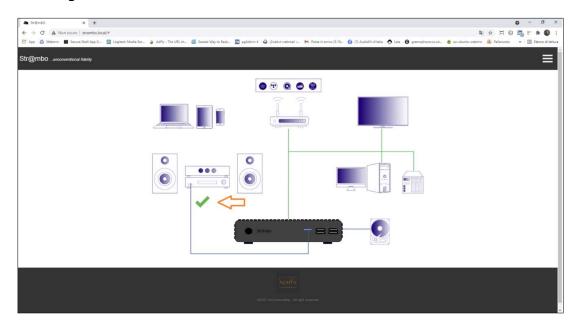


Figure 10 Correctly connected DAC



In case of problems or, simply, when the attempt to stable the connection is still ongoing, a warning signal appears:

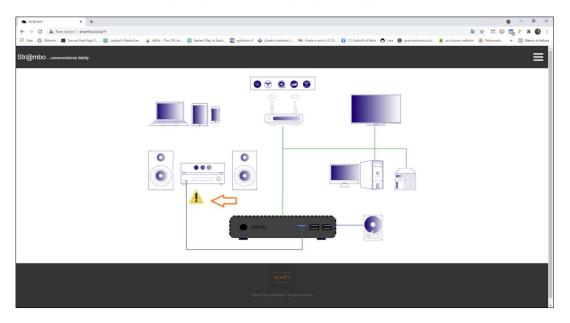


Figure 11 Offline DAC or ongoing detection

In this case, please wait a few seconds (10 are usually more than enough), then just a refresh of the page (or a click on the Str@mbo logo at the top left of the page) to check again.

The same signal appears if two or more different devices are connected to the Str@mbo and the one to be used has not yet been selected.

In case, with a click (or a tap) on the DAC icon or by selecting the Player settings menu you can access the Player page, valid for all modes of use except Roon Bridge, which requires the exclusive use of the sound card and must be set directly from Roon.



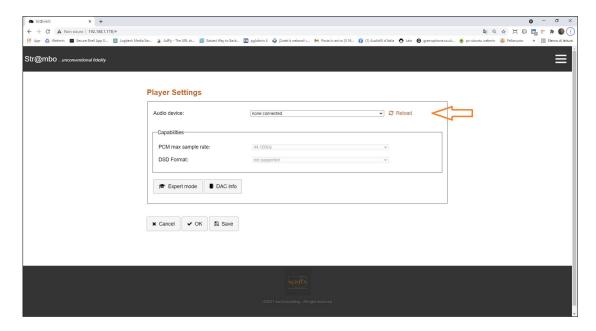


Figure 12 DAC not connected

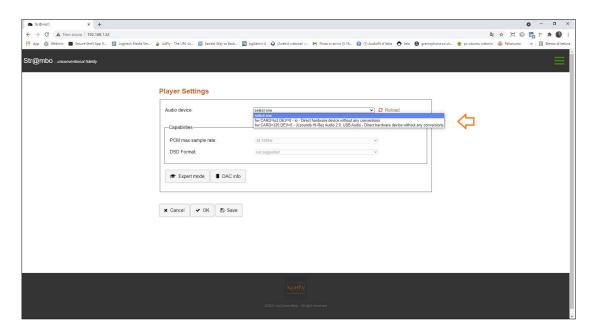


Figure 13 More then one connected DAC

It is always possible, using the reload key, to re-check the situation, for example after connecting or disconnecting a DAC (always wait 10s).



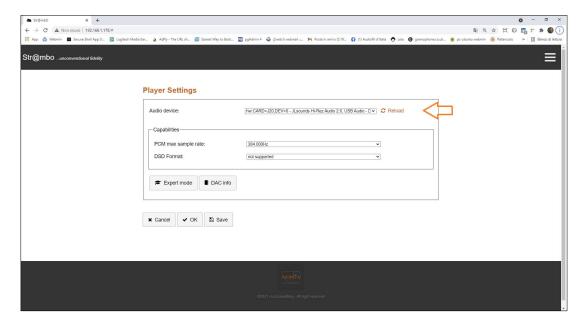


Figure 14 correctly identified DAC

When the DAC to be used is correctly identified, its characteristics are loaded as it presents them. In most DACs this is done accurately, you can always change them manually.

If in doubt (or out of curiosity) the DAC INFO button shows the details with which the DAC presents itself to the system.

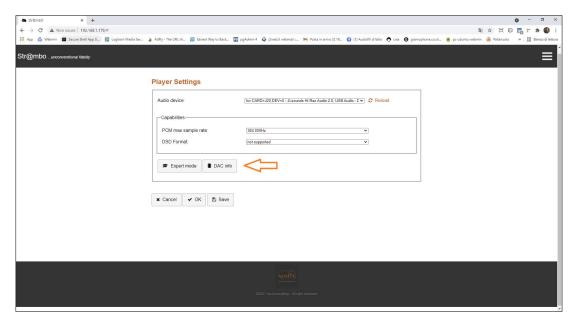


Figure 15 Dac Info

NOHTA

User Manual

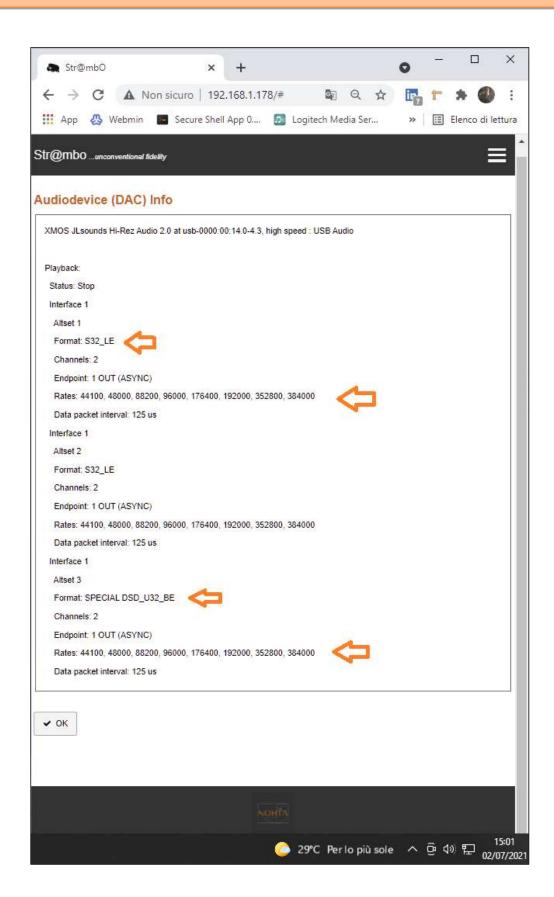




Figure 16 Above the DAC

Advanced Settings of player

They are automatically loaded by the system and are the values that we consider optimal for the use of Squeezelite-R2 with the Hardware of the Str@mbo, accessed by pressing the button "expert mode":

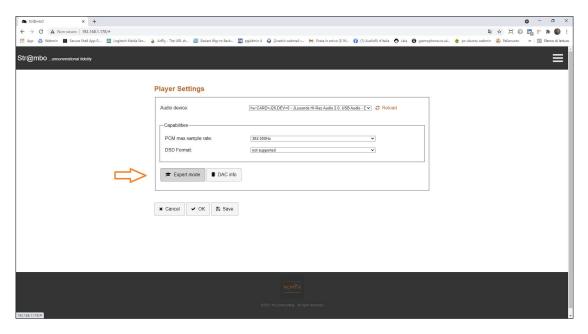


Figure 17 Expert mode

They can be modified at will, aware that they significantly change the behavior of the system, risking to make it unstable.

<u>WARNING</u>: The settings here are valid for all modes of use except for Roon Bridge, which requires the exclusive use of the sound card and must be set directly from Roon.



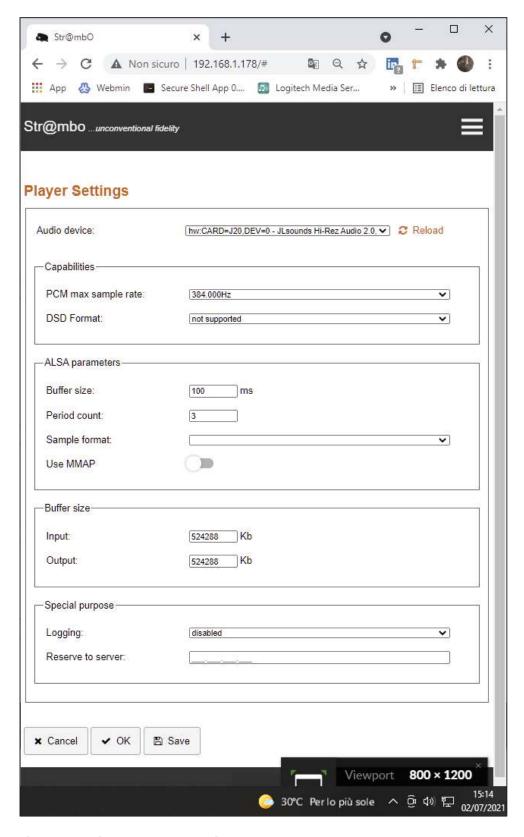


Figure 18 Player Expert mode



In general, **ALSA period count** should be left at 3, only in case of problems with your DAC (e.g. Hegel) you can try to bring it to 4.

It can also be set to 2, but the risk of 'hopping' increases and the benefits are doubtful.

ALSA Buffer size should be a multiple of period counts, but with each rule there is its exception!

You have to experiment, knowing that the more you reduce it, the more the sound 'turns' towards the detailed, fast, nervous and aggressive, while increasing it you get the opposite effect, ie musicality, naturalness, opacity, haze,... It's a matter of taste!

The value used in most cases is 40, we like a higher value more and set it to 100, but you are free to experiment.

It's important to know that in addition to 499 you can't go and that getting below 16 is risky, but I know people who use 10 or even 8.

All other ALSA parameters should be left unchanged unless explicitly requested by the support service.

An exception are the Application Buffers (Input and Output) that concern exclusively Squeezelite-R2.

They are set in consideration of the RAM capacity of the Str@mbo and in our opinion contribute a lot to its performance.

If you use Squeezelite-R2 as a Roon player, as many do, you may experience occasional interruptions in playback. We've been told that reducing them to ¼ or not, the problem disappears.

In all the high cases, in theory, you can also double, given the endowment of the Str@mbo, go up over the risk of forcing the system to pay, which is never positive and we do not recommend it.



General Settings and Usage

By clicking (or tapping) on the Str@mbo icon in the initial map or selecting 'Main settings' from the menu, you can access the main page, where you control all the operating modes.

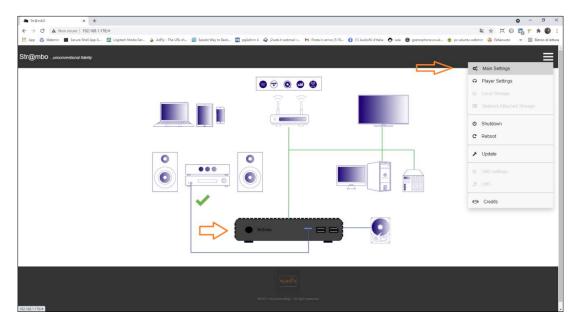


Figure 19 Main Settings

The page that opens is composed of several sections, let's see them in detail.



System Informations

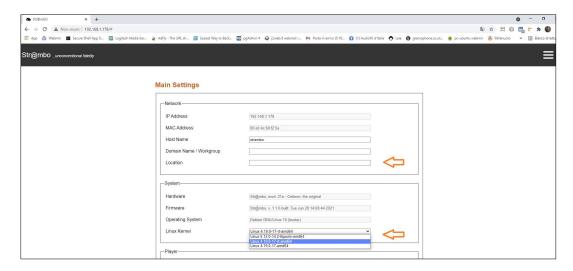


Figure 20 Network and System

It presents the main information of the system, such as IP and mac addresses, the name that identifies it on the network and that you can change, for example if you have 2 different Str@mbo used as player and server.

You can enter an additional domain name or descriptive name, which in LMS will appear in the player name.

There is also the Str@mbo hardware model and the installed operating system and firmware versions.

Last, but not least, the Kernel, which can be selected from the list of those present.

ONLY hardware-specific kernels in use at the latest version are presented, maintaining only the different versions of Linux.

It's impossible to make a mistake!

Currently we recommend the Kernel RT in the latest version (Linux 4.19) but it is also worth trying liquorix Kernel that on some DACs is preferable.

Others may be added in the future



Mode of Use

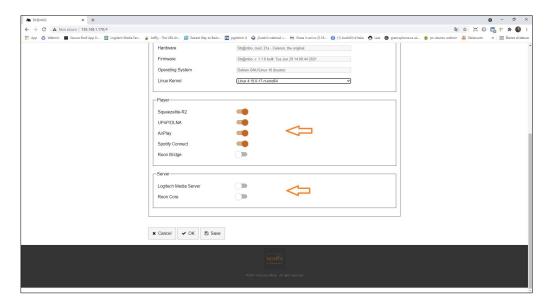


Figure 21 Modes of Use

Here's the most interesting part of the system.

Here you can set the operation as Player, as integrated or as server and by which applications, simply selecting them from the list.

The system is delivered as only player, with all active modes, except Roon Bridge, which is exclusive and to which many of our customers prefer Squeezelite-R2, activating "compatibility with squeezebox" in Roon.

We advise you to keep active only the modes used.

Servers must be strictly activated only if actually used, since their presence is felt negatively.



Use as Player Squeezelite-R2

This mode is possible in both player and integrated mode, simultaneously activating the Logitech Media Server.

For use with LMS, you must install and set up the server properly, please refer to the relative section of the manual: Use as LMS server for details, which remain valid for use on hardware not Str@mbo.

The use with Roon is possible as a player by activating on Roon the support to squeezebox.

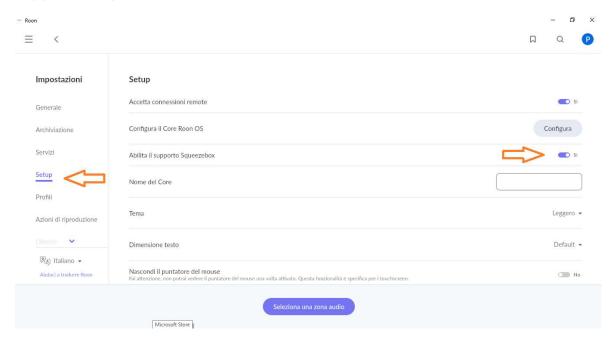


Figure 22 Squeezebox support in Roon.





Figure 23 Support Squeezebox in roon, signal path

It is also possible to use it as an integrated, by activating roon cores on the same machine.

Roon strongly recommends using the built-in core player in this mode.



Use as player only (renderer) UPNP/DLNA

It's probably the most common mode, there are dozens of servers and controllers that can draw from any type of source, the list is not available, we simply report Mconnect that in our opinion it is one of the most complete applications and also allows access to streaming systems in other resolution, in addition to local libraries or on NAS and network shares, without necessarily requiring the presence of an external server.

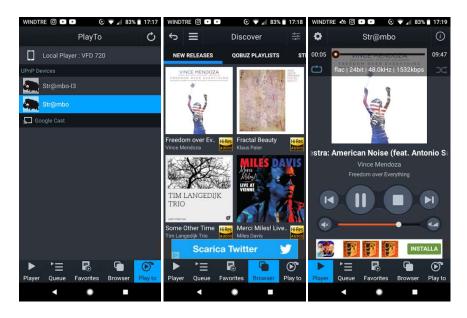


Figure 24 Mconnect used with Qobuz



Use as Airplay endpoint

It has the big limit of being controlled only by Apple devices or by Itunes on Windows, but has the great advantage of allowing access to two streaming services otherwise unreachable: Apple Music and Amazon Music.

The protocol imposes some limitations on formats and - to date - only supports CD resolution (44100hz, 16bit).



Figure 25 Selecting the Player in Airplay



Use as Spotify connect

It needs a premium account, after which it is intuitive and without any problem.

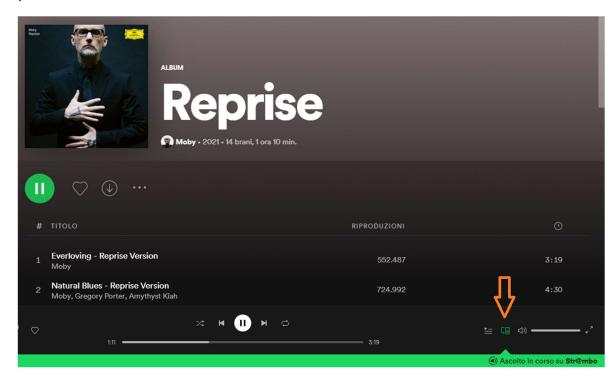


Figure 26 Selecting the Player in Spotify



Use as Roon Bridge

The 'original' way to enjoy Roon.

Compared to Squeezelite-R2, always used with Roon as a server, it is slightly 'loud' and has more 'punch'.

Some people will like it more or less depending on the tastes and genres they listen to. Nice to have them both just a click away, anyway.

The ease of use is, in both cases, total and disarming, in this roon is a true champion.

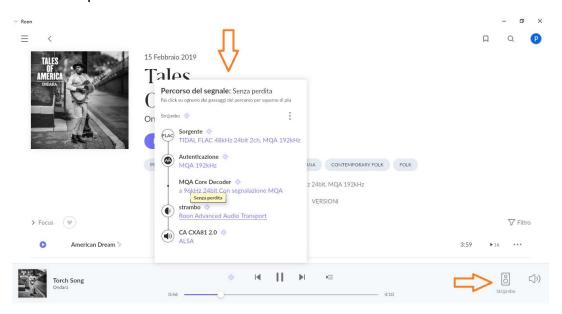


Figure 27 Str@mbo set as ROON Bridge

PLEASE NOTE:

Roon does not recommend using Roon Bridge together with the Core on the same machine, indicating to use, rather, directly the player included in the core.



Use as a Server

Selecting the Logitech Media Server or Roon Core mode activates the server's functionality, in particular that of accessing local disks and network storage, which are common and preparatory to the use of both servers

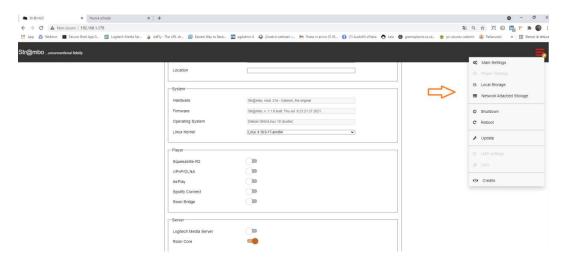


Figure 28 Str@mbo set as LMS Server

<u>IMPORTANT:</u> Roon excludes the simultaneous presence of LMS, therefore they are mutually exclusive.

Even if it is possible, it is good not to have LMS active even on other machines in the network if you use Roon Core with active Squeezebox compatibility, otherwise you may encounter problems in finding the available devices.



Use of Local Memory or USB

Some Str@mbo models can mount an additional internal SSD, and all of them can route USB-connected storage to any (or more) free ports.

PLEASE NOTE:

The Str@mbo has two different USB buses, one v. 2.0 (black ports) and one v. 3.0 (blue ports) are basically matching and both isolated and filtered, but we recommend using them separately, reserving, for example, the blue ones for DACs and the black ones for external drives.

The recognition is automatic, just connect them, no other action is required (except the refresh of the browser window) and will be displayed inside the folder **"media"** with their name.

From the menu or by clicking on the icon of the disk connected to the Str@mbo

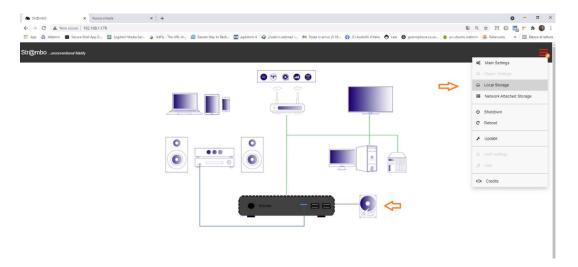


Figure 29 Access to Local Disks or USB



Access the list of linked statements, from which you can safely remove them with Str@mbo in POWER ON

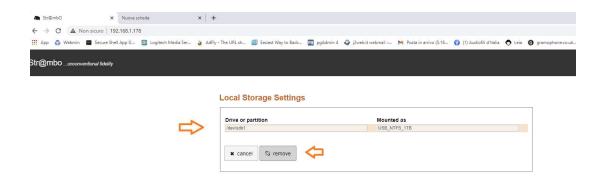


Figure 30 List of Local Disks or USB

No other operation is possible or necessary.



Using NAS or Network Shares

If you have a NAS or if you share disks on a computer (whether Windows, Mac, or Linux) over a network, Str@mbo automatically detects them and allows you to 'mount' them and make them accessible to applications.

PLEASE NOTE:

for LMS this step is indispensable, Roon has the ability to access network shares directly, it does not always work, so at least in that case this is the tool to prefer.

By selecting the "Network Attached Storage" option from the menu or by clicking on the NAS icon:

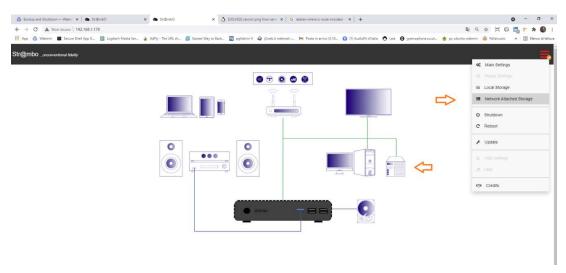


Figure 31 Access to Network memories



The page with the list of shares available on the network is shown (*):

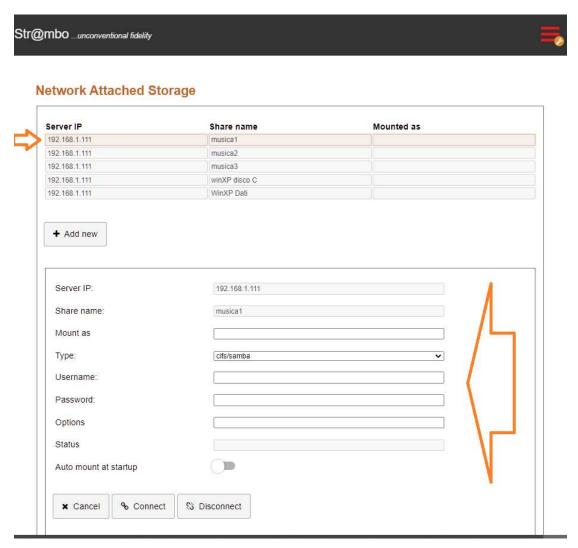


Figure 32 Network memories

By selecting one from the list the data is shown in the section below, where they can be completed, indicating the name of the folder as you want to see it (Mount as), the username, password and any options required by our NAS (see the relevant manual).

Normally it is enough to leave everything as it is and click on Connect the disk will appear in the folder "mnt".



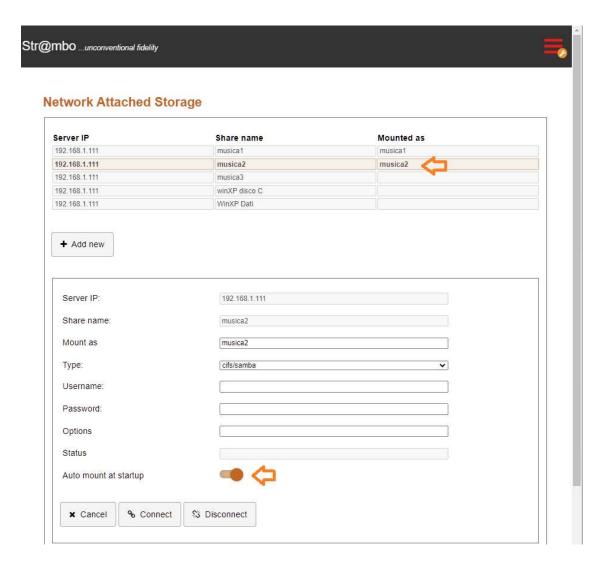


Figure 33 Auto Mount network memory on reboot

If successful, the folder name appears in the list.

<u>PLEASE NOTE:</u> only by selecting **"Auto mount at startup"** the disks will be available even after a restart. In the top list, those mounted with this option are highlighted in bold.

(*) Some NAS or server systems do not publish shares, in those cases you have to add them manually, by clicking on the Add New button and filling in all the fields with the appropriate values



Use as Logitech Media Server

Due to limitations in the license, LMS is not pre-installed, but is only downloaded and installed at the user's request.

In addition to a short waiting time the first time you activate it, nothing changes and the process is completely transparent.

Once activated in the menu appear two items otherwise inactive:

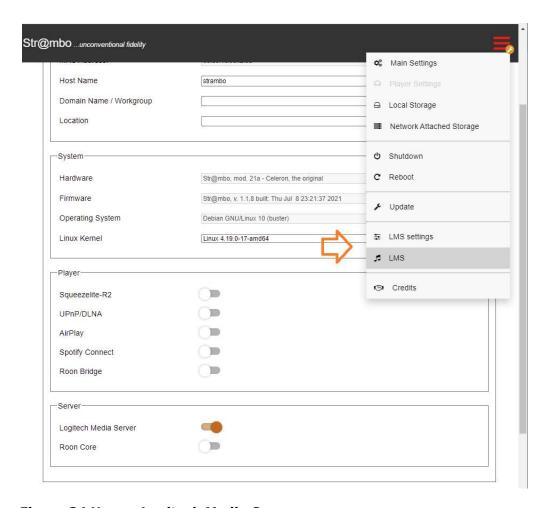


Figure 34 Use as Logitech Media Server

are simple shortcuts, you can access LMS from the browser at:

Strambo.local:9000 (or using IP, es 192.168.1.30:9000).



The correct and complete configuration of an LMS server is beyond the scope of this manual and would require a dedicated server of at least equal length, We therefore limit ourselves to providing the information necessary to obtain a minimum but already good result and refer to the many guides on the net for further information, remaining available for any advice on the subject.

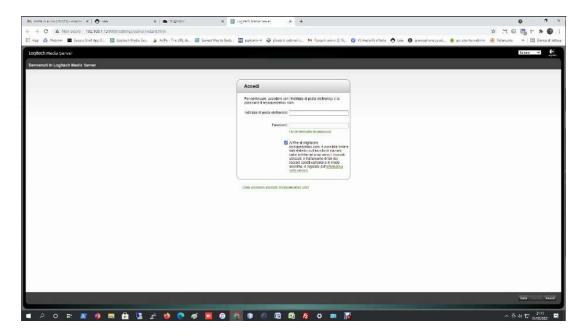


Figure 35 LMS Configuration Wizard

At the moment of the first access, LMS activates a 'wizard' that is an installation wizard, following which you get a system already configured and working.

The first step requires the creation of an account on mysqueezebox.com, operation completely free and essential if you want to use services such as Tidal, Deezer, many internet radio and others.

Absolutely recommended!



If you do not already have an account, click on the words at the bottom and you are directed to the Logitech site, proceed as required.

PLEASE NOTE:

Unfortunately the site is not optimized for mobile, so these operations are best performed from a desktop.

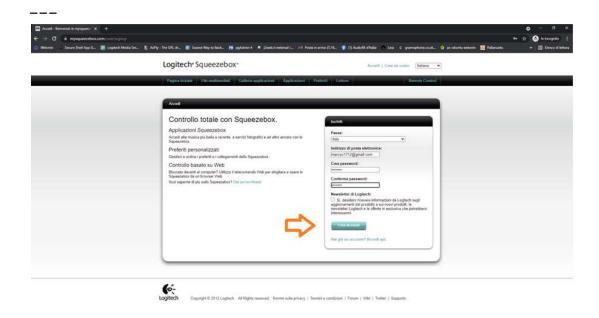


Figure 36 Registration on mySqueezebox.com



After registration, you could already add very interesting features and services, but this is beyond our present purposes, so we pass.



Figure 37 mySqueezebox.com

You can always return to the site www.mysqueezebox.com and complete the task.

Certainly in the coming months we will make manuals and tutorials about, often consult our site!



Back on the LMS page, if you have completed registration (or already have an account) enter the data and press Next, otherwise Skip.

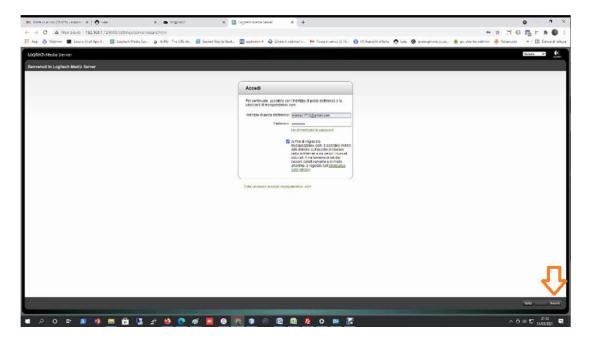


Figure 38 Access with new credentials



The next step is to tell LMS where to look for music and here you must indicate the media folder if you use USB or internal disks, mnt if you use NAS or network storage.

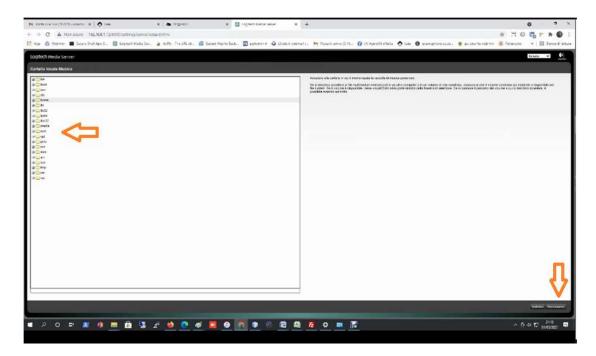


Figure 39 Selecting music folders and playlists

Select all the folders where you want LMS to search for music, you are prompted to indicate the folder where LMS will record playlists.

It can be postponed, but the right place to save them is the preferences folder (where the favorites are also), located in:

/var/lib/squeezeboxserver/prefs

A cloud backup function will be implemented in a future release of the Str@mbo and that folder will be included in the copy.



At the end confirm the installation with OK.

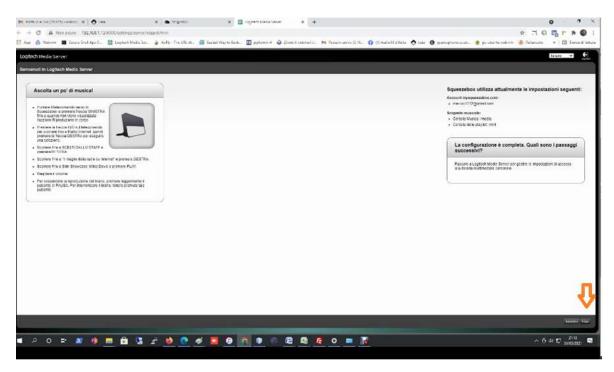


Figure 40 Summering and End

The hard part is over, now the server is analyzing your music and in a few minutes will be ready to play it.



After the Wizard and all subsequent accesses, the control window appears

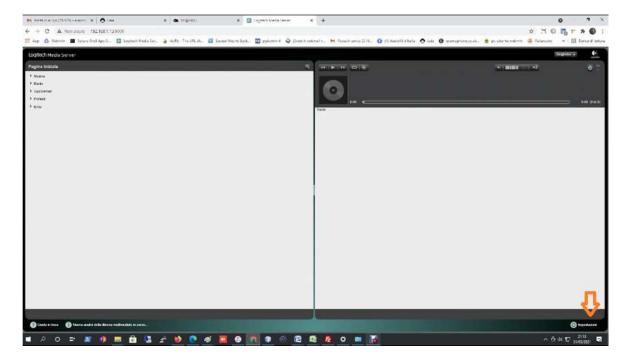


Figure 41 LMS - Control window

that informs us that the analysis of the library is in progress, so we take advantage of it to access the settings and complete the fundamental ones.

Seems click on settings, bottom right.



At first it shows the information we just inserted, that is, the folders where the music is searched (media and mnt, if you followed the instructions) and that of the playlists.

If you have to correct something, this is where it has to be done.

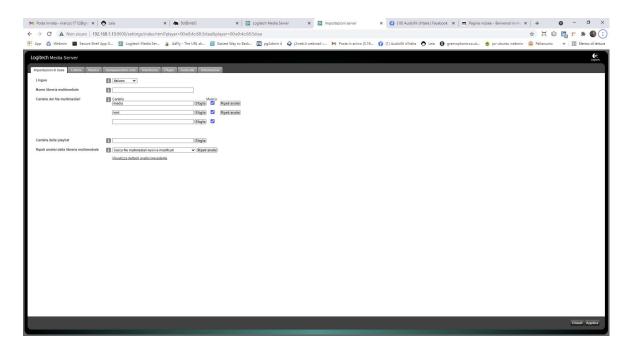


Figure 42 LMS - Settings window



Select the second tab, Player and the Audio submenu

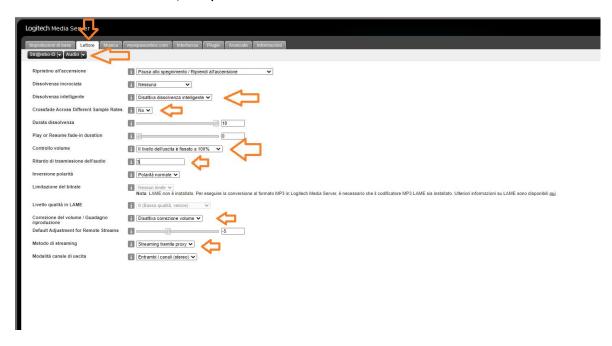


Figure 43 LMS -Audio settings of player

Some options are presented that have an important effect on quality, set them as indicated

Select the Advanced tab and the Performance submenu:

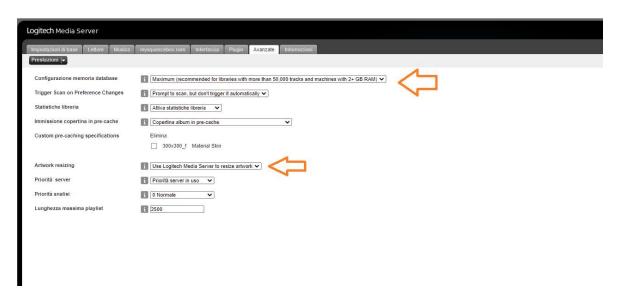


Figure 44 LMS -Advanced Settings, Performance

And here again we set the values as indicated.



At the end, we access the last tab, information, and check the progress of the analysis:

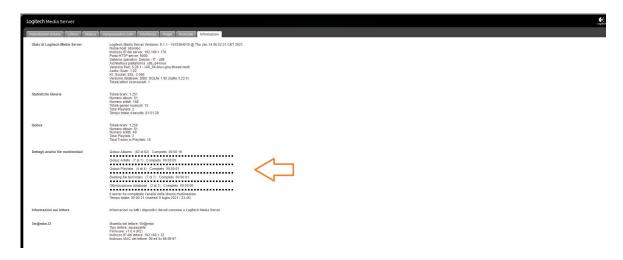


Figure 45 LMS -Informations

OK, he's done, we can listen to some music, finally!

NOHTA

User Manual

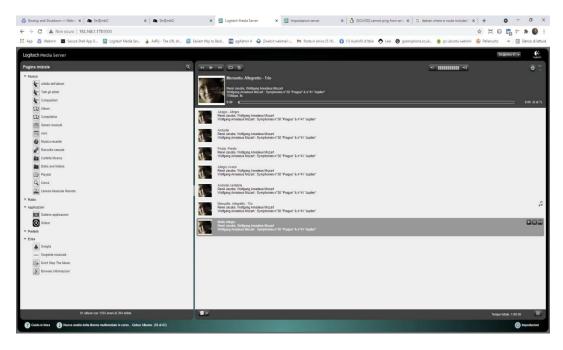


Figure 46 LMS - Main window with SKIN 'classic'

From any browser you can access the LMS control page, but there are several control apps for both Android (Squeezer or Orange) and ios (iPeng) that improve the experience.

We also really like Material, which is not an APP but a Plugin.

Plugins are a fundamental feature of LMS and allow you to add many useful or less useful features to the system, we use Material to see how they are managed.



Let's go back to the settings page and select Plugins, scroll to the "third party plugins" section and select Material skin.



Figure 47 Settings, plugin Material Skin

Then we apply, the server will ask to reboot, confirm, wait a few seconds and then refresh the page.



This will be the new interface, accessible at the same address + /material:

Strambo.local:9000/material or Ip:9000/material

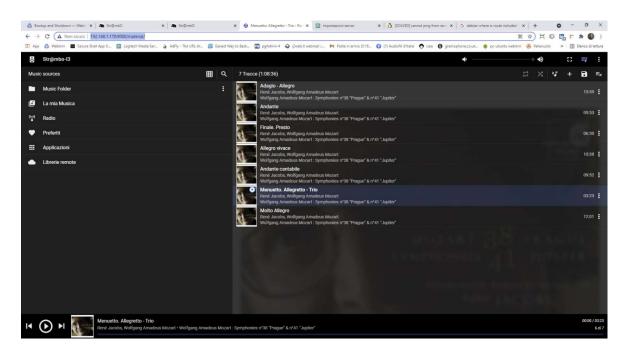


Figure 48 Main window with SKIN 'Material

Better and above all much more usable from tablet and smart phone.

With LMS, experience without fear all the options you find interesting, it really is a mine.

Enjoy!



Access to Qobuz from Logitech Media Server

A very interesting plugin is **Qobuz**, which allows you to access the streaming service of the same name, obviously having a valid account.

Let's go back to the settings page and select Plugins, scroll to the "third party plugins" section and select:

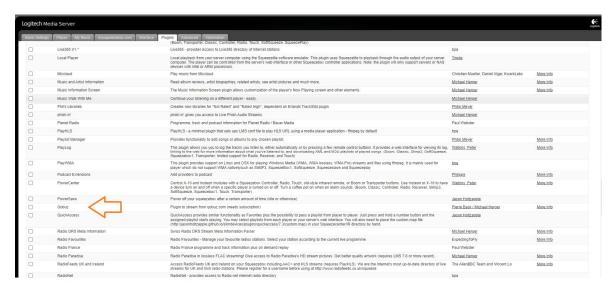


Figure 49 Settings, plugin Qobuz

Then we apply, the server will ask to reboot, confirm, wait a few seconds and then refresh the page.



After the restart, we go to the "Advanced" section and select Qobuz from the drop-down menu:

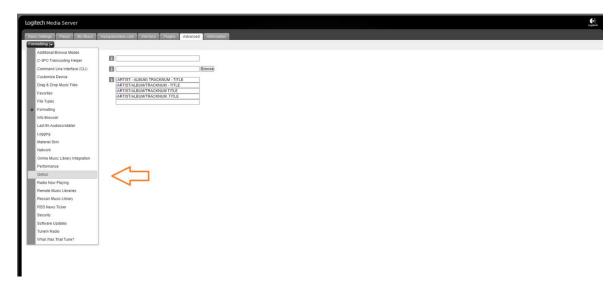


Figure 50 Advanced settings



Specific settings will appear which we suggest you set as follows, as well as your username and password.

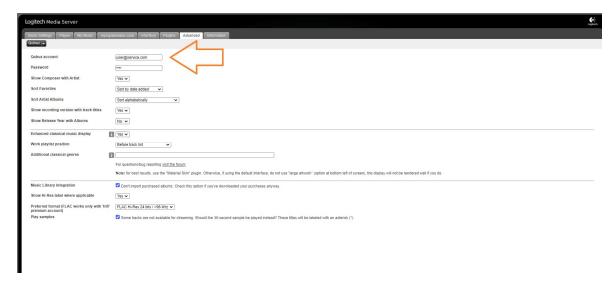


Figure 51 Advanced settings, Qobuz

As usual, you are free to experiment with alternative settings, as you like, you can always change.



On the main screen, the Qobuz icon will appear under "My Apps"

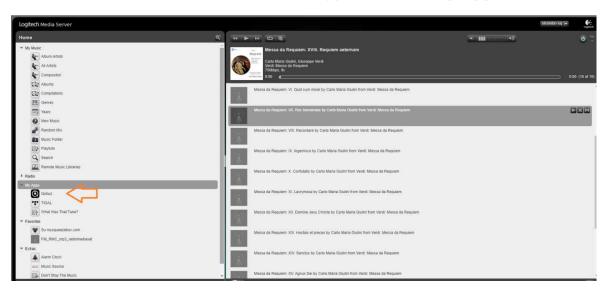


Figure 52 Home screen, My Apps



If the credentials (username and password) that you have entered are valid, selecting it will show the main screen of Qobuz, from which you can operate as usual:

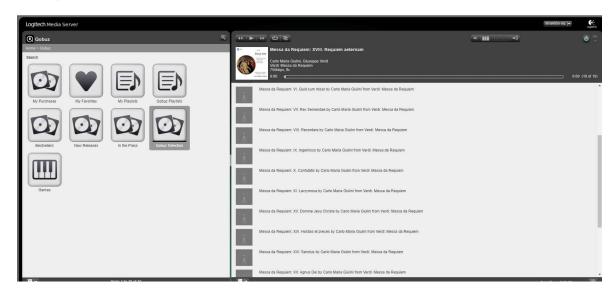
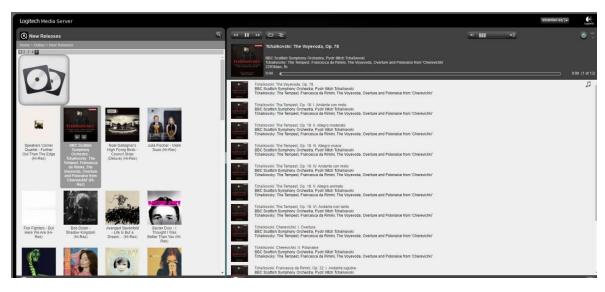


Figure 53 Main screen, Qobuz



Figur3 54 Qobuz, new releases

If, however, a laconic 'empty' appears, it means that the credentials are invalid or the account is not valid.



Use as Roon Core

From any Roon control point you can select Str@mbo as the active core. If a Core is already active you will be asked to disconnect it, since only one core is allowed at a time.

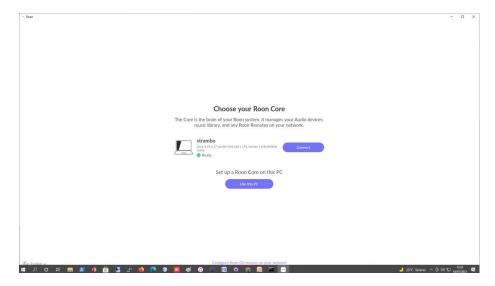


Figure 55 Connecting to Roon Core on Str@mbo

From the Setup section of the menu, go to Storage to add the folders where our music resides.

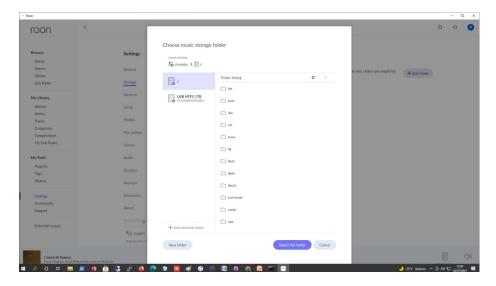


Figure 56 Selecting folders



If you have followed the instructions, you will have to select the **media** and/or **mnt** folders or any intermediate level at their entire.

At the end you will find yourself in a similar situation, and Roon will conduct the analysis of the library.

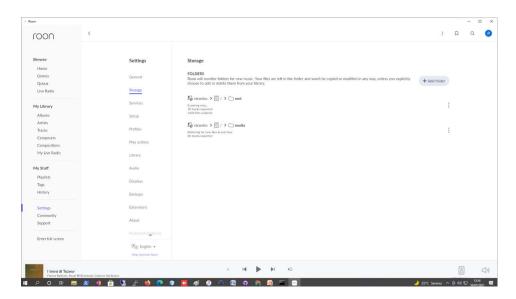


Figure 57 Analysis of the library in progress



If you intend to use Roon Core with Squeezelite-R2 player, you need to enable Squeezebox support from the setup section.

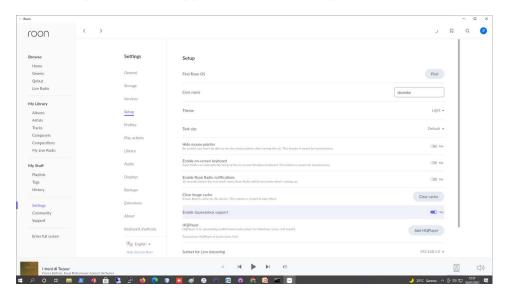


Figure 58 Enabling support for Squeezebox

Once this is done, and provided that no LMS server is active on the network, Squeezelite-R2 players will also appear.

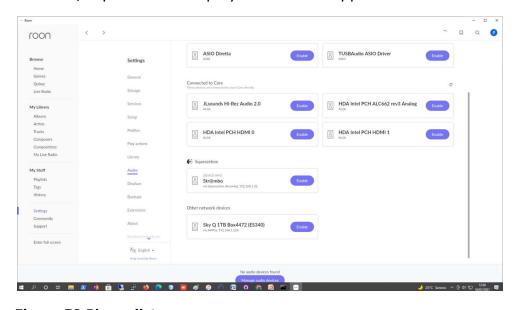


Figure 59 Player list



With Player Squeezelite-R2 we recommend turning off Flac compression.

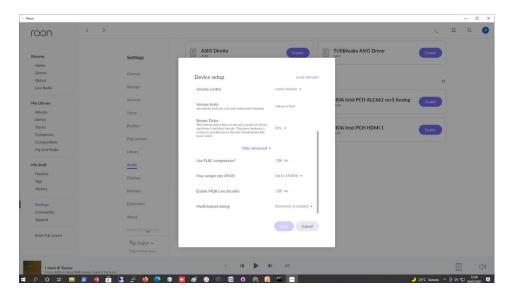


Figure 60 Player options, disable compression FLAC

At the end, the different players will be listed in the relevant sections, the ones enabled are highlighted in gray.

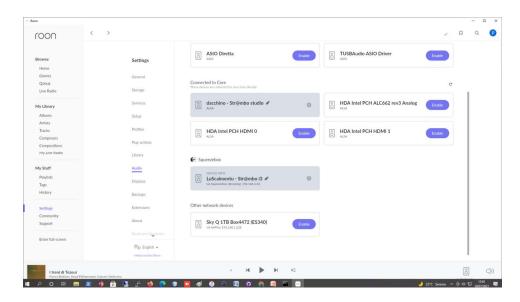


Figure 61 Player enabled



They can then be selected directly from the bar of the player and play simultaneously, without any difference.

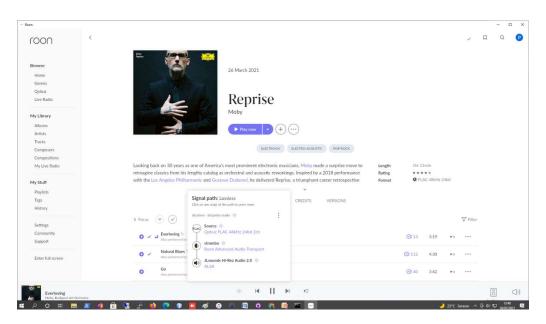


Figure 62 Str@mbo as Roon Bridge

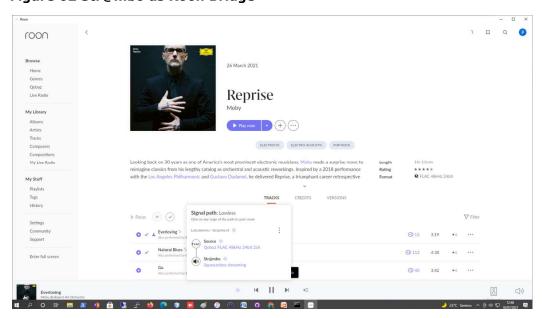


Figure 63 Str@mbo as Squeezebox

Enjoy!



License Terms, Copyrights and Credits

From the WEB interface you can consult the license terms of the Str@mbo and its main applications, check the list of installed components and for each of the respective terms of use, copyright and recognition to the authors.

We invite you to consult it.

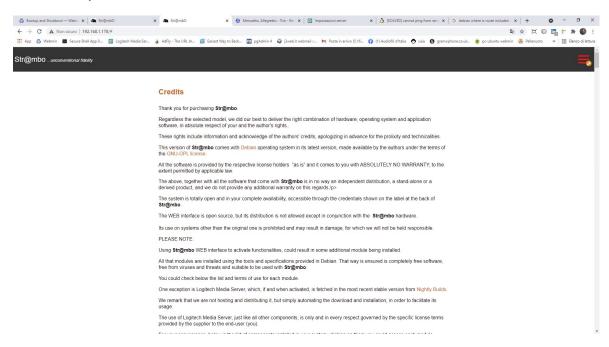


Figure 64 Credits

The trademarks mentioned in this manual and in the web interface are the exclusive property of their respective owners and are mentioned by us only and exclusively for explanatory purposes. Your use of the respective applications and services is subject to your acceptance of the respective terms of service.



Troubleshooting

Below we list some of the most common problems that you may have when installing or using Str@mbo and possible solutions.

Do not hesitate to contact us for any need or request for clarification.

Locate Str@mbo in network

The Str@mbo needs to be connected to a network with DHCP active.

In some particular situations some routers cannot address devices by name, but only by IP address, in these cases you can use different methods to find out.

Below the main ones, remembering that it is always possible to connect monitor and keyboard to the weird to access the operating system, even in the absence of network.

1. Fing

Fing is a free application available for any operating system both Desktop and mobile, you can download on the relevant stores or from the site:

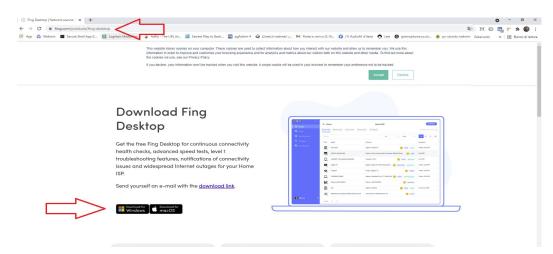


Figure 65 Get Fing



The use is very simple, from the main page select 'see all devices':

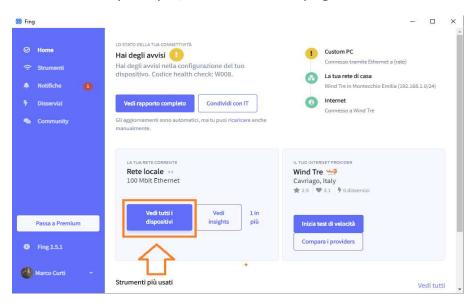


Figure 66 Fing home page

and locate the Str@mbo:

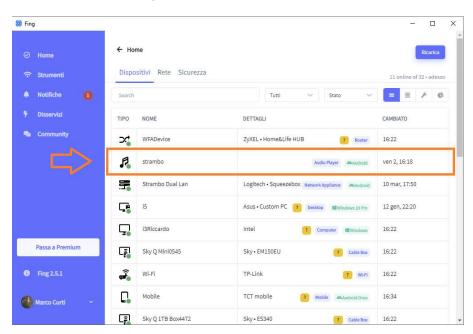


Figure 67 Fing, list of devices in network

A simple double click will give us the necessary information:



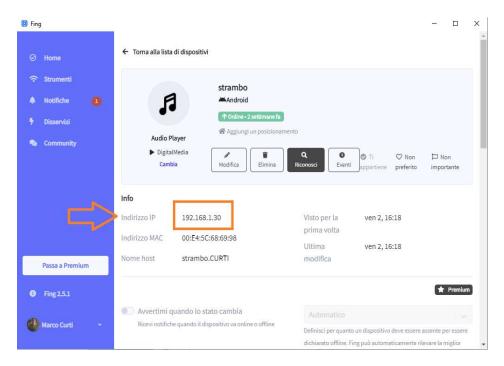


Figure 68 Fing, device details

At this point, from any browser you can access the Str@mbo by simply typing its IP address, in this case:



Figure 69 Access to Str@mbo via IP



2. LMS

If you plan to use the Str@mbo as a player in an LMS system with an external server, you probably already have LMS installed and active, in which case, you can use the server discovery features by simply connecting to the server address (IP:9000), the Str@mbo should already appear in the list of players:

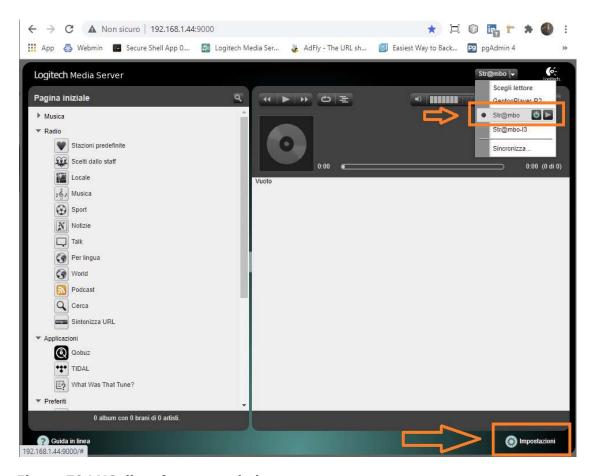


Figure 70 LMS, list of connected players



You then go to the player settings page to find the IP address.

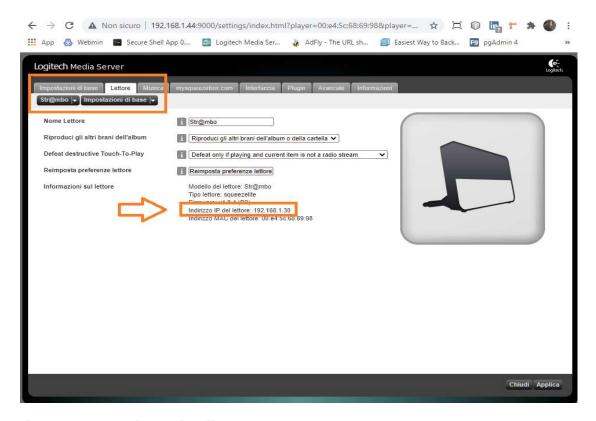


Figure 71 LMS, player details

From the same browser you can then access the Str@mbo by simply typing its IP address:

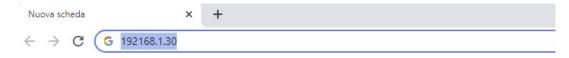


Figure 72 Access to Str@mbo via IP address



3. From the Router

Each model of router has its own management interface, but all provide the ability to list the connected devices, refer to the manual of your model, so you present a Wind model, as an example:

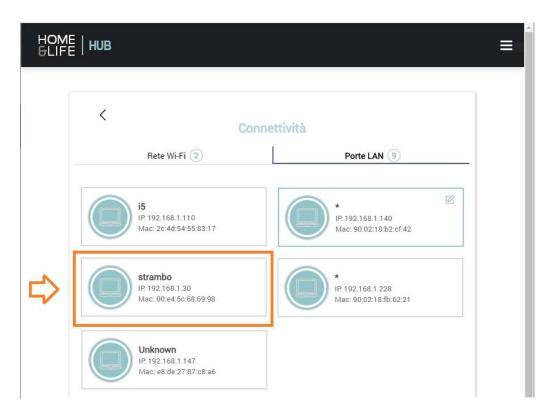


Figure 73 Router, example of a list of connected devices

From the same browser you can then access the Str@mbo by simply typing its IP address:



Figure 74 Access to Str@mbo via IP address