EUPHONY GUIDE

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1 Architecture

1.1 Access

Euphony is an operating system that has been highly optimized for music playback with a selected set of essential software.

It is a so-called **headless** system. This means you **don't need a monitor or keyboard** attached to it for regular use. It will however **need to be connected to your network with an ethernet cable** (to access the user interface). You will also need at least **one DAC connected via USB** (for music playback) or some **network playback device** (UPnP audio renderer, HQPlayer, NAA, RoonBridge...).

Euphony can run on a regular PC, MAC, or a laptop, but it is best suited for a mini-PC or MAC mini (older generations - 2014 and older).

Our recommended configuration (to guarantee the best sound quality) is at least **4GB RAM**, and a four gen (Haswell) or newer processor (**Intel i3 or better**). Lesser hardware will work fine, however the best possible sound quality will not be achieved.

To interact with Euphony you will only need a **Web Browser** (optimized for Chrome and other Webkit-based browsers - Opera, Safari) on any other **computer or mobile device** (either on your smartphone/tablet or another desktop computer).

1.2 Topology and licenses

Euphony operating system and its default Stylus player are primarily intended to be used on a single machine with DAC attached..

However, we also offer other music services in addition to the Stylus. Some of those services are 'servers' (they encompass both roles: Library manager and Player - like Roon), and some are only 'endpoints' (only have Player role - like RoonBridge or NAA). An endpoint is controlled remotely, through network connection and as such can be placed on a different machine. This enables **dual-machine** setups which some people prefer.

If you want to have a dual machine setup and want to benefit from a finely tuned Euphony operating system on both machines you will have to buy 2 Euphony licenses. To make this more optimal, we provided two types of licenses:

- Regular, full price license which enables full functionality of the Euphony system all
 music services are available for selection. You can use it in single machine setup but
 you can also use it as a server part in dual-machine setup.
- Endpoint only license (half price) which enables subset of music services only endpoint-type services are available for selection (HQPlayer embedded, StylusEP, RoonBridge, Squeezelite, NAA, Airplay, EuphonyUPnP). This is intended for use on the endpoint side of a dual-machine setup.

You don't need to have Euphony on both machines in a dual-machine setup. You can buy only an Endpoint-type license and choose to have server part hosted on another system (although we won't deny that a lot of people who prefer dual-machine setups found that

having Euphony on server side brings as much improvements to sound quality as having it on endpoint side.)

If you test dual-machine setup, regardless if your Euphony machine is in the server or endpoint role, during Trial registration you will have full functionality. Only when you buy an endpoint only license and fully register you will have your selection of music services reduced to endpoint-type services.

1.3 Storage

Euphony installation has a dedicated data partition for your music, configuration files, cache files and library database. You can also attach other USB or network devices and add them to the Music library or you can use internal tools to copy selected music to your data partition. If you have other internal drives you can also use them as part of the Music library.

1.4 Sound quality

Euphony is highly optimized for audio playback. We used every trick in the book to minimize latency and reduce jitter to barest minimums even on less powerful devices. If you choose our own Stylus player and library management there are additional benefits. If you worry about interference while playing from network or rotating disk drive, know that the Stylus player will always put the whole song in RAM and play it from there.

2 Installation

There are 2 ways to get Euphony:

- Buy a Summus server machine from us. Euphony OS on Summus is additionally optimized to Summus hardware providing the best synergy between OS and hardware
- Download and install an Euphony System image to a USB flash drive and boot from it. Once you buy the license you can install the OS to the internal drives.

2.1 Summus server

When you buy a Summus server or Summus endpoint machine with our pre-installed Euphony OS you only have to connect it to your network with the Ethernet cable and connect the DAC (or connect to a network player).

Just power-on your machine and check the 'Basic usage' section of this article to learn how to connect and interact with Euphony.

2.2 Image download

We also offer a Euphony System image which can be downloaded and written to a USB flash drive. To make this easy for you we provide a little program to simplify the process. Follow the procedure:

- 1. First get <u>Euphony Downloader for Windows</u>, unzip the downloaded file and double click on the **EuphonyDownloader.exe** icon.
- 2. Insert an empty USB device (min. 16BG) and select the corresponding drive in the Euphony Downloader.
- 3. Click GO! and wait until the Euphony image is downloaded and then written to your USB device.
- 4. Now insert the USB device into your target PC/Music server and power it on. If your machine is not set-up (in the BIOS) to first boot from a USB device, you will need to connect a monitor and keyboard to your system to interrupt the boot process. This is usually done by holding the F10 key for most PCs, or the Option key for MACs. Press the needed key (F10 or Option) immediately after you physically power on the system, then choose the USB device with Euphony on it from the boot menu.
- 5. After the boot process is finished, check the 'Basic usage' section to learn how to connect and interact with Euphony.

You can also use other general purpose programs for writing images to drives like Rufus and Balena Etcher. We highly recommend using Rufus. Link to download the image is always on our <u>Installation</u> page.

3 Basic usage

3.1 Access

Few important notices:

- If your system boots by default from the drive you have Euphony on, then you don't ever need to connect the keyboard or monitor to your Euphony device.
 Otherwise, you may need to have a monitor and keyboard attached to force USB boot.
- 2. Your Euphony device must be connected to your local network via ethernet cable.
- 3. To function properly Euphony has to be registered and to have access to the internet.

As mentioned before, Euphony is a **headless** system, you interact with it through a network connection from another computer via Web Browser.

Main control/playback interface to Euphony is the **Euphony Web Application**. It can be accessed by visiting the web address: http://euphony.local on your main PC device/laptop or your tablet/smartphone. Euphony web app is well optimized for mobile use.

It is possible your Android device won't find Euphony on the network by its name. To get around this go to http://euphony-audio.com/launch-euphony/ and tap on a big launch button in the middle. Your Euphony device must have had access to the internet during startup for this to work.

(You can also connect the monitor to see Euphony console output: there you will find Euphony network IP address which will guarantee you access on all devices.)

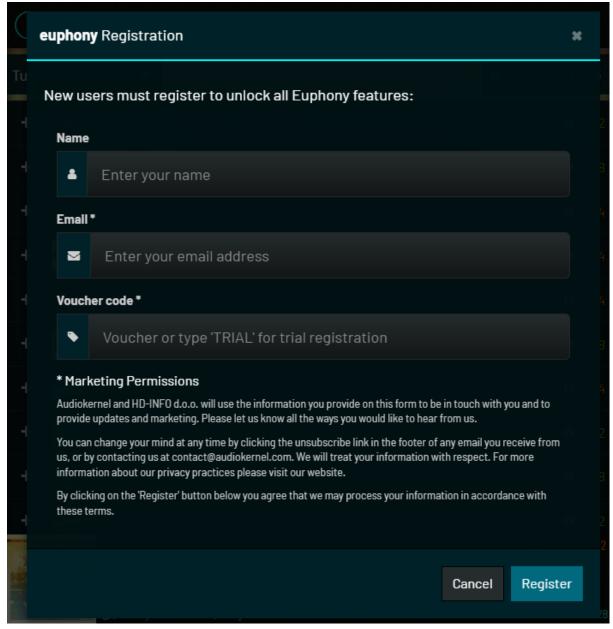
(Your browser may display 'Not Secure' in the address bar when accessing Euphony Web Application. This should not worry you. It's just a warning by the browser that it does not have a secure (https) connection with the site. Since the site is on your local network, a secure connection is not really needed.)

(Remark about this guide: throughout this document you will find many screenshots of practical use of Euphony Web Application. These screenshots are taken by emulating relative screen dimensions of various mobile devices: from IPhone 4 to IPad Pro. It is done so mainly for informative purposes - to illustrate how application looks like on devices of various sizes using both orientations. Also note that some screenshots are cropped - usually just to highlight a specific feature.)

3.2 Registration

Unregistered version has limited functionality: playback service is restarted periodically and some settings and features are not available. Euphony can be registered if you have a valid voucher code obtained via our site by buying an Euphony license.

You can also try Euphony for free for 30 days if you use the voucher code: 'TRIAL'. Start the registration process by going to the top menu and select 'Registration'. A dialog will appear:



Enter your name, email and voucher code. If entered data is valid you will shortly receive an email with the link to confirm your email. Once you confirm your email by clicking on that link your device is registered.

Bear in mind that Euphony must be connected to the internet for this to completely succeed like above.

3.3 Music Services

The Euphony system is first and foremost superbly tuned to output sound bytes to digital audio converters with minimum latency and thus ideally suited to produce the best quality sound regardless of the software used to choose the source of that sound, decode it, convert it and output it to the system sound library. Although we believe that our own Stylus solution is the best both in terms of performance and usability we don't want to lock you into our music ecosystem. Even if you have already invested into other systems, you can still significantly benefit by choosing Euphony as an endpoint between your favorite Music player and your DAC.

That is why we provided several popular options to choose from.

3.3.1 Stylus

Stylus is our own audio system which provides both roles: Music Library manager role and Music Player role. With the Stylus option selected, you will have the option to choose bit-perfect playback or employ some of our Upsampling and DSP options.

Stylus can work in dual-pc configuration with StylusEP as an endpoint. Audio cards connected to StylusEP will be presented in Stylus and available for selection as remote audio outputs. Stylus can also play to UPnP endpoints (our own Euphony UPnP or other UPnP players) or remote machines running HQPlayer.

3.3.2 Roon Server

Euphony comes with a pre-installed Roon Server (also called: Roon Core component in Roon architecture) option. To control the music library and music playback you will use your preferred Roon Client.

If you choose to leave the default music library folder (/data/Music) in Roon then you can manage your songs the same way as when using the Stylus option.

Because of Roon's flexibility, where you can have client, core and music endpoint each on a different machine we support this flexibility by providing several different ways to use Roon Core:

- 1. **Roon Core** Only Roon Core is started on the Euphony machine. Library management and music endpoint are part of the Roon Core
- 2. Roon Core + HQPlayer HQPlayer embedded is started in addition to Roon Core. To be able to use it you have to use Add HQPlayer in Roon Client and in "Hostname or IP address" field enter: localhost
- 3. **Roon Core + StylusEP** StylusEP is started in addition to Roon. Look for Squeezebox-type audio output named StylusEP in Audio part of Roon's settings
- Roon Core + Squeezelite squeezelite program is started in addition to Roon core. Look for Squeezebox-type audio output named euphony in Audio part of Roon's settings

3.3.3 HQPlayer embedded

HQPlayer embedded can be started in combination with Stylus, in combination with Roon or solo.. You can control playback from Stylus or Roon running on another Euphony machine or from a dedicated HQPlayer control application.

3.3.4 StylusEP

StylusEP works as an endpoint to Stylus exposing its local audio cards for remote use. Stylus on a server machine can then select those 'remote' audio cards for its audio output. In addition StylusEP implements Squeezebox control protocol. This has only been tested to work with Roon. LMS is not yet fully supported but you may try it with LMS too. StylusEP will be automatically found by Roon (if Squeezebox support is enabled in Roon) under the name: StylusEP. StylusEP used via Squeezebox protocol can be started together with Roon or it can be employed on an endpoint machine in dual-machine setup.

3.3.5 Roon Bridge

Only the Roon music endpoint is started. That means that Roon Core must be started elsewhere. This music endpoint will be automatically found by Roon Core and it will have the name 'euphony' (or your chosen hostname for Euphony machine)

3.3.6 Squeezelite

Euphony can also function as a squeezelite end-point for Roon/LMS.

3.3.7 Networkaudio

In this configuration Euphony system becomes networkaudio endpoint. Use HQPlayer to manage your music library and connect to this endpoint.

Network Audio Adapter or **NAA** is a way to expose remote audio devices to **HQPlayer desktop** over asynchronous network link. It is just an audio "renderer" with support for a number of different audio endpoint devices. Playback by NAA is completely clocked by the audio endpoint device and NAA performs only buffering, no decoding or processing at all.

3.3.8 AirPlay audio server

All content you have on your iOS devices can be streamed to Euphony AirPlay audio server.

3.3.9 Euphony UPnP

Euphony acts as UPnP renderer endpoint. You can control it from Stylus or another player that supports UPnP audio endpoints.

3.3.10 Spotify device

Euphony will present itself as a Spotify audio device. This means you can select an Euphony audio device from your preferred Spotify client.

3.3.10 Possible configurations

Whether you prefer one-machine setup or dual-machine setup (or 3-machine setup) it may be hard to understand which services can work together and how exactly you can organize multi-machine setups. We will try here to list all possible combinations. Bear in mind that a computer used to control the playback and machine where songs reside are not counted only machines that are part of the music pipeline (flow from obtained song file to machine connected to DAC)

3.3.10.1 Single machine setups

You can run the following audio systems where you only need a control device (running web browser or a dedicated app):

- Stylus
- Stylus + HQPe
- Roon
- Roon + StylusEP
- Roon + HQPe
- Roon + Squeezelite
- HQPe
- Airplay server
- Euphony UPnP
- Spotify device

Note that the last four items can be controlled from dedicated apps which can also supply songs to be played although some may also appear in the endpoint role (HQPe or EuphonyUPnP) if the server is a dedicated optimized machine running one of the server programs (Stylus, Roon).

3.3.10.2 Dual machine setups (server - endpoint)

Left side has a machine in the server role. Right side has the machine in the endpoint role.

Stylus → StylusEP

Stylus → any UPnP endpoint including Euphony UPnP

Stylus → HQPe

Roon core \rightarrow StylusEP

Roon core → HQPe

Roon core → Roon Bridge

Roon core → Squeezelite

HQPe → NAA

LMS server \rightarrow StylusEP

LMS server → Squeezelite

Note that all of the audio systems listed above on both sides (except LMS server) can be run on Euphony OS but most (except Stylus and StylusEP) can also be run on other OSes.

Three-machine setups can be formed where the HQPe endpoint further connects to NAA.

3.4 Music library

Your main music library is located on Euphony drive. Depending on which music service you selected you may or may not need it. For **Stylus** this **local library** is essential. For **Roon Server** it is optional, for **other services** it is not needed.

If you choose Stylus then you have a couple of other options for finding and/or playing music. All options are:

- Local Library
- Tidal
- Qobuz
- Youtube
- Webradio

Local library is also available to Roon core if started on the Euphony system.

3.4.1 Local library

The Euphony system includes an album for quick testing. To add more songs to music library you can:

- Attach external USB storage
- Add network drives (SMB) via Euphony Web Application

For simple file/folder operations, copying music files to the Music library or deleting them you can use *File View* inside the main application.

To manage all your files on Euphony Drive you can use a separate web application: **Euphony File Manager**. Link is available in the Euphony Web App main menu.

Attached USBs and network drives will appear in File Manager as additional drives. Use File Manager Copy function to copy desired songs/directories to '**Euphony Drive**' **Euphony Drive** is the location that Music Service will scan and add content to the Music library.

Euphony Drive can also be shared for network access from Windows. To enable that, head over to Tools → Settings, Music Library section, and enable **Share Music Library on network** option.

3.4.2 Tidal

If you have a Tidal account you can use your Tidal credentials to access your favorite content (albums, artists, songs, playlists) inside the Euphony Web application. You can also perform Tidal search and mark search result content (albums, artists, songs, playlists) as favorite (or unmark it). You can also use a few 'Music discovery' options: Top and Recommended sections. For full Tidal experience we still suggest using **Tidal's own** web application.

It's important to understand that Tidal songs remain on their servers and when you select a song for playback it is streamed from their servers to your machine. It is never stored locally and it is not available for offline use.

3.4.3 Qobuz

If you have a Qobuz account you can use your Qobuz credentials to access your favorite content (albums, artists, songs, playlists) inside the Euphony Web application.

You can also perform Qobuz search and mark search result content (albums, artists, songs, playlists) as favorite (or unmark it). You can also list 'Featured' content. For full Qobuz experience we still suggest using **Qobuz's own** web application.

It's important to understand that Qobuz songs remain on their servers and when you select a song for playback it is streamed from their servers to your machine. It is never stored locally and it is not available for offline use.

3.4.4 Youtube

Youtube contains an enormous amount of music videos. Now you can search Youtube videos or playlists and play the audio stream part of the chosen video.

3.4.5 Webradio

To listen to music streaming from web radio stations you have options to search **Shoutcast** live database of web radio stations or browse **TuneIn** radio station database. You can add a radio station from those services or you can manually enter the web address of a streaming endpoint of a web radio station you found by other means.

4 Euphony Web App

Euphony Web Application allows you to:

- 1. Choose Audio system in use
- 2. Adjust settings (system wide or related to particular service)
- 3. Browse music library and control playback (if Stylus is the audio system in use)

Static parts of all pages are header and footer.

Header contains logo and product name, Power Menu and Main menu.

Footer contains cover photo of currently playing (or paused) song's album and playback controls. Playback controls can be expanded (by clicking on vertical dots icon) to show song seek and volume (if available) controls and additional playback flags.

Application has three main pages and header and footer bar that are present on all pages:

- Audio systems
- Library
- Settings.

The Main Menu is accessible behind the blue bars icon in the header on the top right. **Power menu** is accessible behind the power icon in the header next to the Main menu icon.

Audio systems page is used to change your designated Audio System. It is accessible from the Main Menu -> Audio systems

Library page is accessible only if the chosen music service is **Stylus**. Other music services have their own front end for browsing/choosing/playing songs from their own Music Library.

Library page actually contains three overlapping screens:

- Music Library (album grid or list view)
- Playing Now
- Queue

Music Library is the default screen which allows you to browse your library in many ways and select songs for playing.

Playing now screen pops up to display all available info about the song that is currently playing (or paused).

Queue is a list of songs ready for playing (according to playback options: Random, Repeat, Single, Consume). You can remove or rearrange songs in the queue and you can save it to a playlist file.

Settings page allows you to tweak various options related to the Euphony system, music library and playback engine. Content of this page depends on the Music Service in use.

4.0 Main Menu / Power Menu

Main menu can be accessed by clicking the blue bars icon in the header bar.

It contains the following options:

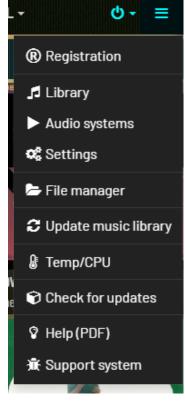
- Registration opens Registration dialog
- Library- link to Library page
- Audio systems link to Audio systems page
- Settings link to Settings page
- File Manager opens File Manager application in separate window
- Update music library rescan your library file for changes that occurred after the last scan (scan is always performed at startup)
- Temp/Cpu Opens small dialog to show Cpu core usage and temperature
- Check for updates checks if there are new updates to Euphony system (check is also performed at startup)
- Help link to this guide
- Support system link to help-desk pages on euphony-audio.com

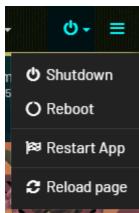
Access **Power menu** by clicking on blue power icon:

Power menu contains options:

- Shutdown turn the computer off
- Reboot restart the computer
- Restart App restart the web application
- Reload page full page reload (bypassing cache)

If, by any case, the system starts to behave erratically you can try first by restarting the Web application, and if problems persist then restart the computer.





If problems don't go away you can open a <u>ticket</u> via our support system or contact support directly at: <u>contact@audiokernel.com</u>

We prefer that you use the support system and open a ticket if you have a technical issue, bug report or improvement suggestion and use contact email if you have general questions regarding licensing, business proposals or formal complaints of any kind.

4.1 Audio Systems

Here you can select an audio system and check which audio system is active.

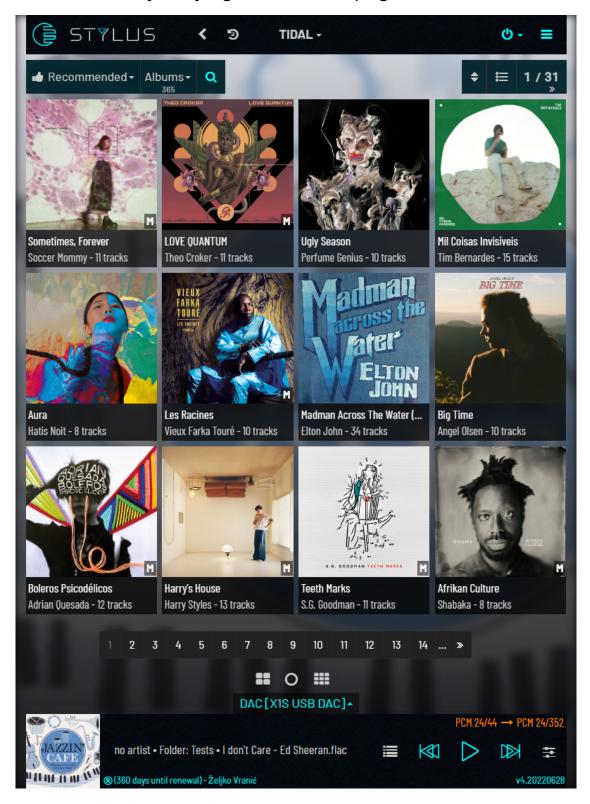


If you select some other audio system besides Stylus, some parts of the application may become unavailable altogether (Library page) and some sections in Settings screen will not be visible.

If you select another music service when you click 'Start' the application will be restarted to reconfigure itself.

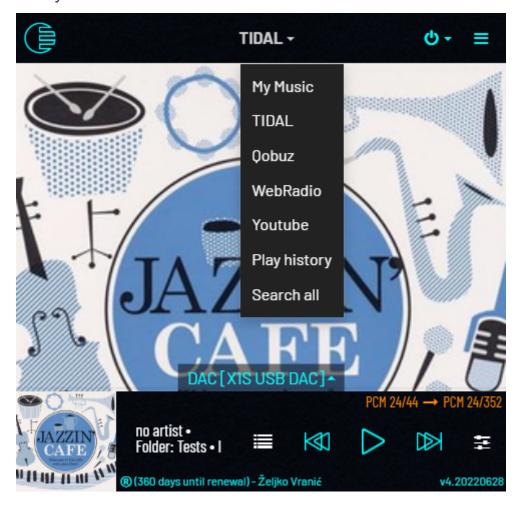
If Roon Server is already selected, you can change the Roon Server configuration option and just click "Restart Roon". This will stop and start appropriate services, save option choice and application will not be restarted (no need to click 'Change')

4.2 Music Library/Playing now/Queue page



This page is available if Stylus is the selected Music Service and is loaded when you click on the Euphony icon or Stylus icon in the header or if you select Library from the Main Menu.

4.2.1 Library



Playing now page, and Queue page remain largely the same no matter which library you use. It's even possible to have local songs, Tidal songs, and Web radio stations all on the Queue at the same time (there will be an icon to indicate the origin of each song in the Queue).

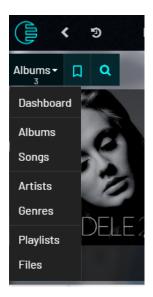
As for the Library, although the view is always the same, **available options differ**. First, we will describe how everything works for **My music** (songs on your Euphony drive and on connected drives that are part of Music Library) and in other sections we will mainly focus on the things that are different.

There are also 2 modes for operating the library and playback: **Queue mode** and **Album playback mode**. Some screens will look different in album playback mode which is centered around playing whole albums at a time.

4.2.1.1 My Music

Default page can display your music library in various views: Dashboard, Albums, Songs, Artists, Genres, Playlists, Files.

Artists and Genres don't actually provide direct means for selecting songs for playback - they are here to provide a quick way to filter your library by specific fields (artist, genre) or usage patterns (Dashboard: most played, recently played, not played yet, largest collections). Filtering your view will be explained later because it can be accomplished in several ways which need detailed explanations. For now, while we go through visuals, bear in mind that content presented on these screens is always subject to some current filter (which can be empty, of course).



4.2.1.1.1 Albums

Albums view contains most options so it will be explained in detail.

Clicking on the **album cover** expands the section with album songs. Selected album is highlighted and other albums are shaded.

Clicking on '+' for a particular song will add it to the end of the Queue.

Clicking on the **Play icon** which appears when you hover or hold-touch song row will add the whole album to Queue and start playing from this song.

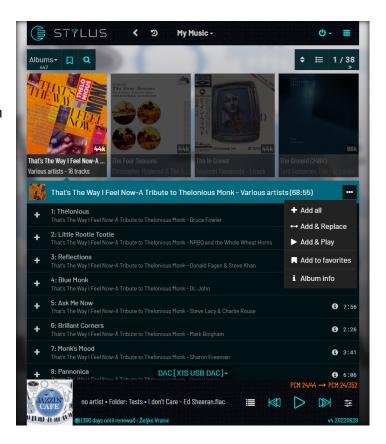
Clicking anywhere else on the song row will add the song at the end of the Queue and start playing it.

Clicking on the info icon **1** (before song time) will bring up a dialog with all attributes of that song.

Clicking on a horizontal ellipsis

icon *** at the end of the first row of expanded section with album songs presents a menu with several options:

- 'Add all' will add all album songs to the end of the queue.
- 'Add & replace' will replace queue content with album songs.
- 'Add & play' will replace queue content with album songs and start playing from the first song.
- 'Album info' will list some fields related to the selected album.

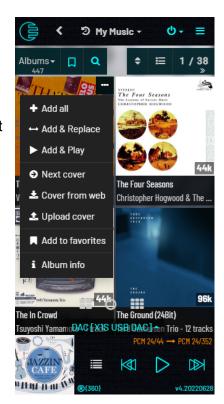


Clicking on **horizontal ellipsis icon** ••• in the corner of the album cover brings up a menu similar to the one explained above with additional options related to album cover pictures.

'Next cover' will try to fetch another image from your album folder (when you have front, back etc. images you may want to cycle through them with this to select the desired one) 'Cover from web' will try to find album cover on the web using current album and artist name. If no image is found a dialog is presented which allows you to adjust album and artist names (i.e.: maybe to drop '- Disk 1' from album name: 'Gold - Disk 1' and similar)

'Upload cover' gives you the option to manually select a local image and upload it to Euphony. You also have the option to copy that image to your album folder under name: cover.png (In most cases Euphony never changes anything inside your album folders - this is an exception)

Album view actually has two forms: **album cover form** which is default and **list form.**

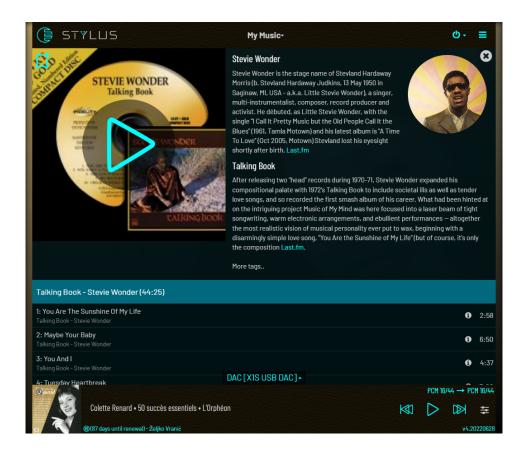


You toggle between them by clicking the icon **!≡** before paging controls.

In album playback mode when you click album cover you get a different view: one that displays the album and its songs in full page view.

When in album playback view following applies:

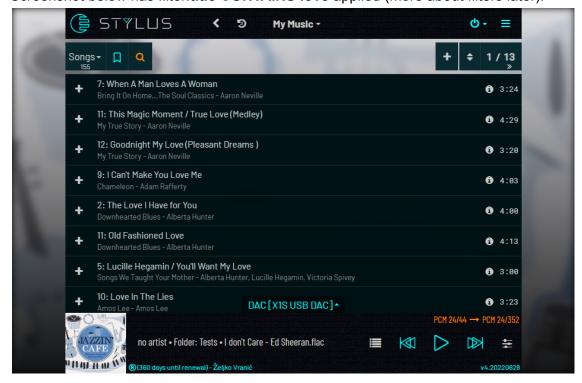
- Playing the whole album is accomplished by clicking on big blue icon on the album cover
- You cannot add individual songs to queue
- Clicking on any song in list will start playing the whole album (starting from the song you clicked)
- There is no icon in the footer to display the queue if you click on the cover icon in the footer you will get a view of the current album in playback that is very similar to the album view you get when you click any of the album covers in library
- You can add album to favorites by clicking on blue bookmark icon in the top left of the cover picture



4.2.1.1.2 Songs

Songs view lists individual songs filtered by current filter (there is no point paging through your entire library in this view without some filter applied).

Screenshot below has filter: title CONTAINS love applied (more about filters later).



Same as before, clicking on the '+' sign will add the song at the end of the Queue, clicking anywhere on the row will add the song and start playing it, clicking on the info icon will present all of the song's attributes.

Song row has two lines.

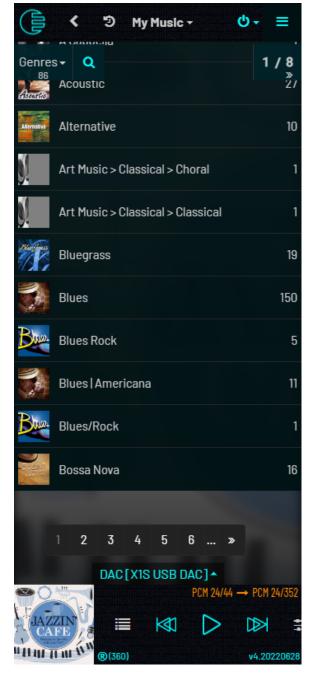
First line contains the track number and song title. Second line contains album and artist names (if available).

Note that long song titles may be truncated on narrow screens so sometimes it may be helpful to orient your device to landscape orientation.

4.2.1.1.3 Artists & Genres

Artist and **Genres** views are very similar. They give you an unfiltered (initially) list of all artists and genres in your library.





You can filter that list by entering something into the **Search** field. Search is not case sensitive.

Each row, in addition to Artist/Genre name will give you a small icon in front and number of songs for that item.

Clicking the item row will create a new filter and transfer you automatically to Albums view with that filter applied.

For example, if you clicked on the "Adele" row filter: artist = "Adele" will be created, and all albums where the artist field is "Adele" will be displayed.

Exactly the same thing for genre: clicking on "Jazz" row will create a filter **genre = "Jazz"** and display all albums with genre field exactly equal to "Jazz" (you can later easily correct that filter to: **genre CONTAINS "Jazz"** so you can see albums of all Jazz variants).

Clicking on **horizontal ellipsis icon** ••• will again give you three familiar options:

'Add all' will add at the end of the Queue all songs that have the view's attribute (artist or genre) exactly equal to row's value (so, instead of creating a filter and display albums or songs with that filter applied, with this you can immediately retrieve a list of songs and add them to the Queue).

'Add & replace' will replace the current queue content.

'Add & play' will replace queue content and start playing from the first song.

Artists and Genres views are just another quick way to browse your library and instantly create appropriate filter for your current listening moods. There are several more ways to do it...

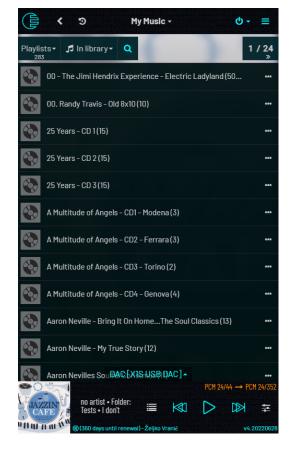
4.2.1.1.4 Playlists

Playlists are ".m3u" files found in your library that usually reference songs in the same folder. You can also create your own playlists by saving current queue content to a named playlist file. User playlists are stored in a separate directory and listed only when you choose 'User' from the sub-menu in the top bar.

Playlists behave like albums, they contain a number of songs which can be displayed if you click on a playlist row and expand it.

Songs can be added individually in similar way as album songs (click on "+" to add to the end of the queue, click on row to add and play) or all together: click on **three-dot** icon for:

Add All Add & Replace Add & Play



You can also create your own playlists by saving current Queue content to a named file (will be explained in detail in the **Queue** document section).

Playlist view can also be filtered by entering a string in the Search box.

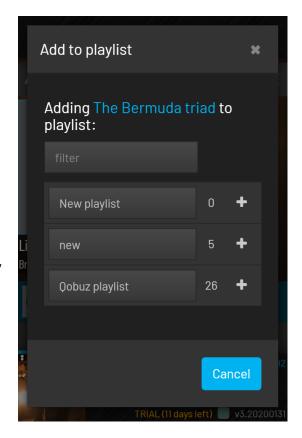
Another way to create a playlist is when you right-click (or long touch) on the info icon of the song. 'Add to playlist' dialog opens and lists all previously saved user playlist. Clicking on "+" next to the playlist name will add the song into that playlist.

You can change the name of any listed playlist just by editing the playlist name in the input field. You can also create a new playlist by adding the song to the first playlist entry: "New playlist" by changing the default name to something else.

You can quickly limit the list of shown playlists by entering something in the "Filter" box above playlists.

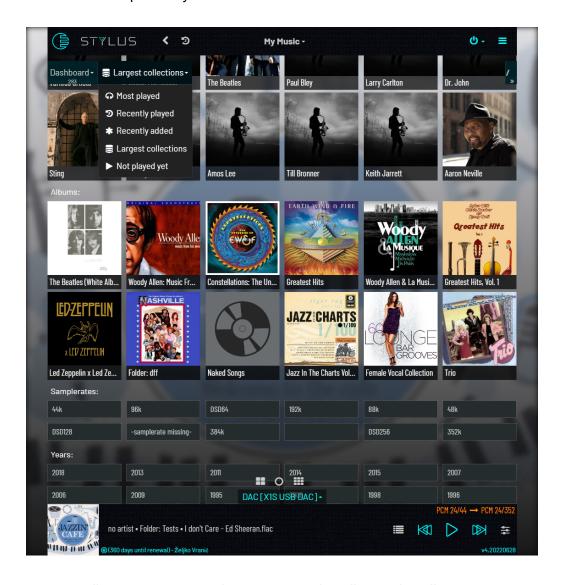
User playlists can contain songs from any source, local or remote but.

Bear in mind that corresponding .m3u files that are created are not actually compatible with standard m3u file format and can be used only inside Euphony.



4.2.1.1.5 Dashboard

Dashboard is another quick way to create filters.



It uses songs attributes: genre, samplerate, year, artist, albumartist, album, composer, performer to present you maximum of 12:

- Most recently played
- Most often played
- · Recently added
- Largest collections of particular song attribute
- Not played yet

Click on any of the dotted rectangles in any of the sections to quickly create a filter and go to the albums view with that filter applied.

Note that "Recently played" and "Most played" will be empty at first until you start playing some songs.

(Notice: usage statistics used for this are updated only upon actual playing of songs, not by adding them to the queue.)

4.2.1.1.6 Files

Files view will show you all folders and music files on your data partition.

Data partition is the largest partition on your system disk and it is dedicated to storing music files. It has one default folder that we call **Euphony Drive** where your music content is physically stored and optional folders (mountpoints/links) which are created when you connect to the network drive or attach another disk or USB drive.

When a USB is attached or a network drive is added it does not automatically become part of your Music Library because you may not want to add the whole device but only attach it to copy specific content to Euphony Drive.

Because of this File View has an additional icon (blue book) to indicate which devices/network drives are part of the library and which are not. (To add a drive to the Music Library you must use the Settings page).

Clicking on a particular folder you will enter that folder and see its contents. You can repeat that and traverse the folder tree. Your current path and links to parent folders are always present in the drop down menu with the name of the current folder (here: Home) .

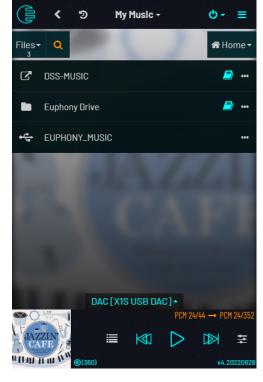
Clicking on the **three-dot** menu will give you an option to copy that folder to Euphony Drive (only if you are not already inside the Euphony drive folder tree).

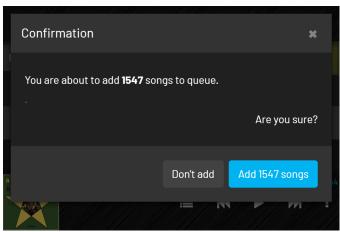
If your root folder is part of Music library then you will have additional options:

Add AII - append to queue
Add & Replace - replace queue
content

Add & Play - replace content and play first song

These will add **all songs** found in that folder (including all subfolders) to Queue.





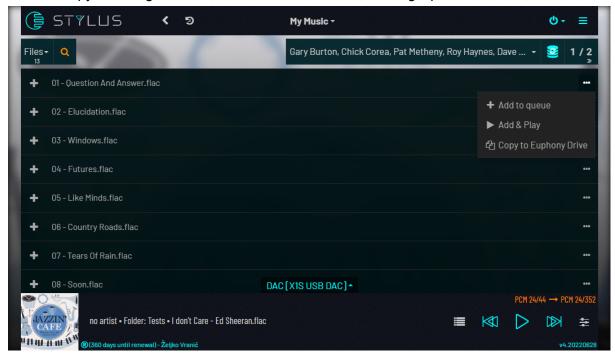
To prevent you from accidentally adding a huge amount of songs to the queue, the number of songs inside the folder tree is checked first and if it exceeds 50 songs a popup dialog will ask you to confirm your intentions.

For lines that represent files you have the following options:

Add to queue - add song at the end of the queue Add & Play - add a play song

If the song is not in Euphony Drive folder tree then you will have additional option: **Copy to Euphony Drive**

This will copy the song and also the folder structure of the song's path.



The Euphony system tries its best to detect changes in paths that are part of the library and scan new folders for new songs but sometimes it is necessary to manually trigger the scan and update the music database. You can do that by clicking "Update library for this path" (If you know where changes occurred this is better than invoking "Update Music Library" from the Tools Menu which will trigger the scan of the entire Music Library folder structure).

For folders with a great number of files you can filter the list by entering some string into the Search box.

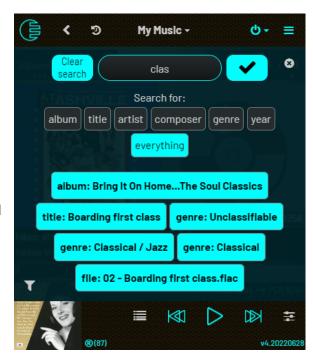
4.2.1.1.7 Search

Search function is available in all libraries and in all modes but the functionality is slightly different for local library than with online libraries. Reason for this is that for local library we have all the tags organized in the local database and we can make any query against it, simple or complex while for online libraries we are limited with APIs that are provided for us. Search function for online libraries will use provided Search API function and while you can search for a specific type (album, playlist, artist, song) you cannot choose against which tag is your search term applied - Search API function will probably search against all tags and the search may be 'fuzzy' (not doing exact comparisons but including similar terms). Search against local library will search for any tag that **includes** your exact search term and it will store that search as a **filter** (more about them later) which can be viewed and modified

(or created from scratch) to make specific more complicated queries (i.e.: to find all songs of artist A or artist B that are released in some specified period).

Search function will try to find songs that satisfy your search term as you type (similar to Google omnibox search suggestions) so if you see a suggested term you intended to fully type you can just click on it to perform search immediately. You can see on the screenshot that user started to type "clas" and saw that "genre: Classical / Jazz" was offered so he clicked on that suggestion to get the desired filter applied immediately (find any song that has "Classical / Jazz" contained in genre tag).

You can also notice that the "Search for:" selection was "everything". You could also choose a specific tag against which your search term is applied.



"Clear search" button will cancel any filter currently applied and clear the search box. Big "check" button on the right of the search box will apply the filter using the term you entered. Observe the difference between clicking the "genre: Classical / Jazz" button and clicking the check button. Former will apply the term "Classical / Jazz" only against genre tag while the later will apply "clas" term against all tags (because "everything" was selected in "Search for" section.

Notice the filter **T** icon in the bottom right - this opens a filter dialog where you can refine your search with specific conditions.

Applying the search, either by clicking the check button or one of the suggested search buttons the search panel will close and display albums satisfying the chosen search term.

NOTICE: Since albums are abstract entities conditions are placed only on songs. If you are filtering **Albums** view then if only one song in the album satisfies filter conditions that album **will be displayed** and if you click on album to view it's songs - **all songs** will be listed (not just the one that satisfied the conditions). The logic is that when listing album songs you will always want to see all the songs. If you are specifically interested just in songs that satisfy given conditions switch to **Songs** list view.

When a filter is applied then the search icon in the top bar will be colored orange as an indication of applied filter (as opposed to blue search icon which indicates that the whole library is shown and no filters are applied).

4.2.1.1.8 Filters

During the Music Library scan we record all of the song's attributes that can be found. Filters are a way to show only albums and songs that satisfy conditions placed on those attributes.

The attributes that we use for filtering are: artist, album, artist, title, genre, year, samplerate, file, albumartist, composer, performer, duration (in seconds).

Filter is a **set of conditions** and **an operator** to bind them.

Operator to bind conditions together can be:

- ALL all conditions must be satisfied displayed as 'AND' in filter string
- ANY any one of the conditions needs to be satisfied displayed as 'OR' in filter

Conditions are in form: attribute <condition operator> value.

Condition operator can be one of:

- Contains attribute contains value string anywhere inside displayed as "CONTAINS" in filter string
- **Not Contains** attribute contains value string anywhere inside displayed as "**NOTCONTAINS**" in filter string
- Begins with attribute begins with value string displayed as "BEGINS WITH"
- Ends with attribute ends with value string displayed as "ENDS WITH"
- Is equal attribute is equal to value string displayed as "="
- Is not equal attribute is not equal to value string displayed as "<>"
- Is less than attribute is smaller that value displayed as "<" (mostly used for number-type attributes like year or duration but will also works for strings - less than means alphabetically before)
- Is more than attribute is bigger than value displayed as ">"

Examples of filters (as displayed upon applying):

- genre = jazz AND year > 1960 AND year < 1980
- album BEGINS WITH best of OR album CONTAINS compilation
- samplerate > 325000 AND duration > 600

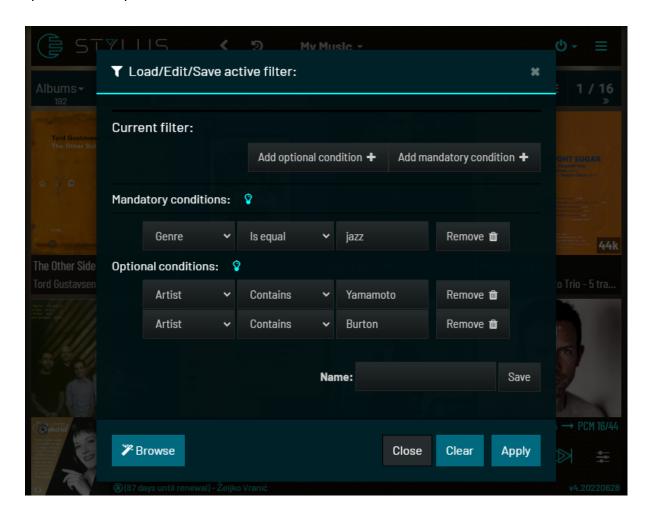
All string comparisons are case insensitive!

Filters can be created in several ways (some of which we already covered):

- **Dashboard** view clicking on any of the dotted rectangles in any of the sections (adds simple condition: attribute = value)
- Artist or Genre view clicking on particular artist row will add simple condition: artist = row value (same for genre)
- **Filter dialog** used to view and edit current filters, delete or add new filters and change ALL or ANY bind type (more a little later)
- **Browse wizard dialog** a quick way to drill down through your library via several fields end result is a filter with one or more conditions binded by ALL type (more on that later)
- Search while in Albums or Songs view, typing anything in search box will execute several database queries at once and offer you sample set of results from which to choose from (more later)

4.2.1.1.8.1 Filter dialog

Filter dialog displays your currently applied conditions, allows you to change them, delete them or add new ones. You open it by clicking on a filter icon **T** in the bottom left of the opened search panel.



Filter dialog allows you to combine AND and OR conditions. Screenshot above shows a filter which asks for jazz songs (mandatory condition) by artists that have either Yamamoto or Burton in their name (optional condition - either Yamamoto or Burton will do).

Any condition in a list can be changed as you wish either by changing the attribute or condition operator or value. New conditions can be added by "Add optional condition" or "Add mandatory condition" and any condition can be removed by the "Remove" button. "Clear" will remove all conditions and "Apply" will apply your current changes to the view. If you just cancel the dialog (by clicking on the 'x' in the top-right corner, Close button or clicking anywhere outside dialog) changes you made will be lost.

If you find that you are using some filter very often you can save it. It will appear in the filter dialog in the **Saved filters** list and you can apply it with one click.

Please notice the "**Browse**" button in the bottom left of the filter dialog. It will be explained in the next chapter.

Filters are applied only for Albums and Songs views and you can switch between them with the same filter in effect.

Other views (Artist, Genres, Playlists, Files) can filter their output by entering some string in the Search box.

Entered search box value is essentially a one-condition filter applied only to current view and only on the attribute you are viewing: genre for Genres view, artist for Artists view etc. When you switch to another view this condition is lost and the search box is emptied.

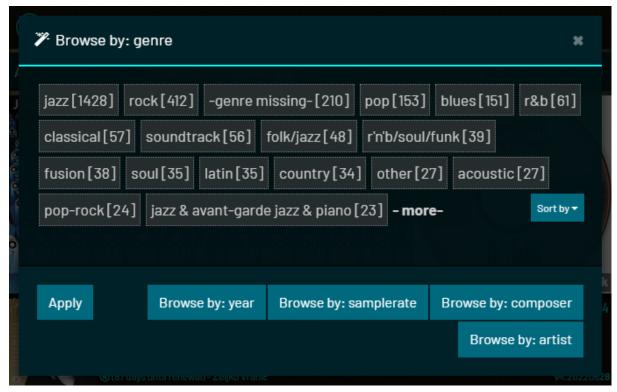
Applied filter stays 'in memory' until you change it or clear it. It is saved as a browser Cookie so it will be recovered even after restarting the next day.

Another useful shortcut is that you can **doubleclick/double tap** the search icon in the top bar to clear all conditions.

4.2.1.1.8.2 Browse wizard

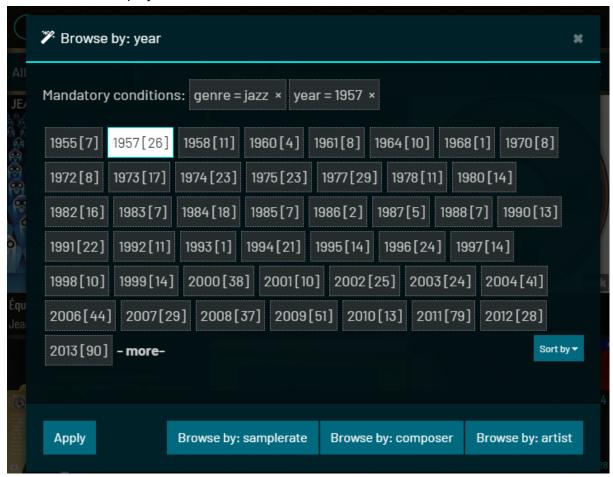
Browse wizard is a nice way to browse your library and 'drill-down' via several attributes that are useful for grouping. Those attributes are: **genre**, **year**, **samplerate**, **composer**, **artist**.

Here you can see the dialog shown after you click Browse and click the "**Browse by genre**" button.



The idea is to quickly see all values for a specific attribute (i.e. genre), select one of them (i.e. jazz) and then see all values for another attribute (i.e. year) by clicking on: **Browse by:** year with filter genre = jazz applied.

This moment is displayed here:



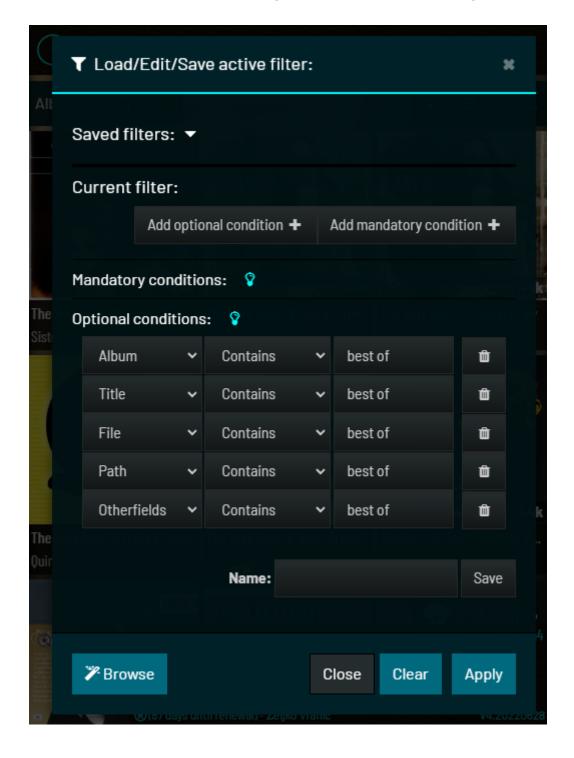
Now you can:

- go deeper select value for current attribute by clicking on dotted rectangle of some year (1957 is selected in the above screenshot) and browse by another attribute - i.e.
 Browse by: artist)
- browse by another attribute without any of the year values selected click on one of the Browse by: buttons
- clear specific condition to return to Browse by: <cleared condition>
- apply current conditions as filter by clicking "Apply"
- values for currently displayed attribute values are sorted by number of songs that have it (the number in parenthesis) but you can opt to sort it by value (that means alphabetically for string-type attributes and naturally for number-type attributes) by clicking on **Sort by** button
- If the list is too big to fit the screen only portion of values is displayed and you can display the rest by clicking on "Show all" that will appear in that case (the logic is that Browse wizard should be like: click, click, click and you are done if you need to scroll first then this purpose is defeated).

Since it is a drill-down method, conditions in the created filter are mandatory conditions: all must be satisfied..

If you have an active filter and you enter the Browse wizard then the conditions in that global filter will be applied and the starting point for browsing. You can clear them in the Browse wizard but this only applies internally, the global filter remains in effect unless you click "Apply" which will replace the global filter with the one created in the Browse wizard.

When you search the local library by using "Search for": **everything** this will leave a filter with all fields where your search term was satisfied as optional conditions. Here is an example of search: "best of" and the resulting filter as viewed in Filter dialog:



4.2.1.1.9 Sorting

When you use Albums or Songs view, resulting content is sorted by globally set params.

These params are displayed when you click Sort icon

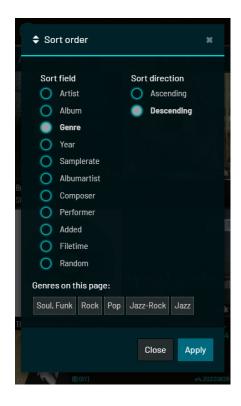
• in the top toolbar.

You can sort by following tags: artist, album, genre, year, samplerate, albumartist, composer, performer, added, filetime and random.

You choose one of the fields and the sort direction. When you click "**Ok**" these will be applied to the current view.

As stated before, this does not apply to other views. Artist, Genre, Playlist, Files are sorted alphabetically by their respective values.

Not all attributes are plainly shown in the default view. If you are in Albums-Cover view and the currently selected sort field is **Genre** you will not know which genres are shown on the current page and you will not know which album is the first one for a particular genre. This is why



sort dialog will also list you all genres that appear on the current page and by clicking on a particular genre: dialog will be closed, view scrolled to show first album of that genre near the top of view and album cover will blink a few times.

Sorting in TIDAL and Qobuz has fewer tags to sort by and has one additional tag: **default**. Default sorting means that results are not sorted by any particular tag - they are sorted by **relevance** to search term. How exactly TIDAL and Qobuz algorithm for relevance sorting works is not publicly known but it seems to at least account for popularity since widely known artists and albums usually show first.

4.2.1.1.10 Adjusting album grid.

Depending on the width of your screen there are some defaults set about how many albums are displayed in one row of album grid view. You can change that default by clicking on one of the buttons near the bottom of the view - above footer.



Button on the left will decrease the number of albums per row while the button on the right will increase it. Max and min number depend on the screen width. Wider screens can have from 4 to 10 albums per row. Mobile screens can have between 2 to 3 albums per row (more in landscape mode).

Middle button will reset the number of albums per row to **auto** (optimal value for current screen width).

Note that if you change the number of albums per row then this number will remain the same even if you change the width of the screen (i.e. by turning the mobile device from portrait to landscape orientation or change your browser window size) while if you set it to **auto** number of albums per row will automatically adjust to new screen width.

4.2.1.1.11 Tag editing

For your songs and albums you can edit some common tags. This is available in Song Info dialog which shows when you click information icon **1** in song row.

Tags that can be changed are listed first and have edit icon in ext to them. (Note the: 'User tags' field where you can enter your own tags to better organize your library). When you click the edit icon field becomes editable and you are free to enter your corrections or new values. When you are done changing tags click the 'Apply edits' button which is now available.

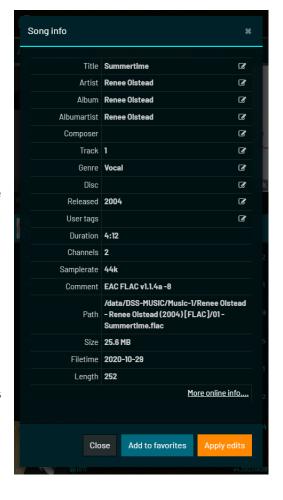
New dialog appears which will show you your changes and present you with two sets of options. You must choose if you want to change that tag only in the database or do you want to change the corresponding song file too.

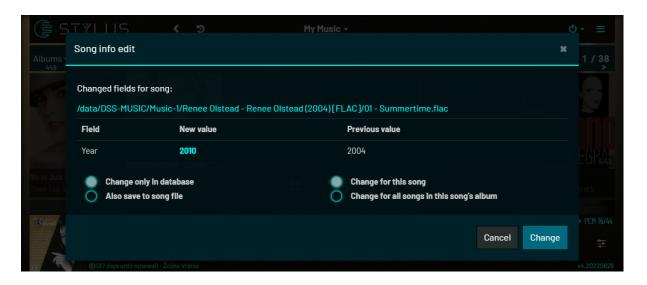
You can also choose if you want to change only this song or all songs in the corresponding album.

Album is defined by a combination of album name and artist name (albumartist field).

If you choose to change all songs in the song's album and the previous value of that field is not the

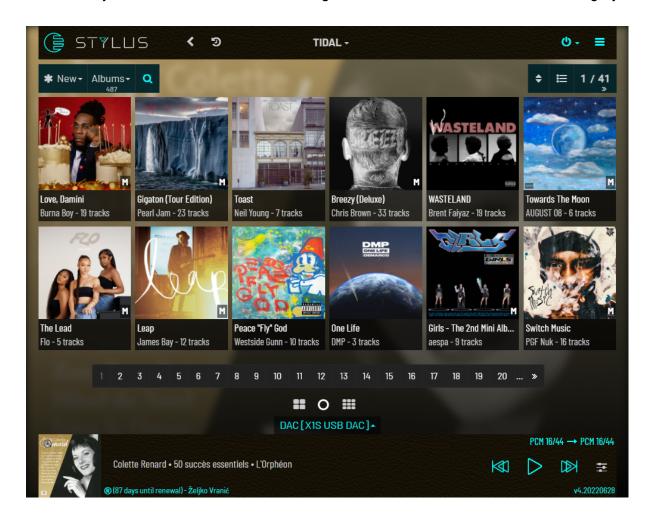
same for all songs on the album you will get a warning about that.





4.2.1.2 TIDAL

When you select TIDAL as your library source for the first time you will be asked to authorize your Euphony machine to TIDAL. A dialog will be shown where you must click the authorize link which will redirect you to TIDAL's own site where you can enter your credentials. **Don't do the authorization from iOS or Android mobile apps** - do it from a desktop browser and open the authorize link in a new tab. The code for authorization should be automatically applied after successful login. In your original Euphony app tab the application is checking with TIDAL if the authorization was performed and when it gets that information it will automatically close the authorization link dialog and show the default **New albums** category.



We do not aim to provide a complete TIDAL experience here, for that we suggest you use TIDAL's own online application. Having said that, we are still committed to giving users good access to their TIDAL content.

You can list following categories (click first dropdown in the top toolbar):

- New
- Recommended
- Favorites
- All of TIDAL

You can view the following type of content (click second dropdown menu in the top toolbar):

- Albums
- Artists
- Songs
- Playlists

4.2.1.2.1 New

Displays new content on TIDAL. Works for albums and playlists.

4.2.1.2.2 Recommended

Displays content recommended by Tidal. Works for albums and playlists.

4.2.1.2.3 Favorites

Displays the content that you favorited in the past either via this application or by Tidal online application. You can choose to remove the Favorite status from the **three-dot** menu.

4.2.1.2.4 All of TIDAL

If you want to search the entire Tidal database then when you select 'All of Tidal'. Nothing will be shown by default. You have to enter something into the search box and it has to be at least 2 letters.

4.2.1.2.5 Albums view

Albums view, once content is loaded, looks and behaves similar to Albums view for local content:

- You can choose to have a Cover view or List view.
- Clicking on cover expands a list of album songs (or shows full-page Album view if "Album playback mode" is selected in Settings.
- Clicking on songs row behaves the same as for local songs: "+" to add to queue, click
 on song row to add and play that song, click on the play icon in the middle add the
 whole album and plays from clicked song
- Click on horizontal ellipsis icon *** on cover or on album row presents following options for album: Add, Add & Replace, Add & Play, Add/Remove favorite

Some albums are rounded with a thin red box. These albums are not available for playback.

There are no filters or any filter related functionality - if the view is filtered it is filtered only by search term.

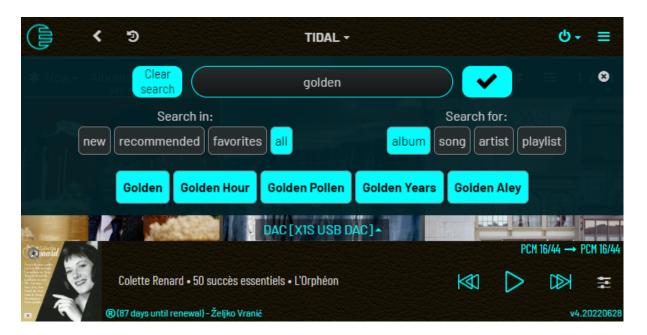
Search panel has 2 different options: "Search in": and "Search for".

In "Search in" you can quickly switch the category you are searching: new, recommended, favorites, all.

In "Search for" you can choose (with some items excluded depending on the first choice): album, song, artist, playlist.

Suggested results are also present as for the local library. You can again choose to search by the exact term in your search box or use one of the suggested search terms.

Unlike the local library, and due to limitations of the API - there is no way to tell how the search function found a particular suggested result (against which tag) so the suggested search will again search broadly - but using the full name of some found "Search for:" entity.



In the above screenshot we entered the search term "golden" and we got 5 suggested hits with album names mentioning "golden". Clicking on one of those hits, say "Golden hour" will not show us only that exact album but all albums that are related to "Golden hour" search term (although the exact album will probably be at or near the top of the returned albums.)

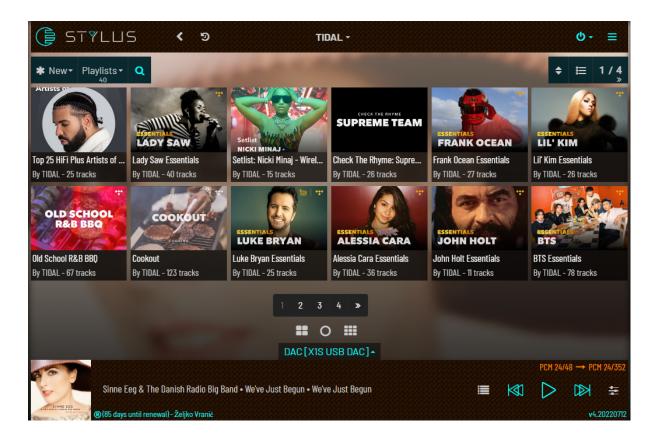
4.2.1.2.6 Artists view

Artist view (only available when you search for artist or select favorite artist) will show a set of rows with artist names. Clicking on the row for a particular artist will execute a search with artist id (internal artist id in TIDAL API) and you will get a list of all albums of that artist (presented in Album view).

4.2.1.2.7 Playlist view

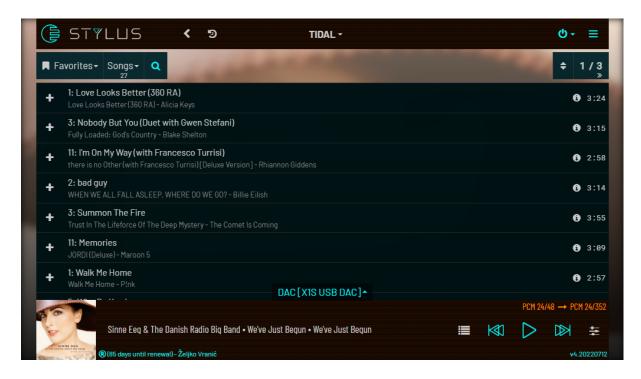
Playlist view is similar to the albums view but the list of covers displayed in the cover grid use playlist cover image.





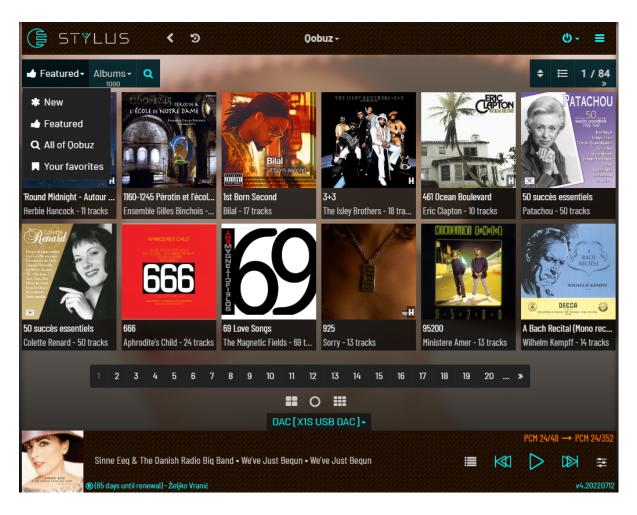
4.2.1.2.8 Songs view

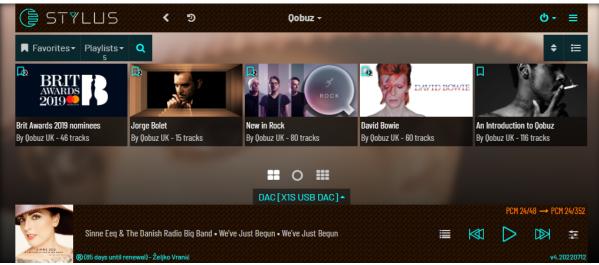
Songs view shows a list of songs where clicking on the song row will start playing the song while clicking on the + icon will add it to the queue.



4.2.1.3 Qobuz

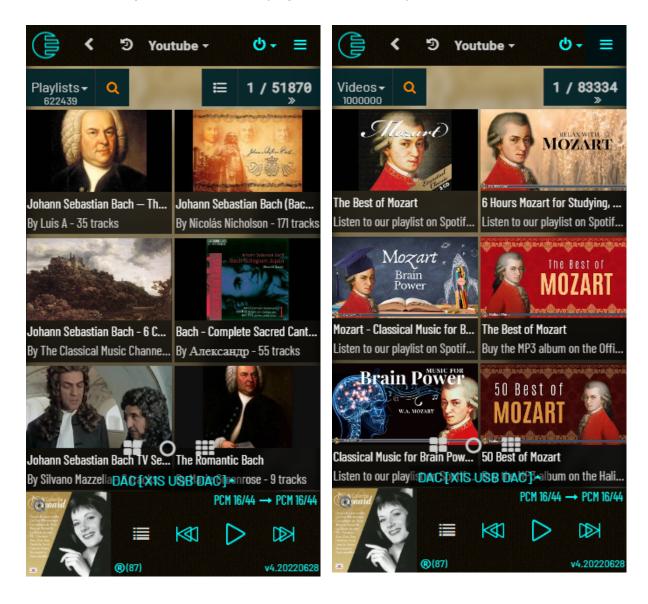
Qobuz behaves almost identically as Tidal. Only minor difference is that for discovery Qobuz has 'Featured' instead of 'Recommended' as TIDAL has.





4.2.1.4 Youtube

Youtube videos or playlists can be searched by keyword. When videos are searched, resulting videos are displayed and by clicking on the three-dot menu you have again familiar options for adding to the queue or playing them immediately.



When searching playlists results are shown in a format similar to the Playlist view in TIDAL and Qobuz.

Clicking on cover will expand the list of videos inside the playlist and you can again add them or play them as in other views.

Of course, only the audio track is played, and the video part isn't even downloaded.

4.2.1.5 Webradio

Euphony uses the Shoutcast **API** to give users the ability to find Web Radio streams (more than 70000 streams in the Shoutcast library at the time of writing this guide) on the internet. It is also possible to browse the **TuneIn directory** of stations and podcasts presented as a browsing tree organized by various categorizations.

You can also directly add webradio stream urls.

Webradio music source gives you several view options:

- My stations station that you added to gueue before
- **Top 500** top 500s station by listener count
- Search search by keywords
- TuneIn browsing browse TuneIn directory

4.2.1.5.1 My stations

My station contains a list of all radio stations that you added to the queue at some point in the past.

Every row displays the station name (default one or the name you have chosen while renaming a station) and three-dot menu with options to rename the station or remove it from the "My stations" list.

Search box is used to filter displayed items by hiding all stations that do not contain the search string.

"+" icon in the toolbar next to the number of stations found is used to add known station url.

In the popup dialog you can choose a name for the station and enter the station url.





Station's stream url is checked first and if it is not playable it won't be added to the queue.

Few things to note:

- Some web pages that provide Web Radio stream urls actually give links to playlist file that contains actual stream url. Euphony tries its best to detect this and parse the playlist file for actual stream url but it's possible it will not always succeed. (if you encounter this for all stream urls from a specific site please let us know so we can investigate and support that site too)
- Some urls you find may be old, obsolete or don't work temporarily. To be sure, try again later.
- Some radio stations have geo restrictions. You will be able to add them to the queue and play them but they will only play a recording informing you of that restriction. (It is best not to add previously unknown stations to Queue without checking first if they actually play music)

4.2.1.5.2 Top 500

This will display the top 500 stations by listener count as recorded by Shoutcast.

Station row shows station name, currently playing song's title and genre all separated by vertical bar: "|".

At the end of the line is declared bitrate for the station. Bear in mind that those are not always correct.

"+" icon will add this station to the queue. Station's stream url is checked first and if it is not playable it won't be added to the queue.

Search box is used to filter displayed items by hiding all stations that do not contain the search string.

4.2.1.5.3 Search

Search results are in the same format as in the Top 500 view.

Station row shows station name, currently playing song's title and genre all separated by vertical bar: "|".



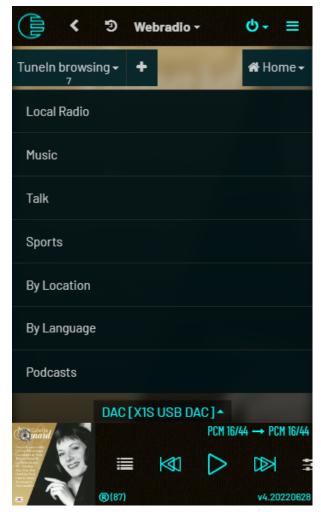
"+" icon will add this station to the queue. Station's stream url is checked first and if it is not playable it won't be added to the queue.

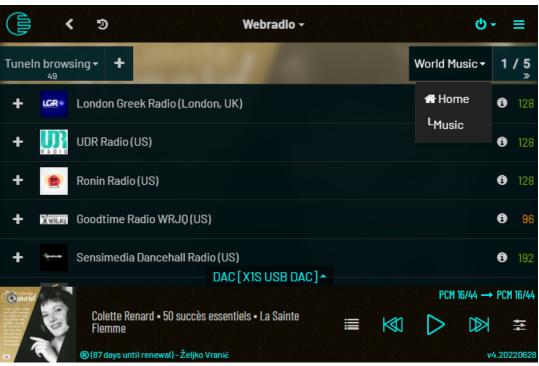
4.2.1.5.4 TuneIn browsing

TuneIn has a browsing directory of stations. Initially you choose one of the categories and get either: a list of other sub-categories to choose from or station list.

When you get a station list it behaves exactly like in other views.

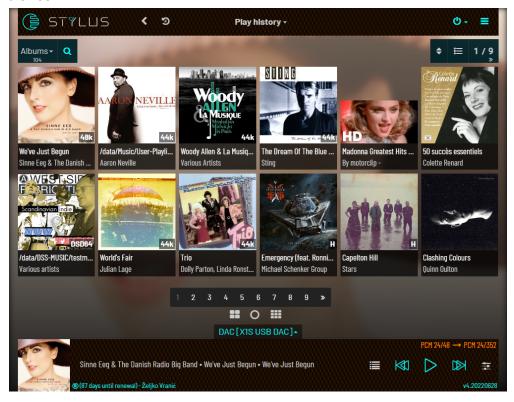
In the top bar on the right there is a drop-down menu (showing your current position) which will display the browse tree you entered - you can choose to go back to some previous 'folder' (category) in that tree.





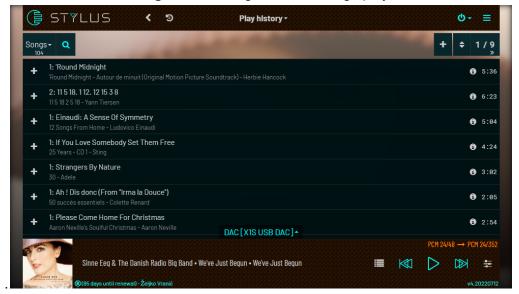
4.2.1.6 Play history

All songs and albums you play are recorded in the database. By selecting "Play history" library source you can view them all at one place (no matter if their source is local library or online libraries.



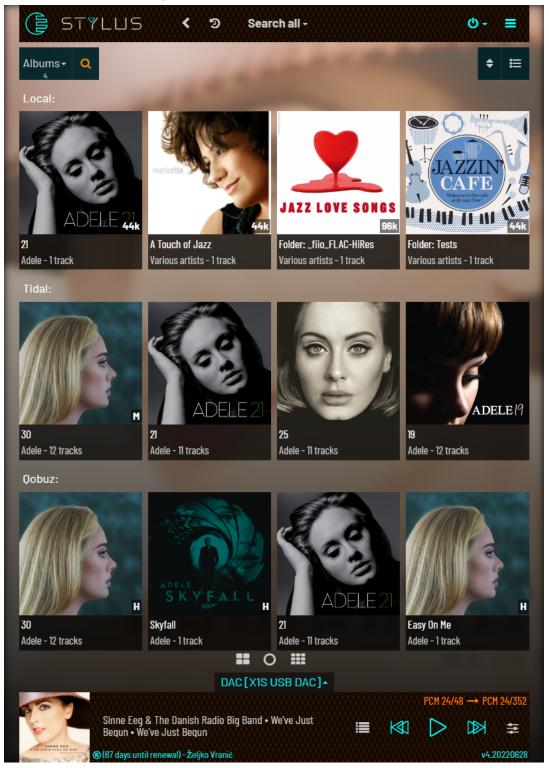
Although the view is called "**Albums**" it may also include playlists (notice Madonna greatest Hits - a Youtube playlist).

You can also choose the "Songs" view and get a list of songs played.



4.2.1.7 Search all

"Search all" library source allows you to search local and online libraries simultaneously. Here is the result of searching for 'Adele':

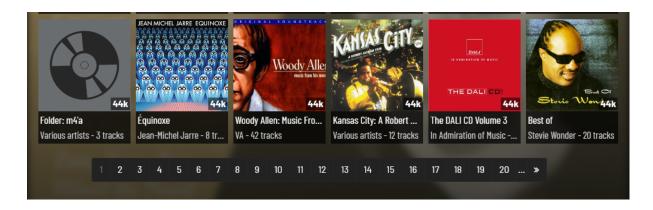


If you have both TIDAL and Qobuz accounts enabled you will have 3 sections each with a third of PAGE_SIZE items.

4.2.1.8 Paging

Total number of items available is always displayed in a small font below the chosen view label. If you have more than PAGE_SIZE items then the paging UI will be displayed. It consists of a couple of small buttons in the top toolbar for previous/next page (with current page number and total pages) and a paging toolbar at the end of the list with <select page number> buttons.

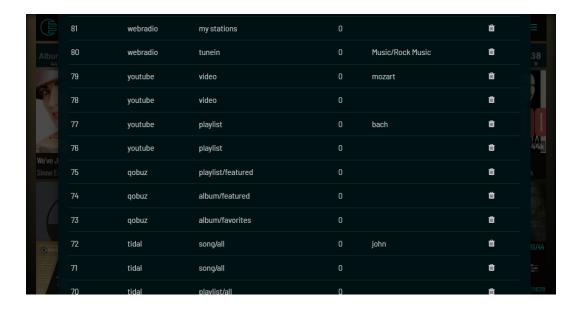
PAGE_SIZE can be adjusted in Settings -> Library -> Miscellaneous.



4.2.1.9 History

As you browse your library by changing filters, views or music sources, every step is recorded in history. You can go back and forward through it by using chevron buttons on the top near the Euphony logo.

By clicking on the history icon the whole history is shown.



You can select any history item to go to that moment or clear the history if it becomes too large.

4.2.2 Playing Now

The **Playing now** screen is shown/hidden when you click on the cover photo in the footer on the bottom of the screen.

It displays info about the song that is currently playing (or paused). It also offers album and artist information.

In addition to title, album, artist, genre and disk fields it will show the table with all other attributes (even non-standard one) that could be found during scan.

If you click on album cover photo and the folder that this song belong to (presumably album folder) contains other files except music files or playlists then a dialog will open with list of those files:

If you click on the filename the file will be downloaded to your computer.



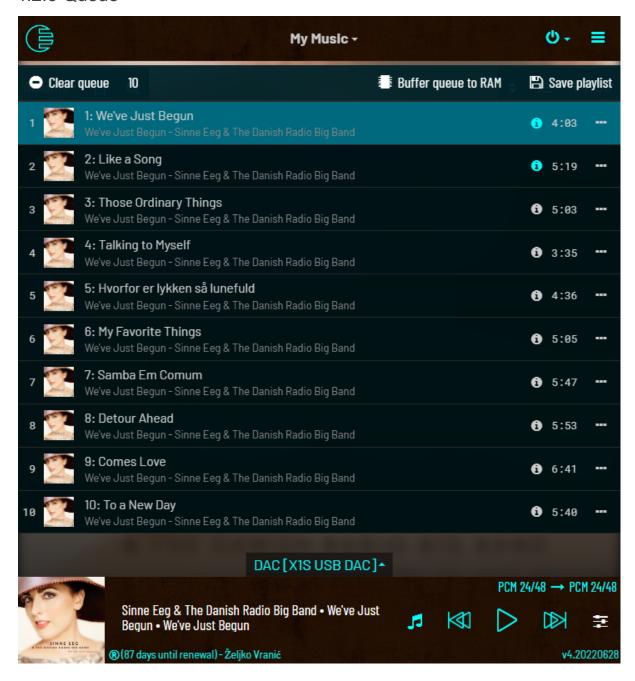
If the file is a picture file or PDF file, clicking on the file icon will open a full screen overlay where you can view the file in detail.

In this screen picture files can be rotated and if there are more picture files in the song's folder you can cycle through them with "<" and ">" buttons.

PDF files cannot be viewed on mobile devices directly in the browser, you must download them and then use a PDF-viewing app but most desktop browsers will display the PDF directly.

"Playing now" screen in **album playback mode** will look very similar to any album view which you get by clicking on the album cover in the library grid. Play icon will be missing and the song which is currently in playback will have a song progress bar in its row.

4.2.3 Queue



Queue screen overlay displays songs in the play queue. It is shown/hidden when you click on list icon is or any part of empty space in the footer. To go back to the library view click music icon that appears in the same place.

Currently playing song is highlighted in blue. Clicking on a currently playing song's row will function as Play/Pause button. Clicking on any other song will start playing it immediately.

Clicking on the info icon (before song time) will bring up a dialog with all attributes of that song.

Euphony usually buffers the song that is currently playing and the next song to RAM. When the first song finishes playing, the next song (which is already buffered) will become the current song and start playing and buffering of the next song will be initiated in the background.

If you want to completely avoid those buffering operations during transitions to the next song you can choose to buffer the entire Queue at once by clicking **Buffer Queue to RAM**. System will then try to copy all Queue songs to RAM. If there is not enough free memory (depending on your Queue size and the file size of songs in it) Queue will be only partially buffered and you will get a notification about how many songs are buffered. In addition to that, you will be able to see which songs are buffered and which are not because buffered songs will have their info icon colored in blue.

Meaning of the info icon colors:

- Blue song is buffered to RAM
- White song is cached to Euphony Drive (/data/Music path)
- Light gray song is on its original location and not buffered

If you select 'Use cache' in Settings -> Library section all songs that reside on network drives or attached devices will be copied to Euphony drive cache (/data/Music/E_CACHE) when added to Queue. When a song is copied to cache it will have a light-blue info icon. This option makes sense if your Euphony drive is faster or less noisy than the original drive.

Horizontal ellipsis icon — menu contains options to remove the song from the queue or move it up one place in the queue.

Queue song list supports drag-and-drop rearrangement. It is achieved by grabbing the row by its cover photo and moving up-down on the desired position. You can select multiple songs by holding the CTRL button while clicking on the songs.

At the top of the queue list there are also options to clear the queue or save it as a playlist.

This playlist file will be saved with your name and .m3u extension and it will be placed in the User-Playlists folder on Euphony Drive.

Note: if you need to edit your saved playlists right now this can be achieved in a roundabout way with the help of the Queue:

- 1. Add & Replace the playlist to Queue
- 2. Use Queue reorder/remove capabilities to reorder/remove songs from queue
- 3. Save the Queue with the 'Save playlist' button and choose the same name your playlist had before it will be overwritten.

4.2.4 Playing controls

Playing controls are located in the footer bar. You have standard buttons: **Previous III**, **Play/**Pause / III, Next III.

Play/Pause button changes appearance depending on play status.

Previous button doubles as the "**Rewind to start**" button. That means that unless the song is in the first 5 seconds of playing, the Previous button will rewind the current song to start.

Vertical ellipsis icon will open a small panel above the footer.

Here you can seek to desired position in the song, change volume (if software mixer is enabled in settings) and change the status of following queue options:

- Random ³ next song is chosen at random
- Repeat after the last song play starts again from the first song in queue
- **Single** - only plays single song (and repeats it if Repeat is also on
- Consume - song is removed from queue after play finishes
- Radio after last item in Queue is played next song is automatically added

If the icon is blue then option is ON, otherwise it's OFF. Click on the icon toggles the option's state.

Top right of the footer indicates what is the format/bits/samplerate of input and output.

Clicking on this opens an additional small panel that will display a signal path: source and output parameters of audio processing pipeline with all processing steps in between.





4.3 Settings page

Place to change system settings with subsections related to various system aspects:

- Music service
- Library
- System
- Complete installation
- Install
- System Update
- Feature update

Depending on several things some sections may be hidden.

Music Service section is displayed if Stylus is a selected music service and then it has a full complement of various options. If other audio systems are selected it may only show the audio devices that are present.

Music Library section is displayed only if Stylus or Roon Server are selected.

System section is always displayed

Complete section will only be displayed for registered users and for a Euphony system made by writing downloaded Euphony image directly to the disk.

Install is available only if the system was booted from the drive that has been made by downloading an image file from our site. It will not be available on a system made by this install function or on our Summus server system or other server systems that come with Euphony pre-installed.

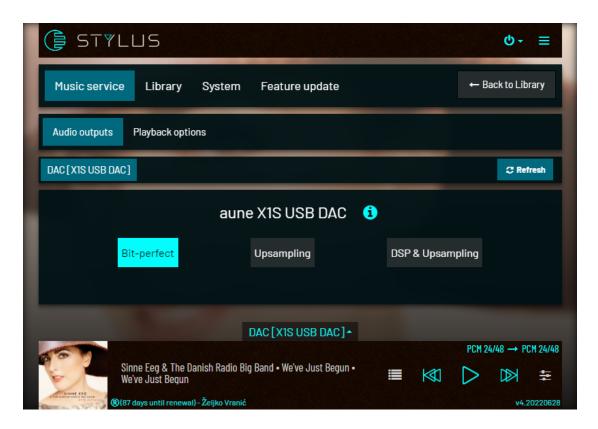
Update section will only be displayed for registered users and when there is an image update available.

Feature update section will only be displayed for registered users and when there is a feature update available..

4.3.1 Music Service

Music Service section displays:

- Your available audio outputs and their settings
- Playback options



4.3.1.1 Audio outputs

Audio outputs can be:

- DACs attached locally
- DACs attached to an active Euphony machine running StylusEP
- UPnP endpoints
- Local or remote HQPlayer embedded programs

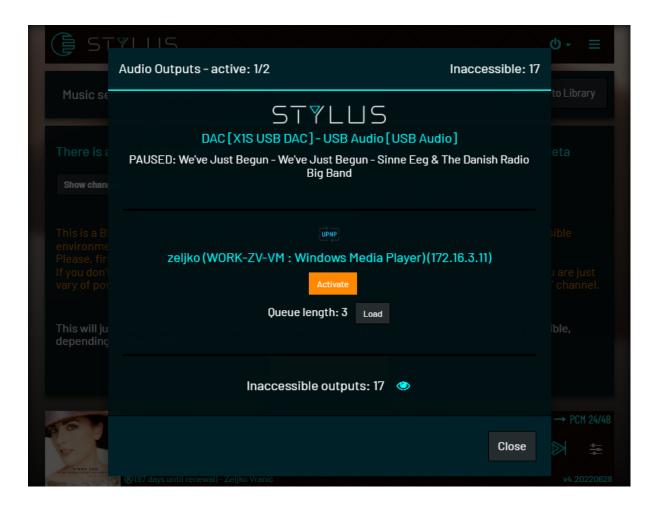
Stylus supports multi room playback. That means you can have several audio outputs active at the same time - provided they are not residing on the same machine:

- You cannot run simultaneously two DAC outputs if both DACs reside on the same machine (either local or remote)
- You cannot have DAC output and local HQPe output if HQPe is configured to use local DAC (you can if HQPe is configured to output to NAA)

So you can run simultaneously:

- One local DAC output
- One local HQPe output configured for NAA
- Several remote StylusEP outputs (each selected for specific DAC local to StylusEP
- Several UPnP endpoints

Outputs are activated either in **Settings -> Music service -> Audio outputs** section (clicking on 'Activate' button next to output name) or in **Outputs dialog** that can be accessed on all pages by clicking on bottom drop down menu attached to middle of the footer:



This dropdown menu displays the name of the output that is currently active or available for activation.

Parts of the UI that display current queue and current song being played will only display information related to current output.

If you have several outputs active you can switch between them from this Output dialog.

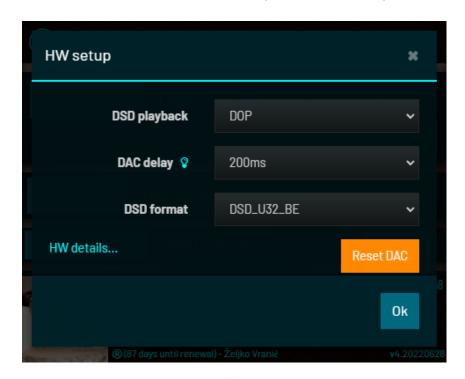
Output dialog first lists outputs that are already activated. Then there is a list of outputs that are present but not yet activated. At the end are outputs that are not present at the moment but were present at some point during running and saved in the configuration - Inaccessible outputs. They can be viewed by clicking on the eye icon after count of inaccessible outputs. Inaccessible outputs can be deleted.

Besides options to activate output or switch to selected output you can also use the "**Load**" button to copy the queue from the output containing the Load button to the current output.

If you have some outputs that you never intend to use for playback from Euphony (like TV UPnP endpoints) you can click the "**Ignore**" button next to the output name in Settings -> Music service -> Audio outputs section.

4.3.1.1.1 HW setup

Clicking on blue information icon • at the end of your output name you can view **HW Setup**



dialog.

Here you can:

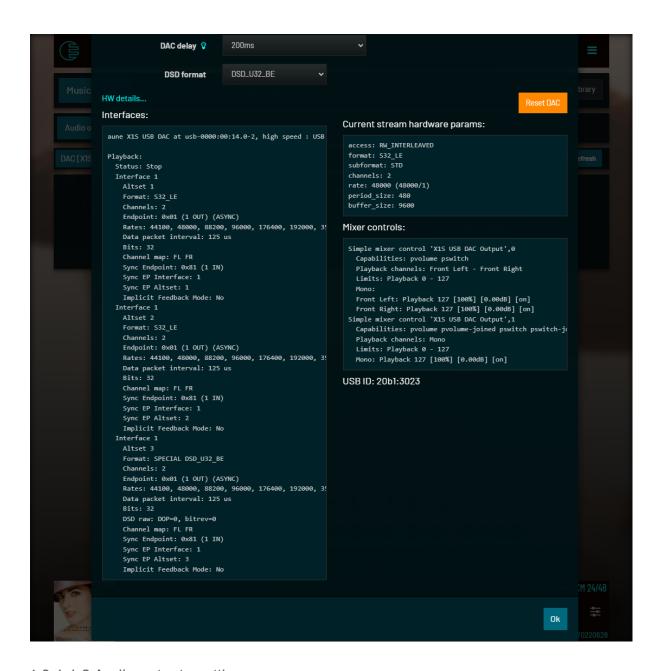
- Select a mode of DSD playback (Native, DOP or Convert to PCM)
- DAC delay time delay between switching between different formats or samplerates
- DSD format that your DAC supports (this rarely needs to be changed)

If you click on **HW details.**. link you can view specific information about your DAC on the system level.

If your DAC supports DSD native playback and Euphony system detects it (by showing Format: SPECIAL in one of the 'Interface' sections) and does not show the specific format after SPECIAL (like DSD_U32_BE in above screenshot) this means you have to choose the format yourself. For most cards DSD_U32_BE is the correct one to choose. Some boards (like some Amanero boards), will require choosing DSD_U32_LE.

After you change the DSD format you have to detach/attach your DAC or power it OFF/ON for this setting to be applied.

Sometimes the DAC can 'hang' - playback doesn't work or reports errors. In that case try using the "Reset DAC" option.



4.3.1.1.2 Audio outputs settings

Locally attached DACs, DACs that are attached to remote StylusEP and UPnP endpoints share most of the options available. HQPlayer outputs must be configured via HQPlayer embedded UI for which we provide a link in HQPlayer output section.

Configuration of all non-HQPe outputs is sectioned in three configuration modes:

- Bit perfect
- Upsampling
- DSP & Upsampling

All mods use the same underlying configuration - things you configure in the "Upsampling" section will have the same values in "DSP & Upsampling section".

These mods are just a way to quickly switch between specific configurations.

DSP & upsampling contains all possible configuration options. If you turn on all features (upsampling, convolution, equalizer and volume control) in "DSP & upsampling section" then

switching to "Upsampling" will automatically turn off: convolution, equalizer, volume control and leave only upsampling features. Likewise, if you select "Bit-perfect" - all options, including upsampling will be turned off - leaving you with bit-perfect playback (no processing of any kind performed on source music data stream).

4.3.1.1.2.1 Upsampling

Upsampling options provide a selection of upsampling engines, desired output samplerate, and configuration for specific engines.

Provided upsampling engines are:

- Default engine this engine is used only if DAC does not support song samplerate. This engine has no configuration
- E-PCM Euphony-developed PCM upsampling this engine only does PCM upsampling. It supports upsampling to all rates your DAC may support
- E-DSD Euphony-developed DSD upsampling. It can upsample to DSD64, DSD128 and DSD256
- Mozzaik PCM Mozzaik-developed PCM upsampling. Supports only 353k and 706k rates
- Mozzaik DSD Mozzaik-developed DSD upsampling. Supports only DSD64.

Mozzaik upsamplers require a separate subscription. Without a license it will play for 25 minutes before stopping.

E-PCM can be configured with:

- Resample rate (all rates your DAC supports)
- Quality (0-3). Higher quality means more demanding processing and higher CPU usage
- Resample method (Nearest, Linear, Cubic, Blackman-Nuttal, Keiser).

Specifics of a particular resample method are too technical to explain here. One has to try them all, listen and decide which method suits your sensitivities the best. Generally, they are listed in order of increased processing demand.

E-DSD can be configured with:

- Resample rate (DSD64, DSD128, DSD256)
- Noise shaping (CLANS type, SDM type)
- Filter taps (4,5,6,7,8)

Again, all options are listed in order of increasing processing demand - depending on your CPU strength you may not be able to reliably play more demanding configurations. Also, bear in mind that if you have upsampling selected for multiple outputs this may overtax your CPU additionally.

Mozzaik PCM only has option to select resample rate: 353k or 706k

Designed as a chain of upsamplers with linear phase FIR filters. Stop band attenuation is below -200dB which is far below the hearing threshold (less than a billionth part of the signal) and an analog noise floor. Pre-echo and post-echo are also below -200dB level and

inaudible. Internal precision of the upsampler is 64-bit floating point which converts to 24-bit using a triangular dither. Special attention is on the impulse response of the whole chain which removes digital harshness introduced by ringing artifacts in the time domain. Supported input rates range from 44.1kHz to 192kHz and supported output rates are 352.8kHz (DXD) and 705.6kHz (DXD 2x) with 24-bit precision. The resulting signal has a deep soundstage and a smooth and clean sound.

Mozzaik DSD only supports DSD64.

Designed using the same chain as for Mozaik PCM with the additional upsampling that reaches up to 2.8224MHz. Sigma delta modulator internally uses 64-bit floating point precision. Noise shaping filter has been optimized to maximize the time resolution response. Supported input rates range from 44.1kHz to 192kHz and output rate is 2.8224MHz in 1-bit precision (DSD 1x). Resulting DSD signal has a deep soundstage, a smooth and harmonically dense sound with fast transients.

4.3.1.1.2.2 DSP

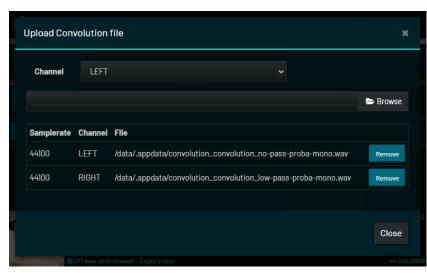
Although upsampling technically belongs under the umbrella of Digital Signal Processing we chose to separate specific features into DSP category: convolution, equalizer, volume control.

Convolution supports mono and stereo filters in wav format with either PCM data or floating point data (32bit and 64bit).

If convolution is enabled you can set it up by clicking on **Setup** button that appears next to the convolution option.

Here you must first select LEFT, RIGHT, or STEREO to indicate which channel(s) your filter file covers. After you select the local file with the "Browse" button "Upload" button will appear.

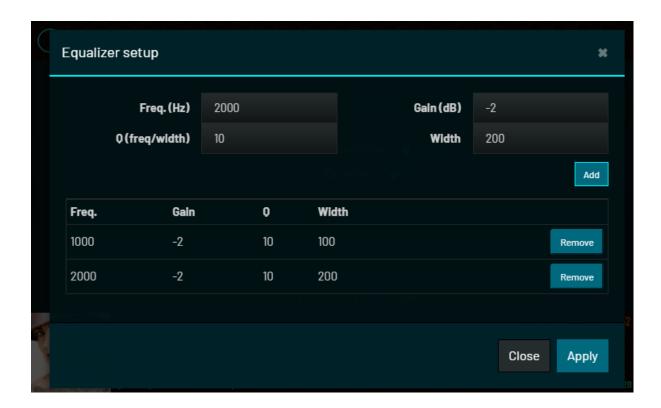
Clicking Upload will send the file for processing and if file is successfully processed it will appear in the table below (indicating



also for which samplerate is the convolution filter created).

Changes are automatically sent to the player process (this will stop your playback to apply new configuration).

Equalizer supports adding individual bands which specify: Frequency (Hz), Gain (dB), Width (Hz), and Q factor (frequency/width). Just enter values and click "**Add**" to add them to a table below or click "**Remove**" to remove a particular band.



Volume control allows you to control software volume, to enable song replay gain and to define volume range in dB.

Neither of our Upsampling and DSP features supports direct processing of DSD source data. In order to use any of them, DSD source data must be converted to PCM.

For that you have an option: **DSD to PCM rate** (Auto, 44k, 88k, 176k, 352k).

Processing pipeline is constructed in following order: Equalizer -> Convolution -> PCM upsampling -> Volume control & replay gain

Equalizer -> Convolution -> Volume control & replay gain -> DSD upsampling

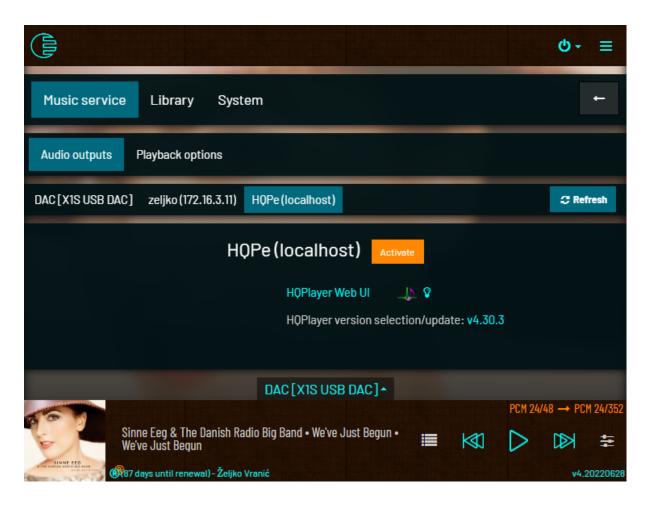
In the case of DSD source DSD to PCM conversion comes first.

In the screenshot on the right is an example of **signal path** (click on source -> output info in top right of the footer). Notice that E-PCM resampler was needed to resample 48k samplerate to 44k because only filters for 44k were uploaded for convolution.



4.3.1.1.2 HQPlayer options

HQPlayer output is present if HQPlayer is started locally (in combination with Stylus or in Combination with Roon) or if it is detected on the network.



Note that activating local HQPe which is configured for local DAC will deactivate current local DAC output (and vice versa).

We do not provide HQPe configuration in Euphony UI - you have to connect to HQPe UI by clicking on "HQPlayer Web UI" link.

All HQPe configuration, including HQPe registration are to be performed via HQPe UI.

What we do provide is the ability to upgrade HQPe binary and to choose between several HQPe binary versions.

We will probably not generate a separate version for every HQPe version that Signalyst releases but we will try to prepare new HQPe versions more often and without the need to generate Euphony updates in order to push new HQPe binaries (like in Euphony v3).

If you configure HQPe to play to remote NAA then you can have local DAC output and local HQPe output active at the same time.

HQPlayer needs a separate license to work without interruption. Without a license file HQPlayer will stop every 20 minutes and you have to make an intervention in UI to start it again and resume playback.

4.3.1.2 Playback options

4.3.1.2.1 Playback mode

You can select between:

- Queue mode you have a visible playing queue which you can manipulate by adding/removing/moving individual songs
- Album mode album-centric mode which tries to bring a CD/Vinyl like playback experience where most of the time you have a whole album ready for playback.
 Queue is not visible and some parts of UI is adjusted to this album-centric experience

4.3.1.2.2 Buffer albums added to queue

This option will try to buffer, in advance, every song from the album added to the queue to RAM. Buffering may take a while so if you immediately start album playback bear in mind that buffering is happening in the background so SQ may be affected until buffering is finished (when all songs in the queue have a blue info icon).

4.3.1.2.3 Start Playback Service in paused mode

If not checked then Playback will resume after startup or after Playback Service is restarted (Playback Service needs to be restarted when you change any options in this section)

4.3.1.2.4 Song histogram

If turned on, the song loudness histogram will be displayed above progress seek bar. Depending on the song this will incur additional processing cost during the first several seconds of playback and it may slightly influence sound quality during that time.

4.3.1.2.5 Enable internal cards

Internal sound cards are disabled by default. If you need them, enable this option.

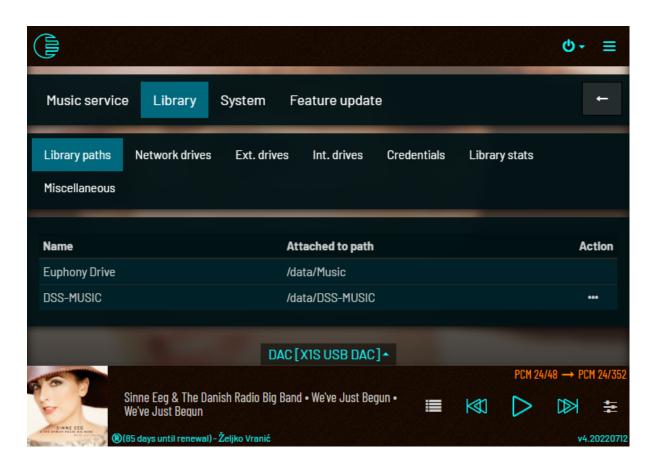
4.3.1.2.7 Song pos. update

Interval for reporting song elapsed playing time to clients. Increasing the interval reduces network traffic and potentially reduces interference thus improving SQ.

4.3.2 Music Library

In this section there are several subsections:

- Library paths
- Network Drives
- External Drives
- Internal Drives
- Credentials for external services
- Library stats
- Miscellaneous



4.3.2.1 Library paths

When you attach some USB device or add network share, it will be accessible on your data partition under some folder name.

- Folder name for attached USB devices will be its volume name (Created during device format or set by manufacturer).
- Folder name for linked network shares will be comprised from: server name + share path

This folder will not be part of your Music Library at once. You have to explicitly add it to the library (see next section).

Library paths section lists all paths that are part of your music library. You can remove the path from the library. Paths that are not accessible at the moment are listed in red.

** Roon specific notice: If you select Roonserver as your music service, library paths added via Euphony app as explained in this and following sections will not be part of the Roon library automatically. You have to add them also in Roon. The path to add is visible in the second column of Library paths table. Copy this path and paste it in Roon.

4.3.2.2 Network drives

Here you can add network shares to the music library and you can see the listing of shares you added before. Existing shares can be:

- Added directly to Music library (attached Library Paths list)
- Removed from it
- Detached share remains present in app configuration
- Deleted detached and removed from configuration
- Used for Music library backup (all music files + configuration files + cover and info files)
- Used for Music library restore

Adding a network drive

Here in the "server" field you type the IP address or hostname of your network shared drive (please enable "Windows type of share" of this drive/path on your NAS first) In the "path" field type name of your network drive or. Complete with "Add network drive".

Server field should contain the IP address or hostname of the server with no additional slashes, backslashes or anything else. I.e: **192.168.0.25**

In the path field you should enter the share name (without leading "/" or "\" and optional path on that share - folders should be delimited by "/". I.e: **sharename** or **sharename/music** or **sharename/music/dsd.**

Now you will get a dialog asking you to type "username", "password" of your network share. These are network credentials to access your network drive (you defined on your NAS - Network Attached Storage). For "Domain" you can write "Workgroup" or nothing. Complete with the "Add network drive" blue button. If Euphony can now reach your drive over a network and have access using given credentials it will add your network drive to the "Network Drives" list. If it reports that he cannot find it, you will have to check network share configuration on your NAS or computer and repeat the procedure above.

When you have your network drive on the list, to use it in the Music Library - you need to add it to the "Library path". This list of paths (Library paths) Euphony scan for music. You can add your network drive to Library Path by the "Action" menu (...) on the right side of Network drive list. Here from menu Action (choose ... on line where your network drive is listed) choose "Add to Music Library". This action will add your disk/path into the list "Library paths". When it is listed there Euphony will scan your drive (progress bar appearing on top of the window). When your drive is scanned you will see your music in the "My music" menu, and can choose it for playback.

Backup and restore

Backup and restore are used in a manner of one way synchronization. This means that:

- Repeated backup on the same share will copy only newer files in your Music library
- Restore will add only files that are missing in your Music Library

4.3.2.3 External drives/Internal drives

Here are listed your external/internal devices (disks and their partitions). In three-dot menu you have options to:

- Add/Remove it from Music Library
- Mount/Unmount (for safe removal)
- Format and add to Music Library

(Only partitions can be attached, disks are listed for informational purposes and initially hidden. The device that has the Euphony operating system on it and its partitions are initially hidden. You can view them by clicking on the **eye icon** • in the table's header row).

4.3.2.4 Credentials for external services

If you accessed one of external services like Tidal and entered some credentials here you have the option to change them (in case you changed passwords or you changed your whole account).

4.3.2.5 Library stats

This section is for informative purposes - it lists some statistics from the music database. It also gives you the option to **Rescan the entire library** and **rebuild the database** and to **Erase the cache**.

Euphony library manager scans library folders for changes after every startup. It only checks file timestamps. If the timestamp has changed (after last scanning of that file) the file is read and scanned for tags and other properties. If the timestamp has not changed, the file is only marked as valid in the database. By rescaning entire library and rebuilding the database you are essentially erasing the database and building it from zero by rescaning the entire library.

During library browsing Euphony will try to find cover files in song's folders or download them from the internet (if 'Download missing covers' was turned on). All these covers are resized and copied to Cover cache folder. If you ever feel that this folder takes too much space or is somehow not showing the covers you expect, you can erase it so it can be recreated again during your browsing.

4 3 2 6 Miscellaneous

4.3.2.4.1 Share Music library on network

If you want to add and delete files in your Music Library on Euphony drive from another computer then enable option 'Share Music Library on network' and you will be able to

access Euphony drive as Samba network share. Connect to Euphony through its hostname (default: euphony) or IP address.

In Windows open Windows Explorer, type \\euphony in the address bar and press enter. User/password: audiouser/euphony

4.3.2.4.2 Skip library scan on startup

If you have a large library and you don't want Euphony to scan your library for changes every time the Euphony app starts you can select the option 'Skip library scan on startup'. If you select this, remember to manually update the library with the 'Update music library' option from Main Menu if needed.

4.3.2.4.3 Use cache

Notice: enable this only if Euphony is installed on a fast-access drive like SSD.

Songs from external drives added to the queue will be copied to cache (folder E_CACHE) on Euphony drive (for fastest access and playback).. Later, when you browse your library you will have duplicate songs for some albums but songs from E_CACHE will be displayed by default, and songs from the original location will be hidden. You can view all songs for an album with duplicate songs by clicking eye icon near the end of the album row.

4.3.2.4.4 Download missing covers

Euphony tries to find album cover images in the folder structure of your album. If no such files can be found you have options for a specific album: to download the cover image from the web or upload it yourself. If you want Euphony to try to **download missing covers** from the web **automatically**, without your intervention, for every album **in your current album view** - select this option.

(This function will not automatically go through your entire music database at once - it will only try to download covers for albums that you are currently viewing in your web application.

It is still possible that some covers will not be found - for these use manual option and adjust album and artist names if needed (i.e.: when you have the album name 'Gold -- Disk 1' maybe you can try without '-- Disk 1' and use only 'Gold').

4.3.2.4.5 Use full screen width

Adjust the web app to cover the entire width of the screen with content.

4.3.2.4.6 Infinite scrolling

Instead of the paging UI, add a new page of content every time when you scroll to the bottom of the current content in the Library view.

4.3.2.4.7 Results / Page

Here you can choose the number of results per page in library views. More results per page: less pages - more scrolling and vice versa.

4.3.2.4.8 Prefered view

Euphony by default remembers your last menu/submenu selection for each music source in a browser cookie. If you wish to have the default view for a music source fixed to some menu/submenu combination, you can do it here.

4.3.2.4.9 Webradio Search

Choose sorting: by bitrate or by listener count (descending).

4.3.3 System

Here you can change global options related to OS functioning. It is divided in three parts:

- System settings various system level option
- System info information about your machine and your registration status
- Expert settings various options for improving the system that are difficult and sometimes risky to use

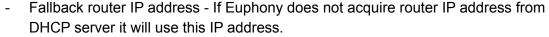
4.3.3.1 System settings

Here you can change:

- Timezone change your timezone by entering the nearest major city in your timezone. Use underscores instead of spaces if needed, i.e.: New York
- Hostname If you prefer, you can change the name of the Euphony system as it appears on the network. You need to do that if you plan to have multiple Euphony installations running on the same network. If you change it to ie.: 'euphony-bedroom' then you must access the Euphony Web App via:

http://euphony-bedroom. After changing this option, the Euphony system will be restarted. Wait until the browser redirects itself to the new hostname after approximately 40 seconds.





- Network interfaces If you have more than one ethernet interface and you plan to connect another machine directly with this one via ethernet cable you can bridge all ethernet interfaces to achieve that. Changing this option will cause a machine reboot.
- Logging In order to minimize disk interaction you can reduce the internal logging by changing the logging level from 'All' to 'Errors only' or even 'None'. In case of problems and need for support make sure to first set the logging level to 'All', try to reproduce the issue and then generate logs for support.



4.3.3.2 System info

Here are listed some system information and your registration status.

Your Euphony license is connected to **Euphony hardware fingerprint**. If you change the device we can transfer your license to a new device. Old device will become unregistered again.

Next to the Euphony release number you can view Changes log.

After performing an image update you can choose to revert to the previous release. To do this use the 'Revert' button which appears next to the 'Previous release' number.

Note that HQPlayer license status may not be updated immediately after you supply a registration key file in HQPlayer UI. Trust HQPlayer UI about your HQPlayer registration status - it will be propagated to Euphony UI eventually.

By clicking on the button 'Generate logs for support' Euphony will collect relevant system information and log files and generate an archive file:



logs.tar.gz which should be automatically downloaded by your browser. In case of problems open a ticket on our <u>Support system</u> and attach this archive file.

When you click on the red **Toggle RC** button you open a secure SSH tunnel which will enable Euphony support to remotely connect to your Euphony machine in order to better diagnose the issue you have and possibly offer an immediate solution by making direct changes to your Euphony system.

Please, **do not use this** without direct coordination with Euphony support.

Clicking on the **Credits/Licenses** button will open a dialog with listed credits, links to all license files and **Written offer for source code**.

4.3.3.2 Expert settings

DISCLAIMER: Expert settings are intended for people who understand what these options mean and how to use them. Do not use them if you are not completely sure how.

They are not fully tested, may not work on every configuration or machine and can make your system unstable even if you use them in the correct way. Therefore, they are not guaranteed to work and we do not fully support them.

Yes, we will try to help you with them and we will help you to recover your system in case of problems (sometimes that will mean you have to re-install the system) but we will not be obligated to make a particular option work for you.

In any case, as long as you have a license your system can be restored again.

In the spirit of the above disclaimer we will not try to explain various Expert options here, what they do and how they work (although there are helpful tips beside blue bulb icons). If you are not able to figure it out yourself - try seeking information online, on forums or in our Support system Knowledge base.

4.3.4 Install

Install option is not available for unregistered installations.

Install option is not available on systems made by this function or on pre-installed Music servers (Summus, Pinkfaun).

Install will perform Euphony installation/repair on another disk (not on your current running Euphony instance).

If your first Euphony installation came to you as a USB image and you have a dedicated machine for use as an Euphony system then you will probably want to have it on your machine's hard disk. (You may also want to show Euphony to a friend and put it on his usb). You can perform such an installation here. (Note that installation from Euphony Web Application is faster, simpler and safer than writing original Euphony image file to target disk).

Install section will not be shown if there are no possible target devices attached (You cannot install it on the disk from which you booted the system up.)

If you go to the Settings screen and attach a device after that, refresh the page so the app can pick up changes).

Important: after starting installation don't leave the Install screen until installation is finished.

WARNING: Install procedure erases all data on selected disk (all partitions). This means that if you do this on a disk that already has Euphony installation, all your data there will be lost (including Music Library).

If the disk you install to already has Euphony installed then you will have the option to 'Repair' installation. This action will preserve your configuration and your music library and only system partitions will be overwritten.

You can also choose which OS partition will be repaired.

To update your current running Euphony installation to a newer version always use the Update option.

4.3.5 Complete installation

Complete option is not available for unregistered installations.

Main purpose of Euphony installation made by writing downloaded image to a device is to make trying Euphony extra simple. Write the image to usb, boot from usb and play with it to see all the features. If you decide to have a permanent Euphony instance you will probably want to install it on a hard disk and you will use the previously described 'Install' option. Nevertheless, if you, for any reason, want to make such 'image' installation your permanent one you must make this additional step: to 'Complete' the installation. **Without this you wouldn't be able to receive System updates**.

'Complete' option will create and initialize an additional partition which is vital for seamless live updates of your running Euphony instance.

They way Euphony does updates to it's system is based on having two system partitions:

- active one which you boot from
- inactive one which you use during update

Update essentially downloads the whole system partition filesystem image and applies it to the inactive partition. Once that is done, the system is simply told to boot from the updated partition. Previously active partition becomes inactive one (and retains previous release to which you can always return to).

Important: When you burn a Euphony image to USB and boot from it you only have one system partition, the one you booted from. Inactive partition still **does not exist**.

To be able to receive updates you first have to register (Trial or full paid registration). If you register for Trial and you wan't to receive updates during the trial period you have to create this second, inactive partition. This is done by the 'Complete installation' function. Complete installation will create this inactive partition from the filesystem image that is already present in the filesystem of the image you burned to your USB.

If you register fully, you will have 2 options:

- Install installs Euphony on another drive creating all needed partitions and restoring the filesystem from the filesystem image to both system partitions.
- Complete installation creates only second partition like before thus enabling updates

4.3.6 System Update

Update option is not available for unregistered installations.

Use this to update your existing Euphony installation without losing your configuration and already built Music Library.

Update procedure:

- 1. Backs up important configuration and state files
- 2. Overwrite your disk partition with new Euphony image
- 3. Restore backed up files

Update procedure does not touch your data partition which contains your Music Library.

4.3.7 Feature Update

Feature update option is not available for unregistered installations.

Some updates will come in the form of a **feature update**. This form of update is reserved for simple changes of web application interface or functionality. It will not replace your system image but only update some files and maybe restart the web application server or reboot to pick up changes.

Feature updates are not cumulative. They only update the last System update image. Consequently, feature update will not appear if you have a pending system update. This

means that if you fall behind on updates it is possible that you will have to do 2 updates. First you will do a System update and after completing that you may also have a pending Feature update with a more recent date.