Taiko Audio Extreme

Preface

Thank you for buying our Taiko Extreme. Taiko Audio is an innovative Dutch high-end audio laboratory. Our mission is to provide the best possible user experience for audiophile music reproduction utilizing the finest components and custom engineering to provide unmatched sound quality, customer service and support.

This manual will help you with installing and using the server. Enjoy your Extreme and the improvement of audio quality that it brings!

Your Taiko Audio Team

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1 About this document

This instruction manual contains the information necessary to properly and safely install, operate, and maintain the server. Read and understand this manual before using the server. Carefully store this manual for future reference.

1.1 Language

This manual is originally written in English. All other languages are translations of the original manual.

1.2 Used symbols

This manual contains safety warnings that may result in injury when ignored. Each safety warning is indicated with a signal word. The signal word corresponds with the level of risk of the described hazardous situation.

Danger!	Indicates a hazardous situation that, if not prevented, will result in death or serious injury or serious damage to the product or the environment.
Warning!	Indicates a hazardous situation that, if not prevented, could result in death or serious injury or serious damage to the product or the environment.
Caution!	Indicates a hazardous situation that, if not prevented, could result in moderate or minor injury or minor damage to the product or the environment.
Notice	Indicates useful information that is not related to hazardous situations.

1.3 Copyright

Taiko Audio Extreme® is a registered trademark of Taiko Audio. Any unauthorized use is illegal. Any other product names used in this manual are the properties of their respective owners and are acknowledged.

2 Product description

2.1 Intended and unintended use

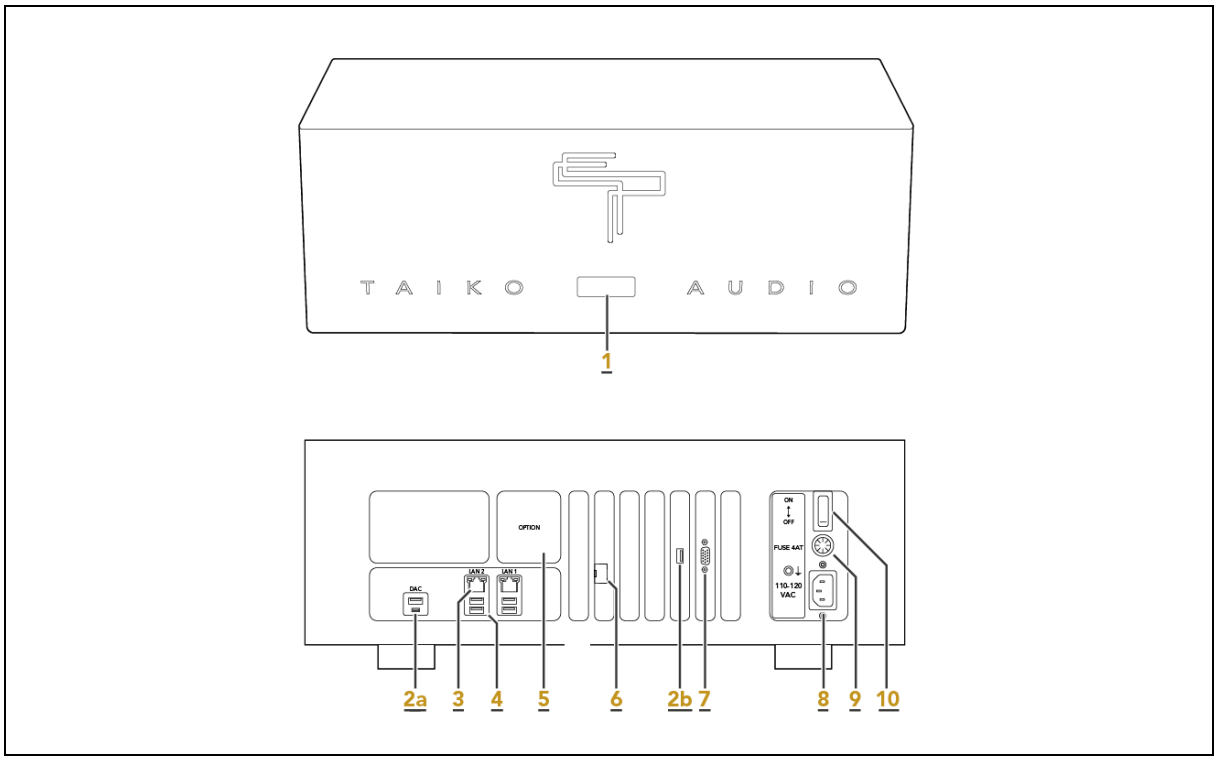
The server is intended for use indoors in household environments for typical digital music playback functions that may also be used by non-expert users for digital music playback.

This server is not intended for installing additional software by the owner.

2.2 Description

The Extreme is a music storage and streaming server. The server is designed to deliver the most realistic sounding reproduction from stored music files and from streaming services such as Qobuz and Tidal.

2.3 Part list



1. Front panel button
2a. Standard USB port for connecting a DAC*
2b. Extreme USB Card for connecting a DAC (Available as an optional upgrade for older servers)*
3. Secondary standard LAN ports
4. USB ports (intended for storage)
5. Option slot (not currently used)
6. Extreme Network Card with SFP Port (Main LAN Port) #
7. VGA output
8. Power inlet
9. Fuse
10. Main power switch

*The default USB DAC port (2a) is present on all Extreme models. This used to be the standard DAC port, until we released the proprietary Extreme Enhanced USB Card. Current Extreme Servers offer the Extreme Enhanced USB DAC port (2b) as standard, which offers superior sound quality and is the preferred DAC connection method. For servers that do not yet have this board, it is available as an upgrade.

#The SFP port can be used with a DAC cable to connect to a Taiko Audio Router or Switch, or it can be used with a regular LAN cable using an RJ45 to SFP adapter.

2.4 Conformity

The Taiko Audio Extreme is designed and tested according to the following regulations and directives:

- EMC directive 2014/30/EU
- NEN-EN 55032:2015
- NEN-EN 55035:2017
- IEC 60065
- IEC 60950-1
- IEC 62368-1
- Low voltage directive 2014/35/EU

Follow this link for access to the complete declaration of conformity:

https://taikoaudio.com/taiko-2020/conformity

3 Safety

3.1 Safety symbols on the server

The following symbols are present on the server:

	FCC – This symbol indicates that the server emits electromagnetic interference which is under the limits approved by the Federal Communications Commission.
	RoHS – This symbol indicates that the server is free of restricted materials which are hazardous to the environment and pollute landfills, and are dangerous in terms of occupational exposure during manufacturing and recycling.
	CE – This symbol indicates that the server is assessed before being placed on the market and that it meets EU safety, health and environmental protection requirements.
	Risk of electric shock – This symbol indicates that the server has risk of electric shock.

3.2 Safety instructions

3.2.1 Transport and storage

Caution!

- Always transport and store the server in the original packaging. Transporting the server in any other packaging may cause damage the server and void the warranty.
- The server is heavy (45 kg). Always lift the server with at least two people.

3.2.2 Installation

Caution!

- The server should be completely silent during operation. If there is any noise audible, switch off the server and try to find the cause.
- Only use the power switch after you have switched off the server and the front-panel button light is off.
- For best sound quality, You should only use one output at a time. Do not enable multiple outputs at once.
- Do not install other software on the server. Installing other software will degrade the audio quality. Cleaning and removing user installed software by your supplier is time consuming and may incur service charges.

3.2.3 Maintenance

Caution!

- Never use water to clean the server. Water can cause unrepairable damage to the server.

3.2.4 Children and vulnerable users

Caution!

- This server can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the server in a safe way and understand the hazards involved.
- Children shall not play with the server.
- Cleaning and user maintenance shall not be done by children without supervision.

4 Transport and storage

Caution! Always transport and store the server in the original packaging. Transporting the server in any other packaging may damage the server and void the warranty.

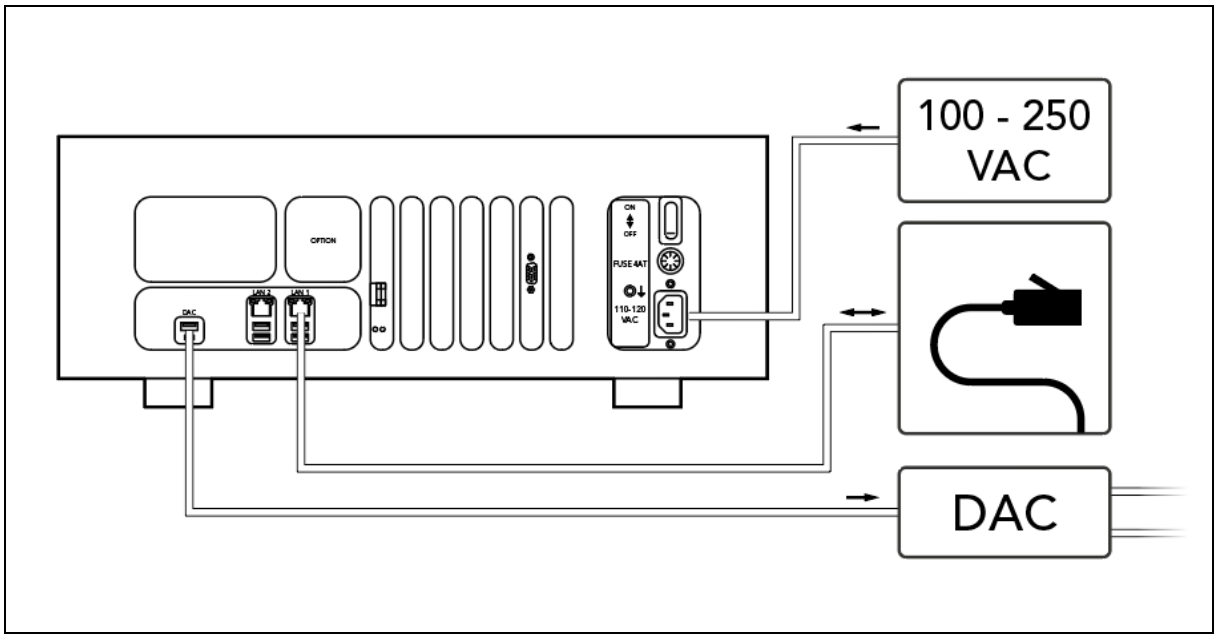
Caution! The server is heavy (45 kg). Always lift the server with two people.

Transport and store the server in a dry place. Avoid shaking and bumping. Consult the table below for the transport and storage conditions.

Temperature	- 40 – 70 °C
Humidity	20 – 90 % (not condensing)

5 Installation

The image below shows an overview of the installation. The following paragraphs will provide all information needed to install the server in a safe way.



5.1 Contents

Check if all contents in the packaging are present and undamaged. The packaging should contain the following parts:

1x	Taiko Audio Extreme Music Server
1x	User manual

If parts are missing or damaged, contact your supplier.

5.2 Installation location

The installation location should comply with the following conditions:

- Flat and stable surface
- Dry environment
- At least 2,5 cm free and ventilated space at the top and sides

5.3 Tips for perfect audio quality

To achieve the best audio quality possible with this server, we recommend following these tips:

- Place the server on a vibration-controlled shelf, as close to the floor as possible.
- The quality of the AC power supply is very important for the quality of the sound. Use a power outlet capable of delivering 2 kW of continuous power without parts of the connection getting warm.
- Use good quality power cords with plugs and sockets with Rhodium, Silver, or Gold plating.
- In countries with Schuko plugs, make sure the connector is in the orientation that sounds the best.
- Avoid any devices that provide local area network connectivity over the mains wiring.
- We do not recommend replacing fuses for experimental purposes.
- If a fuse needs to be replaced, the new fuse must be of the same rating. Please refer to the Technical Specifications at the end of this document for more details.
- Every USB cable has certain specific characteristics. We recommend experimenting with different USB cables.

5.4 Connecting the server

To connect the server, do the following:

1. Connect the power cable to the **power port** (10).
2. Connect the other end of the power cable to a suitable power source (100 – 250 VAC).

Tip To ensure the best audio quality we recommend to use a copper network connection.

3. Connect the network cable to your home network.
4. When using a copper network cable, connect the cable to the **LAN port** (3) labelled *LAN 1*. When using a glass fiber network cable, connect the cable to the **fiber network port** (6).

Tip To ensure the best audio quality we recommend to keep the USB cable length under 2 meter.

5. Connect the USB cable to your DAC.
6. Connect the other end of the USB cable to the **Extreme Enhanced DAC port** (2b) (which can be identified by the vertically-installed USB slot). If you have an older server without this USB card, then connect the USB cable to the **Standard DAC port 2a**.

The server is now connected to all necessary equipment.

5.5 Powering the server

The server is equipped with a power switch at the rear side, and a front panel button. Use the power switch when the server is not used for a longer period of time. In other cases, use the front panel button.

5.5.1 Switching on the server

To switch on the server, do the following:

1. Switch the **main power switch** (8) to the *ON* position.
2. Press the **front panel button** (1). The button lights up.

After 25 seconds the server beeps twice and is ready for use.

Caution! The server should be completely silent during operation. If there is any audible noise, switch off the server, and try to find the cause.

5.5.2 Switching off the server

To switch off the server, do the following:

1. Double press the **front panel button** (1). The button light switches off after 5 seconds.

Caution! Only use the main power switch after you have correctly switched off the server and the button light is off.

2. To completely power off the server to cold state, switch the **main power switch** (8) to the *OFF* position.

The server is now switched off.

6 Digital setup

6.1 Connecting the server to your DAC

To connect your DAC to the server, you need to have a compatible driver for the DAC installed on the server.

Tip The Taiko USB ASIO Driver is updated regularly to include more and more DACs from leading manufacturers.

Caution! Only follow these steps if your DAC is not on the list of compatible DACs!

For installing a driver you need access to the servers desktop (§6.5). To install the driver, do the following:

1. Open a web browser on the desktop of the server.

Tip Consult the website of your DAC manufacturer for the appropriate driver.

2. Download the driver.
3. Follow the installation wizard of the driver.
4. Reboot the server (§5.5).

Tip Contact your Dealer or Taiko Support (support@taikoaudio.com) for assistance to install the appropriate USB Driver for your DAC if needed.

6.2 Connecting with the Roon app

To use the server you need the Roon app:

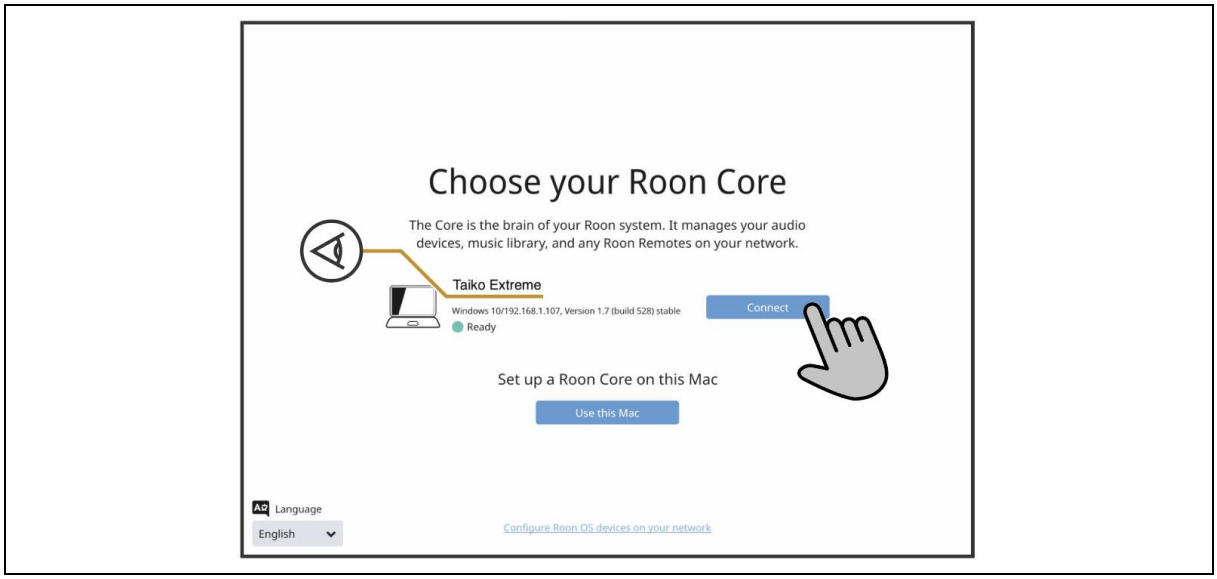
Roon Remote
Roon Labs

Download Roon in the App Store, Play Store, or at www.roonlabs.com. We recommend using an iPad or iPhone. Android mobile devices or MAC and Windows desktops and laptops are also compatible.

To connect the server with the app, do the following:

1. Switch on the server.
2. Open the Roon app. Make sure the device that runs the app is connected to the same WiFi network as the server.

The app starts looking for devices. EXTREME••••• appears in the app (for example: EXTREME21100).



3. Click on *Connect* next to *Taiko Extreme*.

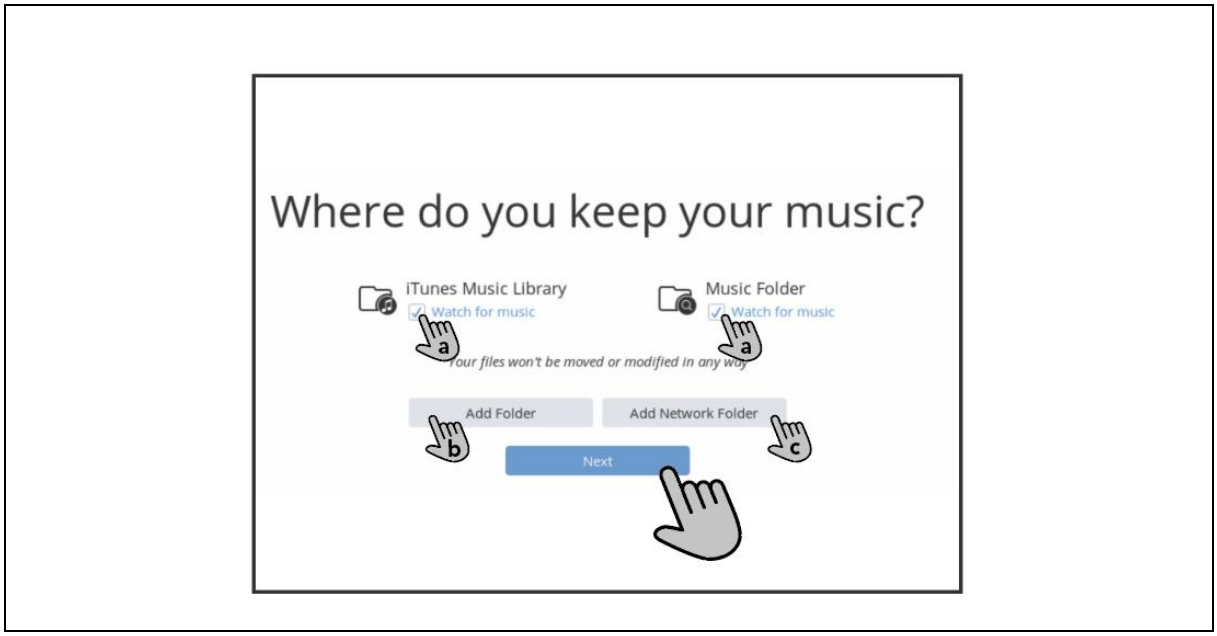
4. Sign into the Roon app with your e-mail address and password. If you don't have a Roon account, click on *Start Free Trial* and make an account.

The app logs in and shows a setup screen.

6.3 Setting up the Roon app

Tip All settings can also be added or edited later.

The app asks for music file locations.

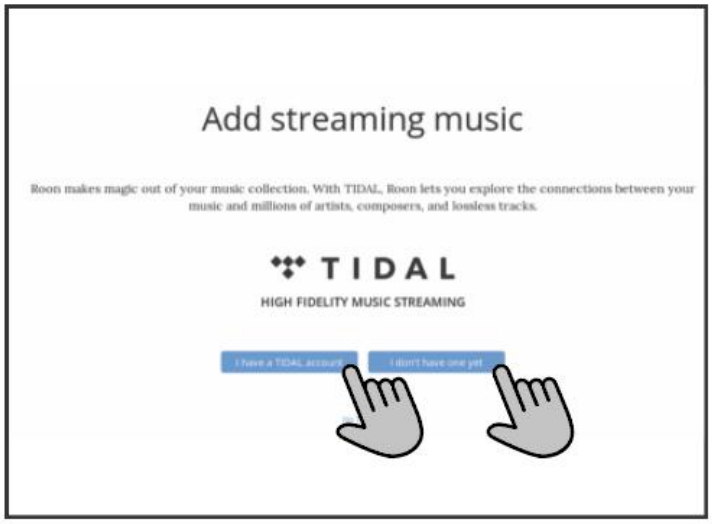


1. Add applicable music file locations:
    a. Deselect the two checkmarks.
    b. Click on *Add Folder* to select music stored on the server.
    c. Enter the internal Extreme Music Drive D:
    d. Click on *Add Network Folder* to add a NAS (see §6.6 to set up a NAS drive).
2. Click *Next*.

If you have accounts at supported streaming services (like TIDAL or Qobuz), you can now connect the server to those services.

Tip Keep in mind that importing big music libraries can take a lot of time.

The app shows a music streaming service.

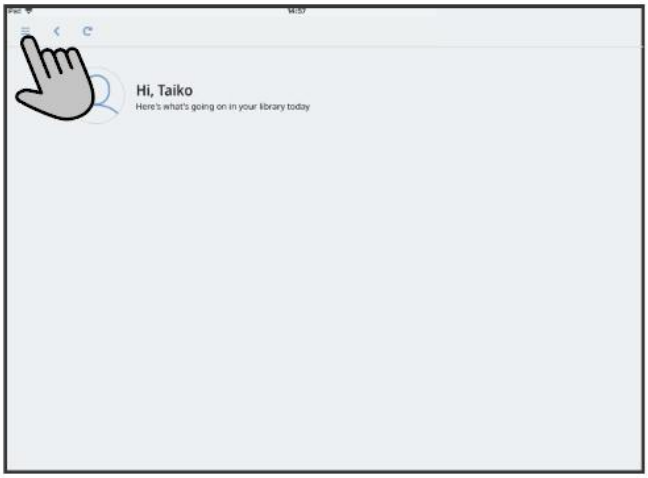


- If you have an account for the shown streaming service, click *I have a [service] account*. If you do not have an account, click *I don't have one yet*.

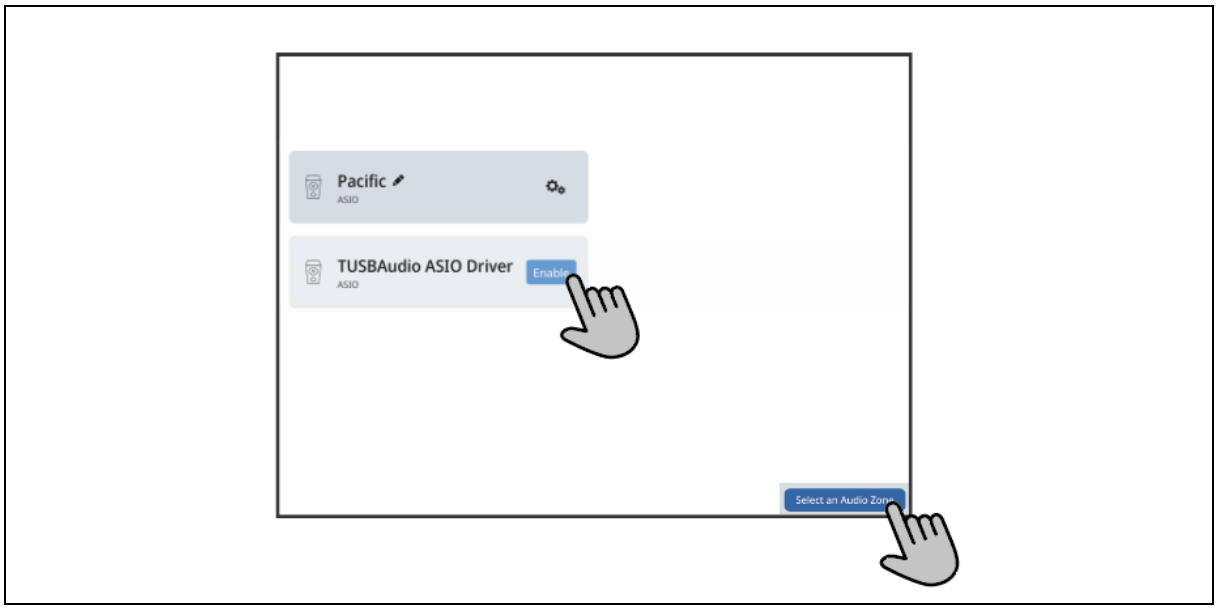
The initial setup is now complete. The app starts setting up your music library.

Tip You can already listen to music when the app is still setting up your music library. However, we do not recommend to make a sound evaluation during the setup. The sound quality will be lower because the system is busy setting up the library.

When the app has finished setting up your music library, you can connect your DAC to the app. To connect your DAC, do the following:



1. Click the settings button.
2. Click *Audio*. The audio settings screen opens. If your DAC driver is installed correctly you will find your DAC under *Connected to core*.



Caution! For the best sound quality, we recommend you use only one output at a time. Do not enable multiple outputs at once. This will drastically reduce the sound quality

3. Click *Enable* next to your DAC.
4. Click on *Select an Audio Zone* at the bottom of the screen. The zones screen pops up.
5. Select the preferred zone.

Your DAC is now connected to the app.

6.4 Accessing the file structure of the server

By accessing the file structure you can directly add music to your server's internal storage.

Tip You need the name and IP address of the server. You can find this information in the Roon app. The name should be the same as the name in §6.2 (EXTREME•••••).

6.4.1 MacOS

To access the file structure of the server via a MacOS computer, do the following:

1. Open the Finder.
2. Press *Command* + *K*. A new window pops up.
3. Enter the IP address of the Extreme as follows: “smb://[IPADRESS]”, for instance: “smb://192.168.1.120”
4. Click *Connect*.
5. Enter the name and password of the server:

   Administrator
   SoundTest

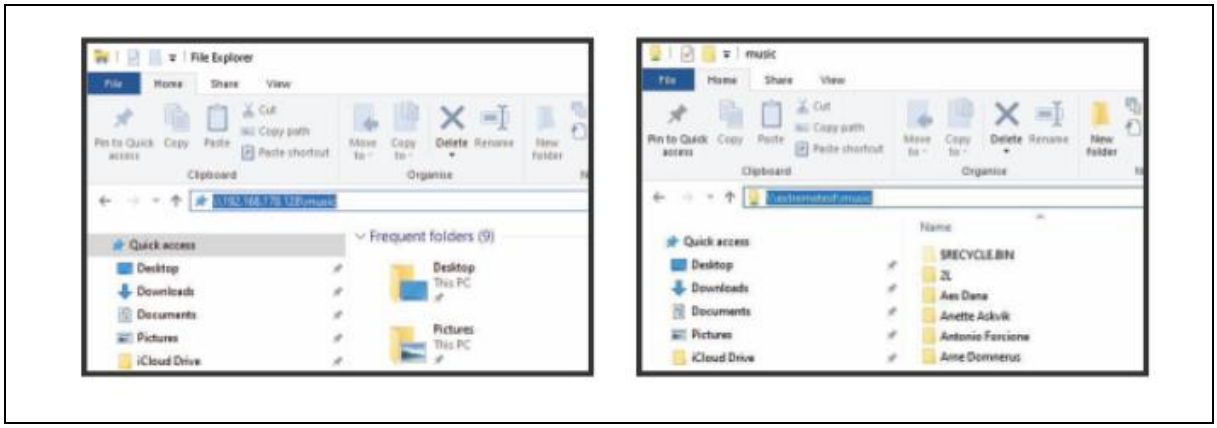
6. Click *Registered user*.
7. Click *Connect*. The computer makes a connection with the desktop of the server.
8. Select the drive of the server in the Finder.
9. Click on *OK*.

You can now view the folder structure of the server on your computer.

6.4.2 Windows

To access the file structure of the server via a Windows computer, do the following:

1. Open the Explorer.



2. Enter \\ followed by the IP address or name of the server, and press the *Enter* key.

3. Enter the login name and password of the server.

Login to Extreme Server:

Administrator
SoundTest

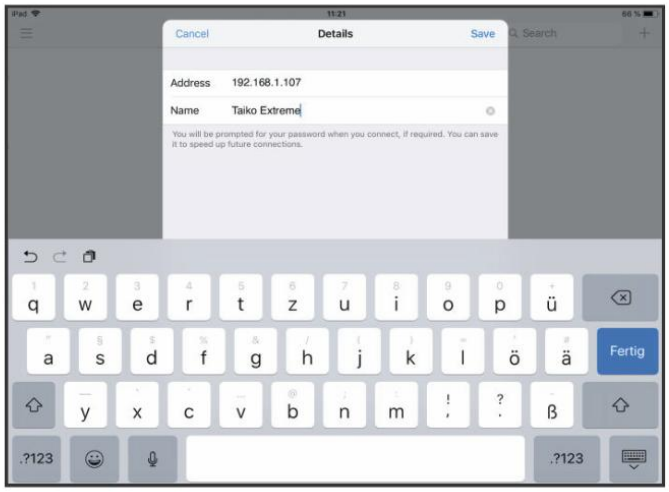
You can now access the folder structure of the server on your computer.

6.5 Accessing the desktop of the server

For some functions, you need to access the desktop of the server. To access the desktop, do the following:

Tip If you have accessed the desktop of the server before, and the IP address of the server has not changed, you can start at step 4.

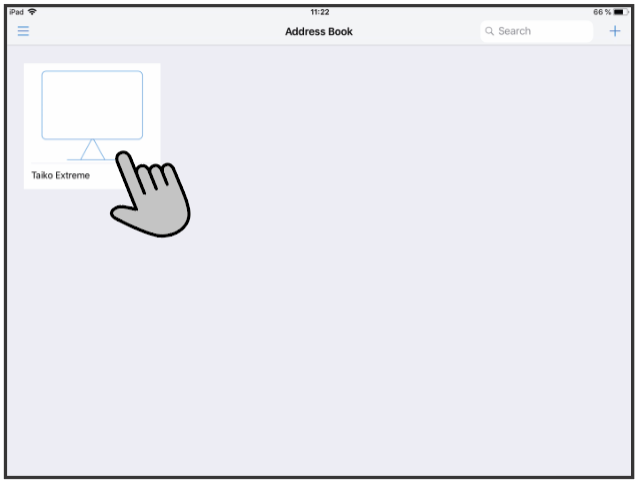
1. Download **realVNC Viewer** on a device connected to the same WiFi network as the server. You can find the app here: https://www.realvnc.com/en/connect/download/viewer/
   The page opens on the correct tab for VNC Viewer. Please ignore the VNC Server tab.
2. Select your computer's Operating System (usually Windows or MacOS) and click the yellow Download button below. Please ignore the blue "Download RealVNC Connect button at the bottom.
3. Run the VNC app from your computer's download location. Setting up a RealVNC account is not required.
4. The MacOS has very tight security which can cause the installer to fail, and requiring several settings to be changed. If a Windows computer is also available, we recommend using that instead for the easiest installation.
5. Click on the + symbol in the top right corner.



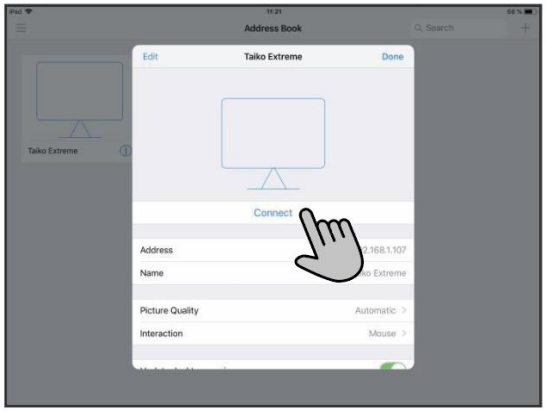
Tip You can find the IP address of the server in the Roon app.

6. Enter the IP address of the server (without http or slashes) and choose any name.
7. Click *Save*.

You have now created a connection profile.

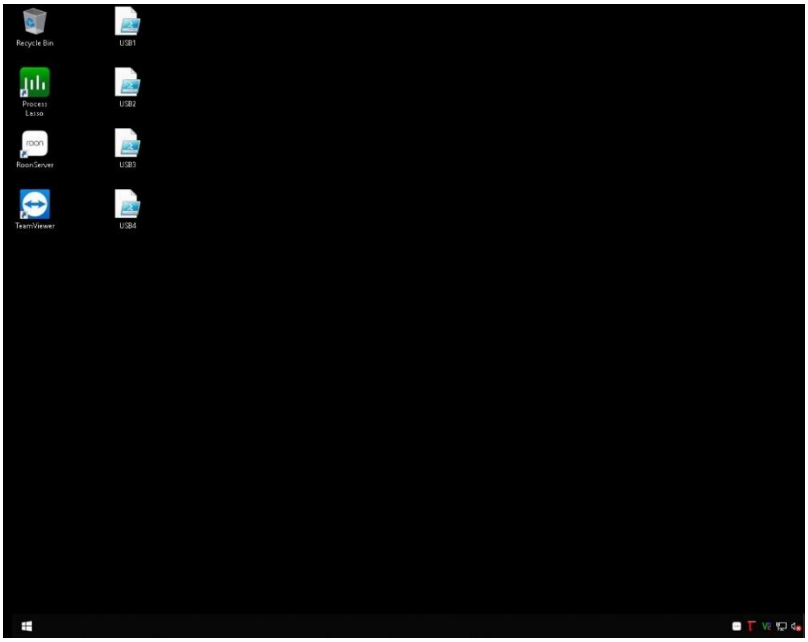


8. Click the connection profile with the name you entered in step 3.



9. Click on *Connect*.

10. Enter the VNC name and password of the server:
    Username: (Leave blank - No Username is required)
    Password: SoundTest
11. Select *Remember password*.
12. Click *Continue*



The desktop of the server is shown and can now be controlled.

Tip If you need a keyboard, you can click the keyboard icon in the toolbar at the top of the screen to enable a virtual keyboard.

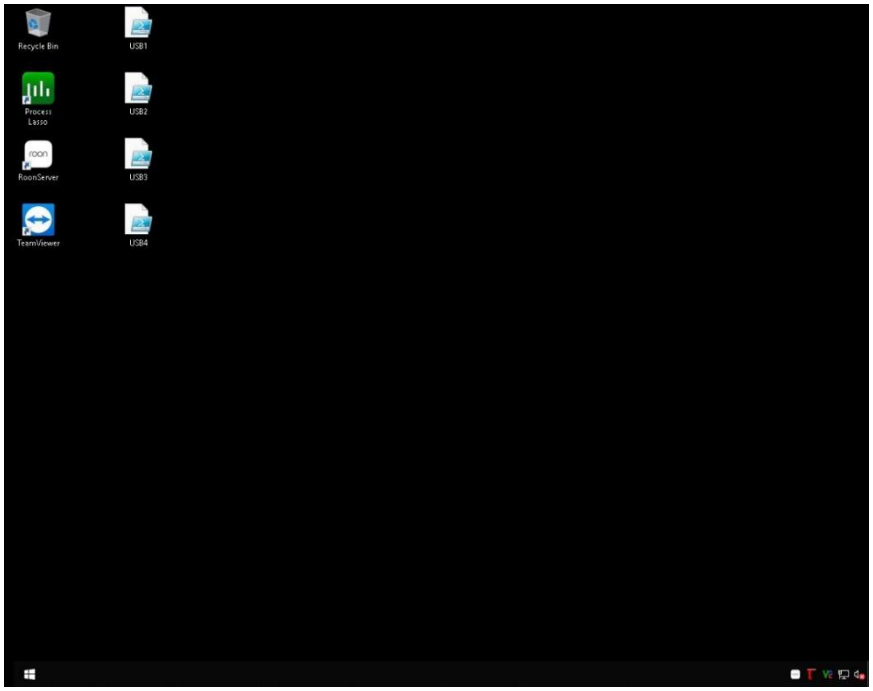
6.5.1 Alternative method (only MacOS)

When using a MacOS device you can also access the desktop of the server via your browser. Do the following:

1. Open your browser.
2. Type *vnc://* followed by the IP address of the server in the search bar. For example: *vnc://192.168.1.23*

A popup appears, asking you if you want to open the screen sharing application.

3. Click *Yes*.
4. Enter the VNC name and password of the server:
   Username: (Leave blank - No Username is required)
   Password: SoundTest
5. Click *Enter*.



The desktop of the server is shown and can now be controlled.

Tip If you need a keyboard, you can click the keyboard icon in the toolbar at the top of the screen to enable a virtual keyboard.

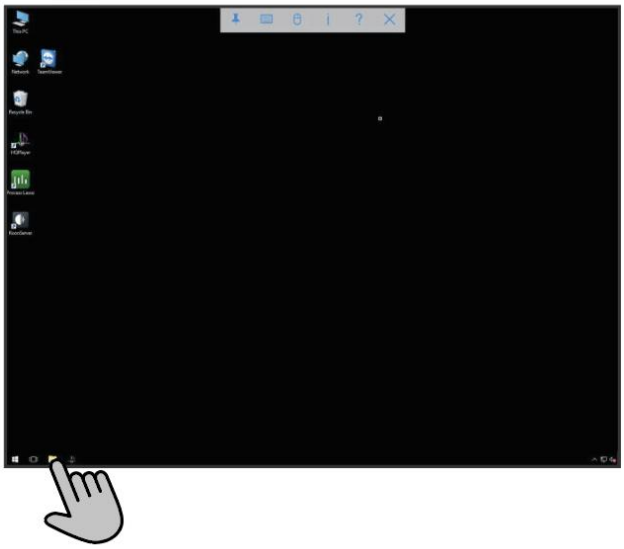
6.6 Using network drives

A network drive makes it possible to access stored music from different devices. A network drive can for example be located on:

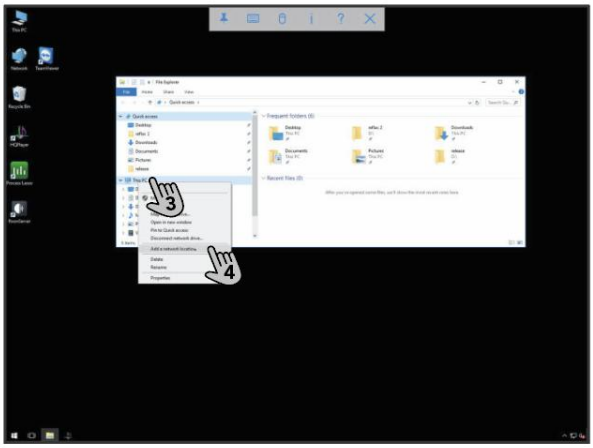
- a NAS;
- a USB drive connected to a router;
- a computer connected to the same network;
- an FTP server.

When using a network drive you don't have to reconnect to the file structure of the server over and over again. You simply establish a connection once and can use it the next time again. To make a network drive, do the following:

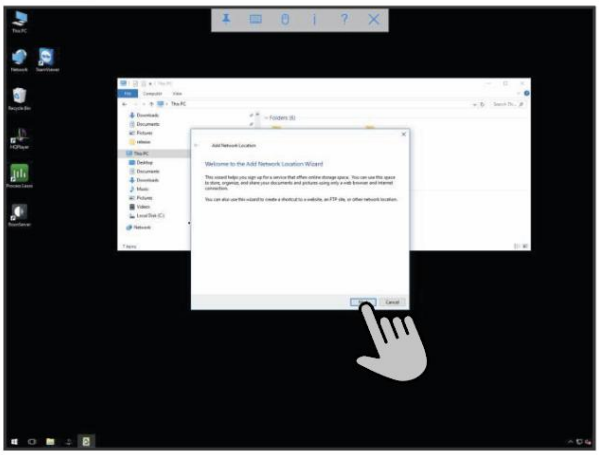
1. Access the desktop of the server (§6.5).



2. Open the Windows Explorer.

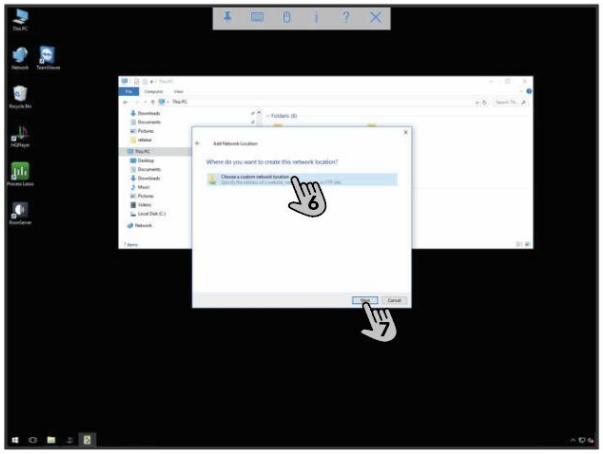


3. Right click on *This PC* (or tap with two fingers on a touchscreen device).
4. Choose *Add a network location*.

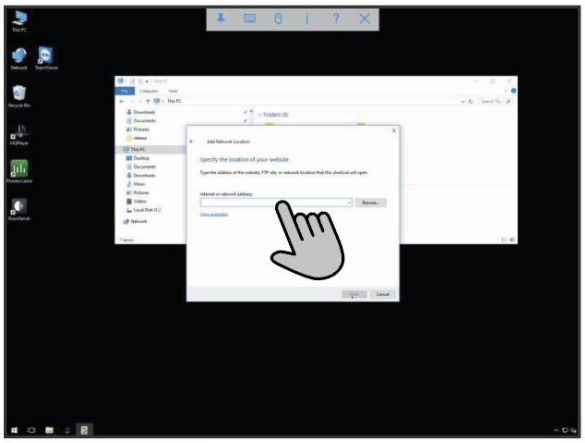


The network setup wizard opens.

5. Click *Next*.



6. Select *Choose a custom network location*.
7. Click *Next*.



8. Enter the network location of your shared drive. Your network drive is now ready for use.

7 Roon Use

Roon offers far more functionality than we can list in this manual. Visit https://kb.roonlabs.com/ to find all information about Roon.

7.1 Adding music via USB

We recommend storing all your music on the internal storage of the server. The server and the app will work best when the files are stored locally and this also leads to the best sound quality.

To store music on the server via USB, do the following:

1. Access the file structure of the server (§6.4).
2. Connect the USB device to one of the **USB ports**(4).

The USB device appears below the local disk *C:*\.

3. Drag and drop the music files from the USB device to the file structure of the server.

8 Maintenance

Caution!

Never use water to clean the server. Water can cause unrepairable damage to the server.

Try to keep the room where the server is installed as dust-free as possible. Wipe the server with a clean and soft cloth when it gets dusty.

8.1 Updating the drivers and applications

To update the drivers and applications on the server do the following:

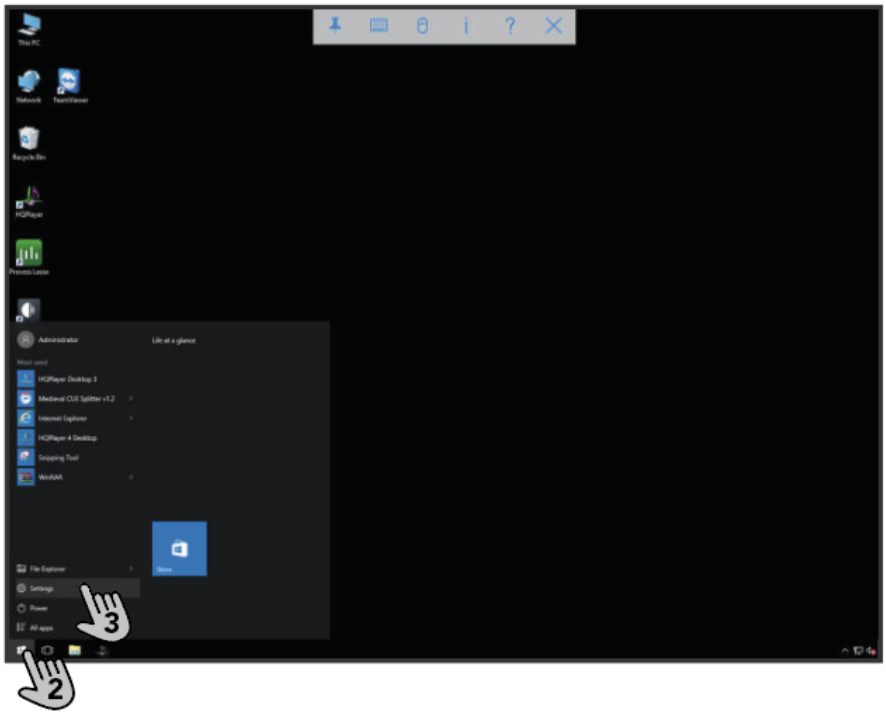
1. Access the desktop of the server (§6.5).
2. Search for the update in the browser.
3. Download the update.
4. Install the update by following the installation wizard.

8.2 Removing an application or a driver

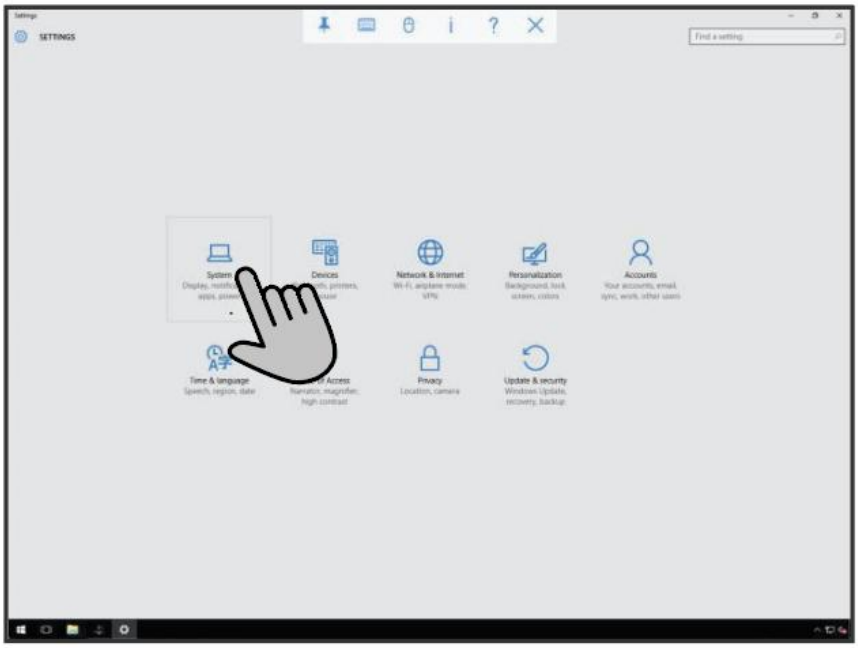
Tip Installing 3rd party software is not recommended. To maintain the highest performance, delete any unused software from the server.

To delete a driver from the server, do the following:

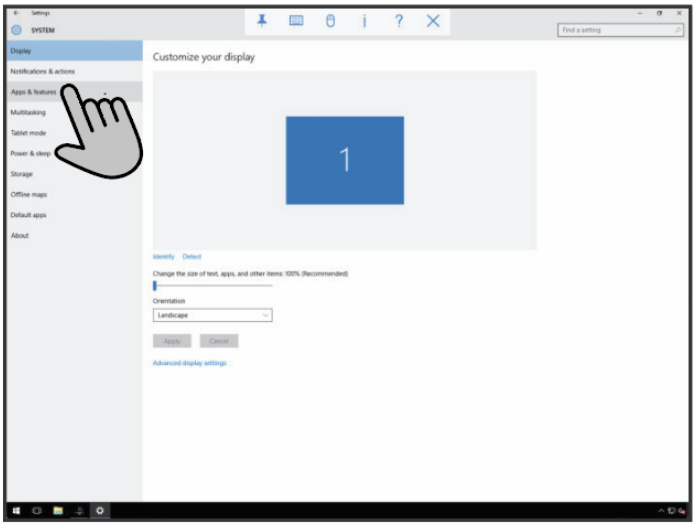
1. Access the desktop of the server (§6.5).



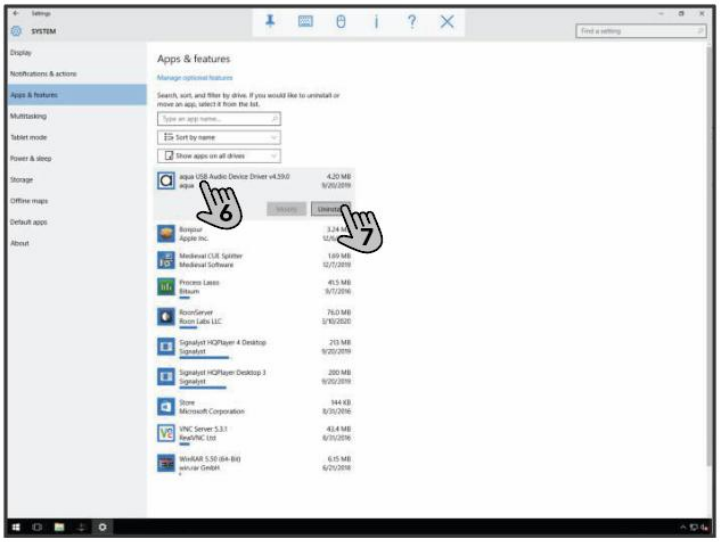
2. Click the windows icon to open the start menu.
3. Click on *Settings*. The settings menu appears.



4. Click on *System*.



5. Click on *Apps and Features*.



6. Navigate to the application or driver that you want to remove from the system.
7. Click *Uninstall* behind the name of the application or driver.
8. Follow the uninstall wizard.
9. Reboot the server (§5.5).

9 Technical specifications

Name	Extreme
Dimensions (W x D x H)	483 x 455 x 180 mm
Weight	45 kg
Power supply	100 – 250 VAC
CPU	Dual Intel Xeon Scalable 10 core – 20 thread CPU's for 20 cores – 40 threads in total
Fuse	230V/240V Regions: Schurter 0001.2707.11, 5x20mm, 2A, 250V, slow blow 110V Regions: Schurter 0001.2710.11, 5x20mm, 4A, 250V, slow blow
RAM	48 GB (12 x 4 GB)
Storage	2 TB (expandable to 24 TB)
Connections	5x Type-A USB 3.0
	2x RJ45 Ethernet
	1x Fiber SFP open slot ethernet
	1x VGA
Installed software	Custom Windows-based OS
	Roon Core
	HQPlayer (on request)
	TeamViewer QuickSupport
	VNC Server

Caution! Do not install other software on the server. Installing other software will degrade the audio quality. Cleaning and removing user installed software by your supplier is time consuming and may incur service charges.

10 Troubleshooting

10.1 Troubleshooting

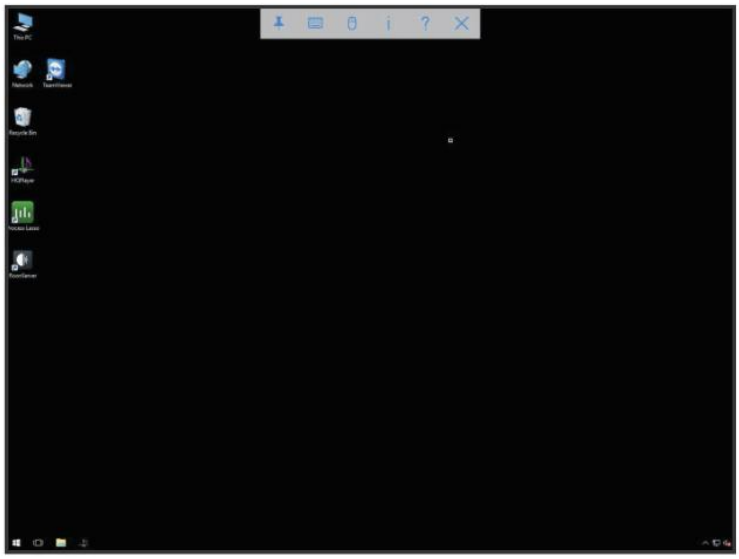
Problem	Possible cause	Possible solution
Reconnecting to the desktop or the file structure of the server does not work.	The IP address has changed due to a LAN switch restart.	You can find the new IP address in the Roon app. Connect to the server using the new IP address.
The connection between the server and your DAC is lost.		Press and hold the **front panel button** (1) until the button light switches off. Switch off your DAC. After 15 seconds, switch on your DAC. When the DAC is ready for use, press the **front panel button** (1) to switch on the server.

Tip You can contact the Taiko Audio Team anytime for help.

10.2 Online support via TeamViewer

The Taiko Audio Team can ask for a TeamViewer connection for better support. TeamViewer QuickSupport is already installed on the server.

To give the Taiko Audio Team access via TeamViewer, do the following:



1. Open TeamViewer.

2. Share the ID and Password with the Taiko Audio Team.
3. After the TeamViewer session is finished, close the TeamViewer QuickSupport window. TeamViewer automatically unloads from the memory of the server.

11 Disposal

If your server is defective, contact Taiko Audio. We can possibly repair it or give it a second life. If you have to dispose of the server, dispose it according to the locally applicable guidelines.

Caution! When you sell the server to a new owner, make sure to add this manual or a copy of this manual.

12 Warranty

The server has a two-year warranty for parts and labor of the replacement of any item or component that fails during normal operation in an adequately ventilated space with a temperature less than 32 °C.

Should you experience any problem, do not hesitate to email your contact info to Taiko Audio at support@taikoaudio.com and suggest a call time for a Taiko representative to get in touch with you and carry out remote examination / diagnostics of the server.

13 Contact

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Website: www.taikoaudio.com
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The Netherlands