



MUSIC SERVER & STREAMER

WAVELIGHT SERVER

WLS

Owner's Manual

SIMPLICITY IN COMPLEXITY · ROCKNA-AUDIO.COM

TABLE OF CONTENTS

01	Introduction	3
02	Package Contents	3
03	Functional Description	4
04	Connecting a DAC	5
05	Powering Up	5
06	Accessing the WLS Control Interface	6
07	Description of the Control Interface	8
08	Servers	10
09	Services	11
10	Streaming	12
11	Diretta	13
12	Settings and Software Updates	14
13	Adding Music to the Internal Storage	15
14	Setting Up Roon	16
15	Changing the Mains AC Voltage	19
16	Safety Precautions	20
17	Warranty	21
18	Disposal Information	23
19	Document Revision History	23

01 INTRODUCTION

Thank you for choosing the Rockna Wavelight Server as your music source. The WLS was designed to give you countless hours of musical enjoyment, combining a high-performance music server, a network streamer and a hardware upsampling audio engine in a single, quiet chassis.

This manual is aimed at the end user of the Rockna Wavelight Server (WLS). It contains an overview of the device's functions, specific handling details, safety precautions and product warranty details. This document is not meant for service or repair operations, as these must be carried out only by qualified personnel.

More information regarding Rockna Audio products can be found online at <https://www.rockna-audio.com>. Additionally, our support team is ready to assist you with any question or issue regarding our products. Refer to the contact details below.

MANUFACTURER

Rockna Electronics S.R.L.

Strada Plopului, nr. 5, Suceava

ZIP Code 720145, Romania

Phone: +40 770 125 694 – General inquiries

EMAIL

support@rockna-audio.com

Technical support

contact@rockna-audio.com

General inquiries

02 PACKAGE CONTENTS

- Wavelight Server
- Owner's manual

NOTE

The package does not contain the mains cable. Please use an audio-grade power cord in order to get the best sonic results from the WLS.

03 FUNCTIONAL DESCRIPTION

FRONT VIEW



#	ELEMENT
1	Power switch
2	WLS LED-illuminated logo (status indicator)

REAR VIEW



The connectors on the back panel are self-explanatory. There is one LAN port, three USB ports (1 × USB 3.0, 2 × USB 2.0) and the digital outputs: I2S (HDMI), Toslink, S/PDIF and AES/EBU. The USB ports are mainly intended for connecting external storage, but can also be used to connect a USB DAC or a Wi-Fi repeater. On the right there is the mains AC input.

MAINS VOLTAGE

The WLS leaves the factory set to either 230 VAC or 110 VAC. On the 110 VAC version there is a "110 V" sticker right under the power socket. The input voltage can be changed manually from 230 V to 110 V and vice versa – see Changing the Mains AC Voltage. Do not attempt to change the voltage unless you know exactly what you are doing! If in doubt, please contact your dealer or a technician.

04 CONNECTING A DAC

You can connect the WLS to a digital-to-analogue converter (DAC) using one of the following methods:

WLS PORT	CABLE SPECIFICATION
HDMI – I2S	HDMI cable, 0.5–2 m length
AES/EBU	AES/EBU cable, 110 Ω
S/PDIF	S/PDIF coaxial cable, 75 Ω
Optical	TOSLINK optical cable
USB	USB cable, 0.5–2 m length

NOTE

If a DAC is connected to the WLS via USB, it will not benefit from the WLS hardware upsampling audio engine.

A DAC can also be fed over the network using the Diretta protocol, in which case the WLS acts as a Diretta Host and the DAC (for example a Rockna Wavedream Reference) acts as a Diretta Target. See Diretta for details.

05 POWERING UP

Plug in the power cord and the LAN cable connected to your local network. The WLS will start to initialise itself. During the boot process the centre logo will pulsate slowly with a turquoise-blue light. Please check the table below for the various states indicated by the colour of the WLS logo.

WLS LOGO	STATUS
 Off	Unit is powered off
 Pulsating turquoise	Boot sequence
 Red	Network cable unplugged
 Orange	Network IP address not acquired
 White	Connected and ready

After the boot process is complete and the WLS is properly connected to your local network, the WLS logo should stay white (normal operation) until shutdown. If, for reasons independent of the WLS, connectivity is lost, the colour of the logo will change accordingly.

To power off the unit, press the power button briefly and wait until the logo light goes off. Do not remove the power cord or press the button again to power up until the logo light is off.

NETWORK REQUIREMENT

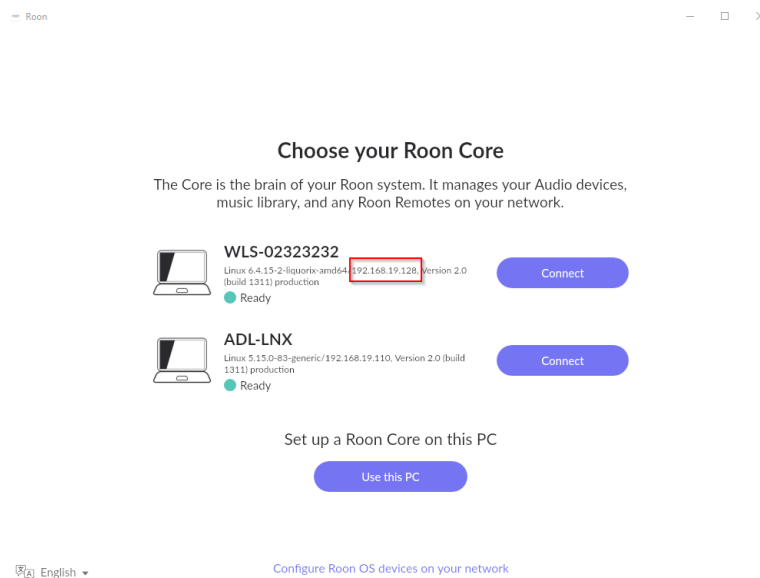
Your local router should be set to DHCP (this is the default setting for most routers), meaning the WLS can acquire its local IP address automatically. If your router is not set to DHCP, please enable DHCP in your router configuration.

06 ACCESSING THE WLS CONTROL INTERFACE

After your WLS is connected (logo is white), its control interface can be accessed by typing **wls-xxxxxxx.local** in your web browser (where the x's are replaced by your serial number, located on the back of the device) or by typing the local IP address of the WLS. There are several ways to find out the WLS IP address; we recommend the two methods below.

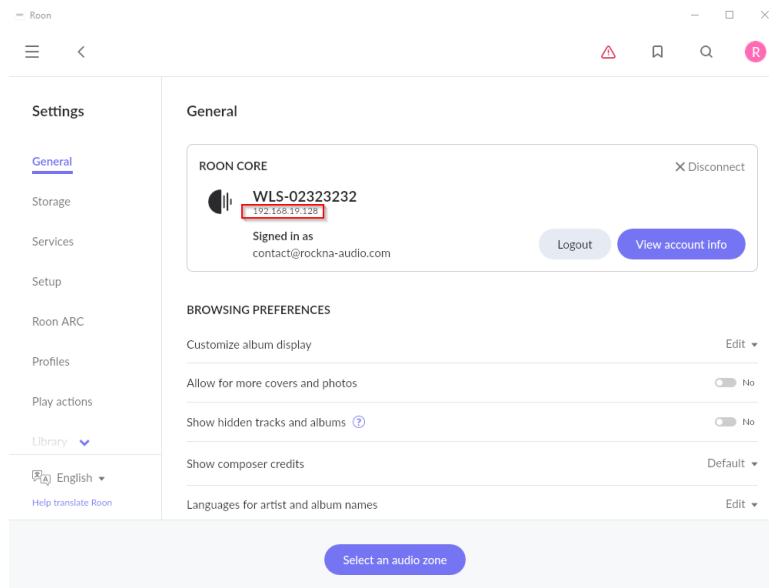
A) USING ROON

By default, Roon Server is enabled on the WLS. Open Roon or Roon Remote and look for available Roon Servers. You will find the WLS IP address under its name – see the example below.



In this example, the local IP of the WLS is 192.168.19.128. Typing this value into the app or a web browser will take you directly to the WLS control interface.

If you are already logged in to Roon, you can find the WLS IP from **Settings – General**:



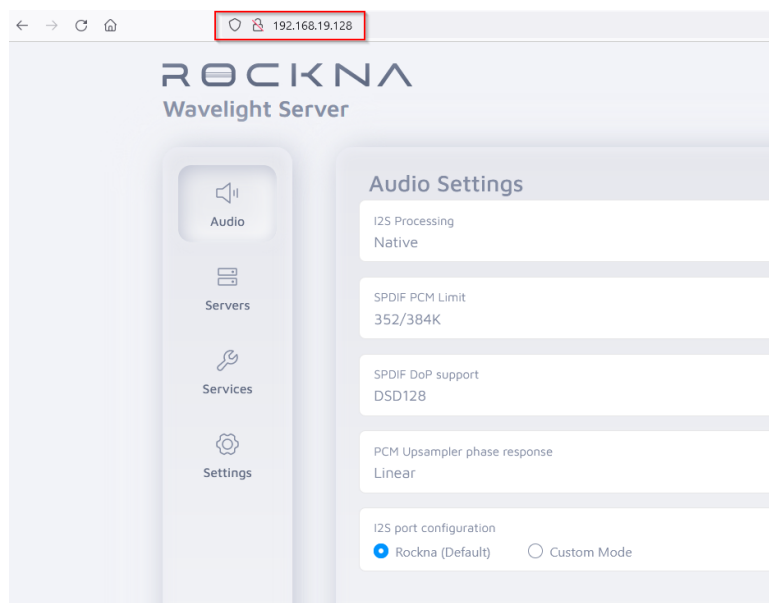
B) USING AN IP SCANNER PROGRAM

Download and install a network IP scanner, for example www.advanced-ip-scanner.com/download/. Run the program and find the WLS listed as **WLS-xxxxxxx**, where "xxxxxxx" is the serial number.

ADL-TWO	192.168.19.117	GIGA-BYTE TECHNOLOGY CO.,LTD.
N2	192.168.19.122	GIGA-BYTE TECHNOLOGY CO.,LTD.
WLS-02323232.local	192.168.19.128	AXIOM TECHNOLOGY CO., LTD.
Andrei-PC	192.168.19.130	GIGA-BYTE TECHNOLOGY CO.,LTD.

We find the same IP – 192.168.19.128. Please note that this is just an example, not your actual IP.

Once the WLS IP is known, you can access the control interface by typing it into your web browser or into the mobile app. A detailed explanation of the WLS control interface follows.

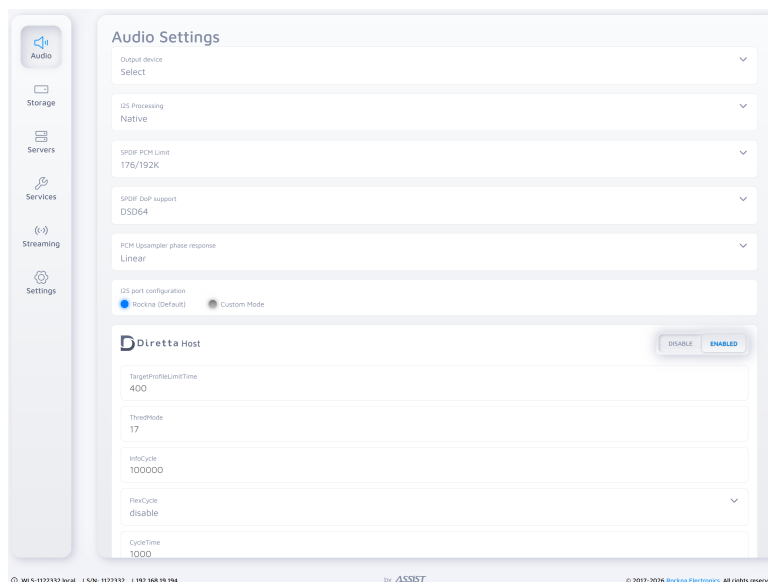


WLS interface accessed via web browser – note the address bar, which shows exactly the WLS IP.

07 DESCRIPTION OF THE CONTROL INTERFACE

The WLS graphical interface is clean and easy to navigate. There is a left-justified column with the main sections. When selected, a section reveals its own settings horizontally on the right. The structure and options available will grow over time, so make sure your WLS is updated to the latest version.

The main sections are **Audio**, **Storage**, **Servers**, **Services**, **Streaming** and **Settings**.



Audio settings page, with the Diretta Host section at the bottom.

STORAGE

Shows the internal drives and any USB drives or network shares mounted on the WLS, together with their capacity and free space.

AUDIO

Output device

Selects the physical output used for playback (I2S/S/PDIF/AES/Toslink hardware engine, a USB DAC connected to one of the USB ports, or a Diretta Target).

I2S processing

Sets the I2S output to a desired rate or format: Native (same sample rate and format as the file)

352.8/384 kHz PCM

DSD256

DSD512

S/PDIF PCM limit

Some DACs will not work properly if the input rate is higher than 192 kHz. Please check your DAC's capability before setting the limit. Options: 352.8/384 kHz 176.4/192 kHz

S/PDIF DoP support

Some DACs accept DSD over PCM (DoP) on S/PDIF-compatible inputs. Please check your DAC's capability before choosing the right option: DSD64 DSD128 No DoP support

PCM upsampler phase response

Configures the impulse response of the WLS hardware audio engine when PCM upsampling is enabled:

☐ Linear phase☐ Minimum phase☐ Hybrid phase

I2S port configuration

For extended compatibility with other I2S-input DACs, any combination of inverted signals is available. There are two modes: **Rockna (Default)** (to be used with any Rockna DAC) and **Custom Mode** (bit clock, left/right clock, serial data and DSD data can be inverted individually).

Diretta Host

Enable/Disable switch for the Diretta Host. When enabled, the WLS streams its audio output over the network to a Diretta Target. The advanced transport parameters shown below the switch (TargetProfileLimitTime, ThredMode, InfoCycle, FlexCycle, CycleTime) are pre-set for Rockna Targets; leave them at their default values unless instructed otherwise by Rockna support. See Diretta.

08 SERVERS

A **server** manages your music library (internal drives, USB drives, network shares and streaming accounts) and plays it back on the WLS or on other endpoints in your home. The following servers are pre-installed on the WLS:

Roon Server **DEFAULT**

The complete Roon music management and listening solution. The WLS runs the Roon Server (Core), so any Roon Remote app on your phone, tablet or computer can browse and control your library and stream to the WLS outputs as well as to other Roon Ready devices. An active Roon subscription is required. See Setting Up Roon.

MPD

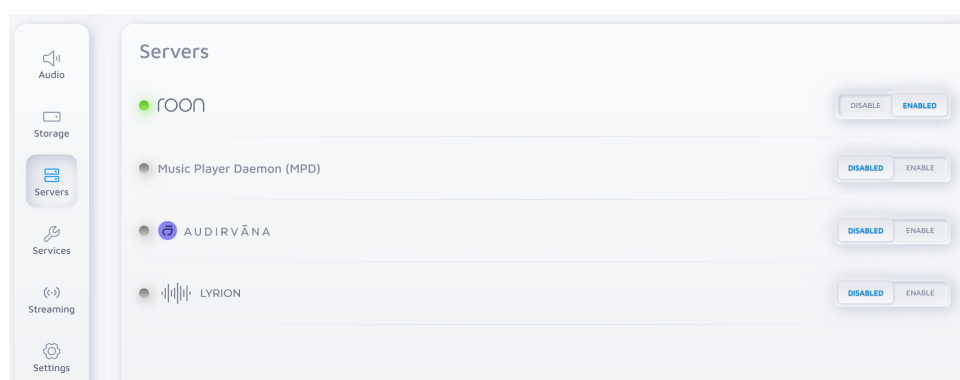
Music Player Daemon – a lightweight, open-source music server controlled by a wide range of free MPD client apps for desktop and mobile.

Audirvana **NEW**

The Audirvana Studio server runs directly on the WLS. Use the Audirvana Remote app on your mobile device, or the Audirvana desktop application, to browse your local library and streaming services and play them through the WLS. An Audirvana licence or subscription is required.

Lyrion Music Server **NEW**

Lyrion Music Server (formerly Logitech Media Server) is a mature, open-source server for the Squeezebox ecosystem. It indexes your library and can play to the WLS itself (through its built-in player) or to any Squeezelite / Squeezebox player on your network. It is controlled from its web interface or from companion apps such as iPeng, Squeezer or Material Skin.



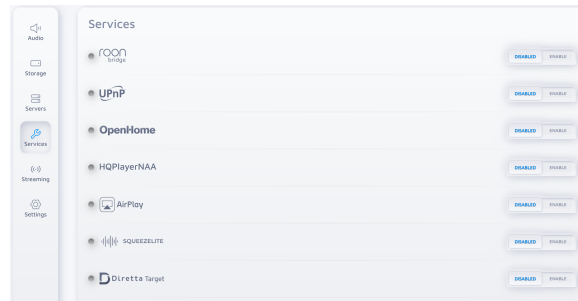
Servers section – Roon is enabled by default.

IMPORTANT

Once a server or service is enabled, all other servers and services are disabled. Only one can be active at a time.

09 SERVICES

Because the WLS can also work as an audio **endpoint** (renderer), not only as a server, it offers a set of services that let external software or devices stream to it. The following services are installed. Remember that only one server or service can be active at a time – enabling one disables all the others.



Services section of the control interface.

Roon Bridge

Turns the WLS into a Roon endpoint. Use this when the Roon Server runs on a separate device on the same network and you only want the WLS to act as the output.

UPnP

Enables network streaming from a wide variety of UPnP-compatible software and devices. It is a widely supported protocol that allows flexible streaming solutions across different platforms.

OpenHome

Extends the capabilities of UPnP by adding features such as streaming from cloud services, saving playlists and more precise playback control. It is a standard used by various high-end streaming applications.

HQPlayer NAA

Network Audio Adapter mode lets the WLS work as an output device for the HQPlayer software, known for its high-quality oversampling, noise shaping and dithering. Requires HQPlayer running on a network-connected computer.

AirPlay

Enables wireless streaming from Apple devices such as iPhone, iPad and Mac. AirPlay password: **WLS**

Squeezelite **NEW**

Turns the WLS into a Squeezebox-compatible player for the Lyrion Music Server ecosystem. Playback is managed from the server's web interface or companion apps. This service requires a Lyrion Music Server running on another device connected to the same network. The Lyrion server on the WLS itself must be off while Squeezelite is used, otherwise the WLS may not be discoverable by your Lyrion server (if you want the Lyrion server to run on the WLS instead, enable it under Servers).

Diretta Target **NEW**

With this service enabled, the WLS receives audio over the network from a Diretta Host – another WLS, or a PC running the Rockna Diretta ASIO driver – and renders it to its digital outputs. See Diretta.

10 STREAMING

The Streaming section hosts the "Connect"-type streaming services, which let the official app of the service act as a remote control while the WLS pulls the stream directly from the internet.

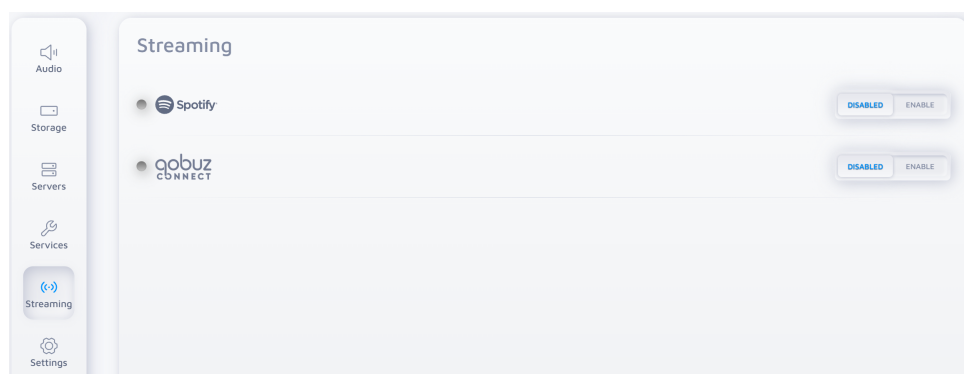
Spotify Connect

Enable Spotify, then open the Spotify app on a device connected to the same network, play something, tap **Connect to a device** and pick the WLS. A Spotify Premium account is required. If you pause playback for more than 10 minutes, you may need to reconnect.

Qobuz Connect NEW

Qobuz Connect enables direct, high-resolution streaming from the Qobuz service. Use the Qobuz app on your mobile device or computer as a remote control and select the WLS as the playback device; the audio stream is delivered straight from Qobuz to the WLS. An active Qobuz subscription is required.

- 1 Enable **Qobuz Connect** in the Streaming section of the WLS control interface.
- 2 Open the Qobuz app on a device connected to the same network and start playing something.
- 3 Tap the output / device selector in the Qobuz app and pick the WLS (listed as WLS-xxxxxxx).



Streaming section of the control interface.

Streaming services such as Tidal, Qobuz and KKBOX can also be used from within Roon (see Setting Up Roon) and, depending on your subscription, from Audirvana and Lyrion Music Server.

11 DIRETTA

Diretta is a high-performance, low-latency LAN audio transport that delivers your music to a DAC or renderer over a standard network. It uses two complementary roles: a **Host**, which sends the audio stream, and a **Target**, which receives it and feeds the DAC. Because it works end-to-end over the network (using IPv6 link-local addressing), Diretta can run across your existing LAN between two devices, giving you flexible placement.

The Host transmits packets at constant, very short intervals. This keeps the Target's processing load steady and predictable, so power-supply fluctuations and electrical noise on the playback device are averaged out and minimised – resulting in cleaner sound.

ROLES SUPPORTED BY ROCKNA PRODUCTS

PRODUCT	DIRETTA HOST	DIRETTA TARGET
Wavelight Server	Yes – streams your library out to a Diretta Target (Audio → Diretta Host)	Yes – receives a stream and renders it to its digital outputs (Services → Diretta Target)
Wavedream Reference	—	Yes – select Diretta Target as the renderer
Windows PC	Yes – with the Rockna Diretta ASIO driver, from any ASIO-capable playback software	—

SETTING UP A DIRETTA LINK

- 1 Prepare the Target.** Any Diretta-compatible Target can be used. For example, on a Wavedream Reference select Diretta Target as the renderer, or on another WLS enable the Diretta Target service. Make sure the Target has internet access.
- 2 Enable the Host.** On the source WLS, open the Audio section of the control interface and enable Diretta Host.
- 3 Select the Target for playback.** In Roon (or the active WLS player) choose the Diretta Target as the output zone and start playback.

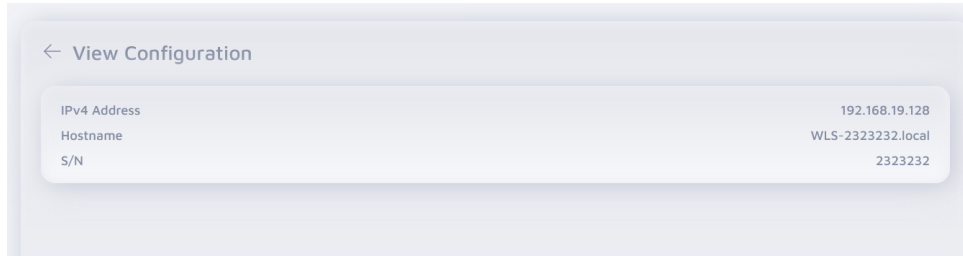
NOTE

A Diretta Target performs a time synchronisation on start-up and will not start without internet access.

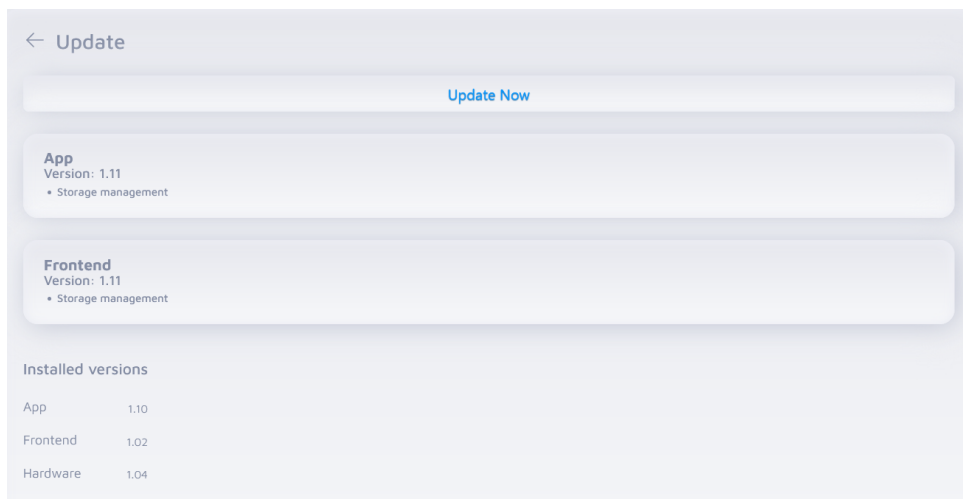
For more details, visit <https://www.rockna-audio.com/services/diretta>.

12 SETTINGS AND SOFTWARE UPDATES

In the Settings section you can view the WLS configuration (IP address, hostname, serial number) and manage system updates.



If any updates are available, the **Update Now** button will be active. Press it and wait until the update process is complete.



NOTE

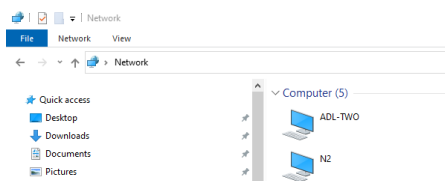
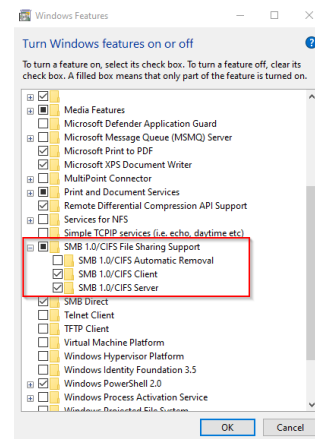
It is recommended to stop music playback before updating the WLS. Do not power off the unit while an update is in progress.

13 ADDING MUSIC TO THE INTERNAL STORAGE

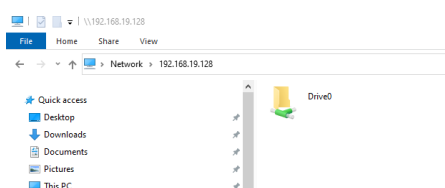
In order to add music to the internal storage, a PC or a Mac connected to the same network as the WLS is required. The WLS shares its internal drives over the network as **Drive0** and **Drive1**.

WINDOWS PC

- 1 In the Windows search bar, type **Turn Windows features on or off** and open this setting.
- 2 Check that **SMB 1.0/CIFS File Sharing Support** is enabled; if not, enable the features marked by the red rectangle in the picture and restart your computer.
- 3 After restarting, open File Explorer and go to the **Network** section.



- 4 In the address bar, type the WLS IP address preceded by two backslashes, e.g. **\\192.168.19.128** (use your own IP, not the one from this example!). The WLS internal drives will appear.
- 5 Double-click **Drive0** or **Drive1** to see their content and to copy or delete music files.



MAC

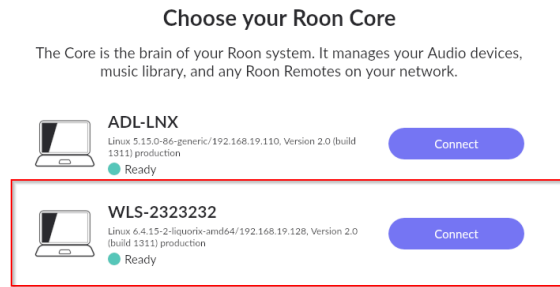
- 1 In the Finder, choose **Go → Connect to Server...** (or press ⌘K).
- 2 Type **smb://** followed by the WLS IP address or hostname, e.g. **smb://192.168.19.128** or **smb://wls-xxxxxxx.local**, and click **Connect**.
- 3 Connect as **Guest** and select **Drive0** or **Drive1**. The drive is mounted on the desktop and in the Finder sidebar; copy your music files into it.

Music copied to the internal drives is automatically picked up by the active server (Roon, MPD, Audirvana or Lyrion) the next time it scans the library.

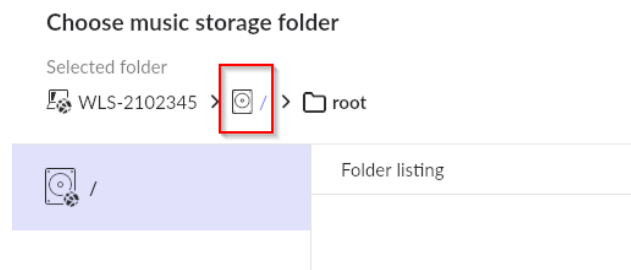
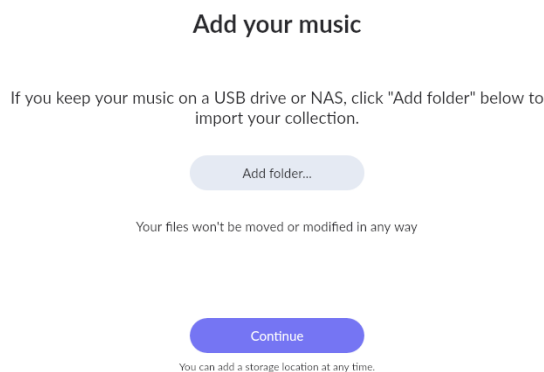
14 SETTING UP ROON

The WLS comes with Roon Server pre-installed and enabled by default. This means you can use it immediately if you have a Roon control app (Roon or Roon Remote) installed on your tablet, phone or computer.

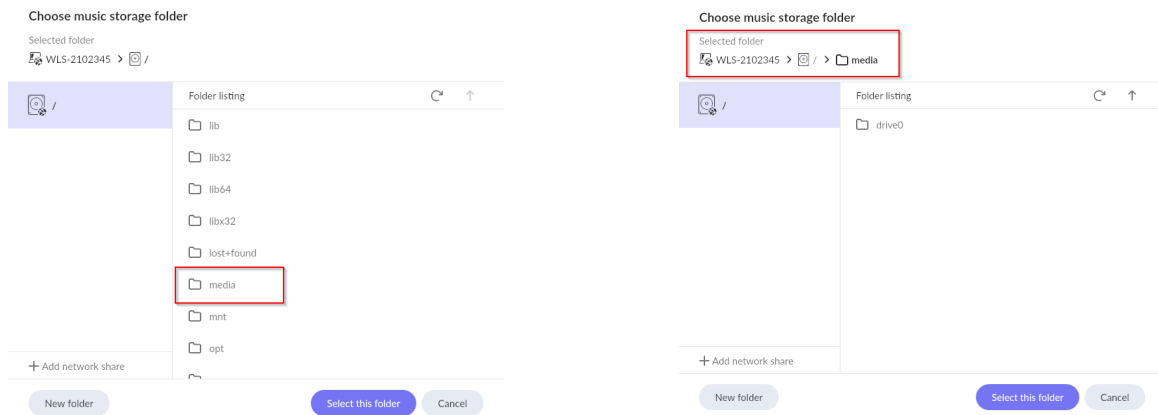
- 1 Open the control app and choose your Roon Server by selecting the WLS, which appears as **WLS-xxxxxxx** (where the x's are your serial number), then press **Connect**.



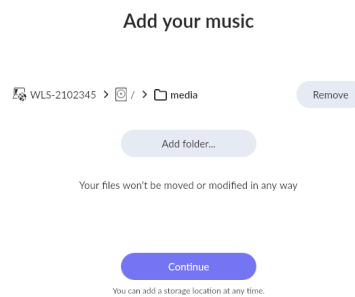
- 2 Roon will prompt for a username and password. You need an active Roon account in order to use it on the WLS.
- 3 After logging in, a dialog for adding music will appear. Press **Add folder** and select the icon showing a disk drive.



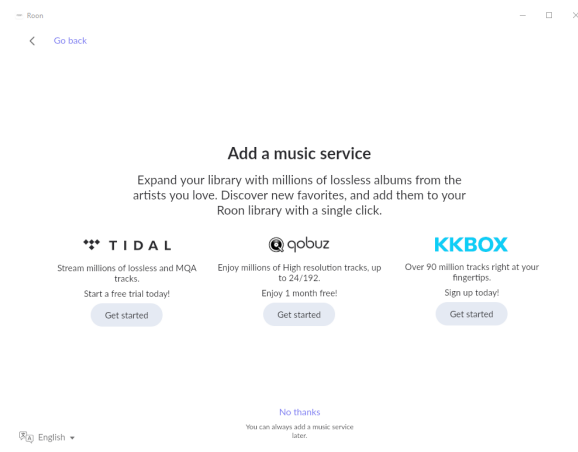
- 4 From the list that opens, choose **media** and check in the next screen that the path looks like the example below.



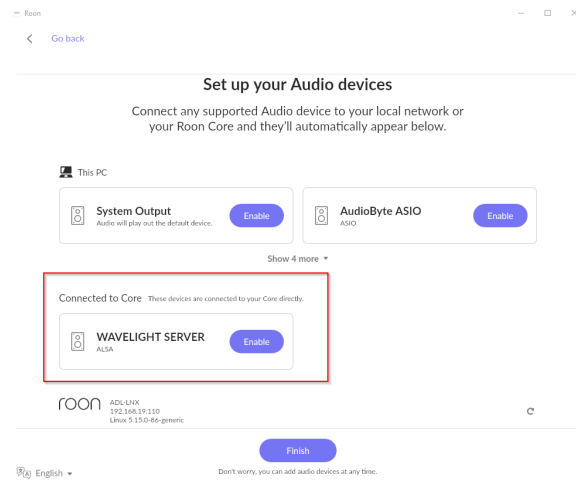
- 5 This is the correct path; Roon will automatically index everything from the internal WLS drives. Press **Select this folder**. If all is well, the next screen will look like the one below – press **Continue**.



- 6 In the next screen Roon will ask about existing accounts with streaming services such as Tidal, Qobuz or KKBOX. You can set these up now or at any later time.



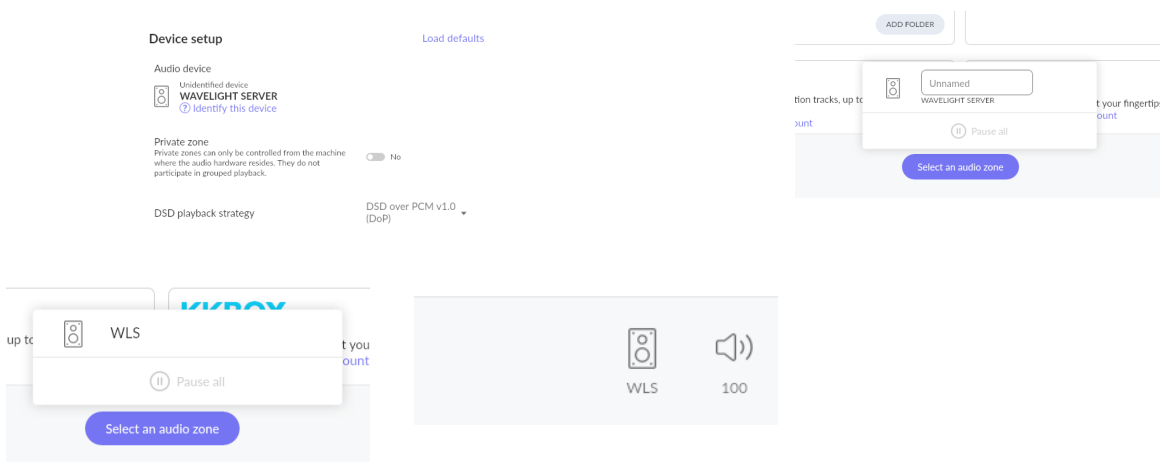
- 7 The final step is setting the WLS as a Roon audio device. Under the **Connected to Server** section you will find **WAVELIGHT SERVER – ALSA**, which has to be enabled.



- 8 After enabling, configure the device with **DSD over PCM v1.0** as shown below, then press **Finish**.



- 9 Finally, select the WLS as an audio zone and give it a name.



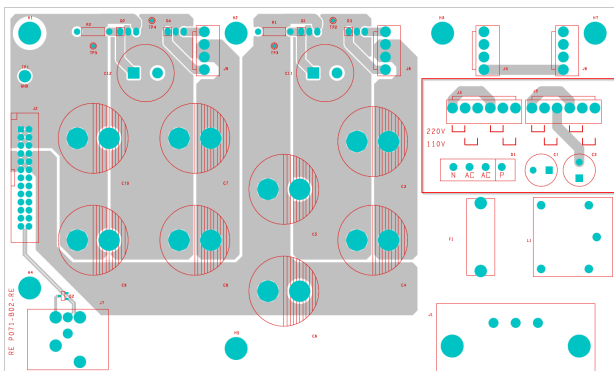
All set! The music on the mounted drives (internal, external, network) is now automatically indexed by Roon and ready to play.

15 CHANGING THE MAINS AC VOLTAGE

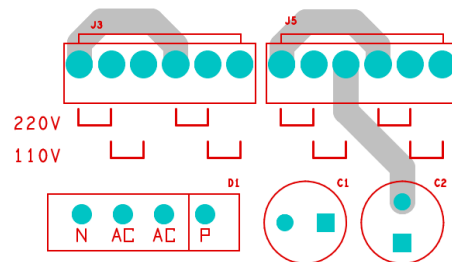
WARNING

This procedure must be carried out only with the unit disconnected from the mains. If you are not confident performing it, contact your dealer or a qualified technician. Damage caused by connecting the unit to the wrong mains voltage is not covered by the warranty.

- 1 Unplug the power cord and remove the WLS top panel.
- 2 Locate the **J3** and **J5** connectors on the power supply board.
- 3 Note the position of the installed jumpers: for 230 V they start from the leftmost pin of J3 and J5; for 110 V the first pin is left open.
- 4 To change from the 230 V setting to 110 V, move the jumpers one position to the right.
- 5 To change from the 110 V setting to 230 V, move the jumpers one position to the left.
- 6 Refit the top panel and apply the appropriate voltage label near the mains socket.



Location of J3 and J5 on the power supply board.



Jumper positions for 230 V (marked 220 V on the board) and 110 V.

16 SAFETY PRECAUTIONS

- 1 This device is meant for indoor use only.
- 2 Protect the device from excessive heat, humidity and liquid-filled objects, such as vases.
- 3 Clean only with a dry cloth.
- 4 Do not remove the product cover while the device is plugged into the mains outlet.
- 5 Use an earth-grounded outlet if available.
- 6 Do not move the device while it is operating.
- 7 Lightning or static electricity can affect normal operation of the device. Make sure that it is unplugged during a thunderstorm.
- 8 Make sure the unit is unplugged if it is not to be used for a long period of time.
- 9 In case of product damage of any kind – such as power cable or plug damage, spilled liquids, physical shocks, exposure to moisture – or if the product does not operate normally, service is required.
- 10 Keep this owner's manual for future reference.

17 WARRANTY

3 YEARS LIMITED WARRANTY

WARRANTY COVERAGE

Rockna Electronics' warranty obligation is limited to the terms set forth below.

WHO IS COVERED

Rockna Electronics warrants the product to the original purchaser or the person receiving the product as a gift against defects in materials and workmanship, based on the date of original purchase from an Authorised Dealer. The original sales receipt showing the product name and the purchase date from an authorised retailer is considered such proof.

WHAT IS COVERED

The Rockna Electronics warranty covers new products if a defect arises and a valid claim is received by Rockna Electronics within the Warranty Period. At its option, Rockna Electronics will either (1) repair the product at no charge, using new or refurbished replacement parts, or (2) exchange the product with a product that is new or which has been manufactured from new or serviceable used parts and is at least functionally equivalent or most comparable to the original product in Rockna Electronics' current inventory, or (3) refund the original purchase price of the product. Rockna Electronics warrants replacement products or parts provided under this warranty against defects in materials and workmanship from the date of the replacement or repair for one (1) year or for the remaining portion of the original product's warranty, whichever provides longer coverage for you. When a product or part is exchanged, any replacement item becomes your property and the replaced item becomes Rockna Electronics' property. When a refund is given, your product becomes Rockna Electronics' property.

Note: any product sold and identified as refurbished or renewed carries a one (1) year limited warranty. A replacement product can only be sent if all warranty requirements are met. Failure to follow all requirements can result in delay.

WHAT IS NOT COVERED – EXCLUSIONS AND LIMITATIONS

This Limited Warranty applies only to new products manufactured by or for Rockna Electronics that can be identified by the trademark, trade name or logo affixed to them. This Limited Warranty does not apply to any non-Rockna Electronics hardware product or any firmware, even if packaged or sold with the product. Non-Rockna Electronics manufacturers, suppliers or publishers may provide a separate warranty for their own products packaged with the bundled product. Rockna Electronics is not liable for any damage to or loss of any programs, data or other information stored on any media contained within the product (including music stored on the WLS internal or external drives), or any non-Rockna Electronics product or part not covered by this warranty. Recovery or reinstallation of programs, data or other information is not covered under this Limited Warranty.

This warranty does not apply (a) to damage caused by accident, abuse, misuse, misapplication or non-Rockna Electronics products, (b) to damage caused by service performed by anyone other than Rockna Electronics or an Authorised Service Location, (c) to a product or a part that has been modified without the written permission of Rockna Electronics, (d) if any Rockna Electronics serial number has been removed or defaced, or

(e) to products, accessories or consumables sold "AS IS" without warranty of any kind, including refurbished Rockna Electronics products sold "AS IS" by some retailers.

This Limited Warranty does not cover:

- Shipping charges to return a defective product to Rockna Electronics.
- Labour charges for installation or setup of the product, adjustment of customer controls on the product, and installation or repair of systems outside of the product.
- Product repair and/or part replacement because of improper installation, connection to an improper voltage supply, abuse, neglect, misuse, accident, unauthorised repair or other cause not within the control of Rockna Electronics.
- Damage or claims for products not being available for use, or for lost data or lost firmware.
- Damage occurring to the product during shipping.
- A product that requires modification or adaptation to enable it to operate in any country other than the country for which it was designed, manufactured, approved and/or authorised, or repair of products damaged by these modifications.
- A product used for commercial or institutional purposes (including but not limited to rental purposes).
- A product lost in shipment where no signature verification receipt can be provided.
- Failure to operate the product as described in this Owner's Manual.

18 DISPOSAL INFORMATION

FOR PRIVATE HOUSEHOLDS



Information on disposal for users of WEEE. This symbol on the product(s) and/or accompanying documents means that used electrical and electronic equipment (WEEE) should not be mixed with general household waste. For proper treatment, recovery and recycling, please take this product to designated collection points where it will be accepted free of charge.

Alternatively, in some countries you may be able to return your product to your local retailer upon purchase of an equivalent new product. Disposing of this product correctly will help save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling. Please contact your local authority for further details of your nearest designated collection point. Penalties may be applicable for incorrect disposal of this waste, in accordance with your national legislation.

FOR PROFESSIONAL USERS IN THE EUROPEAN UNION

If you wish to discard electrical and electronic equipment (EEE), please contact your dealer or supplier for further information.

FOR DISPOSAL IN COUNTRIES OUTSIDE THE EUROPEAN UNION

This symbol is only valid in the European Union (EU). If you wish to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.

19 DOCUMENT REVISION HISTORY

VERSION	DATE	DESCRIPTION
0.9	31-10-2023	Preliminary release
1.00	27-08-2026	First full release. Added Audirvana and Lyrion Music Server as servers; Squeezelite and Diretta Target as services; Qobuz Connect streaming; Diretta Host. Added Mac instructions for internal storage, warranty terms, disposal information; corrected typing errors; new layout in line with the Rockna visual identity.

Roon is a trademark of Roon Labs LLC. Audirvana is a trademark of Audirvana SAS. Qobuz is a trademark of Xandrie SA. AirPlay is a trademark of Apple Inc. HQPlayer is a trademark of Signalyst. Diretta is a trademark of Diretta Ltd. All other trademarks are the property of their respective owners. Specifications and features are subject to change without notice.



SIMPLICITY IN COMPLEXITY

Rockna Electronics S.R.L. · Strada Plopului nr. 5, 720145 Suceava, Romania
support@rockna-audio.com · contact@rockna-audio.com · +40 770 125 694
rockna-audio.com