Beyond Audio, **HiFi ROSE**

Complete HiFi Network Streamer **RS250A**



rose

Beyond Audio, **HiFi ROSE**




VU MODE
wmaloss.oos.32bit 384kHz 2ch
HiFi Network Streamer RS250A
ROSE RS250A
04:38

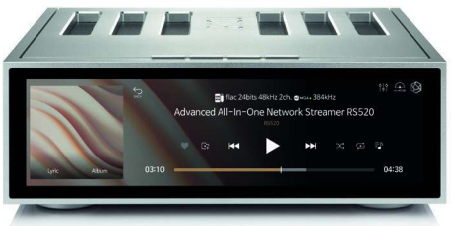

rose

Advanced All-In-One Network Streamer RS520

- Reference Grade All-in-One Network Streamer
- Network Streamer + DAC + Class AD Amplifier with next generation GaN FET
- High-Resolution Music Playback available(DSD512, PCM32bit/768kHz)
- A Femto Clock provides Ultra Precision
- The Special Linear Power Supply Configuration minimizes electrical noise

Hi-Res	DSD	Native DSD 512	In/Out Port	Speaker	2ch 250W(8Ω)
	PCM	32bit / 768kHz		USB Audio In	USB B Type 2.0
In/Out Port	Digital In	Optical, Coaxial, eARC		USB Audio Out	USB A Type 3.0
	Digital Out	Optical, Coaxial	Network Connection	Ethernet	10/100/1000 BASE-T
	Analog In	Line In		WiFi	Optional_dongle (2.4GHz/5GHz)
	Analog Out	Pre-out_RCA			
	HDMI Out	4K		Bluetooth	Optional_dongle

Connectivity Bluetooth, DLNA, Airplay, Spotify Connect, Roon Ready
Design 346*328*127mm / 8.1 kg / 12.6" Wide viewing angle touch screen / Color : Black, Silver



Integrated Amplifier
- With Gallium Nitride Amplifier built in RA180

- Class AD Amplifier with next generation GaN FET
- Multi Output Component
- Designed to play up to the Super Twitter Realm
- Balanced Power Supply
- PHONO Amplifier with Variable EQ

Design 430*391*124 mm / 16.7 kg / High Purity Aluminum / Color: Silver

In/Out Port	Analog In	Line1, Line2, Line3(Bypass), Balanced, Phono(MM/MC)
	Analog Out	Sub Woofer
Speaker	Stereo(A/B)	4ch 200W(8Ω)
	Stereo(A), BTL(B)	Stereo(A): 4ch 200W(8Ω) / BTL(B) : 2ch 400W(8Ω)
	BTL(A/B)	BTL(A) : 2ch 400W(8Ω) / BTL(B) : 2ch 400W(8Ω)



Complete HiFi Network Streamer RS250A

- Reference Grade All-in-One Network Streamer
- Network Streamer + DAC
- High-Resolution Music Playback available(DSD512, PCM32bit/768kHz)
- A Femto Clock provides Ultra Precision
- The Special Linear Power Supply Configuration minimizes electrical noise

Hi-Res	DSD	Native DSD 512	In/Out Port	Headphone Out	3.5mm
	PCM	32bit / 768kHz		USB Audio In	USB B Type 2.0
In/Out Port	Digital In	Optical, Coaxial		USB Audio Out	USB A Type 3.0
	Digital Out	Optical, Coaxial	Network Connection	Ethernet	10/100/1000 BASE-T
	Analog In	Line In		WiFi	802.11 a/b/g/n/ac (2.4GHz/5GHz)
	Analog Out	Pre-out_RCA			
	HDMI Out	4K		Bluetooth	V4.0 / V3.0+HS

Connectivity Bluetooth, DLNA, Airplay, Spotify Connect, Roon Ready
Design 278*231*83 mm / 3.2 kg / 8.8” Wide viewing angle touch screen / Color : Black, Silver



High Performance Network Streamer RS150 Series

- Flagship Network Streamer
- Network Streamer + DAC
- High-tech DAC design for pure sound with low noise and low distortion
- High-Resolution Music Playback available(DSD512, PCM32bit/768kHz)
- A Femto Clock provides Ultra Precision
- The Special Linear Power Supply Configuration minimizes electrical noise

Hi-Res	DSD	Native DSD 512	In/Out Port	HDMI Out	4K
	PCM	32bit / 768kHz		USB Audio In	USB B Type 2.0
In/Out Port	Digital In	Optical, Coaxial, AES/EBU, HDMI ARC, USB Audio		USB Audio Out	USB A Type 3.0
	Digital Out	Optical, Coaxial, AES/EBU, I2S-DVI, I2S-RJ45	Network Connection	Ethernet	10/100/1000 BASE-T
	Analog In	Line In		WiFi	Optional_dongle
	Analog Out	Pre-out_XLR, Pre-out_RCA		Bluetooth	Optional_dongle

Connectivity Bluetooth, DLNA, Airplay, Spotify Connect, Roon Ready
Design 430*318*124 mm / 11 kg / 14.9” Wide viewing angle touch screen / Color : Black, Silver



HiFi Network Streamer RS201 Series

- Reference Grade All-in-One Network Streamer
- Network Streamer + DAC + AMP
- Built-in High-Performance Power Amplifier(50W*2ch)
- High-Resolution Music Playback available(DSD256, PCM32bit/384kHz)
- A Femto Clock provides High Precision
- Digital equipment, PreAmplifier connection available
- Awarded the world's three major design awards(Reddot, GOOD DESIGN, PIN-UP)

Hi-Res	DSD	Native DSD 256	In/Out Port	Headphone Out	3.5mm
	PCM	32bit / 384kHz		USB Out	USB A Type 3.0 / 2.0
In/Out Port	Digital In	Optical	AMP	AMP	50W X 2CH(4Ω)
	Digital Out	Optical	Network Connection	Ethernet	10/100/1000 BASE-T
	Analog In	Line In		WiFi	802.11 a/b/g/n/ac (2.4GHz/5GHz)
	Analog Out	Pre-out_RCA			
	HDMI Out	4K		Bluetooth	V4.0 / V3.0+HS

Connectivity Bluetooth, DLNA, Airplay, Spotify Connect, Roon Ready
Design 278*231*85 mm / 2.3 kg / 8.8" Wide viewing angle touch screen / Color : Silver



HiFi Media Player RS301

- High-end All-in-One Speaker
- Network Streamer + DAC + AMP + SPEAKER
- 3-Way full-range speaker configuration
- High-Resolution Music Playback available(DSD256, PCM32bit/384kHz)
- Powerful sound playback with dual passive woofer engine design(Patented technology)
- Awarded the world's three major design awards(Reddot, PIN-UP, iF)

Connectivity Ethernet, WiFi, Bluetooth, DLNA, Airplay
Rear Micro USB, USB A Type, USB B Type, Micro SD, Headphone, AUX
Design 360*122*119 mm / 1.9 kg / 5" IPS touch panel / Color : Silver



Premium Media Player RS350

- Casual All-in-One Speaker
- Network Streamer + DAC + AMP + SPEAKER
- 3-Way full-range speaker configuration
- Playback of various file formats available(Music, Video, Image)
- Powerful sound playback with dual passive woofer engine design(Patented technology)

Connectivity WiFi, Bluetooth, DLNA, Airplay
Rear Micro USB, USB A Type, Micro SD, Headphone
Design 364*123*123 mm / 1.5 kg / 5” IPS touch panel / Color : White



HiFi ROSE CD Drive RSA780 Series

- USB-isolator Adopted to block motion noise
- USB-B Type Port Adopted for HiFi Audio
- 900g weight for CD playback without external shaking
- Minimized Motion Noise by applying Insulators
- Provides CD Ripping Features

Rear USB B Type
Design 152*152*25 mm / 0.9 kg / Color : Silver



Innovative ROSE OS System

Spotify Connect

Spotify Connect allows you to play and wirelessly control Spotify music on your ROSE OS over a network. With the Spotify Connect function, you can enjoy a variety of music with HiFi sound quality on your ROSE device.

Hi-Res Audio

HiFi ROSE devices are certified with a 'High-Resolution Audio' license from the JAS (Japan Audio Society).

TIDAL

Enjoy music streaming and videos with TIDAL's unique features. Supports MQA full decoding, so you can enjoy TIDAL Masters catalogue.

4K Video

You can enjoy high-definition videos on YouTube, TIDAL, and Bugs, and play video files in various formats.

Qobuz

Enjoy music streaming with Qobuz's various functions. Support for Hi-Res Audio(24bit/192kHz) means you can enjoy high-resolution music.

MQA

RS250A includes MQA technology, which enables you to play back MQA audio files and streams, delivering the sound of the original master recording.

Roon Ready

ROSE OS is fully compatible with Roon Core, with Roon Ready certification in compliance with all requirements of Roon Labs. You can enjoy HiFi sound quality on your ROSE device with the powerful music management capabilities of Roon.

ROSE Radio

Enjoy Rose Radio, which consists of about 30,000 radio channels from 200 countries around the world. Channels are organized into various categories, and you can easily search for channels with filters of genre/region/language.

Bugs

Listen to high-resolution music on Bugs. Easily connects existing functions, including login, playlists, and playback.

ROSE Tube

You can enjoy all content and music on YouTube.

Radio

Listen to various Internet radio channels from around the world. Keep track of your favorite channels.

CD Player

Play CDs by connecting an external USB CD-ROM.

ROSE Podcast

Listen to various podcasts from around the world.

CD Ripping

Rip CDs by connecting an external USB CD-ROM and save them on a storage device.

Clock

Various design clock functions are provided, such as alarms and weather information.

Music Library

Manage your music files under various categories, such as albums, artists, and genres.

AppleMusic App

Enjoy curated playlists divided by Apple Music's own musical tastes.
You can enjoy various tracks in Apple Music.

My Playlist

Create your own playlist. You can also register your friends and share it with them.

ROSE Connect Remote Application

A dedicated Remote App is provided that allows users to conveniently control and smartly manage their ROSE device. The Remote App is supported on various platforms, including the iPhone, iPad, Android phone, and PCs.

Control

You can freely and conveniently control various HiFi ROSE functions wirelessly.

Control You can control a variety of functions remotely including Music, ROSE Tube, TIDAL, Qobuz, Bugs, Radio, Podcasts, Apple Music and CD Play.

Remote ROSE Connect includes the remote control function.

Search You can conveniently search for a variety of music in the Media Library.

Streaming

You can simply and easily play music stored on your phone on your ROSE device.
Enjoy a lossless, high-quality streaming service.

Playlist

You can create your own playlist.
Make a playlist on Music and ROSE Tube and check it out at Home - My Music.

Share with Friends

You can share your playlists with your friends or listen to music recommended by them.
Communicate with your friends through music.

Media Library

Scan the music in your local memory to organize it into various categories.



OWNER'S MANUAL

RS250A Product User Manual

Contents

Safety Precautions 12

1. Warnings 12
2. Cautions 13

List of Components 14

Button and Connection Locations / Functions 15

1. Front of the Product 15
2. Rear of the Product 16
3. Remote Control 17

Product Installation 18

1. Product Design Direction and Installation Location 18
2. How to connect the Power Cord 19
3. How to properly connect the Rear Port and the Cable 20
   - 3-1. Connecting the Analog Output Port and the Power Amplifier or AV Receiver
   - 3-2. Connecting the Analog Input Port and the Audio Device
   - 3-3. Connecting the Digital Input/Output Port and the Audio Device(TV or Digital Input/Output Support Device)
   - 3-4. Connecting the USB Audio Output Port and the External DAC
   - 3-5. How to connect the USB Audio In
   - 3-6. How to Connect to HDMI Output
4. External Memory(USB) and SATA Storage Devices 29
5. How to Connect an SSD 29
   - 5-1. How to insert the SSD
   - 5-2. How to format After Installing the SSD
   - 5-3. How to copy Files over the Network
6. Network Connection 32
   - 6-1. Ethernet Connection(Wired)
   - 6-2. WiFi Connection(Wireless)
7. How to Pair with the Bluetooth Remote Control 34
8. How to Connect Roon Ready 34

Initial Settings 36

1. Power Button 36
2. Input/Output Settings 36
   - 2-1. INPUT
     - 2-1-1. RS250A
     - 2-1-2. ANALOG IN
     - 2-1-3. COAX IN

2-1-4. OPT IN
2-1-5. USB IN
2-2. OUTPUT
2-2-1. USB DAC
2-2-1-1. MQA Type
2-2-1-2. PCM Resampling Frequency
2-2-1-3. DSD Mode
2-2-1-4. SoftWare Volume Control
2-2-1-5. How to Calibrate the Lower 8 Bits of a 32-bit Sound Source
2-2-1-6. OUTPUT Gain
2-2-2. HDMI
2-2-2-1. PCM Resampling Frequency
2-2-2-2. DSD Mode
2-2-2-3. HDMI Passthrough
2-2-2-4. SoftWare Volume Control
2-2-2-5. How to Calibrate the Lower 8 Bits of a 32-bit Sound Source
2-2-2-5. OUTPUT Gain
2-2-3. Digital
2-2-3-1. MQA Type
2-2-3-2. PCM Resampling Frequency
2-2-3-3. DSD Mode
2-2-3-4. SoftWare Volume Control
2-2-3-5. How to Calibrate the Lower 8 Bits of a 32-bit Sound Source
2-2-4. Analog
2-2-4-1. Pre-Out Level Settings
2-2-4-2. SoftWare Volume Control
2-2-4-3. How to Calibrate the Lower 8 Bits of a 32-bit Sound Source
2-2-2-4. FIR Interpolation Filter
2-2-4-5. PCM Resampling Frequency
2-2-4-6. Headphone Output Impedance
2-2-4-7. DSD Mode

Playback 50
1. Basic Operation 50
2. Media Library 50
2-1. Media Scan Operation
2-2. After completing the Media Scan

Supplementary Information 52
1. Firmware Update 52
1-1. OTA Update
1-2. Update via the Settings Menu
1-3. How to install XMOS/Audio MCU when an Update Pop-up Appears
2. MQA (Master Quality Authenticated) 56
3. Factory Reset 56

Product Specifications 57
1. Specifications 57
2. Analog Audio Specifications 58

Quality Guaranteed 59

FAQ 60

Safety Precautions

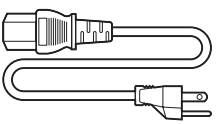
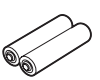
1. Warnings

- Do not apply excessive force to the product, throw it, or impact it with a sharp object.
- When used by children, a parent or guardian should tell them how to use the product correctly and make sure that they are using it correctly.
- Use within a temperature range of 0 - 40 °C and do not use in hot or humid conditions. Install the product in a well-ventilated area, not an enclosed space. The product may break, corrode, overheat, or catch fire in an environment below 0°C or in a sealed environment with a high temperature, such as a sauna. Moisture or liquid can also damage the surface of the product and its circuit components.
- Be sure to use a genuine power cable provided by ROSE. Any other cable may cause operational errors or damage (decreased performance) to the product.
- Do not spill dirt or liquid on the product. It may damage the components and circuits. If the product gets wet, do not turn it on. Contact your nearest service center. However, free repairs are not available in this case.
- Do not connect antennas or accessories that are not certified by ROSE to the product, and do not place the product on objects that may interfere with radio waves (steel desk, microwave oven, etc.).
- The product is sensitive to radio waves, so performance may deteriorate when used around steel, electromagnetic wave devices, etc.
- How to replace the fuse: After removing the power cord from the main body, remove the fuse and replace it with a fuse of the same specification.
- The label for this product is located on the bottom of the product.

2. Cautions

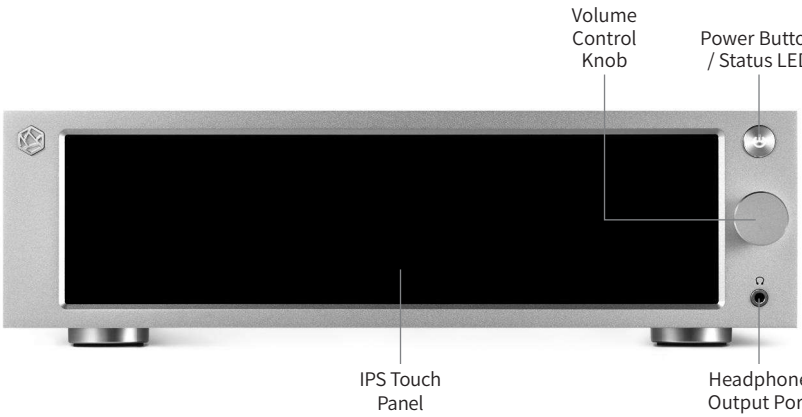
- The contents of the owner's manual are described based on the default settings of the product.
- Some contents of this manual may be changed without prior notice to the user in order to improve product performance.
- The features and additional services of the product may vary depending on the country, software specifications, and policy changes of the service provider.
- Repairs due to user negligence or product failure may erase user data (music files, video files, etc.). ROSE is not responsible for any damage or loss of data.
- If you use Bluetooth and 2.4GHz band wireless LAN together, the WiFi connection may be slow or audio playback through Bluetooth may not work properly due to signal interference. If you are using them at the same time, it is recommended to use wireless LAN connections in the 5GHz band.
- Do not use chemical solutions (alcohol, thinners, solvents, etc.) or detergent to clean the product. Rubbing the product with a chemical solution can create heat and cause the product to catch fire. When cleaning the product, wipe it with a soft cloth or towel.
- Do not disassemble, modify or repair the product on your own. If you do, you will no longer qualify for free repairs. If a malfunction occurs because of this, contact an authorized service center for repairs.
- Only programs provided by the manufacturer are available. Transferring independently created files or user-modified files to the product can cause operational errors or cause serious problems with the product. ROSE is not responsible for any problems that arise in this case.
- If the touch screen is damaged, do not touch it with your hands. Contact the service center immediately, as it may cause injury.
- Install the product close to an outlet so that it is easy to remove the plug from the outlet.
- For HDMI and USB cables, it is recommended to purchase certified products. Otherwise, a connection error may occur, which may cause problems with the audio and output screens. Also, if you are using an HDMI cable extension, be sure to connect it using the HDMI repeater (signal amplifier) device.

List of Components

1	Main Device	
2	Bluetooth Remote Controller	
3	Power Cable	
4	User Manual	
5	SSD Mounting Screws	
6	AAA Batteries for Remote Controller	

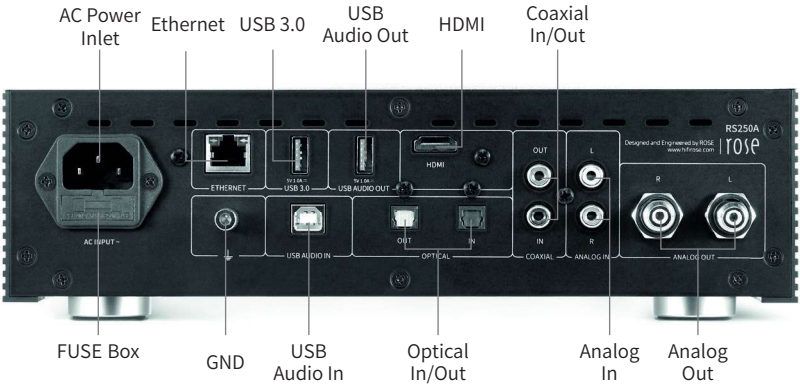
Button and Connection Locations / Functions

1. Front of the Product



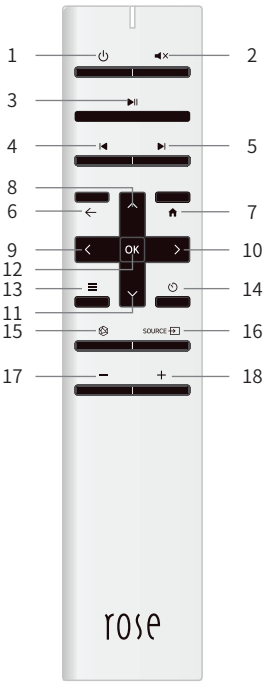
Power Button(⏻) / Status LED	When you press the power button, the LED flashes, and when booting is complete, the LED turns off. ※ *See Initial Settings – Power Button for detailed functions.(p. 33)*
Volume Control Knob	You can adjust the volume by turning the volume control knob or dragging the volume up/down on the control screen. You can adjust the volume from 0 ~ 99 in 100steps. Press on the volume control knob to mute the sound. ⚠ **Caution :** *If you listen to music for a long time at a high volume, it may cause hearing damage.*
Headphone Output Port	You can connect stereo 3-pole earphones and headphones(3.5mm). Once connected, check if the headphone icon(🎧)at the top of the screen lights up. You can choose the impedance of the headphones you are connecting on the main body settings menu. ※ *Simultaneous speaker and earphone output is not available.*
IPS Touch Panel	You can move the screen with multi-touching.

2. Rear of the Product



AC Power Inlet	AC INPUT ~	Connect the AC power cable.
GND	⏚	This port is for connecting an external device to the product.
USB Audio In	-	You can use this product as a USB DAC on your computer after connecting this port to your computer using a USB B cable.
Optical In	-	Connect an optical cable to this port to receive digital signals.(44.1kHz ~ 192kHz).
Optical Out	-	Connect an optical cable to this port to output digital signals.(44.1kHz ~ 192kHz).
Analog In	-	Connect an RCA cable to this port to receive analog signals.(max : 9.0dBu / 2.2Vrms).
Analog Out	-	Connect an RCA cable to this port to output analog signals.(max : 9.0dBu / 2.2Vrms).
Ethernet	-	Connect a wired LAN cable to this port.
USB 3.0	5V 1.0A ⎓ USB 3.0	Connect a USB storage device to this port to play music files, or connect a CD-ROM to use the ripping function.
USB Audio Out	5V 1.0A ⎓ USB AUDIO OUT	Connect an external USB audio DAC device or a USB storage device to this port to play music files.
HDMI	-	Connect an HDMI cable to this port to output video signals.(max. 3840x2160/60Hz) to your TV or monitor.
Coaxial In	-	Connect a coaxial cable to this port to receive digital signals.(44.1kHz ~ 192kHz).
Coaxial Out	-	Connect a coaxial cable to this port to output digital signals.(44.1kHz ~ 192kHz).

3. Remote Control



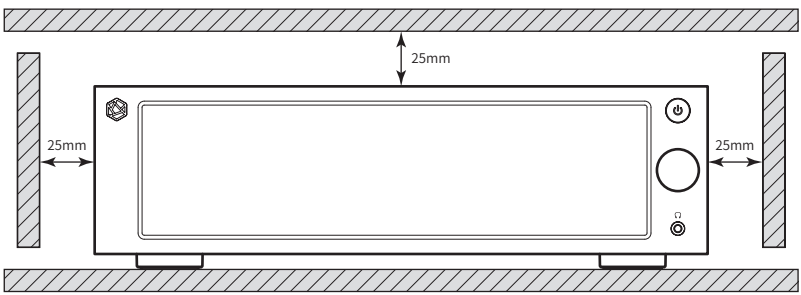
	Function	Note
1	**Power On/Off**	Sleep Mode On/Off
2	**Mute**	
3	**Play / Pause Current Song**	
4	**Play Previous Song**	
5	**Play Next song**	
6	**Go Back**	
7	**Go to the Home Screen**	
8	**Move Focus Up**	
9	**Move Focus Left**	
10	**Move Focus Right**	
11	**Move Focus Down**	
12	**Select Current Focus**	
13	**Option Key**	Works only when playing songs and videos with sub-options (favorite, queue, subscribe) in the list
14	**Sleep Timer**	
15	**Go to Favorites Menu**	Go to the favorites menu set on this device
16	**Go to External Input/Output Menu**	Go to Input/Output page
17	**Volume Down**	Press and hold to adjust the volume down
18	**Volume Up**	Press and hold to adjust the volume up

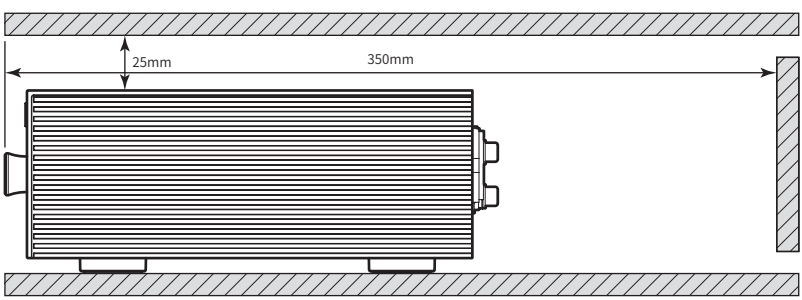
※ The bluetooth remote controller has an average battery life of about 3~4 months. However, if the power is weak due to battery consumption, the product may malfunction; in this case, replace the battery before use.

Product Installation

1. Product Design Direction and Installation Location

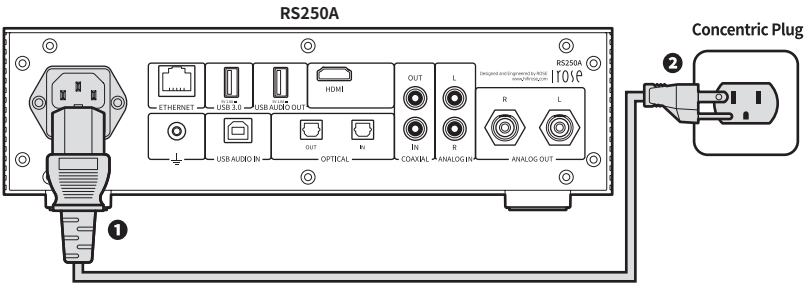
- This product is designed for proper use on a table or shelf.
- The product may malfunction due to high heat in the winter or summer. (Operating temperature : 0°C ~ 40°C / Storage temperature : -10°C ~ 50°C)
- If the installation space is small, make sure to provide adequate ventilation. You can ensure a longer life cycle for electronics by providing proper ventilation and taking care to avoid excess heat. Do not install this product directly above devices that produce heat, such as power amplifiers.
- The figure below show the minimum ventilation requirements.
- Maintain a gap of at least 2.5cm on each side of the product to prevent restrictions on air flow.
- Ensure a depth of 35cm for airflow and cabling.





2. How to connect the Power Cord

- This product contains a removable power cord. Please connect the power cord after all other connections are completed. First, connect the power cord to the product's AC inlet port, and then connect it to an outlet.

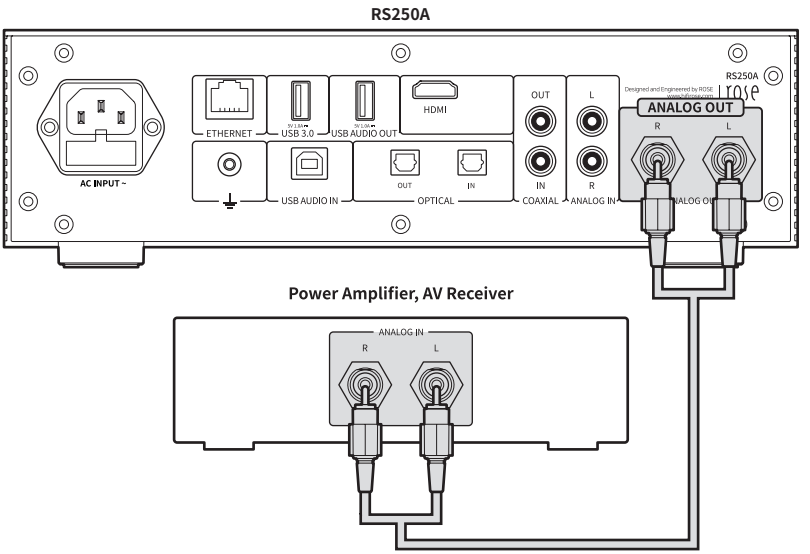


⚠ **Caution** : *When disconnecting the power cord, always disconnect the outlet first.*

3. How to properly connect the Rear Port and the Cable

3-1. Connecting the Analog Output Port and the Power Amplifier or AV Receiver

- You can connect the analog audio output of this product to the Analog input of a power amplifier or AV receiver as shown below.
- You can select 'Variable' or 'Fixed' through the pre-out level settings to adjust the volume of the analog audio output of this product.

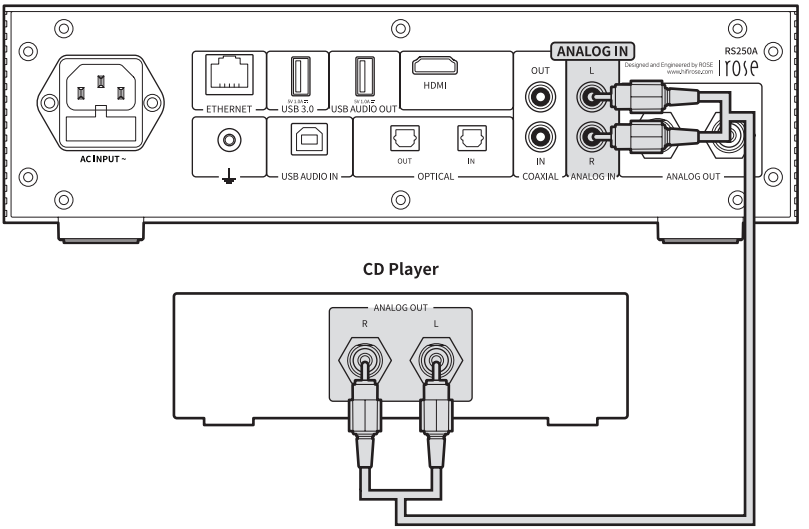


⚠ **Caution** : *Before connecting the product to the power amplifier, set the volume to mute or below step 5 and then connect it using an RCA cable. When music is being played on this product with the volume turned up, a loud shock sound may occur when the cable is connected.*

3-2. Connecting the Analog Input Port and the Audio Device

- As shown in the figure below, you can connect the analog output of an external device such as a CD player to the analog audio input of this product.
- When using the analog audio input as a source, you must switch the input source to 'ANALOG In' in the Input/Output Settings. Input/Output Settings can be changed from the home screen, settings, settings of the ROSE Connect Premium App, and the remote controller.

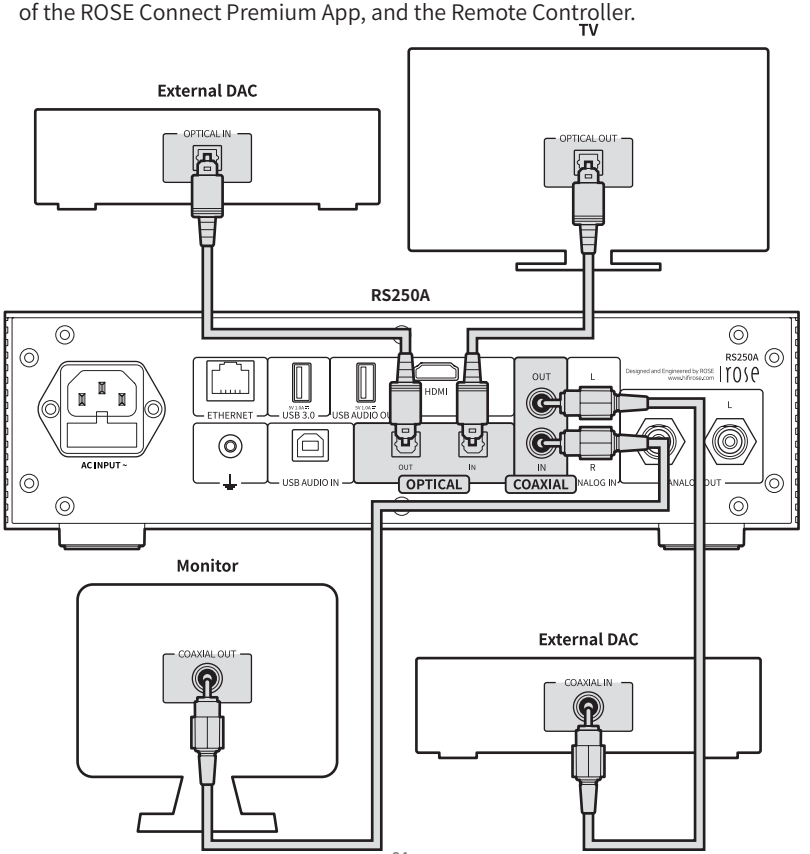
RS250A



CD Player

3-3. Connecting the Digital Input/Output Port and Audio Device(TV or Digital Input/Output Support Device)

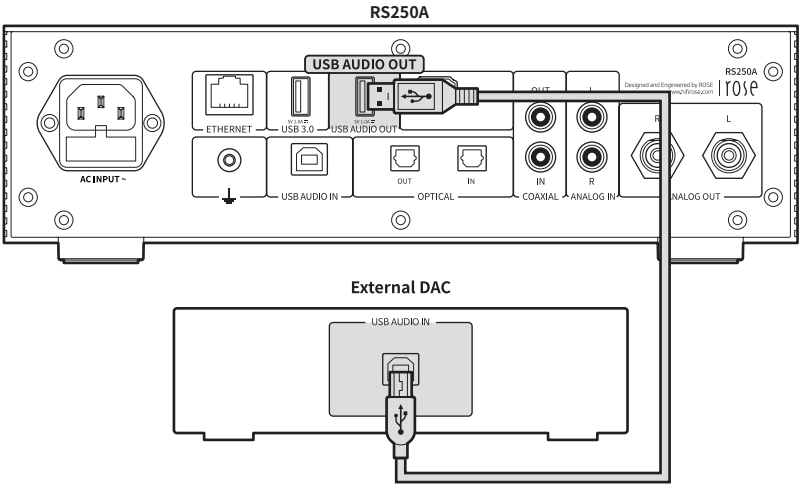
- As shown in the figure below, you can connect the Digital input/output of an external device to the Digital(Optical/Coaxial) input/output port of this product to use it.
- This product can reproduce linear PCM signals with sampling frequencies of 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz and 192kHz.
- When using a Digital input, you need to switch the input source to 'Optical In' or 'Coaxial In' in the Input/Output Settings.
- To export Digital output, the output mode must be set to 'Optical Out' or 'Coaxial Out' in the Input/Output Settings.
- Input/Output Settings can be changed from the home screen, Settings, Settings of the ROSE Connect Premium App, and the Remote Controller.



⚠ **Caution :** *Do not input signals other than linear PCM signals such as Dolby Digital, DTS, AAC, etc., into this device. Doing so may generate noise and damage the speaker.*

3-4. Connecting the USB Audio Output Port and the External DAC

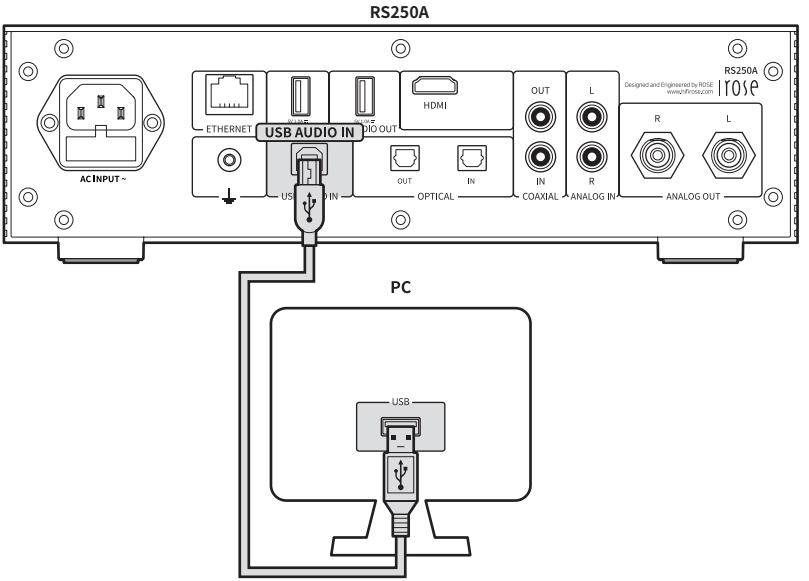
- This product has a USB Audio Out terminal that allows you to connect a separate USB DAC.
- After connecting an external USB DAC to the USB Audio Out terminal of the product, you must activate the output device as an external USB DAC in the Input/Output Settings.



※ *This product complies with the USB Audio Class 2.0 standard.*

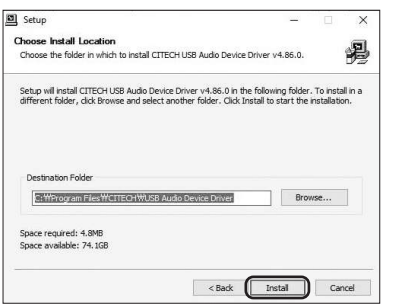
3-5. How to connect the USB Audio In

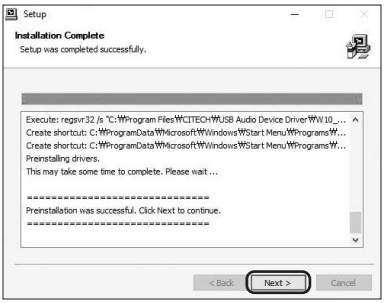
• Connect the device as shown in the figure below.

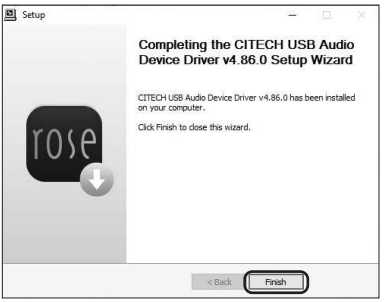


• **3-5-1.** Download Rose_UsbAudio_[VERSION] from the ROSE website (www.hifirose.com).
• **3-5-2.** When you unzip the downloaded Rose_UsbAudio_[VERSION] file and run Rose_UsbAudio_[VERSION].exe, a screen will appears as shown in the image below. Select Next.

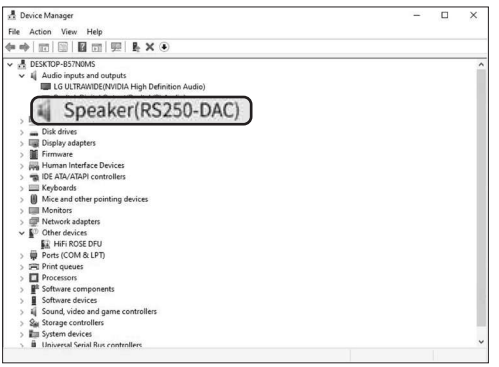




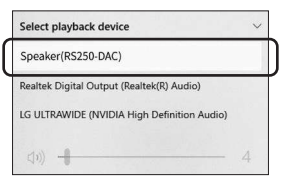




- **3-5-3.** Reboot after installing the USB Audio Sound and Universal Serial Bus Controller.
- **3-5-4.** After driver installation is complete, when you switch the source to 'USB In' in the Input/Output Settings, the RS250-DAC will appear on your PC as shown below.

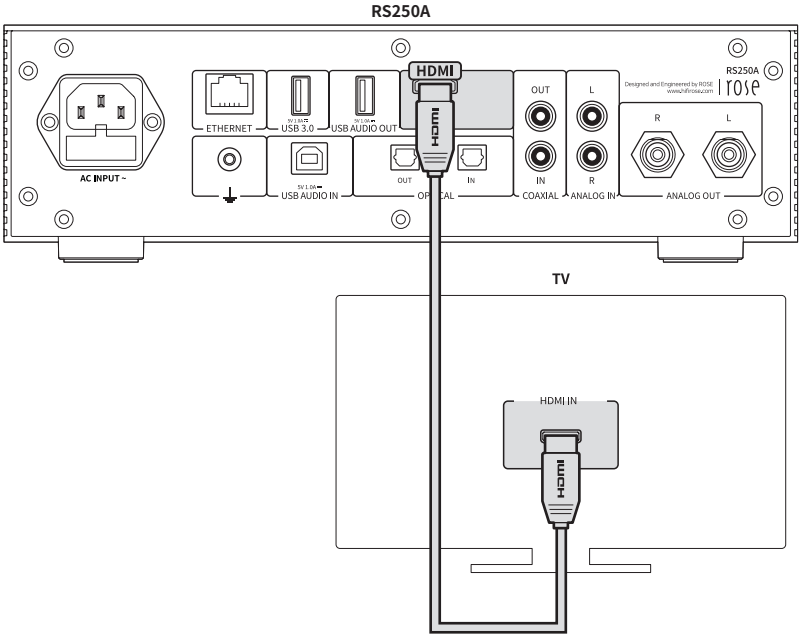


- **3-5-5.** Once you set the sound device to RS250-DAC in the system tray area of your PC, the USB In is ready for use.



3-6. How to Connect to HDMI Output

- As shown in the figure below, you can connect a TV to the HDMI port of this product.
- By connecting this product to a TV, video output (up to 3840x2160 / 60 Hz) signals can be played back.



4. External Memory(USB) and SATA Storage

- This product can connect to USB and SATA storage devices.
- When connecting a storage device using the SATA method, it is recommended that you use an SSD.
- USB storage devices are compatible up to 10TB and SATA storage devices up to 4TB.

※ *SSD must be purchased separately and only products of 7mm thickness can be used.*

※ *It has only been tested on SAMSUNG SSD for compatibility, and may not function normally on some SSD(Intel).*

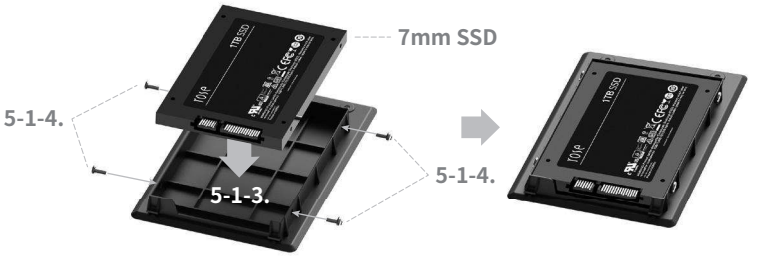
5. How to connect an SSD

5-1. How to insert the SSD

- **5-1-1.** Remove the SSD Cover Screws(2pcs) on the bottom of the main body.
- **5-1-2.** Remove the SSD Cover by pushing on the OPEN indicator.



- **5-1-3.** Set the SSD to the connection port on the SSD Cover.
- **5-1-4.** Fix the SSD to the SSD cover with the SSD Mounting Screws(4pcs).

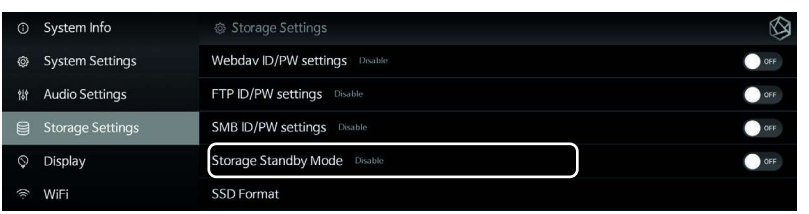


- **5-1-5.** Assemble SSD cover with the SSD on the main body.
- **5-1-6.** Re-fix the screws(2pcs) after pushing on the LOCK indicator.



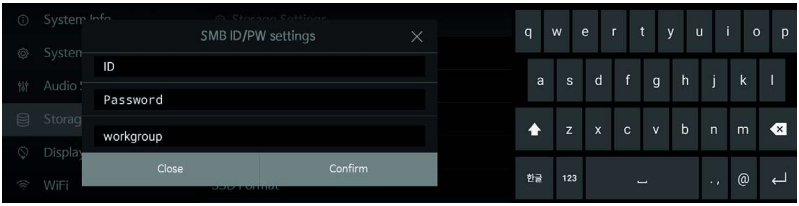
5-2. How to format After Installing the SSD

- You can format any SSD connected to this product from the SSD Format menu under System Settings.



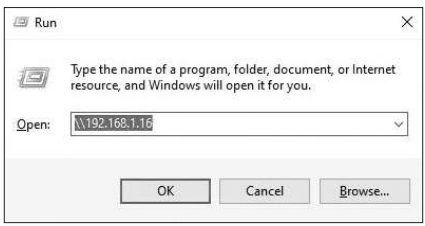
5-3. How to copy files over the Network

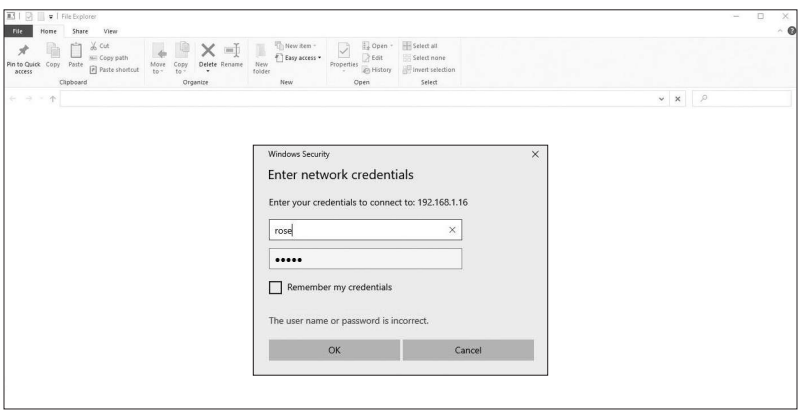
- Set the SMB ID/PW in Storage Settings under System Settings.



- After entering ₩₩ROSE IP on your PC, enter the ID/PW that you set up for the SMB. Any storage connected with this product will appear and you will be able copy the files directly from your PC.

※ *To connect to the SMB of this product from a PC, both devices must be connected to the same network.*



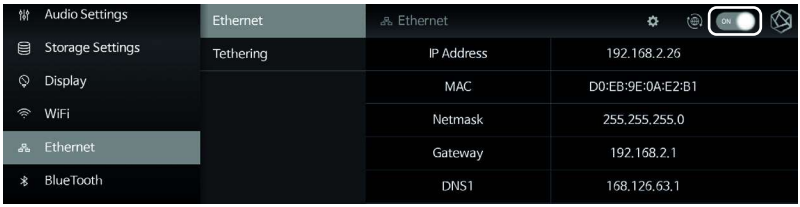


6. Network Connection

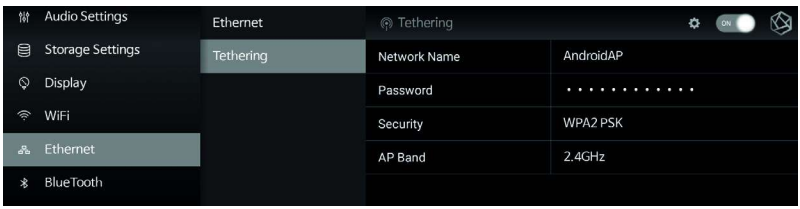
- This product can be connected to a network via a wired or wireless connection.

6-1. Ethernet Connection(Wired)

- After connecting a LAN to the rear Ethernet port, select ON from the Settings - Ethernet menu to connect to the network.
- When connected normally, the IP address and other information are received automatically.

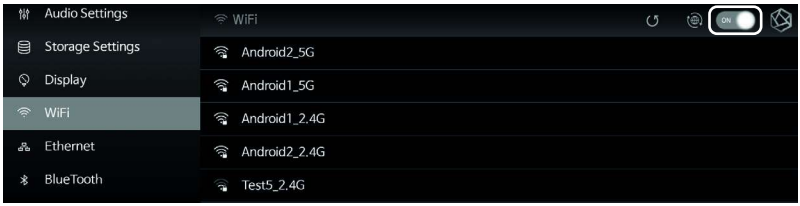


- **6-1-1.** After connecting the Ethernet cable, you will be able to use this product as a WiFi hotspot. After entering the network name and password, you can enable the hotspot function to allow other devices to connect to this WiFi hotspot using the password.

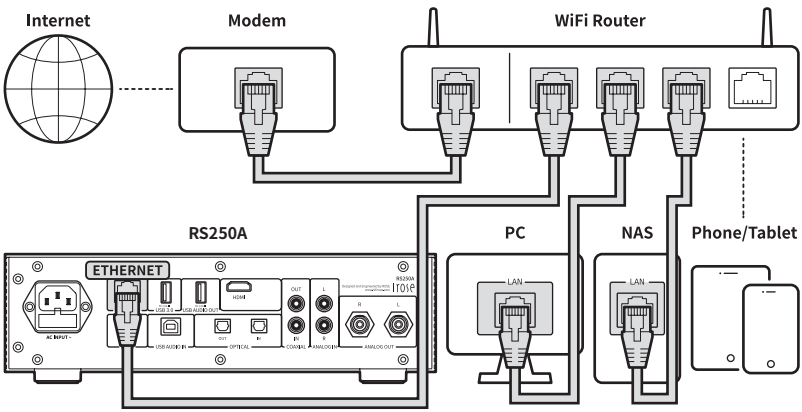


6-2. WiFi Connection(Wireless)

- When WiFi is turned On in the Settings - WiFi menu, currently available SSIDs appears and the product connects to the network after one of the SSIDs is selected.



※ You can remotely control this product by downloading and installing the ROSE Connect Premium App available through the Google Play Store and App Store on your smartphone.



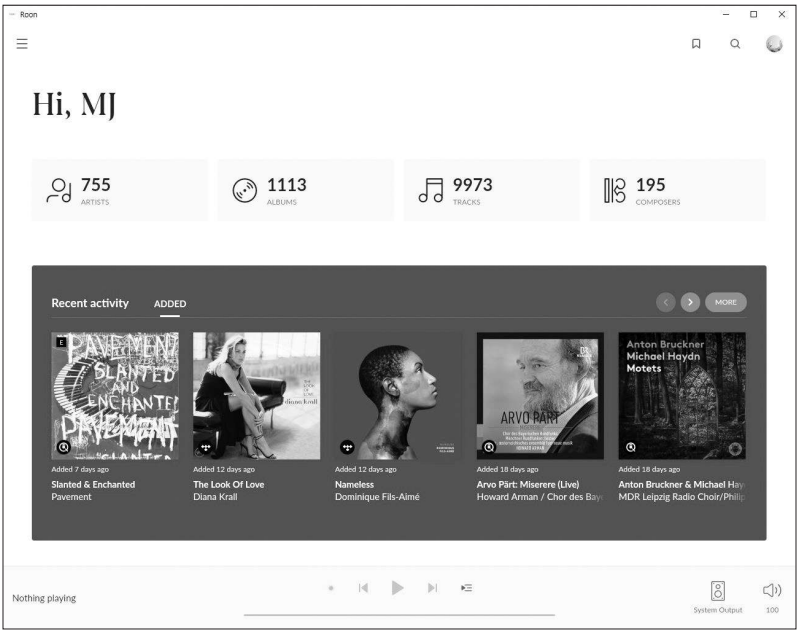
※ To control this product on your smartphone(ROSE Connect Premium App), it must be connected to the same network.(You can configure a single network using wireless network extenders, bridges, etc.)

7. How to Pair with the Bluetooth Remote Control

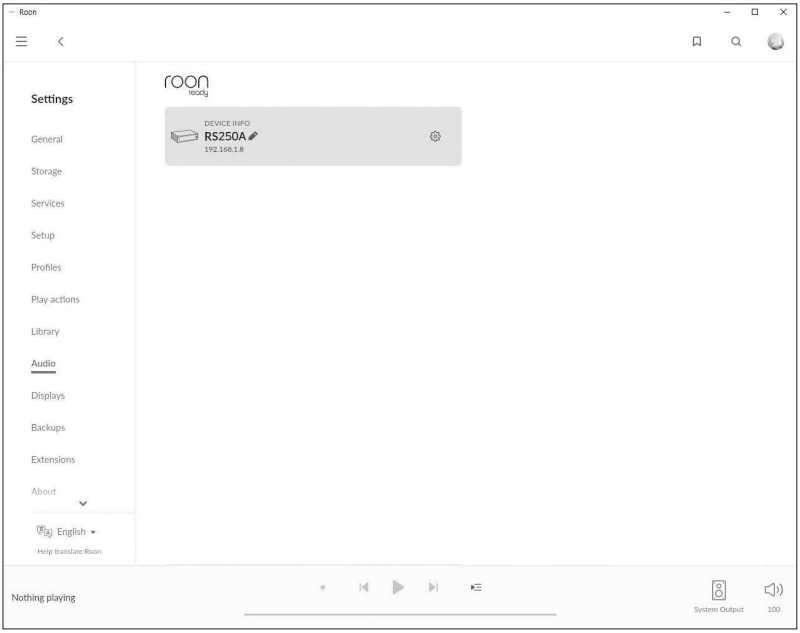
- **7-1.** Press the Home ( )and Option ( )buttons on the remote control at the same time for about 5 seconds.
- **7-2.** When the white LED of the remote control turns on, activate the Bluetooth switch to ON in the Settings - Bluetooth menu on the main device and select Search Peripheral Devices ( )'.
- **7-3.** After selecting ROSE RCU from the Available Device List, if you select ROSE RCU from Registered Devices, the light will change to gold and the pairing is completed

8. How to Connect Roon Ready

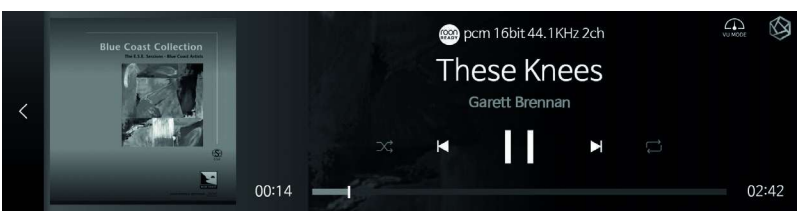
- To use Roon, first access the website(http://roonlabs.com) and create an account. Download Roon Core and install the software on your PC.
- Various tracks managed by Roon Core will appear.



• Select this product from ‘Select Audio’ under Settings - Audio.



• Once connecting with ROSE is completed, you can control and listen to the sound source by running the music in Roon.



※ *To control this product from Roon, it must be connected to the same network.*

Initial Settings

1. Power Button

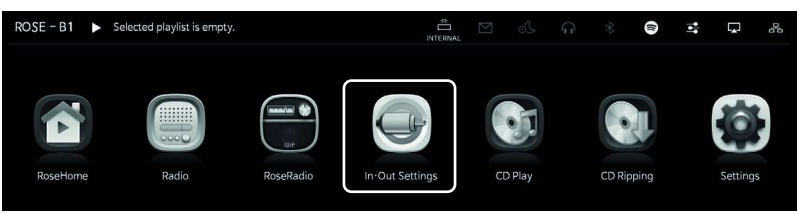
- **1-1.** You can turn this product on and off by pressing the power button briefly.
  - **1-1-1.** When the power button is pressed briefly, the product enters standby mode when the power is on, or is turned on when the power is off.
  - **1-1-2.** If you press the power button during booting, the product will turn off.
- **1-2.** Press the power button for 3 seconds to display the [LCD OFF | Power OFF | Reboot] menu.
  - **1-2-1.** LCD OFF( ) : The sound is played and only the screen turns off. If you press the power button again while the LCD is off, the screen turns on.
    - ※ *This function can only turn off the screen while the product is in use.*
  - **1-2-2.** Power OFF( ) : The power will be turned off.
  - **1-2-3.** Reboot( ) : The product will turn off and on and then display the home screen.

※ *If you touch a screen other than the menu, it will be canceled.*

- **1-3.** Power button LED status : Screen on (LED OFF) / Screen off (LED ON)
- **1-4.** Pressing the power button for 5 seconds will force a reboot.

2. Input/Output Settings

- Select the 'Input/Output Settings' icon on the main screen to move to the Input/Output Settings menu.



2-1. INPUT

- You can select an Input by selecting the icon from the INPUT Settings menu. When activated, the icon color changes to gold and a check mark appears.

※ *Only one input can be selected at a time.*

2-1-1. RS250A

- Set this product to Internal mode. Select this as the default setting mode at initial startup when using a music or streaming source from a storage device.
- If an external input is in use, it is automatically selected if you play the music or stream on the storage device.



2-1-2. ANALOG IN

- When using Analog Audio Input as a source, select the input source as ‘ANALOG In’ under Input/Output Settings.



2-1-3. COAX IN

- When using COAX In as a source, select the input source as ‘COAX In’ under Input/Output Settings.



2-1-4. OPT IN

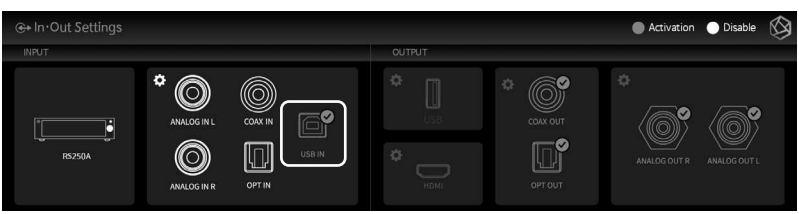
- When using OPT In as a source, select the input source as ‘OPT In’ under Input/Output Settings.



2-1-5. USB IN

- When connecting this product to a PC and using it as a USB DAC, select the source as USB In under Input/Output Setting.

※ *Please refer to ‘Product Installation - How to Connect USB Audio In’.*

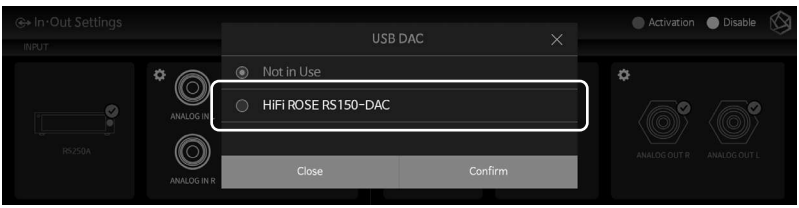


2-2. OUTPUT

- You can enable/disable Output Settings by selecting the icon in the Output Settings menu.
- When activated, the icon color changes to gold and a check mark appears. Only one of USB, HDMI, and Internal DAC can be selected.
- For Internal DAC, you can enable multiple output ports.

2-2-1. USB DAC

- When you connect a USB DAC and select USB, a list of connected USB DACs appears. Select the USB DAC you want to use from the list.



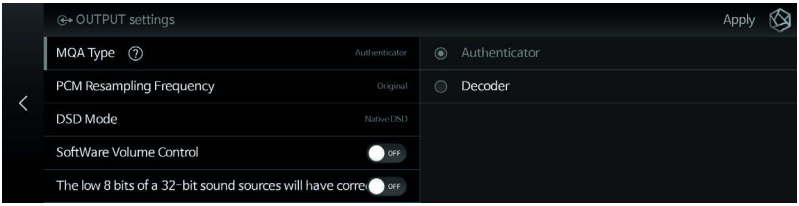
- If you select USB DAC, the model name of the selected USB DAC appears and becomes available.



- If you select the USB DAC Setting icon, the following USB DAC Setting screen appears.

2-2-1-1. MQA Type

- Set the MQA playback mode. You can select Authenticator or Decoder mode.
- Only original sound or decoded audio data can be exported to Digital output; full-decoded audio data cannot be exported.



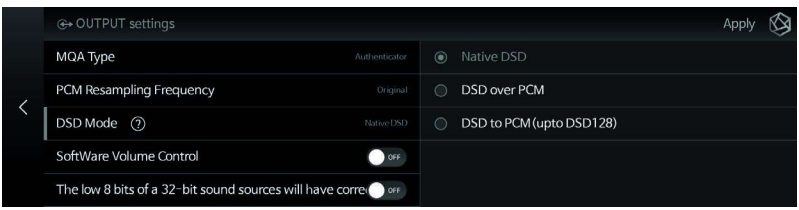
2-2-1-2. PCM Resampling Frequency

- This is the menu for Setting the Sampling Frequency. Select Original Sampling Rate if you want to output the original sound, or select your desired sampling rate(48kHz, 96kHz, 192kHz, etc.) to use the re-sampling function.



2-2-1-3. DSD Mode

- Select the transmission format(Native, DOP, PCM) of audio samples to be delivered to the DAC when playing DSD music files. For USB DACs, you must select and use Native, DOP, or DSD to PCM to play DSD music files, depending on whether or not the DAC you connected to is supported.



2-2-1-4. SoftWare Volume Control

- You can adjust the playback volume of digital audio data using the ROSE Volume Control software.
- **Caution 1.** This function is not available in Native DSD and DSD over PCM mode. It is applied after changing to DSD to PCM (up to DSD128) mode.
- **Caution 2.** For digital output, MQA stream is only supported when the volume is at maximum. If the volume is smaller than the maximum, MQA stream is not supported.



2-2-1-5. How to Calibrate the Lower 8 Bits of a 32-bit Sound Source

- Some DACs may cause noise when playing 32-bit sound sources with high sampling rates. In this case, this feature can be used to reduce noise by correcting the lower 8 bits.



2-2-1-6. OUTPUT Gain

- This is a menu to adjust the gain value of the digital output. If distortion occurs when connecting to an external receiver or DAC, adjust the output gain value appropriately.



2-2-2. HDMI

- You can set up HDMI.



- When you select the setting icon for HDMI, the HDMI Settings screen appears as shown below.

2-2-2-1. PCM Resampling Frequency

- This is the menu for Setting the Sampling Frequency. Select 'Original Sampling Rate' if you want to output the original sound, or select the desired sampling rate(48kHz, 96kHz, 192kHz, etc.) to use the re-sampling function.



2-2-2-2. DSD Mode

- Select the transmission format(Native, DOP, PCM) of Audio Samples to be delivered to the DAC when playing DSD music files. For HDMI output, only DSD to PCM is possible.



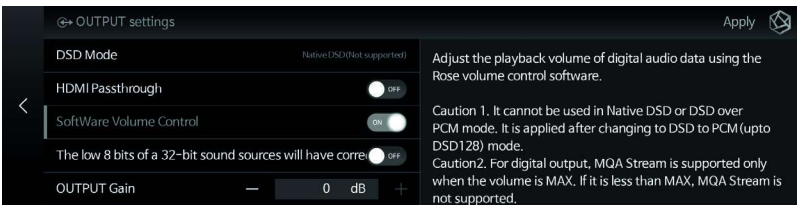
2-2-2-3. HDMI Passthrough

- This bypasses HD Audio Formats such as Surround Sound Files to the Audio Receiver through HDMI without decoding.



2-2-2-4. SoftWare Volume Control

- You can adjust the playback volume of digital audio data using the ROSE Volume Control software.
- **Caution 1.** This function is not available in Native DSD and DSD over PCM mode. It is applied after changing to DSD to PCM (up to DSD128) mode.
- **Caution 2.** For digital output, MQA stream is only supported when the volume is at maximum. If the volume is smaller than the maximum, MQA stream is not supported.



2-2-2-5. How to Calibrate the Lower 8 Bits of a 32-bit Sound Source

- Some DACs may cause noise when playing 32-bit sound sources with high sampling rates. In this case, this feature can be used to reduce noise by correcting the lower 8 bits.



2-2-2-6. OUTPUT Gain

- Adjust the Gain Value for Digital Output. If distortion occurs when connecting to an external receiver or DAC, adjust the Output Gain Value accordingly.



2-2-3. Digital

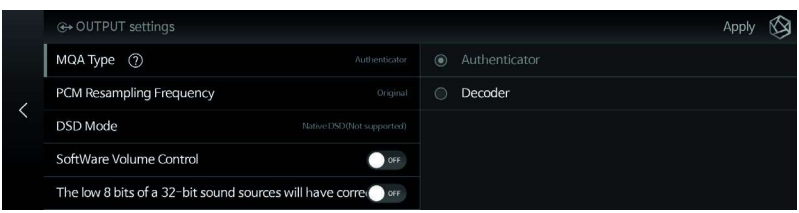
- Here you can set COAX OUT and OPT OUT.



- If you select the Digital Setting icon, the Digital Output Settings screen appears as follows.

2-2-3-1. MQA Type

- Set the MQA playback mode. You can select Authenticator or Decoder mode. Only original sound or decoded audio data can be exported to Digital output; full-decoded audio data cannot be exported.



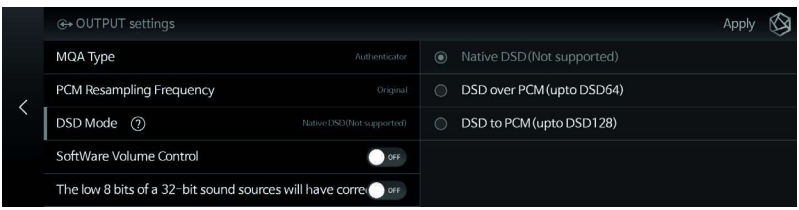
2-2-3-2. PCM Resampling Frequency

- This is the menu for setting the sampling frequency. Select ‘Original Sampling Rate’ if you want to output the original sound, or select the desired sampling rate(48kHz, 96kHz, 192kHz, etc.) to use the re-sampling function.



2-2-3-3. DSD Mode

- Select the transmission format(Native, DOP, PCM) of Audio Samples to be delivered to the DAC when playing DSD music files.
- In Native mode, Analog Output supports up to DSD512 when playing DSD, but Digital Output does not produce sound.
- In the case of DOP mode, no sound is produced through Analog Output, and audio data is transmitted up to DSD256 through Digital Output. For Optical and COAX, up to DSD64 is supported.
- The DSD to PCM mode supports up to DSD128 and sounds simultaneously from Digital and Analog Outputs.



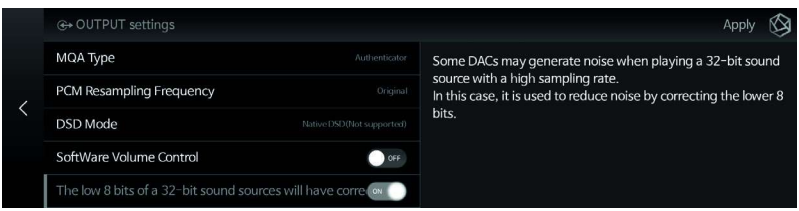
2-2-3-4. SoftWare Volume Control

- You can adjust the playback volume of digital audio data using the ROSE Volume Control software.
- **Caution 1.** This function is not available in Native DSD and DSD over PCM mode. It is applied after changing to DSD to PCM (up to DSD128) mode.
- **Caution 2.** For digital output, MQA stream is only supported when the volume is at maximum. If the volume is smaller than the maximum, MQA stream is not supported.



2-2-3-5. How to Calibrate the Lower 8 Bits of a 32-bit Sound Source

- Some DACs may cause noise when playing 32-bit sound sources with high sampling rates. In this case, this feature can be used to reduce noise by correcting the lower 8 bits.



2-2-4. Analog

- You can set up the Analog Out.



- If you select the Analog Setting icon, the Analog Output Settings screen appears as follows.

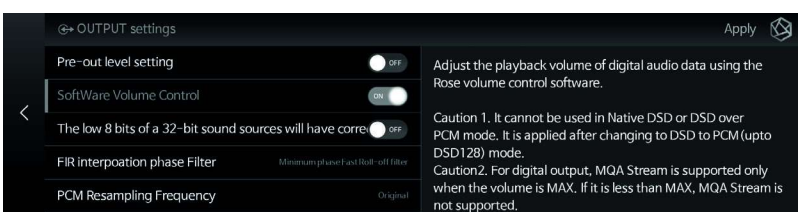
2-2-4-1. Pre-Out Level Settings

- This fixes the Pre-Output Level. This product can be used by fixing the Output Level with inputs within the acceptable range of the AMP connected, without using volume control.



2-2-4-2. SoftWare Volume Control

- You can adjust the playback volume of digital audio data using the ROSE Volume Control software.
- **Caution 1.** This function is not available in Native DSD and DSD over PCM mode. It is applied after changing to DSD to PCM (up to DSD128) mode.
- **Caution 2.** For digital output, MQA stream is only supported when the volume is at maximum. If the volume is smaller than the maximum, MQA stream is not supported.



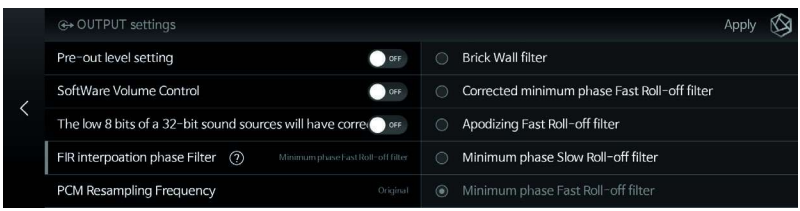
2-2-4-3. How to Calibrate the Lower 8 Bits of a 32-bit Sound Source

- Some DACs may cause noise when playing 32-bit sound sources with high sampling rates. In this case, this feature can be used to reduce noise by correcting the lower 8 bits.



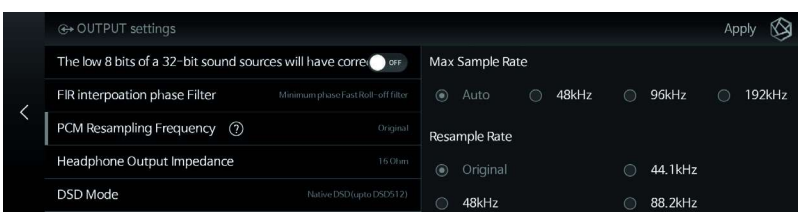
2-2-4-4. FIR interpolation Filter

- Even when the user selects a specific filter, “Minimum phase slow roll-off filter” is automatically selected to provide the best audio quality during MQA playback.
- The FIR filter only applies to PCM data, not to DSD.



2-2-4-5. PCM Resampling Frequency

- This is the menu for setting the Sampling Frequency.
- Select ‘Original Sampling Rate’ if you want to output the original sound, or select the desired Sampling Rate(48kHz, 96kHz, 192kHz, etc.) to use the re-sampling function.



2-2-4-6. Headphone Output Impedance

- This is the menu for setting the Output Impedance of your headphones.
- You can enjoy better sound quality by selecting the Output(16Ω, 32Ω, 50Ω, or 100Ω) that matches your headphone specifications.



2-2-4-7. DSD Mode

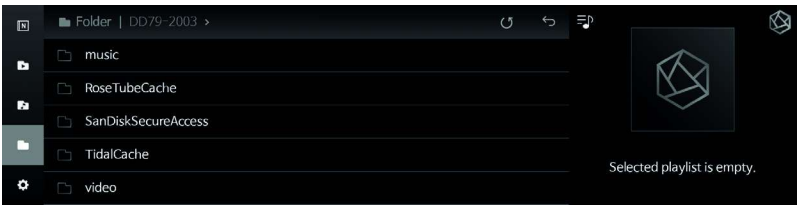
- Select the transmission format(Native, DOP, PCM) of Audio Samples to be delivered to the DAC when playing DSD music files.
- In Native mode, Analog Output supports up to DSD512 when playing DSD, but Digital Output does not produce sound.
- In the case of DOP mode, no sound is produced through Analog Output, and Audio Data is transmitted up to DSD256 through Digital Output. For Optical and COAX, up to DSD64 is supported.
- DSD to PCM mode supports up to DSD128 and sounds simultaneously from Digital and Analog outputs.



Playback

1. Basic Operation

- You can play music and video files by connecting a USB storage device to a USB port on the back of this product.
- SATA HDD/SSD can be installed at the bottom of this product.
  ※ *Thickness : 2.5inch/7mm*
- You can play files on the storage device by entering the ‘Music/Video’ - ‘Folder’ tab.

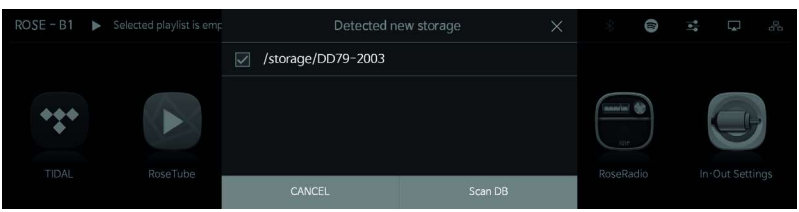


2. Media Library

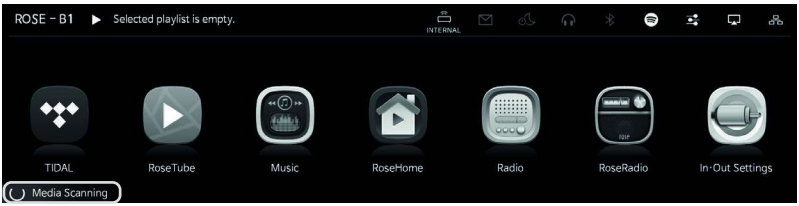
- You can save music using the storage media or network shared folder as a Library(DB) by scanning the media.

2-1. Media Scan Operation

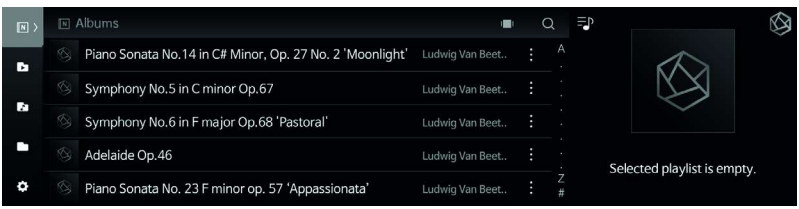
- When you connect a new storage device to a USB port on the rear of the device, a new storage detection pop-up appears.



- When you select the ‘DB Scan’ button in the new storage pop-up, Media Scanning of the connected storage device begins. (Depending on storage capacity, the time to complete Media Scanning may vary.)
- During DB scanning, the ‘Media Scanning’ loading image is displayed at the bottom left of the main screen of the product.



- After the DB scan is complete, the album art and list of Music and Videos is displayed, and you can play the music.
- You can also add, research, and delete DBs through the Music/Video and Settings menus.



2-2. After completing the Media Scan

- The list of albums is displayed using the album art, and you can play the entire track list for an album.
- You can sort and play music by album, artist, genre, and composer.
- You can search for music by artist and album name.
- You can save your favorite music and albums using the Playlist and Favorite features.

Supplementary Information

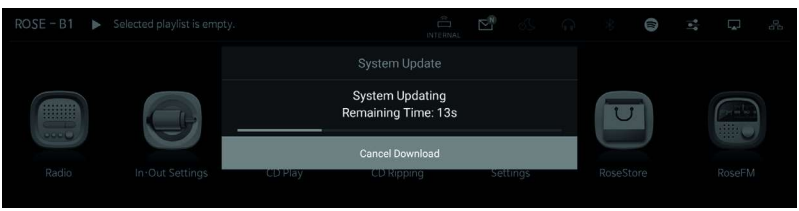
1. Firmware Update

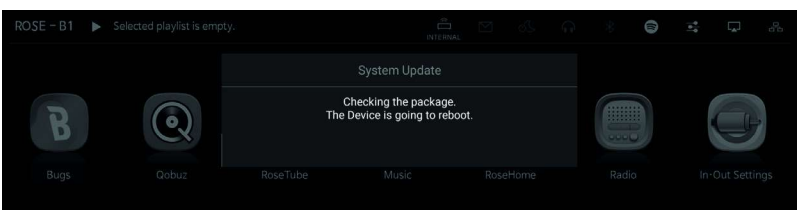
1-1. OTA Update Progress

- The system update pop-up appears when connected to the network if a new update is available.



- If you select the 'Yes' button in the system update pop-up, the OTA update will begin.



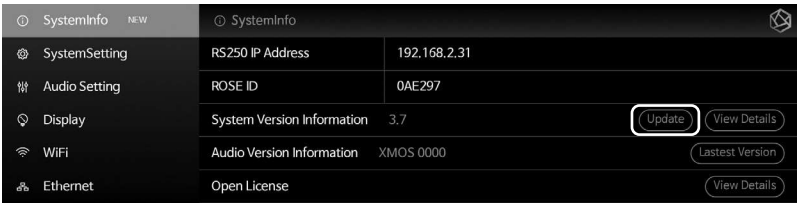


- After rebooting, the SW system update is complete.

⚠ **Caution :** *Forcibly turning off the power during the update may cause problems.*

1-2. Update via the Settings Menu

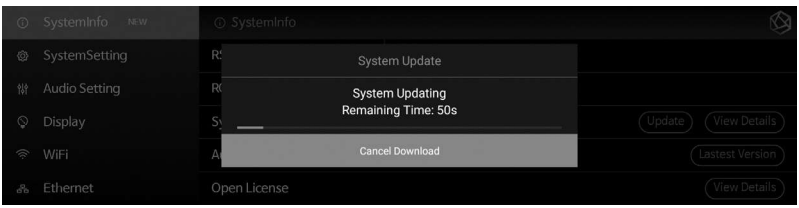
- Whenever a newer version is available, the ‘Update’ button is displayed in the system version information in the Settings menu.



- When you select the update button, the system update pop-up appears.



- If you select the ‘Yes’ button in the system update pop-up, the OTA update will begin.



- After rebooting, the SW system update is complete.

⚠ **Caution :** *Forcibly turning off the power during the update may cause problems.*

1-3. How to install XMOS/Audio MCU when an Update Pop-up Appears

- If the XMOS/Audio MCU update is required after the system update, the update window is automatically displayed and you can proceed with the update.
- Updates can occur in the following cases.

1-3-1. If a XMOS update is required

- After the XMOS update, the system is automatically rebooted.





1-3-2. If an Audio MCU update is required

- After the MCU update, the system is automatically rebooted.



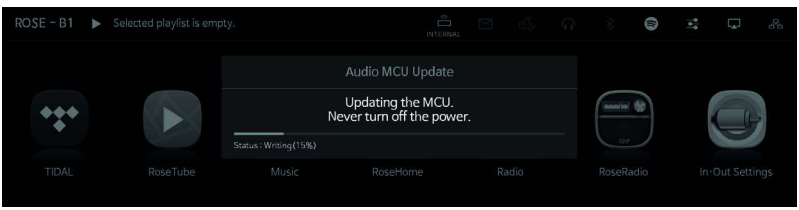


1-3-3. If the XMOS and Audio MCU update are required

- After the XMOS update is complete, the Audio MCU update will automatically proceed and the system is automatically rebooted.



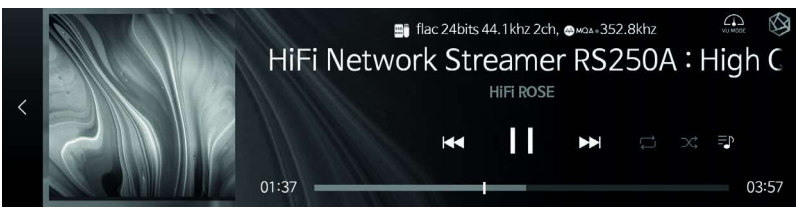




⚠ **Caution :** *Forcibly turning off the power during the update may cause problems. Do not remove power.*

2. MQA (Master Quality Authenticated)

- MQA is an award-winning British technology that delivers the sound of the original master recording. The master MQA file is fully authenticated and is small enough to stream or download.
- RS250A includes MQA technology, which enables you to play back MQA audio files and streams, delivering the sound of the original master recording.
- The green or blue dot next to MQA logo indicates that the unit is decoding and playing an MQA stream or file, and denotes provenance to ensure that the sound is identical to that of the source material. It glows blue to indicate it is playing an MQA Studio file, which has either been approved in the studio by the artist/producer or has been verified by the copyright owner.
- MQA and the Sound Wave Device are registered trade marks of MQA Limited.© 2016



3. Factory Reset

- A Factory Reset is recommended when the product does not work or Internet Firmware Upgrade fails. Upon factory reset, all custom settings, including DB scan data, settings and storage data for each app, apps installed through the ROSE Store, WiFi network settings, shared files, and saved playlists, are reset. Reset is required after a factory reset.
- This product can be reset or restored to its factory settings.
- You can return it to the factory settings by going to Settings - System Settings - Factory Reset.

Product Specifications

1. Specifications

Part		Specifications
OS		Customized Android 7.1
Design	Size	278(W) x 231(D) x 83(H)mm
	Weight	3.2kg
	Display	8.8” TFT LCD & Capacitive Touch Screen (MIPI-DSI)
CPU	Hexa Core CPU	Dual-core Cortex-A72 up to 1.8GHz Quad-core Cortex-A53 up to 1.4GHz
GPU		Mali-T864 GPU, OpenGL ES1.1/2.0/3.0/3.1, OpenVG1.1, OpenCL, DX11
Memory		LPDDR4 4GByte
Network Connection	Ethernet	10/100/1000 BASE-T
	WiFi	802.11 a/b/g/n/ac (2.4GHz/5GHz)
	Bluetooth	V4.0 / V3.0+HS
Audio Service	Streaming	Airplay / DLNA / Roon Ready / Spotify Connect / Bluetooth
	Music Service	TIDAL / Qobuz / Bugs / ROSE Tube / Internet Radio / ROSE Podcast / Apple Music
In/Output	Audio Input	Optical x 1, Coaxial x 1, Analog-In x 1, USB DAC x 1
	Audio Output	Optical x 1, Coaxial x 1, Analog-Out x 1
	Video Output	HDMI 2.0 x 1(up to 3840 x 2160 / 60Hz)
	Media Connection	File System : NTFS / exFAT / FAT32 Network Protocol : SMBv1, SMBv2 / FTP / WebDav Storage Interface : USB3.0 x 2, SATA x 1
Supported Codec	Audio	MQA, WAV, FLAC, AIFF, WMA, MP3, OGG, APE, DFF, DSF, AAC, CDA, AMR, APE, EC3, E-EC3, MID, MPL, MP2, MPC, MPGA, M4A, ALAC PCM : 8kHz~768kHz(8/16/24/32bit per Sample) Native DSD : DSD64(2.8MHz)/DSD128(5.6MHz)/ DSD256(11.2MHz)/ DSD512(22.4MHz)
	Video	ASF, AVI, MKV, MP4, WMV, MPEG-1, MPEG-2, MPEG-4 H.263, H.264, H.265, VC-1, VP9, VP8, MVC, H.264/AVC, Base/Main/High/High10 profile @ level5.1 up to 4Kx2K @ 30fps H.265/HEVC, Main/Main10 profile @ level 5.1 High-tier up to 4Kx2K @ 60fps

Power	Input Voltage	AC100-120, AC220-240V 50/60Hz
	Power Consumption	50W
	Fuse	T3.15AL / 250V
Update		SW update via internet, USB OTA, ROSE Store
Remote Control Feature	Remote Controller	Bluetooth Remote Controller
	Remote App	ROSE Connect (Android, iOS) / Google PlayStore, App Store
Accessory		Power Cord x 1, Bluetooth Remote Controller x 1 (AAA Battery x 2), Manual x 1, SSD Screw x 4

2. Analog Audio Specifications

DAC Chip	
ES9028PRO(ESS) 8-Channel Audio DAC	
Analog In	
Input Impedance	100kΩ
Input Frequency Response	17Hz ~ 80kHz (+/-1dB)
Maimum Input Level(20Hz ~ 20kHz)	Max 2.0Vrms
Preout	
DAC Chip	ES9028PRO x1
Output level	Max 2.2Vrms, Unbalanced
THD	0.00028%(1kHz 2.25Vrms Unbalanced Output)
THD + N	0.0003%(1kHz 2.25Vrms Unbalanced Output)
Signal to Noise Ratio	122dB(A-wt)
Dynamic Range	135dB(CCITT filter)
Stereo Crosstalk	Better than -137dB, 20Hz ~20kHz
Output Impedance	150Ω
Headphone	
Output Power	1Vrms /32Ω(MAX 2Vrms/300Ω)
Output Impedance	16Ω~600Ω
Signal to noise Ratio	108dB (600Ω)
Total Harmonic Distortion	0.006%(600Ω)

Quality Guaranteed

Model Name	RS250A
Date of Purchase	20 Year Month Date
Place of Purchase	Firm Name
	Telephone
Serial No.	
Telephone	
Term of Guarantee	1 Year from the Date of Purchase

- Name of the company that received the Conformity Assessment : Citech Co., Ltd.
- Manufacturer/Country of Manufacturer : Citech Co., Ltd./Korea
- Identification Code of the Certified Company: SYH
- Certification No. : R-R-SYH-250A

Q. The product does not turn on.
- After disconnecting the power cord from the outlet, wait for about 10 seconds, then plug it back in and turn on the power.

Q. Which one should I use, Ethernet or Wi-Fi?
- In an environment where Ethernet connection is possible, using Ethernet will help you enjoy more stable music.

Q. Can I watch the video played on the ROSE device on the TV and listen to the music through a separate speaker?
1. Connect the HDMI port of the ROSE device to the TV.
2. Change the external input of the TV to match the HDMI port of the ROSE device.
3. Connect with the equipment you want to connect (DAC, amplifier, speaker, etc.).
4. Enable the audio output you want to connect in the Input/Output Settings of your ROSE device.

※ The video signal is transmitted via the HDMI cable even if the output is not set to the HDMI port.

5. Play the music and video you want on your ROSE device.
6. When playing music, music information is automatically displayed on your TV.
7. When playing the video, change the TV button on the upper right of the RS250A screen to “ON”.

Q. I logged in from the ROSE device after registering as a member on the Hi-Fi ROSE website, but the message “Member not found” appears.
- For Hi-Fi Rose products, the account used on the Internet homepage and the account used on the ROSE device (or ROSE application) are separate. Please use the device after registering as a member using the ROSE device (or ROSE application).
- How to sign up for membership on ROSE devices: ROSE device > Settings > User Account > Log in > Sign up

How to sign up for membership in RoseConnectPremium: RoseConnectPremium > Settings > My Page > Sign up

Q. The output is fixed to HDMI in the input/output setting of the RS250A, so I can’t change it to another output.
- Turn off the device, unplug the power cord, wait about 10 seconds, and then connect it again.
- If the same problem still occurs after turning the power back on, you can try factory reset. (See page 55.)
- If the problem is not resolved even after factory reset, please contact the distributor in the country where the purchase was made.

Q. I am trying to access the NAS over the network from my ROSE device, but I am getting a “network error”.
- Set the minimum SMB to SMB 1 in the NAS settings.

Q. Can I use the ROSE device as Roon Core?
- The ROSE device is a Roon Ready product but cannot be used as a Roon Core.

Q. I played music, but there is no sound from the device.
- Please check the volume.
- Please check the cable you connected.
- Make sure that the input and output you want to use are enabled in Input/Output Settings of the device.

Q. Do ROSE devices provide an equalizer (EQ)?
- RS250A model does not provide an equalizer.

Q. I can't connect my ROSE device to the RoseConnectPremium application.
- You need to verify that the ROSE device and the smartphone running ROSE application are on the same network. The IP address displayed on the ROSE device and the IP address displayed on the registration screen of the ROSE application must be the same except for the last digit.
E.g. ROSE device > Settings > System Information > IP address > 192.168.2.63
ROSE application > Register ROSE > RoseConnect IP > 192.168.2.89

Check Before Contacting the Service Center

- If touch does not work while using the device, or the screen stops working, you must restart the device. Press and hold the power button for more than 5 seconds to force reboot.
- When the product is used for a long time in a confined space that does not meet the installation conditions (page 20), heat may be generated, which may make the product hot and affect the life and performance of the product.
- When Internet connection is unstable or weak, or when Internet usage is high, sound may be cut off while listening. Also, wireless Internet reception may be delayed or not received due to the nature of wireless communication. Move to another location and try to connect again.
- Content files are optimized according to product characteristics, design standards, and the needs of operators.
- Therefore, even the same content may differ in volume or sound tone from different manufacturers and models.
- Exchange and Return Due to Product Defects
  - For initial defects of the product that occurred without the cause attributable to the consumer within 15 days of receiving the product, if the defect is confirmed by collecting the product, it can be exchanged or returned with a new product.
- Make sure you have a box with a genuine serial number and all accessories. If the box and accessories are damaged or lost, you may not be able to apply for exchange or return.
- Exchange and Return Due to Customer's Change of Mind
  - If the product and accessories are not opened, they can be exchanged or returned within 7 days of receipt.
- For exchange or return requests due to change of mind, please contact the agency where you purchased the product.

Contact Us: https://eng.hifirose.com/QnA

- You can get the phone number and location information of the nearest service center from the Customer Service Center or website.

Product Website: www.hifirose.com

- Get news about the latest events and new product information from ROSE through the newsletter

Memo

Memo