



RSMP

RADIO STREAMER MEDIA PLAYER

LDRSMP

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YOU'VE MADE THE RIGHT CHOICE!

We have designed this product to operate reliably over many years. LD Systems stands for this with its name and many years of experience as a manufacturer of high-quality audio products. Please read this User's Manual carefully, so that you can begin making optimum use of your LD Systems product quickly. You can find more information about **LD SYSTEMS** at our Internet site WWW.LD-SYSTEMS.COM

INFORMATION ON THIS USER'S MANUAL

- Read the safety instructions and the entire manual carefully before using the appliance.
- Observe the warnings on the appliance and in the operating instructions.
- Always keep the operating instructions within reach.
- If you sell or pass on the appliance, be sure to hand over these operating instructions as well, as they are an essential part of the product.

INTENDED USE

The product is a device for professional audio installation! The product has been developed for professional use in the field of audio installation and is not intended for use in households!

Furthermore, this product is intended for installation by qualified persons with specialist knowledge and for operation by instructed persons! The use of the product outside the specified technical data and operating conditions is considered as not intended! Liability for damages and third party damages to persons and property due to non-intended use is excluded!

The product is not suitable for:

- Persons (including children) with limited physical, sensory or mental capabilities or lack of experience and knowledge.
- Children (children must be instructed not to play with the device).

EXPLANATIONS OF TERMS AND SYMBOLS

1. **DANGER:** The word DANGER, possibly in combination with a symbol, indicates an imminently hazardous situation or condition to life and limb.
2. **WARNING:** The word WARNING, possibly in combination with a symbol, indicates potentially hazardous situations or conditions which could endanger life and limb.
3. **CAUTION:** The word CAUTION, possibly in combination with a symbol, is used to indicate situations or conditions that could result in injury.
4. **ATTENTION:** The word ATTENTION, possibly in combination with a symbol, indicates situations or conditions which may lead to damage to property and/or the environment.



This symbol indicates hazards that can cause electric shock.



This symbol indicates danger points or dangerous situations.



This symbol indicates hazards due to hot surfaces.



This symbol indicates hazards due to high volumes.



This symbol indicates a device that does not contain user-replaceable parts.



This symbol indicates supplementary information on the operation of the product.

SAFETY INSTRUCTIONS



DANGER:

1. Do not open or modify the device.
2. If your device no longer functions properly, if liquids or objects have entered the inside of the device, or if the device has been damaged in any other way, switch it off immediately and disconnect it from the power supply. This device may only be repaired by authorized specialists.
3. For devices of protection class 1, the protective conductor must be connected correctly. Never interrupt the protective conductor. Devices of protection class 2 do not have a protective earth conductor.
4. Make sure that live cables are not kinked or otherwise mechanically damaged.
5. Never bypass the device fuse.



WARNING:

1. The device must not be put into operation if it shows obvious damage.
2. The device must only be installed in a **de-energized** state.
3. If the power cable of the device is damaged, the device must not be put into operation.
4. Permanently connected mains cables must only be replaced by a qualified person.



CAUTION:

1. Do not operate the device if it has been exposed to strong temperature fluctuations (for example, after transport). Moisture and condensate could damage the device. Do not switch on the device until it has reached ambient temperature.
2. Make sure that the voltage and frequency of the mains supply match the values indicated on the device. If the device has a voltage selector switch, do not connect the device until it is set correctly. Use only suitable power cords.
3. To completely disconnect the device from the power supply, unplug the power cable or power adapter from the outlet. It is not sufficient to press the on/off switch on the unit.
4. Only replace the fuse with a fuse of the same type and rating indicated on the device.
5. Make sure that suitable measures have been taken against overvoltage (e.g. lightning strike).
6. Observe the specified maximum output current on devices with Power Out connection. Ensure that the total current consumption of all connected devices does not exceed the specified value.
7. Replace pluggable mains cables only with original cables.



DANGER:

1. Choking hazard! Plastic bags and small parts must be kept out of reach of persons (including children) with reduced physical, sensory or mental capabilities.
2. Danger of falling down! Make sure that the device is securely installed and cannot fall down. Only use suitable stands or mountings (especially for fixed installations). Make sure that accessories are properly installed and secured. Make sure that applicable safety regulations are observed.



WARNING:

1. Use the device only in the manner intended.
2. Operate the device only with the accessories recommended and intended by the manufacturer.
3. During installation, observe the safety regulations applicable in your country.
4. After connecting the device, check all cable routes to prevent damage or accidents, e.g. due to tripping hazards.
5. It is essential to observe the specified minimum distance to normally flammable materials! If this is not explicitly stated, the minimum distance is 0.3 m.



CAUTION:

1. In the case of moving components such as mounting brackets or other moving components, there is a possibility of getting jammed.

**CAUTION:**

1. Do not install or operate the unit near any radiators, heat registers, stoves, or other sources of heat. Always ensure that the device is installed in such a way that it is sufficiently cooled and cannot overheat.
2. Do not place ignition sources such as lighted candles near the unit.
3. Ventilation openings must not be covered and fans must not be blocked.
4. Use the original packaging or packaging provided by the manufacturer for transport.
5. Avoid shocks or impacts to the device.
6. Observe the IP protection class as well as the ambient conditions such as temperature and humidity according to the specification.
7. Devices may be subject to continuous development. In case of deviating information on operating conditions, performance or other device characteristics between operating instructions and device labeling, the information on the device always has priority.
8. The device is not suitable for tropical climates and for operation above 2000 m above sea level.
9. Unless explicitly stated, the device is not suitable for operation under marine conditions.

**NOTICE:**

In the case of conversion or retrofit kits or accessories provided by the manufacturer, be sure to follow the enclosed instructions.

**CAUTION HIGH VOLUME AUDIO PRODUCTS!**

This device is intended for professional use. Commercial operation of this device is subject to applicable national regulations and guidelines for accident prevention. Hearing Damage from High Volume and Continuous Exposure: Use of this product may generate high sound pressure levels (SPL) that can cause hearing damage. Avoid exposure to high volume levels.

**SIGNAL TRANSMISSION AND CONTROL VIA RADIO****(E.G. W-DMX OR AUDIO RADIO SYSTEMS, BLUETOOTH):**

The quality and performance of wireless signal transmissions is generally dependent on the environmental conditions.

Influence on the range and signal stability have e.g.:

- Shielding (e.g. masonry, metal buildings, water).
- High radio traffic (e.g. strong W-LAN networks)
- Interference
- Electromagnetic radiation (e.g. LED video walls, dimmers)
- All range specifications refer to free-field application with line-of-sight contact without interference!
- The operation of transmitters is subject to official regulations. These may vary from region to region and must be checked by the operator before commissioning (e.g. radio frequency and transmission power).



WARNING: Devices with wireless signal transmission are not suitable for operation in sensitive areas where radio operation can lead to possible interactions. These include:

- Hospitals, health centers, or other healthcare facilities that provide patient care with specialized personnel and equipment.
- Class I, II and III hazardous areas
- Restricted areas
- Military facilities
- Aircraft or vehicles
- Areas where the use of cell phones is prohibited

**UNITS WITH BATTERY REPLACEMENT PROVIDED BY THE USER (E.G. REMOTE CONTROL)****DANGER:**

Be sure to observe the manufacturer's data sheet for the batteries or rechargeable batteries used!

1. Batteries and rechargeable batteries must be kept out of reach of persons (including children) with reduced physical, sensory or mental capabilities. Danger of suffocation!
2. Avoid strong mechanical impacts on batteries and accumulators! Damage due to falling, smashing or puncturing as well as high pressure leads to fire and explosion hazards as well as the risk of further dangerous situations (e.g. outgassing).
3. Leaking battery fluid is corrosive and can be toxic. It can cause skin and eye irritation and is dangerous if swallowed. Avoid any contact with leaked fluid. In case of contact with leaked liquid, wash the affected area immediately with plenty of water and contact a doctor.
4. Never attempt to charge non-rechargeable batteries. Danger of explosion!
5. Do not throw batteries and rechargeable batteries into a fire! Danger of explosion!
6. Do not short-circuit batteries and rechargeable batteries! Avoid contact of the battery terminals with electrically conductive objects (e.g. key ring or coins).

**ATTENTION:**

1. When inserting batteries and rechargeable batteries, ensure that the polarity is correct (see illustrations in the battery compartment or on the housing).
2. Do not use different cell types and battery brands in the same unit at the same time.
3. Only use batteries and rechargeable batteries with the same discharge status.
4. Check batteries and rechargeable batteries for damage and do not use damaged batteries and rechargeable batteries!

**NOTES FOR INDOOR INSTALLATION EQUIPMENT**

1. Units for installation applications are designed for continuous operation.
2. Units for indoor installation are not weatherproof.
3. Surfaces and plastic parts of installation equipment can also age, e.g. due to UV radiation and temperature fluctuations. This does not usually lead to functional restrictions.
4. with permanently installed units, the deposition of impurities, e.g. dust, is to be expected. Be sure to observe the care instructions.
5. Unless explicitly stated otherwise on the unit, the units are intended for installation heights of less than 5 m.

1. INTRODUCTION

1.1 FEATURES

This guide describes how to use the RSMP Radio Streamer and Media Player, an advanced but easy-to-use Wi-Fi and ethernet connected audio system with the following modes:

- **DAB/DAB+/FM broadcast radio** covering local digital and analogue radio stations
- **Internet Radio** with access to over 20,000 stations, ‚Listen again‘ broadcasts
- **Podcasts** with access to global podcasts
- **Audio streaming** acting as networked audio receiver for streaming services, control via the front panel user interface, Frontier Smart Technologies‘ UNDOK App or the relevant services app: Amazon Music
- **Spotify** acting as networked audio receiver controlled by the Spotify App available for iOS/Android smart devices and a desktop client for PCs
- **Deezer**
- **Bluetooth** – streaming and control from a Bluetooth Smart device
- **Music Player** – allows easy navigation and playback of MP3 music files from a USB stick

RSMP includes also these features:

- Mute circuit in line output to avoid pop noise during Power ON or OFF
- Infrared remote control
- Remote control via Frontier Smart Technologies‘ UNOOK App, available in iOS and Android OS.



Fraunhofer: MPEG-4 HE AAC Audio decoder
MPEG-4 HE-AAC audio coding technology licensed by Fraunhofer IIS.
<http://www.iis.fraunhofer.de/amm/>



The Spotify Software is subject to third party licenses found here:
<https://www.spotify.com/connect/third-party-licenses>
Use your phone, tablet or computer as a remote control for Spotify. Go to [spotify.com/connect](https://www.spotify.com/connect) to learn how.

1.2 PACKAGING CONTENT

Remove the product from the packaging and remove all packaging material. Check that all items are present and notify your distributor immediately after purchase if there are any missing or damaged items. RSMP packaging includes the following items:

- 1x RSMP Radio Streamer Media Player
- 1x IR remote control
- 1x DAB+ / FM antenna
- 1x WiFi antenna
- 1x External power supply unit with interchangeable plugs
- 1 set of terminal blocks
- 1x Mounting set for under-table mounting
- User’s manual

1.3 EXTERNAL RESOURCES

To operate RSMP, the following external resources are needed:

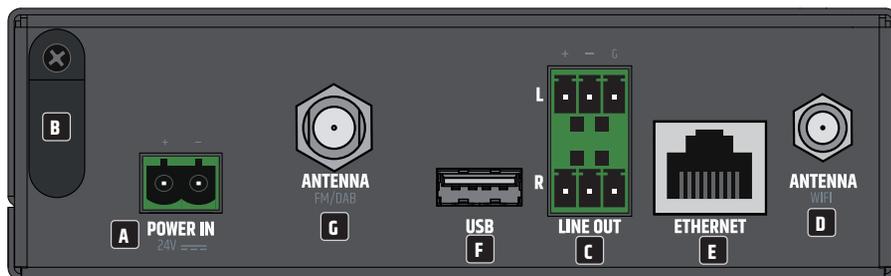
- A power source (100-240 V mains supply)
- A wired (Ethernet) or wireless (Wi-Fi) network (provided through a router) with appropriate permissions and passphrase if necessary.

Note: When using a wired (Ethernet) connection a shielded twisted pair (S/FTP) cable must be used.

Dependent on the operating mode the following resources may also be required:

- Broadband Internet access (for Internet radio and Spotify mode and Internet Software Update)
- An iOS or Android device (for using control apps)
- A USB memory stick (for playback of MP3 audio files in Music Player mode)

2. CONNECTIONS, CONTROLS AND INDICATORS



A POWER IN

Terminal block connection for the power supply of the unit. To avoid damage to the unit, please use only the original power supply unit (power supply unit included in the packaging content).

B CABLE STRAIN RELIEF

Use the strain relief for the flexible cable of the external power supply, to protect the terminal block connection from damage and to prevent the terminal block from being pulled out unintentionally.

C LINE OUT L / R

Analogue audio outputs with balanced terminal block connections. Poles +, - and G are intended for the balanced output signal (suitable for unbalanced cabling). Terminal block connectors are included in the packaging.

D ANTENNA WIFI

Antenna connection for a WiFi antenna (antenna included). The internal WiFi module enables wireless connection to a wireless network for remote control, internet radio and streaming services.

E ETHERNET

Ethernet connection for wired connection to a network for remote control, internet radio and streaming services.

F USB

USB-A socket for connecting a USB storage medium. MP3 audio files stored in a USB stick can be played in Music Player mode.

G ANTENNA FM/DAB

Connection for an FM or DAB radio antenna (antenna included in the packaging). The internal radio module enables analogue and digital radio reception (FM, DAB / DAB+).



H BUTTON STANDBY / ON

With this button, RSMP is put into standby mode or turned on.



The illuminated power symbol indicates the unit status.

Symbol flashes white: Start-up process

Symbol lights up permanently white: Ready for operation

Symbol flashes red: System is turning into standby mode

Symbol lights up permanently red: Standby mode

J INFRARED SENSOR

Infrared sensor for control via IR remote control.

K VOLUME / PUSH TO SELECT

Rotary-push encoder for adjusting the volume and navigating in the unit menu. In menu navigation mode, turn clockwise or anticlockwise to scroll down or up through a menu, list of items or station list. The current item is highlighted in reverse text (dark characters on a light background). Press to select the highlighted item.

L GRAPHIC DISPLAY

Multifunctional graphic LC display with illumination.

M PRESET

Short press for Preset recall menu/ Long press for Preset Save menu; Scroll up/down with the rotary VOLUME encoder to select the preset number, and then push it to confirm. There are 40 presets each for, Internet radio/Podcasts (combined), DAB and FM modes, up to 10 presets for Spotify, and 8 presets for Amazon Music.

N INFO

View more information about the station or track playing. Press again to cycle through further information screens then return to the normal Now playing screen.

O MENU/BACK

Press this button to show the menu for the current mode (Internet radio, FM, etc.) Now navigate to the desired menu item by turning the rotary-push encoder and press the encoder to select the highlighted item. Press MENU/BACK again to go up one level in the menu structure or press and hold for 2 seconds, to get to the main display.

P PLAYER CONTROL

▶|| = Start / Pause

▶▶ = Next: press to select next track or press and hold to scan up (Radio)/ fast forward.

◀◀ = Previous: press to select start of track, previous track, or press and hold to scan down (Radio)/ rewind.

VENTILATION OPENINGS

To prevent damage to the unit, do not cover the ventilation openings on the left and right side, and the top and bottom. And ensure that air can circulate freely.

2.1 SCREENS

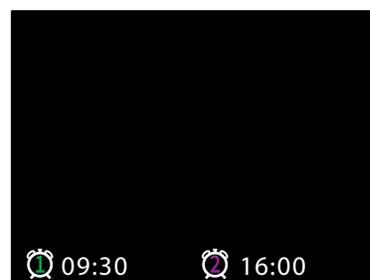
The screen shows various menus, dialogues and displays, as described below.

There are basically six types of screen:

- Standby screen
- Splash screen
- Now playing
- Dialogue
- Error/Information
- Menu

Where there is more text than can be fitted onto a screen, the text automatically scrolls right to left after a brief pause.

The **Standby screen** remains normally in black, but it shows information about any active alarm times.



A **splash screen** is displayed for each mode when using the IR remote control.



Now playing screens show information about the audio source and track now playing, where available.



Dialogue screens are shown to allow the user to change settings.

They vary in complexity from simple Yes/No options up to the scrollable network passphrase input screen.

The selected option is highlighted with a white background.

Dialogue screens mark the currently saved setting with an asterisk (*).



Error/Information screens give specific messages for a few seconds, then change automatically to the next screen.



Menu Screens – for details of menu screens see under Section 4.3 Menu navigation



3. GETTING STARTED/SETUP

RSMP is a sophisticated multi-source media player. To simplify the set up process as much as possible when RSMP is first started a setup wizard helps take you through the basic steps to enable connections with the different audio sources.

The various listening modes have different requirements:

- Internet Radio requires a suitable internet broadband connection (usually via a local wired or wireless network)
- Audio streaming services including: Amazon Music, require connection to a wired or wireless network
- Spotify requires connection to a wired or wireless network connected to the internet
- Deezer requires connection to a wired or wireless network connected to the internet
- DAB/FM requires a DAB/FM broadcast signal via the supplied antenna
- Bluetooth requires a Bluetooth capable smart device
- Music Player requires MP3 music files on a USB memory stick

To start RSMP, connect the unit to a suitable power source using the power supply provided. The unit starts up (there may be a few seconds delay before the display is initialised).

After showing a Starting screen RSMP will normally enter the last used listening mode. The first time RSMP is started (or after being reset to factory settings) the setup wizard is launched automatically.

3.1 SETUP WIZARD

When RSMP is started for the first time, it runs through a setup wizard to configure settings for date/time and network. Once this has finished, the system is ready to use in most modes.

Note: To change these settings later, select **MENU > System settings >** and select the required settings option(s) (see section 5 Settings for further details).

To run the setup wizard again, select **MENU > System settings > Setup wizard**.

The Network settings can be reset later manually running the Network wizard, select **MENU > System settings > Network wizard** (see section 5 Settings for further details).

Select **Yes** to start the setup wizard.

If you choose **No**, a second screen asks if you would like to run the wizard next time RSMP is started; select Yes or No. The system then starts without configuring time/date and network settings and enters the Main Menu.

Note: If power is removed while the wizard is in progress, the wizard will run again next time RSMP is started.

The Setup wizard guides you through the basic setup parameters for Time/Date and Network connection. For details see the relevant settings in section 5 Settings. To change any settings later all setting functions are accessible from the Settings Menu.



3.2 WEB BASED CONFIGURATION

Using PCs, Mac OS and Android smart devices.

ON RSMP

- 1 Ensure RSMP is active, if in Standby or Sleep mode press .
- 2 Ensure RSMP is in Device Setup mode:
 - If RSMP has not already been configured, it enters Device Setup mode automatically on start-up
 - If RSMP has previously been configured and already connected to a network press MENU/BACK > System settings > Network > Clear network settings
This will clear any current network settings and RSMP will automatically enter Device Setup mode.

Note: While configuring the RSMP unit it is recommended that your computer is disconnected from all other networks (both wired and wireless).

In Device Setup mode RSMP is set to act as a micro Access Point (μ AP) and broadcasts its own network name (SSID):

RSMP_XX:XX:XX:XX:XX

Where XX:XX:XX:XX:XX matches the third of four available RSMP module MAC addresses – the mac addresses are sequential with the first MAC address specified on the label attached to the RSMP module.

ON YOUR COMPUTER

- 3 Ensure the Wi-Fi interface of your computer or device is switched on.
- 4 Select the RSMP network: RSMP_XX:XX:XX:XX:XX from your computer's list of available Wi-Fi networks.
- 5 In a Web browser on the computer or device, navigate to the RSMP Web configuration page using the following address:
i. P address 172.24.0.1
- 6 The RSMP Web Configuration page opens.
- 7 Click the Network tab.

LDsystems LD Language: English

Status Network Update Presets Report

Network Connection

Network Type: Ethernet WiFi

Network Setting

DHCP: Enable Disable

Keep network connected: Enable Disable

Cancel Apply

- 8 Select Wi-Fi as the Network Type.
- 9 Click Scan.

LDsystems LD Language: English

Status Network Update Presets Report

Network Connection

Network Type: Ethernet WiFi

Scan

WiFi networks:

- [WPS]BT-77AFZT
- [WPS]BT-FSAC8C
- [WPS]BT-FSAC8C
- [WPS]BT-FJACCJ
- BTWiFi
- BTWiFiX

SSID: BT-77AFZT

WiFi Passphrase: Visible

WiFi Protected Setup: PBC

Network Setting

DHCP: Enable Disable

Keep network connected: Enable Disable

Cancel Apply

- 10 The Wi-Fi Networks list updates to show available Wi-Fi networks.
- 11 Select your preferred network from the Wi-Fi Networks list.
- 12 Type the passphrase (if required) for the network in the Wi-Fi Passphrase box.
- 13 In the DHCP field, Enabled is selected by default to generate network settings automatically. Only select 'Disabled' if you wish to set the following parameters manually:
 - a. IP Address
 - b. Subnet Mask Address
 - c. Gateway Address
 - d. DNS Address.
- 14 Keep network Connected - When disabled the network connection is shut down when not in a network mode. When enabled the network connection is maintained to allow activation/control from network apps.
- 15 Click Apply.
- 16 Click OK to confirm you wish to apply the selected settings. RSMP restarts and connects to the preferred network.
- 17 Setup Complete.

The RSMP unit's wireless network (RSMP_XX:XX:XX:XX:XX !!!) will no longer be available. Reconnect your computer to the same preferred home network as you have just specified for the RSMP unit (this may happen automatically, dependent on the computer set up).

3.3 EMBEDDED WEB PAGES

Once RSMP is connected to your network a web page is available to view status information, log incident reports, manage presets and make limited changes via a web browser, run on a Smart device or PC, connected to your network.

To connect to the web page enter the RSMP unit's IP address into your web browser. To view the IP address, on the RSMP menu system, navigate to: Menu > System Settings > Network > View Settings - IP address, (see section 5.2.3).

3.3.1 NETWORK TAB

From the Network tab, those parameters that can be changed are:

- Friendly name.

3.3.2 PRESET TAB

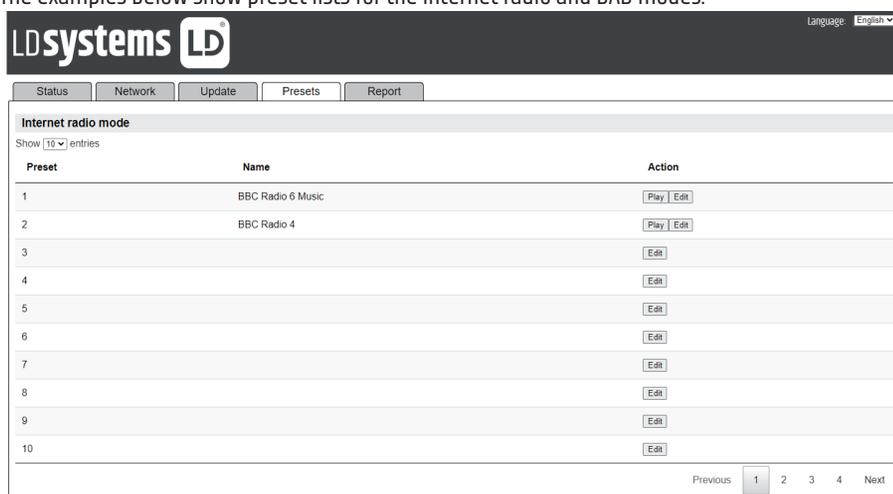
For all modes, existing presets, including those created via the local user interface, are available and can be played from the embedded webpages. Presets for Internet Radio and Podcasts mode can be saved and updated on the embedded web page and are also available from the local user interface.

Note: When storing presets for Internet Radio/Podcasts using the embedded web-page it is possible to store a preset with an empty name - although the play button is not available on the Embedded web-page the blank preset can still be selected from the local User Interface.

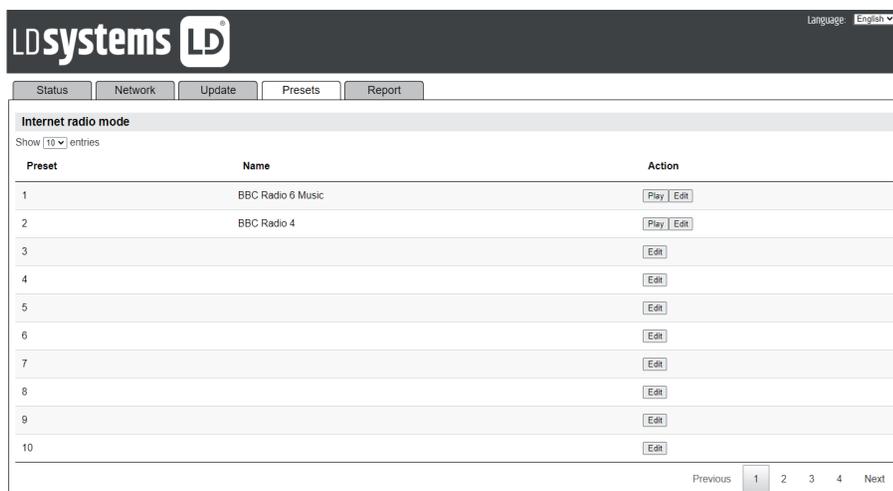
Internet Radio/podcast preset names should only use alphanumeric characters and not include any special characters (!"£\$%^&*()_+, etc.).

Note: The presets displayed on the embedded web page are those for the current mode being used on the RSMP device. Separate preset lists exist for each mode capable of setting presets.

The examples below show preset lists for the Internet radio and DAB modes:



A typical Edit dialogue window appears like this:



3.3.3 REPORT TAB

This tab allows users to store and view incident reports. The reports are generated by using the **Create** button on the Report tab.

Reports contain the following information:

- System information (SW version, platform details, etc.)
- System log
- System Graphs (Audio, CPU, Memory, Network)
- Task Information.

Up to two incident reports can be stored in RAM. When the max number of reports is stored any new reports generated replace the oldest stored report.

Reports are available across power cycles provided the restart time interval is short enough and they are still held in RAM.



4. OPERATION

After the initial setup, RSMP is ready for operating in most Modes.

4.1 MODE SELECTION

To select a Mode press MENU/BACK in the device's front panel, and use the VOLUME/SELECT rotary control to select the Main Menu. Then press it. A list with all modes is displayed. Use again the rotary control to move up or down through the mode options. When the required mode is highlighted press select.

The selected Mode splash screen is displayed. After a brief moment RSMP switches to that mode. If possible the last station or track, previously used in that mode, is selected. If this is not possible, RSMP scans for relevant stations, networks, or prompts the user for appropriate input. See the relevant Mode section for details of how to use each listening mode.

The Common local controls for sound volume, Mute (Volume 0) and Play/Pause are available in all listening modes.

4.2 AUDIO PLAYBACK

The Common local controls for audio playback are available in all listening modes:
The Volume rotary control is turned to increase or decrease the sound volume.

The general track controls are:

Play/Pause **⏮** to start and stop tracks.

The 'Next' and 'Previous' buttons **⏭** and **⏮**:

- To scroll forwards or backwards through a track (Press and hold)
- To skip to the next or previous track in the current playlist (short press).

Note: If part way through a track a short press of the 'Previous' **⏮** button will jump to the beginning of the current track.

4.3 MENU NAVIGATION

The primary controls for moving through menus and options are the MENU button and the rotary- push-encoder VOLUME / PUSH TO SELECT (hereinafter called SELECT). Press MENU/BACK to access the main menu then rotate the control to move up or down a menu. Once the required option or value is highlighted press the encoder. All menus and lists act as loops such that turning the control to go beyond the first or last entry in a menu or list takes you to the opposite end of the menu or list. So going up from the first entry in a menu will take you to the last option in the menu, etc.

A chevron '>' next to a menu option indicates that option leads to a further menu.

To enter the menu tree in a particular mode press **MENU/BACK**.

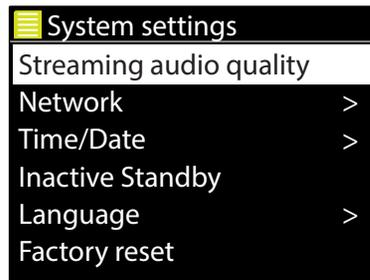
To move back a menu level press **MENU/BACK**.

To exit the menu system, press **MENU/BACK**.
 To move from the Mode menu back to the „Now playing screen“, press **MENU/BACK** for about 2 seconds or press **INFO**.

Each mode has a **Mode menu**, with options specific to that mode. For example, the FM mode menu has two mode specific options: Scan setting and Audio setting.
 In addition, each mode menu has two final options: **System settings >** and **Main menu >**.



The **System settings menu** presents system setting functions to allow the user to setup how the unit behaves. This includes network, time, language and software parameters.

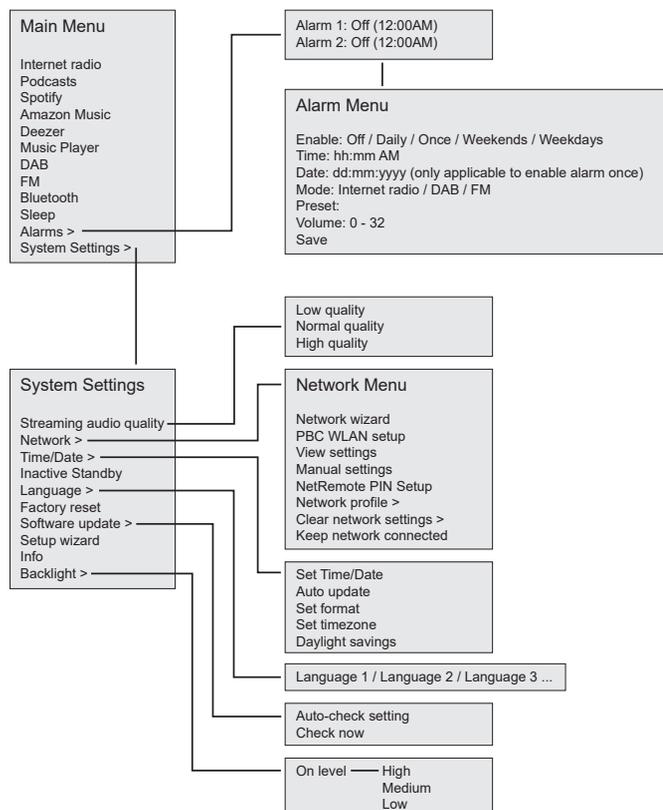


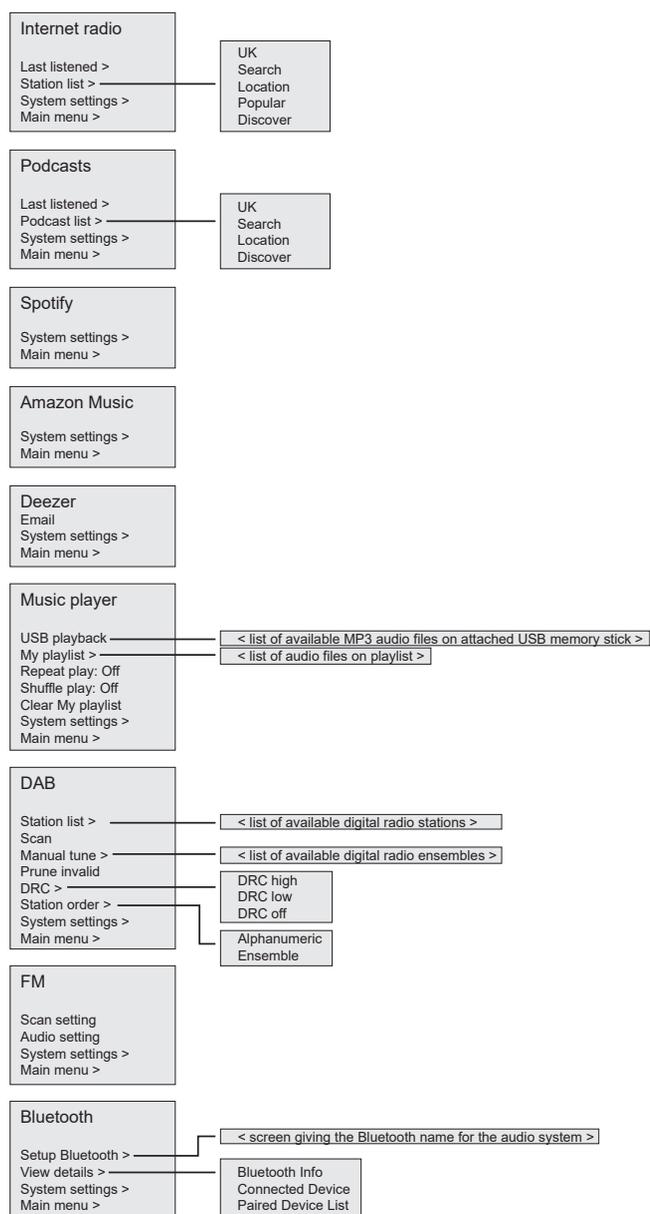
The **Main menu** presents an alternative method for selecting listening modes plus sleep and alarm functions.



Some menus, for example the System settings menu, have several submenus. A menu map for the System Settings and Main menu and for the various listening modes is shown below.

Note: This menu structure may change with software updates.





4.4 TEXT ENTRY

To enter search requests and or passwords, etc. the data entry screen presents all available characters and command functions in a continuous loop. Rotate the **SELECT** control to scroll back and forth through the loop as required. Press **SELECT** to select the currently highlighted character.

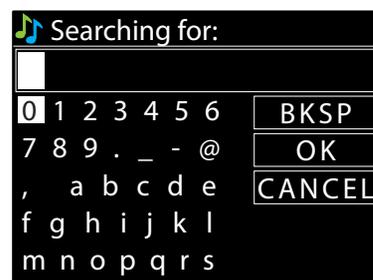
If you make a mistake select the **BKSP** (backspace) option to remove the last character.

When you have finished the word(s), select **OK** to enter the search word(s) or password.

Select **CANCEL** to quit the entry screen.

Note: A short cut is available to reduce the amount of scrolling when selecting commands and characters. Press the **INFO** key to jump to the BKSP (Backspace) command option, from anywhere in the character loop.

To enter a string of characters, select each character in turn. As each character is selected, the key is built up and displayed in the field at the top of the display. The three options - **Backspace**, **OK** and **Cancel** are included in the selection loop. These can be accessed just using the **SELECT** control, or, a short cut is available, press the **INFO** key, to jump to the BKSP (Backspace) option.



4.5 PRESETS

There are up to 40 presets each for, Internet radio/Podcasts (combined), DAB and FM modes Up to 10 presets are available for Spotify, and 8 presets for Amazon Music. Presets are stored in the radio and cannot be accessed from other radios.

To store the current audio source as a preset, press and hold **PRESET** until the display shows the Save preset screen. Select one of the presets to save the currently playing audio source.

To select a preset, press **PRESET** briefly, then select one of the listed preset audio sources. When a preset source is playing, its preset store number ★n (★1, ★2, etc.) is shown in the bottom of the screen.

4.5.1 EMBEDDED WEBPAGE PRESETS

Presets created (as above) using the local user interface can also be accessed via the RSMP embedded webpages. For details of how to access the embedded webpages see section 3.3 Embedded web pages.

The Preset Tab presents a list of station slots for the current listening mode.

For all modes, existing presets, including those created via the local user interface, are available and can be played from the embedded webpages. Presets for Internet Radio and Podcasts mode can be saved and updated on the embedded web page and are also available from the local user interface.

Note: Separate preset lists exist for each mode capable of setting presets.

5. SETTINGS

All the settings parameters for RSMP are available on the Settings menu.

Note: Settings included in the Setup Wizard are indicated with 'wizard'.

Settings menu options:

- Streaming audio quality
- Network – wizard
- Time/Date – wizard
- Inactive Standby
- Language
- Factory Reset
- Software update
- Setup Wizard
- Info
- Backlight

5.1 STREAMING AUDIO QUALITY

- Low quality
- Normal quality
- High quality.

Select the required level of audio quality for the available streaming services. The actual bit rate for each level depends on the service being used.

The currently set quality level is indicated with an asterisk.

5.2 NETWORK

- Network wizard – wizard
- WPS setup
- View settings
- Manual settings
- NetRemote PIN setup
- Network profile
- Clear network settings
- Keep network connected.

RSMP is compatible with all common network protocols and encryption methods, including Wi-Fi Protected Setup (WPS).

To connect RSMP to your network, you need one of the following:

- A wired router and an Ethernet (RJ45 network) cable.

Note: When using a wired (Ethernet) connection a shielded twisted pair (S/FTP) cable must be used.

- A Wi-Fi wireless router, together with passphrase key, if set.

To select a network use either the Network wizard or Manual settings

5.2.1 NETWORK WIZARD

This guides you through the necessary steps to join a network. This is also automatically run as part of the Setup wizard. The screens and options presented will depend on the type of network and network protection used.

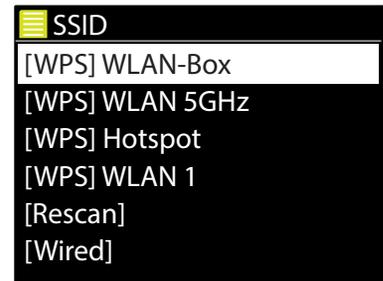
Selecting a network

When the Network wizard is chosen RSMP automatically scans for available wireless networks and presents a list of SSID's (Service Set Identifier) for the networks. Those options starting with WPS in brackets indicate encrypted networks offering Wi-Fi Protected Setup (WPS) options, for further details see under section 5.3.2 WPS setup (Wi-Fi Protected Setup).

RSMP remembers login details for the last four wireless networks it has connected to and will automatically connect to them when they are available. If connection to a network is temporarily lost, RSMP will automatically reconnect.

Wi-Fi network (SSID), select a network from the list.

To connect to a wired network, select **[Wired]**, after ensuring that the Ethernet cable from the wired router is connected to the Ethernet socket of the RSMP.



Open network

If the network is open (non-encrypted), RSMP connects and no further details are required; see On completion below.

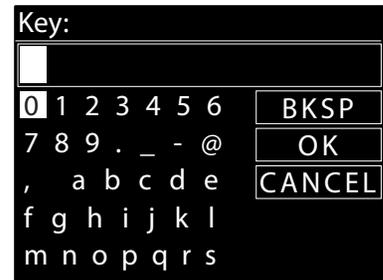
Standard encrypted network

If the wireless network is protected the next screen presents options to enter the network key or passphrase.

Note: The default passphrase for most wireless routers is printed on a label on the router.

Enter the network's key (passphrase), use the **SELECT** control to highlight the next relevant character and press to select each character in turn. As each character is selected, the key is built up and displayed in the field at the top of the display.

The three options - **BKSP**, **OK** and **CANCEL** are included in the selection loop. These can be accessed just using the Select control, or, a short cut is available, pressing the **INFO** key, which moves the selection highlight to the BKSP(BackSpace) option.



On completion

RSMP connects to the selected network.

If connecting fails, RSMP returns to a previous screen to try again. To exit the process use the Back/Menu button



If the network connection is lost, RSMP automatically reconnects.

5.2.2 WPS SETUP (WI-FI PROTECTED SETUP)

WPS encrypted networks are identified by '[WPS]' at the start of the network name, and have two methods of connection. Select one and follow the prompts. When using the network wizard an additional option to Skip WPS is available.

Push Button >

RSMP prompts you to press the connect button on the router and then press the select control.

Pin > (code number)

RSMP generates an 8-digit code number which you enter into the wireless router, access point.

Skip WPS >

Enter key as for a standard encrypted network, above.

RSMP connects to the network, see 'On completion above.

For more information on setting up a WPS encrypted network, see your WPS router's instructions.

5.2.3 VIEW SETTINGS

Displays the settings details for the current network setup, including:

- Active connections
- MAC Address
- DHCP
- SSID
- IP Address
- Subnet mask
- Gateway address
- Primary DNS
- Secondary DNS.

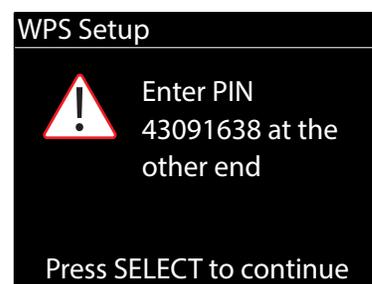
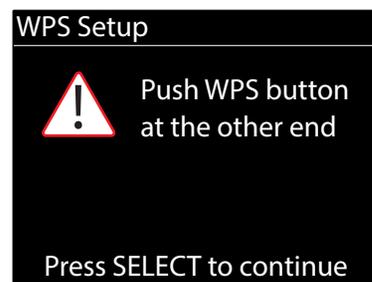
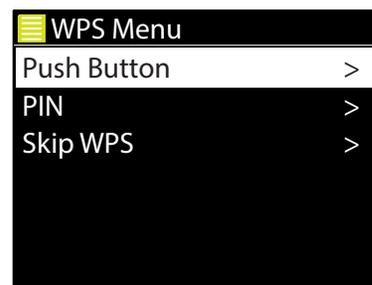
5.2.4 MANUAL SETTINGS

There are also other options for viewing and manually altering network settings from **MENU > System settings > Network >** (for example setting up a wired network). Users experienced with networking may find these options useful for diagnosing and fixing network problems.

- Wired/Wireless
- DHCP enabled/disabled
- SSIP
- Authentication
- Encryption type
- Passphrase/key.

5.2.5 NETREMOTE PIN SETUP

Allows you to define a PIN number to be entered before being able to connect to RSMP remotely over a network.



5.2.6 NETWORK PROFILE

This displays a list of the networks remembered by RSMP (up to a maximum of 4). You can see the list of registered networks through **MENU/BACK > System settings > Network > Network profile >**. From here you can delete unwanted networks by turning and pressing **SELECT** then confirming delete **Yes**.

5.2.7 CLEAR NETWORK SETTINGS

This option will clear current network settings, to allow you to join an alternative network more easily.

5.2.8 KEEP NETWORK CONNECTED

This option allows you to define whether RSMP remains connected to its network in Standby mode and when not in Network radio mode. This is necessary for remote operation.

Note: This option is forced to 'Yes' to keep the network connected if connection is configured using the UNDOK app. Network connection is also forced on when the audio system is part of a multi-room group.

5.3 TIME/DATE

- Set Time/Date
- Auto Update
- Set Format.

5.3.1 SET TIME/DATE (WIZARD)

The date and time are displayed as dd-mm-yyyy and hh:mm AM/PM with the first value, dd, active (flashing).

Adjust each value with the **SELECT** control. As each value is set by pressing the **SELECT** control, the next value becomes active ready for adjustment.

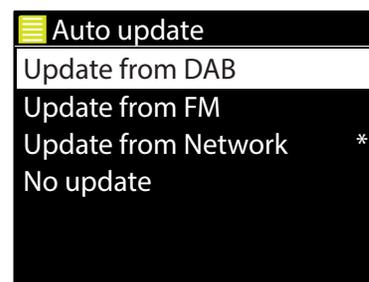


5.3.2 AUTO-UPDATE (FROM DAB, FM OR NETWORK)(WIZARD)

Auto-update works with data sent over DAB, FM or the Internet. The clock is only updated when in a corresponding mode, so it is best to select a mode you use regularly.

DAB and **FM** use time signals broadcast with radio transmissions.

Network uses a time signal sent from the Frontier Smart Technologies Internet radio portal when in any network connected mode.



1. Select **Update from DAB**, **Update from FM**, **Update from Network** or **No update**.
2. If you are updating from the network, set your time zone.
3. If your country uses daylight saving, the automatically updated time from the network may be wrong by one hour. When daylight saving adjustments are in effect, such as British Summer Time (BST), turn on the Daylight savings option to rectify this.

Note: That if you are updating the time from DAB or FM, the Daylight savings option has no effect on the clock's time.

RSMP will auto-update from the selected source when time information is available.

5.3.3 SET FORMAT (WIZARD)

Allows you to change between 12 and 24 hour display.

5.3.4 SET TIMEZONE

Set your country's time zone.

5.3.5 DAYLIGHT SAVINGS

Switch daylight savings „On“ or „Off“.

5.4 INACTIVE STANDBY

Standby is automatically activated after the preset time if no input is made within this period. Set Timeout to „Off“, „2 hours“, „4 hours“, „5 hours“ or „6 hours“.

5.5 LANGUAGE

The default language is English. To change, select **MENU/BACK** > **System settings** > **Language** > then select your language.

5.6 FACTORY RESET

A factory reset resets all user settings to default values, so time/date, network configuration and presets are lost. However, the radio's current software version is maintained. To perform a factory reset, select **MENU/BACK** > System settings > Factory reset Proceed > Yes

5.7 SOFTWARE UPDATE

From time to time, Frontier Smart Technologies, the chip manufacturer, may make software upgrades available with bug fixes and/or additional features. You can either check manually, or set RSMP to check periodically automatically (this is the default). If RSMP detects that newer software is available, it asks if you want to go ahead with an update. If you agree, the new software is then downloaded and installed. After a software upgrade, all user settings are maintained.

CAUTION: Before starting a software upgrade, ensure that RSMP is plugged into a stable mains power connection. Disconnecting power during a software update may permanently damage the unit.

To turn automatic checking on or off, select **MENU/BACK** > **System settings** > **Software update** > **Auto-check setting**.

5.7.1 SOFTWARE UPDATE

To upload new firmware to the RSMP unit manually, identify and note the IP address of the relevant RSMP unit (select **MENU/BACK** > **System settings** > **Network** > **View settings** > **IP address**)

On your computer

1. Ensure the Wi-Fi interface of your computer or device is switched on.
2. In a Web browser on the computer or device, navigate to the RSMP Web configuration page using the IP address identified above.
3. The RSMP Web Configuration page opens:
4. Select the Update tab and browse to the appropriate file location. Select the required firmware file (*.sap.bin) and click on the send button to upload the firmware file to the unit. The display presents information on the progress of the firmware update.
5. When the firmware upload is completed the unit automatically reboots using the new firmware.

5.8 SETUP WIZARD

This allows you to run the Setup wizard at any time. The wizard guides you through the essential settings in the following order:

1. Date/Time – Set format
2. Auto update – select clock update source or No Update
3. Set Time/Date (this step is only needed if the 'No Update' option is selected in Auto update)
4. Network wizard automatically runs (see section 5.2.1 Network).

Once you are connected to a network the wizard is completed.

5.9 INFO

Shows details of the current system Including:

- SW Version: Software version number
- Radio ID: Unique code used to identify this particular radio device
- Friendly name: (name by which the radio is identified on a network).

5.10 BACKLIGHT

For the brightness of the display (On level), High, Medium and Low are available.

6. INTERNET RADIO MODE

RSMP can play thousands of radio stations and podcasts from around the world through a broadband Internet connection.

When you select Internet radio mode, RSMP contacts the Frontier Smart Technologies Internet radio portal to get a list of stations, organised into different categories like Country, and Popular. Once you select a station, RSMP connects directly to that station.

To enter Internet Radio mode select **MENU/BACK > Main menu > Internet Radio**.

Note: The first time Internet Radio mode is selected (or no previous Internet Radio service has been selected), the user is taken directly to the Station list menu to find and select an Internet Radio service.

Note: If the Internet Radio portal server is unavailable, RSMP defaults to the last listened Playable URL for Internet Radio station, or the URL stored in a preset if playing from a preset.

The Common Local controls for sound volume, Mute (Volume 0), Play/Stop and Presets are available.

6.1 INTERNET RADIO MENU

- Last listened
- Station list
- System settings
- Main menu

6.2 LAST LISTENED

Presents a list of (up to) the last ten Internet Radio stations that have been selected.

6.3 STATION LIST

Note: If no previous Internet Radio service has been selected, the Station list menu is automatically presented to find and select an Internet Radio service.

Note: The station list menu is provided from the Internet radio portal, so it is only accessible when RSMP is connected to the Internet. Station lists and submenus will change from time to time.

The Station list is organised into various categories and search facilities:

- <Local area> – dependent on radio device's location, for example: UK
- Search
- Location
- Popular
- Discover

6.3.1 <LOCAL AREA> – DEPENDENT ON RADIO DEVICE'S LOCATION, FOR EXAMPLE: UK

Presents a sub-menu for local area stations. The names and types of categories are dependent on local network information, for example a radio located in the UK would have a main title 'UK' and display, local stations, BBC stations, Genres and/or stations from a specific city.

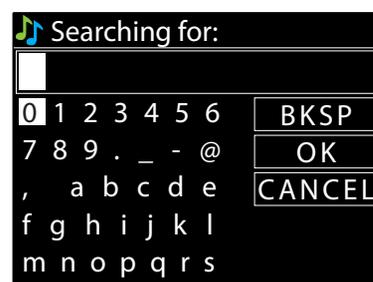
Choose the required category and either a further list of sub-categories is shown, or (if there are no further sub-categories) the available stations for the chosen category are listed.

6.3.2 SEARCH

You can also search through Internet broadcasts for stations with particular keywords in their title.

To search, select **Search**.

Enter a keyword by selecting characters in turn, then **OK**. The search entry screens are similar in operation to the Wi-Fi passphrase entry screen.



Select a broadcast from the list.



6.3.3 LOCATION

To select an Internet broadcast from a particular location, select **Location >**. Select a continent from the menu and a list of countries available is presented, select a country and the available internet radio stations are presented.

Choose a radio station from the list to tune to that station.



6.3.4 POPULAR

Presents a list of the most popular internet stations from around the world.

6.3.5 DISCOVER

Allows you to select from a list of stations defined by either their origin (Country), Genre (style of music) or language. Navigate through the category options, once you have made your selection a screen confirms your selected category and the number of stations within that category. To see the list, select the option showing the number of available stations.

6.4 NOW PLAYING INFORMATION

While the stream is playing, the screen shows its name and description. If artist and track information is available, this is also shown. To view further information, press **INFO**.

Each time you press **INFO**, another set of information is displayed, cycling through the following details:

- Slogan (default; where available)
- Language/Location
- Codec and sampling rate
- Playback buffer
- Today's Date.

6.5 PRESETS

Internet Radio presets can be created, played and updated via the local user interface or Embedded web pages. For details see section 4.5 Presets.

7. PODCASTS

RSMP can play thousands of podcasts from around the world through a broadband Internet connection.

When you select Podcast mode, RSMP contacts the Frontier Smart Technologies Podcast portal to get a list of available podcasts. Once you select a podcast, RSMP connects directly to that podcast source.

To enter Podcast mode, select **MENU/BACK > Main menu > Podcasts**.

Note: The first time Podcast mode is selected (or no previous Podcast service has been selected), the user is taken directly to the Podcast list menu to find and select a Podcast service.

Note: If the Podcast portal server is unavailable, RSMP defaults to the last listened Playable URL for Podcasts, or the URL stored in a preset if playing from a preset

The Common local controls for sound volume, Mute (Volume 0), Play/Pause and Presets are available.

7.1 PODCASTS MENU

- Last listened
- Podcast list
- System settings
- Main menu

7.2 LAST LISTENED

Presents a list of (up to) the last ten Podcasts that have been selected.

7.3 PODCAST LIST

Note: If no previous Internet Radio service has been selected, the Podcast menu is automatically presented to find and select an Internet Radio service.

Note: The podcast list is provided from the Podcast portal, so it is only accessible when RSMP is connected to the Internet. Podcast lists and submenus may change from time to time.

The Podcast list is organised into various categories and search facilities:

- <Local area> – dependent on radio device's location, for example: UK
- Search
- Location
- Discover

7.3.1 <LOCAL AREA> – DEPENDENT ON RADIO DEVICE'S LOCATION, FOR EXAMPLE: UK

Presents a sub-menu for local area stations. The names and types of categories are dependent on local network information, for example a radio located in the UK would have a main title 'UK' and present a sub-menu to search for podcasts using a variety of categories, for example, Comedy of the week, Books and Authors, Popular, etc.

Choose the required category and either a further list of sub-categories is shown, or (if there are no further sub-categories) the available podcasts for the chosen category are listed.

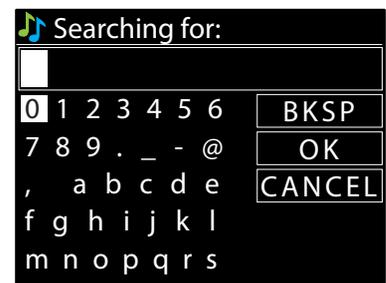
7.3.2 SEARCH

You can also search through podcasts with particular keywords in their title.

To search, select **Search**.

Enter a keyword by selecting characters in turn, then **OK**. The search entry screens are similar in operation to the Wi-Fi passphrase entry screen.

Select a broadcast from the list.



7.3.3 LOCATION

To select an podcast from a particular location, select **Location >**.

Select a continent from the menu and a list of countries available is presented, select a country and the available podcasts are presented.

Choose a podcast from the list to tune to that podcast.

7.3.4 DISCOVER

Allows you to select from a list of podcasts defined by either their origin (Country), Genre (style of music) or language. Navigate through the category options, once you have made your selection a screen confirms your selected category and the number of podcasts within that category. To see the list, select the option showing the number of available podcasts.

7.4 PRESETS

Podcast presets can be created, played and updated via the local user interface or Embedded web pages. For details see section 4.5 Presets.

8. SPOTIFY

RSMP is compatible with Spotify allowing a RSMP unit to act as a wireless receiver controlled by the Spotify App.

Use your phone, tablet or computer as a remote control for Spotify. Go to spotify.com/connect to learn how.

Note: Ensure RSMP has the Keep Network Connected option turned On, see section 5.2.8 Keep network connected. This will enable Spotify streaming to the RSMP unit when in sleep or a non network mode (DAB/FM).

When Spotify mode is selected, on a RSMP, before a connection with a Spotify App is established, the message: 'Use your phone, tablet or computer, as a remote control for Spotify. Go to spotify.com/connect to learn how' is displayed as scrolling text.

8.1 CONTROL FROM RSMP

You can change volume, play/pause the audio and jump forwards and backwards through your playlist.

Changes made on the RSMP are reflected on the Spotify App and vice versa.

8.2 INFO

Pressing the **INFO** button on the RSMP cycles through extra information in the following sequence: Artist – Album – Streaming data – Playback buffercapacity

8.3 INFO MESSAGES

Messages are displayed on the RSMP when appropriate to show the current play status. For example: should the audio stream from Spotify Connect be interrupted or stopped (for example: when the audio playback is moved by the Spotify app to a different audio speaker or the smart device itself.) the message 'Press Play...' is displayed. Shuffle and Repeat icons are also displayed when appropriate along the bottom of the screen.

9 AMAZON MUSIC

Amazon Music streaming service is available on RSMP.

Note: A subscription account for the relevant service is required.

RSMP is compatible with a wide variety of streaming services allowing RSMP units to act as wireless speakers playing tracks selected from the appropriate service. This can be controlled directly on the RSMP, or, using the Frontier Smart Technologies UNDOK app.

9.1 LOG IN FROM RSMP

Login to Amazon Music service is not available via the RSMP interface and must be performed via the UNDOK App.

Once connected the service's menu is presented or the 'Now Playing' screen giving details of the currently playing track. To access the service menu(s) from the Now Playing screen, press the **MENU/BACK** button.

Note: Press the **MENU/BACK** button to display the RSMP main menu, this allow you to select another service or change settings of the RSMP unit.

To close the RSMP main menu press the **MENU/BACK** button.

9.2 CONTROL FROM RSMP

The normal audio playback controls are available to change volume, play/pause the audio and jump forwards and backwards through your playlists (see section 4.2 for details).

Changes made on the RSMP are reflected on the UNDOK app (or relevant service app) and vice versa.

Tracks, playlists and other programmes and categories available from the selected streaming service can be selected using the service menu which reflects the organisation and categories used in the selected service.

To access the service menu from the 'Now Playing screen press the **MENU/BACK** button.

9.3 SERVICE MENUS

The Service menus on the RSMP and the UNDOK app reflect the organisation and terminology of the relevant streaming service. For details of how to use the streaming service of your choice visit the relevant services website.

9.3.1 ACCESS THE RELEVANT STREAMING SERVICE MENU

If no track is currently playing the service menu is displayed automatically. To access the service menu from the 'Now Playing' screen press the **MENU/BACK** button.

9.3.2 ADDITIONAL ACTIONS

While a track or menu item is highlighted in the service menu tree, press and hold the **SELECT** control to show a contextual menu, if available.

Note: The contextual menus are not available from the 'Now playing' screen. The contextual menu will offer Actions that can be performed on the menu item/track. For example: Pressing **SELECT** while a track name is highlighted will show: • Add to playlist.

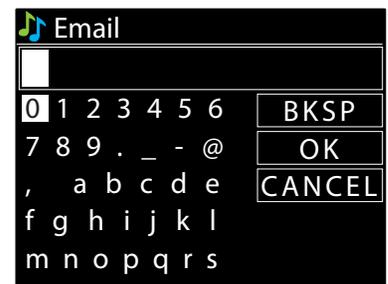
10. DEEZER

10.1 LOG IN FROM RSMP

Please use your Deezer email and password to log in.

Use the **SELECT** control to highlight the next relevant character and press to select each character in turn. As each character is selected, the email (resp. password) is built up and displayed in the field at the top of the display.

The three options – **BKSP**, **OK** and **CANCEL** are included in the selection loop. These can be accessed just using the Select control, or, a short cut is available, pressing the **INFO** key, which moves the selection highlight to the BKSP (BackSpace) option.



11. MUSIC PLAYER (USB)

Music player mode plays MP3 audio files from a USB Flash drive. To enter Music player mode, select **MENU/BACK > Main menu > Music player**.



11.1 USB PLAYBACK

To play audio from a USB mass-storage device such as a USB Flash stick, Select **USB playback**.

Browsing folders

From this point on, menus are generated from the folders on the USB device. Browse folders with the **SELECT** control and **MENU/BACK** button. The display shows folder and file names (not necessarily track names).

Once you have found a track that you want to play, press **SELECT**. A short press plays the track immediately.

A long press (at any time while the track is displayed or playing) adds the track to My playlist. You can also add entire folders to My playlist.

Viewing track metadata

While a track is playing, you can view extra information about it (metadata) by pressing **INFO**. Each time you press **INFO**, a different item of metadata is displayed.

11.2 MY PLAYLIST

RSMP holds a queue of up to 200 tracks in My playlist. To manage the playlist, select **My playlist**.

- To view the playlist, scroll through it by turning **SELECT** USB tracks show their file name.
- To play the playlist from a certain track, highlight the track and short press **SELECT**.
- To erase a track from the playlist, long press **SELECT** then confirm YES.

Note: tracks are added to My Playlist by browsing your available tracks through the USB playback menu option, highlight the track(s) you wish to add and long pressing **SELECT**.

To clear the entire 'My playlist' select the Clear My playlist option from the Music Player menu. The playlist is preserved during standby.

11.3 REPEAT/SHUFFLE

You can repeat tracks or play them in random order by selecting **Repeat play** „On“ / „Off“ and **Shuffle play** „On“ / „Off“.

11.4 NOW PLAYING INFORMATION

While a track is playing, the screen shows its file name. There is also a progress bar with figures for elapsed and total track time. At the bottom of the screen, an icon indicates USB as the audio source. To view further information, press **INFO**. Each time you press **INFO**, another set of information is displayed, cycling through:

playback progress bar (default), artist, album, folder, full file path, bit rate/codec type/sampling rate, playback buffer bar, today's date

12. DAB RADIO MODE

DAB radio mode receives DAB/DAB+ digital radio and displays information about the station, stream and track playing.

To enter DAB mode select **MENU/BACK > Main menu > DAB**.

The DAB radio mode menu offers the following options:

- Station list
- Scan
- Manual tune
(displays the signal strength for selected channel)
- Prune invalid
- DRC
- Station order
- System Settings
- Main Menu



12.1 STATION LIST

The first time you select DAB radio mode, or if the station list is empty, RSMP automatically performs a full scan to see what stations are available. You may also need to start a scan manually to update the list of stations for one of the following reasons:

- Available stations change from time to time
- If reception was not good for the original scan (for example the antenna was not up), this may result in an empty or incomplete list of available stations
- If you have poor reception of some stations (burbling), you may wish to list only stations with good signal strength

A question mark before a station in a list indicates that the station is currently unavailable. Depending on the cause of the loss of signal this may be only temporary.

Stations that are unlikely to be available again (for example you have moved out of the broadcast range of a station), can be removed from the station list.

12.1.1 SCAN FOR STATIONS

To start a scan manually, select **> Scan**.

Once the scan is complete, the radio shows a list of available stations.

The Manual tune menu option allows the user to select a particular channel and display the signal strength for that channel.

12.1.2 REMOVE STATIONS FROM LIST

To remove stations that are listed but unavailable, select Menu **> Prune invalid**.

12.1.3 SELECTING STATIONS

To listen to or change a station, turn the **SELECT** control, a list of stations from which you can select is presented. Stations listed with a '?' question mark in front of them are not available.

Once selected, the station plays and the screen shows 'Now playing' information about the station, track or show broadcast by the station.

Alternatively, pressing either the **▶▶** and **◀◀** keys, jumps to the next station up or down in the station list.

12.2 PRESETS

DAB presets can be created and updated, via the local user interface and can be played via the local user interface or Embedded web pages. For details see section 4.5 Presets.

12.3 NOW PLAYING INFORMATION

While the stream is playing, the screen shows its name and DLS (Dynamic Label Segment) information broadcast by the station giving real-time information such as programme name, track title and contact details. Stereo broadcasts are indicated with an icon at the top of the screen. To view further information, press **INFO**.

Each time you press **INFO**, another set of information is displayed, cycling through DLS text, programme type, ensemble name/frequency, signal strength/error rate, bit rate/codec/channels, today's date and DL Plus (if available).

12.4 SLIDESHOW

When slideshow is available (dependent on the broadcasted signal), the images are displayed on the left side of the screen. To cycle through the different display options (thumbnail, slide with DLS text and full screen slide) press the **SELECT** control.

12.5 SETTINGS

12.5.1 DYNAMIC RANGE COMPRESSION (DRC)

Some DAB broadcasts offer dynamic range compression (DRC). This feature allows radios to compress the dynamic range of the output audio stream, so that the volume of quiet sounds is increased, and the volume of loud sounds is reduced. This can be useful if you are listening to music with a high dynamic range in a noisy environment (for example, classical music while cooking).

To change the DRC setting for RSMP, select **DRC**, and then **DRC high**, **DRC low** or **DRC off**.

Note: RSMP's DRC setting does not have any effect if DRC data is not included in the broadcast.

12.5.2 STATION ORDER

You can choose the order of the DAB station list to be either Alphanumeric, Ensemble or Valid.

Ensemble lists groups of stations that are broadcast together on the same ensemble, for example BBC or South Wales local.

Valid lists valid stations first, alphanumerically, then off-air stations.

To change station order, select **Station order** > then **Alphanumeric**, **Ensemble** or **Valid**.

13. FM RADIO MODE

FM radio mode receives analogue radio from the FM band and displays RDS (Radio Data System) information about the station and show (where broadcast).

To enter FM Radio mode select **MENU/BACK** > **Main menu** > **FM**.

The FM radio mode menu offers the following options:

- Scan Settings
- Audio Settings
- System Settings
- Main Menu

13.1 SELECTING STATIONS

To find a station, press **SELECT**. The frequency display starts to run up as RSMP scans the FM band. Alternatively, you can scan up or down by pressing and holding the **▶▶** or **◀◀** buttons or tune manually with quick presses.

Note: Scanning can be set to search for strong signals only, (see 12.3 Settings below)

13.2 PRESETS

FM presets can be created and updated, via the local user interface and can be played via the local user interface or Embedded web pages. For details see section 4.5 Presets.

13.3 NOW PLAYING INFORMATION

While an FM station is playing, the screen shows one of the two following sets of data:

- If RDS information is available, by default the service name (i.e. station name) is displayed. You can cycle through further RDS information by pressing **INFO**. Each time you press **INFO**, another set of information is displayed, cycling through RDS radio text, RDS programme type, frequency and today's date.
- If no RDS information is available, the currently tuned frequency is shown.



13.4 SETTINGS

Scan settings

By default, FM scans stop at any available station. This may result in a poor signal-to-noise ratio (hiss) from weak stations. To change the scan settings to stop only at stations with good signal strength, select **Scan setting > Strong stations only? > Yes**.

Audio settings

By default, all stereo stations are reproduced in stereo. For weak stations, this may result in a poor signal-to-noise ratio (hiss). To play weak stations in mono, select **Audio setting > FM weak reception: Listen in mono only > Yes**.

14. BLUETOOTH

Bluetooth mode allows Bluetooth devices to pair with the RSMP Audio system, stream music and displays information about the track playing.

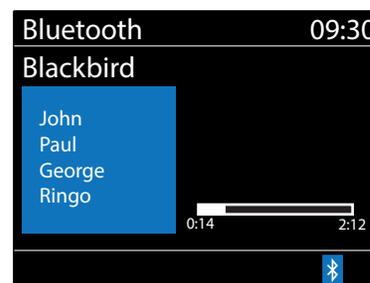
To enter Bluetooth Audio mode select

Menu > Main menu > Bluetooth.

The Bluetooth Audio menu offers the following options:

- Setup Bluetooth
- View Details
- System Settings
- Main Menu.

Note: iOS 13 (or later) devices connected via Bluetooth technology are capable of sending Album artwork, associated with the track currently being streamed to the RSMP device, for display on the screen of the RSMP device.



14.1 TO PAIR A BLUETOOTH DEVICE WITH THE RSMP AUDIO SYSTEM

In Bluetooth mode, on your RSMP audio system press **Menu > Setup Bluetooth**, this puts the RSMP into discoverable mode. The screen shows the Bluetooth name of the audio System.

On your Bluetooth smart device, make sure you Bluetooth is on and scan for devices select the RSMP audio system from the list of available Bluetooth devices.

14.2 TO SWITCH TO ANOTHER PAIRED BLUETOOTH DEVICE

In Bluetooth mode, on the RSMP select **Menu > View details > Paired Device List** then select the required device from the list.

14.3 CONTROL FROM RSMP

While in Bluetooth mode you can pause, play, jump to next track and jump to previous track (in the playlist on the controlling Bluetooth device) using the buttons available on the RSMP audio system.

14.4 BLUETOOTH CONNECTION DETAILS

For information on the current state of the Bluetooth connection and paired Bluetooth devices, in Bluetooth mode, select **> View details**

The menu offers the following options:

Bluetooth Info – information on the current state and version of the Bluetooth connection on the RSMP audio system.

Connected Device – details of the currently connected Bluetooth device

Paired Device List – list of up to eight devices that are paired with the RSMP audio system.

15. ALARMS AND SLEEP

As well as a clock/calendar, there are two versatile wake-up alarms and a sleep function to turn the system off after a set period. Each alarm can be set to start in a particular mode.

To set the clock/calendar, see section 5.3



15.1 SLEEP

To set the sleep timer, select **MENU/BACK** > **Main menu** > **Sleep** and select from the sleep time options (Sleep OFF, 15 MINS, 30 MINS, 45 MINS or 60 MINS). Once you select a sleep period, the system returns to the main menu. Press **Menu** to return to the Now playing screen.

On the Now Playing screen the remaining sleep time is displayed at the bottom of the screen.

To cancel a sleep time, select Sleep OFF from the sleep options.

Set sleep time

30 minutes

Note: A sleep time is automatically cancelled if RSMP is put into Standby.

15.2 ALARMS

To set or change an alarm, select **MENU/BACK** > **Main menu** > **Alarms**.

Select the alarm number (1 or 2) then configure the following parameters:

- **Enable:** Off, Daily, Once, Weekends or Weekdays
- **Time:** 12:00AM (adjust as necessary)
- **Date:** 01-01-2022 (adjust as necessary - this option is usually hidden and only required if 'Once' is selected in the Enable field)
- **Mode:** Internet radio, DAB, or FM
- **Preset:** Last listened or 1 - 10
- **Volume:** 0 - 32.

To save these settings and set the alarm, scroll down and select **Save**.



Note: If you press **MENU/BACK** to exit the Alarm settings without saving, a dialogue screen is displayed asking if you wish to save the changes or not. The Now Playing screen shows active set alarms with an icon at the bottom left. The Standby screen shows active set alarms with an icon and the alarm time.

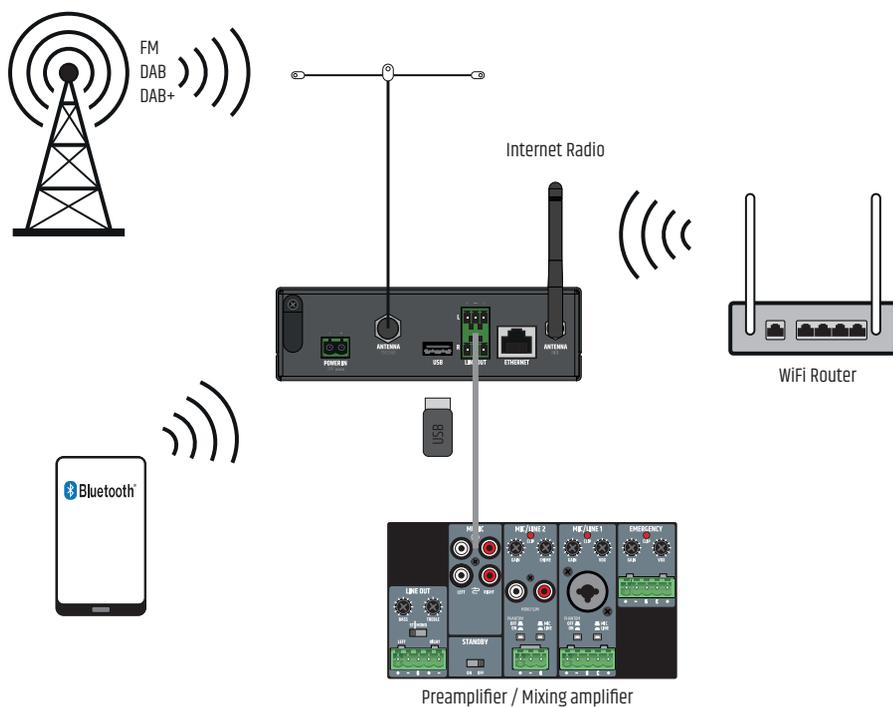
16. INFRARED REMOTE CONTROLE



	Standby	Activate and deactivate standby mode
	MODE	Cycle through the modes: Internet radio -> Podcasts -> Spotify -> Amazon Music -> Deezer -> Music player -> DAB -> FM -> Bluetooth
	Preset	Recall preset 1 to 5 on the current audio mode (short press). Store the current station/track on preset 1 - 5 (long press).
	SHIFT	Press shift and then a preset number to recall presets 6 to 10 on the current audio mode. Example: then press briefly = preset 9. Press and hold shift, and then press a preset number to save the current track/station to presets 6 to 10. Example: then long press = preset 8.

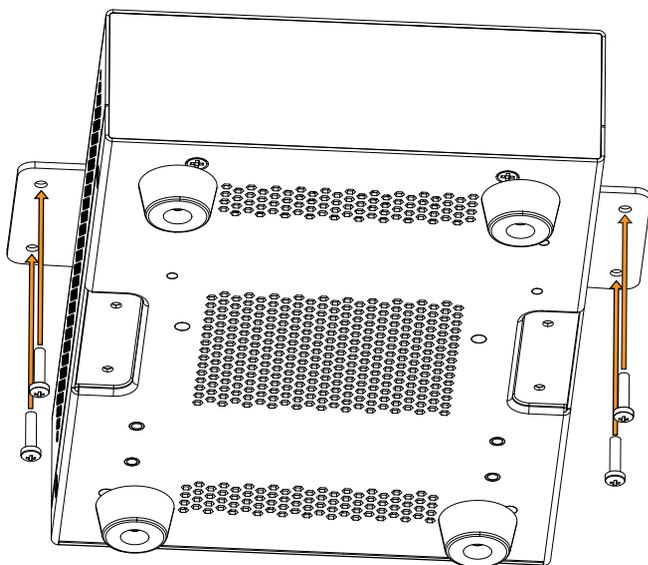
	Preset list	Press for Preset recall menu. Press and hold for Preset save menu on the current audio mode. Select a preset with and , confirm with or . Back with or .
	MENU	Press to enter the menu of the current audio mode. Press again to show Now Playing screen.
	INFO	Press to view more information about the station or track playing. Repeat press to cycle through further information screens.
	Arrow up / down	Scroll up/ down through a menu or station list.
	SELECT / Arrow right	Confirm selection. SELECT: FM radio: Automatic station search
	BACK / Arrow left	Back
	SHUFFLE	Music player: Shuffle
	Pause / Play	Music player: pause track / continue track
	Stop	Music player: Stop playback
	Repeat	Music player: Repeat current track
	Plus / Minus	Raise / lower volume
	Mute	Mute / unmute outputs
	Back	Skip to the beginning or previous file / track / chapter / station. FM radio: Set frequency manually.
	Forward	Skip to the end or to the next file / title / chapter / station. FM radio: Set frequency manually.
	Music player	Fast rewind
	Music player	Fast forward

17. CABLING EXAMPLE



18. UNDER / ON-TABLE MOUNTING

There are two recesses on the top and bottom of the enclosure, each with two M3 threaded holes, for mounting underneath or on top of the table. Screw the two enclosed mounting plates to the top or bottom side using the enclosed M3 countersunk screws. Now the amplifier can be fixed in the desired position (see illustration, fixing screws not included). For tabletop mounting, the four rubber feet must be removed beforehand.



19. CARE, MAINTENANCE AND REPAIR

To ensure the proper functioning of the device in the long term, it must be cared for regularly and serviced as required. The care and maintenance requirements depend on the intensity of use and environment.

We generally recommend a visual inspection before each start-up. Furthermore, we recommend carrying out all the maintenance measures listed below every 500 operating hours or, in the case of less intensive use, after one year at the latest. Defects due to insufficient care may result in limitations of the warranty claims.

MAINTENANCE (user performable)



WARNING! Prior to any maintenance measures, the voltage supply and, if possible, all device connections must be disconnected.



NOTE! Improper maintenance may impair the device or even destroy it.

1. Housing surfaces must be cleaned with a clean, damp cloth. Make sure that no moisture can penetrate the device.
2. Air inlets and outlets must be regularly cleaned of dust and dirt. If compressed air is used, care must be taken to prevent damage to the unit (e.g. fans must be blocked for this case).
3. Cables and plug contacts must be cleaned regularly and freed from dust and dirt.
4. In general, no cleaning agents, disinfectants or agents with an abrasive effect may be used for maintenance, otherwise the surface finish may be impaired. Especially solvents, such as alcohol, can impair the function of the housing seals.
5. Devices must generally be stored in a dry place and protected from dust and dirt.

MAINTENANCE AND REPAIR (by qualified personnel only)



DANGER! There are live components in the device. Even after disconnection from the mains, residual voltage may still be present in the device, e.g. due to charged capacitors.



NOTE! There are no assemblies in the device that require maintenance by the user.



NOTE! Maintenance and repair work may only be carried out by qualified personnel authorized by the manufacturer. In case of doubt, contact the manufacturer.



NOTE! Improperly performed maintenance work may affect the warranty claim.

20. TROUBLESHOOTING AND ERROR MESSAGES

20.1 ERROR MESSAGES

Message	Description	Example
Failed to connect	Correct key entered, but router rejects request	MAC filtering enabled on router
Format error	Cannot recognize file format – independent of network	Received .MP3, but found that the stream wasn't MP3 when trying to decode
Network error	Problem past router – incorrect data being received from network	Data obtained from server is unreadable.
Network not ready	Problem with connection to router	Router switched off
Network timeout	Problem past router – no response being received from network	Streaming IR station and suddenly station becomes unavailable
Service not available (DAB)	No DAB reception	
Update failed	Software upgrade failed	
Waiting for Users	Spotify mode – No Spotify account credentials available on the RSMP audio system. Connect to the audio system using a Spotify Connect account.	
'Press Play...'	Spotify mode – Waiting for playback information; for example, when the audio playback is moved by the Spotify app to a different audio speaker or the smart device itself.	

20.2 TROUBLESHOOTING

Problem	Cause	Solutions
Cannot connect to network	Network down	Check that network is working between a computer and the router
	Router restricts access to listed MAC addresses	Obtain the RSMP MAC address from Menu > System settings > Network > View settings and add to router list. Note: RSMP has separate MAC addresses for wired and wireless networks; only the current network adaptor method address is displayed, but the other address can be obtained by changing the first pair of digits between '00' (wireless) and '02' (wired)
	Insufficient Wi-Fi signal strength	Check distance to router; see if a computer can connect to the network in this location
	Unknown encryption method	Change encryption method on router. RSMP supports WEP, WPA and WPA2
Cannot connect to Internet	Unusual network configuration	Setup network manually through Menu > System settings > Network > Manual settings
	Firewall preventing access	Check the following ports are open on the router: UDP and TCP ports 80 and 123; DNS port 53. Windows shares: ports 135 – 139 and 445. Windows Media Player: varies – non-Microsoft firewalls may require configuration for UPnP.
	Internet connection down	Check that Internet is working for a computer connected to the same network
Cannot play particular Internet radio station	Firewall preventing access	Check the following ports are open: UDP and TCP ports 80 and 123; DNS port 53. Some Internet radio stations may require additional ports to be opened.
	Station not broadcasting, overloaded or insufficient bandwidth. Station broadcasting using unknown codec. Link out of date.	Try other stations; try listening on computer via Internet radio portal website; try later.

21. GLOSSARY

DAB	Digital Audio Broadcasting
DLS	Dynamic Label Segment – short text information broadcast with DAB audio
FM	Frequency Modulation
RDS	Radio Data System
UI	User Interface
WLAN	Wireless Local Area Network

22. TECHNICAL DATA

Item number	LDRSMP
Product type	Installation Media Player source
Audio modes	USB Player (.mp3), Audio Streaming services, Internet Radio, DAB/DAB+, FM Radio, Bluetooth Audio Receiver
Line outputs	1 Balanced stereo
Cooling system	Convection cooling
USB Player	
Media Formats	.mp3
Audio Streaming	
Media Formats	MP3, MP4 AAC
Services	Spotify Connect, Amazon Music, Deezer
Presets	10 for Spotify and 8 for Amazon Music
Internet Radio	
Media Formats	MP3, ADTS(HE-AAC v2)
Presets	40
Digital Radio	
Radio Standards	DAB, DAB+, DLS Decoding
Presets	40
FM Radio	
Transmission Type	FM Stereo
Presets	40
RDS (Radio Data System)	Yes
RF Band	EU 87.5 - 108MHz
Music input - BT	
THD+N	< 0.2%
Frequency response	20 Hz - 20 kHz (-1 dB)
Bluetooth interface	5.0
Line Output	
Outputs	Stereo Balanced Line Level
Connector	2x 3-pin Terminal block, pitch 3.81mm
Max. output Level	13dBu
Frequency response	20 Hz - 20 kHz (-1dB)
THD+N	< 0,05% @ 1kHz
Output Noise Level	< -105 dBu / A-Weighted
Network Connection	
Connector (Wired)	RJ45
Wireless	Wi-Fi 802.11a/b/g/n - WEP, WPA, WPA2 security
Remote Control	
Transmission Type	Infrared
Battery type	1x CR 2025
Display	
Type	2,4" TFT Colour 320 x 240
Power Supply	
Type	SMPS
Voltage Range	100 VAC - 240 VAC (+10%), 50-60 Hz
Mains Connector	EU, USA, UK, Australia
Power Supply Secondary	24VDC / 500mA
Max power consumption	4 W
Idle power consumption	0.03 W (PSU Secondary unloaded)
Standby power consumption	< 2,5 W
General	
Material	Steel chassis, Plastic Front panel
Dimensions (W x H x D)	143 x 54 x 235 mm (height with rubber feet)

Item number	LDRSMP
Rack Unit /mounting	1 RU - 1/3 19"
Weight	0,9 kg
Operating Temperature	0°C - 40°C
Operating Humidity (non condensing)	< 85%
Included Accessories	External power supply with interchangeable plugs, Mounting plates for surface mount applications, IR Remote control, FM/DAB antenna, Wifi antenna

23. DISPOSAL



PACKAGING:

1. Packaging can be disposed of via the usual waste disposal channels.
2. Please separate the packaging according to the waste disposal and materials regulations in your country.



DEVICE:

1. This device is subject to the European Directive on Waste Electrical and Electronic Equipment in its applicable version. WEEE Directive Waste Electrical and Electronical Equipment. Old devices and batteries do not belong in household waste. The old device or batteries must be disposed of via an approved waste disposal service or a municipal waste disposal facility. Follow the directives in your country!
2. Follow the disposal laws in your country.
3. As a private customer, you can obtain information on environmentally friendly disposal options from the retailer from whom you purchased the product or from the relevant regional authorities.



BATTERIES AND RECHARGEABLE BATTERIES:

1. Batteries and rechargeable batteries do not belong in household waste. Batteries and rechargeable batteries must be disposed of via an authorised disposal company or a municipal disposal facility.
2. Observe all disposal laws and regulations applicable in your country.
3. As a private customer, you can obtain information on environmentally friendly disposal options from the dealer from whom the product was purchased or from the relevant regional authorities.
4. Appliances with batteries or accumulators that cannot be removed by the user must be handed in at a collection point for electrical appliances.

24. MANUFACTURER'S DECLARATIONS

MANUFACTURER'S WARRANTY & LIMITATIONS OF LIABILITY

Adam Hall GmbH, Adam-Hall-Str. 1, D-61267 Neu Anspach / E-mail Info@adamhall.com / +49 (0)6081 / 9419-0. Our current warranty conditions and limitation of liability can be found at: https://cdn-shop.adamhall.com/media/pdf/MANUFACTURERS-DECLARATIONS_LD_SYSTEMS.pdf
Contact your sales partner for service.

UKCA- CONFORMITY

Hereby, Adam Hall Ltd. declares that this product meets the following guidelines (where applicable)
Electrical Equipment (Safety) Regulations 2016
Electromagnetic Compatibility Regulations 2016 (SI 2016/1091)
The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulation 2012 (SI 2012/3032)
Radio Equipment Regulations 2017(SI 2016/2015)

UKCA- DECLARATION OF CONFORMITY

Products that are subject to Electrical Equipment(Safety)Regulation 2016, EMC Regulation 2016 or RoHS Regulation can be requested at info@adamhall.com. Products that are subject to the Radio Equipments Regulations 2017 (SI2017/1206) can be downloaded from www.adamhall.com/compliance/

FCC STATEMENT

1. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
 - (1) This device may not cause harmful interference, and
 - (2) This device must accept any interference received, including interference that may cause undesired operation.
2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

SUBJECT TO MISPRINTS AND ERRORS, AS WELL AS TECHNICAL OR OTHER MODIFICATIONS!

