



MP2 media player



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1 General information

This user manual contains important information on the safe operation of the device. Read and follow all safety notes and all instructions. Save this manual for future reference. Make sure that it is available to all persons using this device. If you sell the device to another user, be sure that they also receive this manual.

Our products and user manuals are subject to a process of continuous development. We therefore reserve the right to make changes without notice. Please refer to the latest version of the user manual which is ready for download under www.thomann.de.

1.1 Further information

On our website (www.thomann.de) you will find lots of further information and details on the following points:

Download	This manual is also available as PDF file for you to download.
Keyword search	Use the search function in the electronic version to find the topics of interest for you quickly.
Online guides	Our online guides provide detailed information on technical basics and terms.
Personal consultation	For personal consultation please contact our technical hotline.
Service	If you have any problems with the device the customer service will gladly assist you.

1.2 Notational conventions

This manual uses the following notational conventions:

Letterings

The letterings for connectors and controls are marked by square brackets and italics.

Examples: *[VOLUME]* control, *[Mono]* button.

Displays

Texts and values displayed on the device are marked by quotation marks and italics.

Examples: '24ch', 'OFF'.

Instructions

The individual steps of an instruction are numbered consecutively. The result of a step is indented and highlighted by an arrow.



Example:

1. ➤ Switch on the device.
2. ➤ Press *[Auto]*.
⇒ Automatic operation is started.
3. ➤ Switch off the device.

1.3 Symbols and signal words

In this section you will find an overview of the meaning of symbols and signal words that are used in this manual.

Signal word	Meaning
DANGER!	This combination of symbol and signal word indicates an immediate dangerous situation that will result in death or serious injury if it is not avoided.
CAUTION!	This combination of symbol and signal word indicates a possible dangerous situation that can result in minor injury if it is not avoided.
NOTICE!	This combination of symbol and signal word indicates a possible dangerous situation that can result in material and environmental damage if it is not avoided.

Warning signs	Type of danger
	Warning – high-voltage.
	Warning – danger zone.

2 Safety instructions

Intended use

This device is intended to playback audio files. Use the device only as described in this user manual. Any other use or use under other operating conditions is considered to be improper and may result in personal injury or property damage. No liability will be assumed for damages resulting from improper use.

This device may be used only by persons with sufficient physical, sensorial, and intellectual abilities and having corresponding knowledge and experience. Other persons may use this device only if they are supervised or instructed by a person who is responsible for their safety.

Safety



DANGER!

Danger for children

Ensure that plastic bags, packaging, etc. are disposed of properly and are not within reach of babies and young children. Choking hazard! Ensure that children do not detach any small parts (e.g. knobs or the like) from the unit. They could swallow the pieces and choke! Never let children unattended use electrical devices.



DANGER!

Electric shock caused by high voltages inside

Within the device there are areas where high voltages may be present. Never remove any covers. There are no user-serviceable parts inside.



DANGER!

Electric shock caused by short-circuit

Always use proper ready-made insulated mains cabling (power cord) with a protective contact plug. Do not modify the mains cable or the plug. Failure to do so could result in electric shock/death or fire. If in doubt, seek advice from a registered electrician.



CAUTION!

Possible hearing damage

With loudspeakers or headphones connected, the device can produce volume levels that may cause temporary or permanent hearing impairment. Do not operate the device permanently at a high volume level. Decrease the volume level immediately if you experience ringing in your ears or hearing impairment.



NOTICE!

Risk of fire

Do not cover the device nor any ventilation slots. Do not place the device near any direct heat source. Keep the device away from naked flames.



NOTICE!

Operating conditions

This device has been designed for indoor use only. To prevent damage, never expose the device to any liquid or moisture. Avoid direct sunlight, heavy dirt, and strong vibrations.



NOTICE!

Power supply

Before connecting the device, ensure that the input voltage (AC outlet) matches the voltage rating of the device and that the AC outlet is protected by a residual current circuit breaker. Failure to do so could result in damage to the device and possibly injure the user. Unplug the device before electrical storms occur and when it is unused for long periods of time to reduce the risk of electric shock or fire.

- **NOTICE!**
Possible damage due to installation of a wrong fuse
The use of different types of fuses can cause serious damage to the unit. Fire hazard! Only fuses of the same type may be used.
- **NOTICE!**
Risk of fire due to incorrect polarity
Incorrectly inserted batteries may destroy the device or the batteries. Ensure that proper polarity is observed when inserting batteries.
- **NOTICE!**
Possible damage by leaking batteries
Leaking batteries can cause permanent damage to the device. Take batteries out of the device if it is not going to be used for a longer period.
- **NOTICE!**
Possible staining
The plasticiser contained in the rubber feet of this product may possibly react with the coating of your parquet, linoleum, laminate or PVC floor and after some time cause permanent dark stains. In case of doubt, do not put the rubber feet directly on the floor, but use felt-pad floor protectors or a carpet.
- **NOTICE!**
Radio interference
This device emits electromagnetic signals. This can cause interference due to overlapping radio waves. Do not use the device in locations where the use of wireless devices is prohibited.

3 Features

This media player is suitable for use in clubs, bars, night clubs and on stages.

Special features of the device:

- Internet radio with access to over 20,000 stations, radio programmes and podcasts
- Digital radio (DAB / DAB +) with a large number of channels and digital sound quality
- FM with RDS (Radio Data System)
- Media player for easy navigation and playback of music files from USB medium or network library
- Playback formats: AAC/AAC+, MP3, FLAC, WMA, WAV
- Playback option of files from a PC (DMR mode)
- Connection of external audio sources (e.g. MP3 player)
- Large display for easy operation with plain text information, with up to six text lines
- Infrared remote control (included)
- Clock with automatic update function and two independent alarms
- Sleep / snooze function
- Multiple network profiles for easy setup
- 13 languages available for operation
- max. USB (2.0) medium size: 128 GB
- Connections: RS232, RJ45, USB, RCA, XLR plug, FM antenna, screw terminal block (13.2 V $\overleftrightarrow{\text{---}}$)
- WIFI (2.4 GHz and 5 GHz, PIF antenna, compatible with IEEE 802.11 b/g/a/n)
- Headphones output
- 19" rack housing (1 RU)

4 Installation

Unpack and carefully check that there is no transportation damage before using the unit. Keep the equipment packaging. To fully protect the device against vibration, dust and moisture during transportation or storage use the original packaging or your own packaging material suitable for transport or storage, respectively.

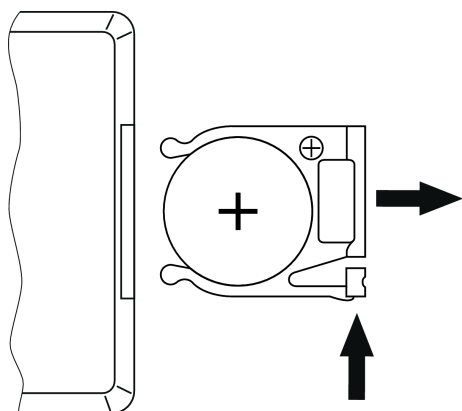
Establish all connections as long as the unit is switched off. Use the shortest possible high-quality cables for all connections.

Rack mounting

The unit has been designed for rack mounting in a standard 19-inch rack; it occupies one rack unit.

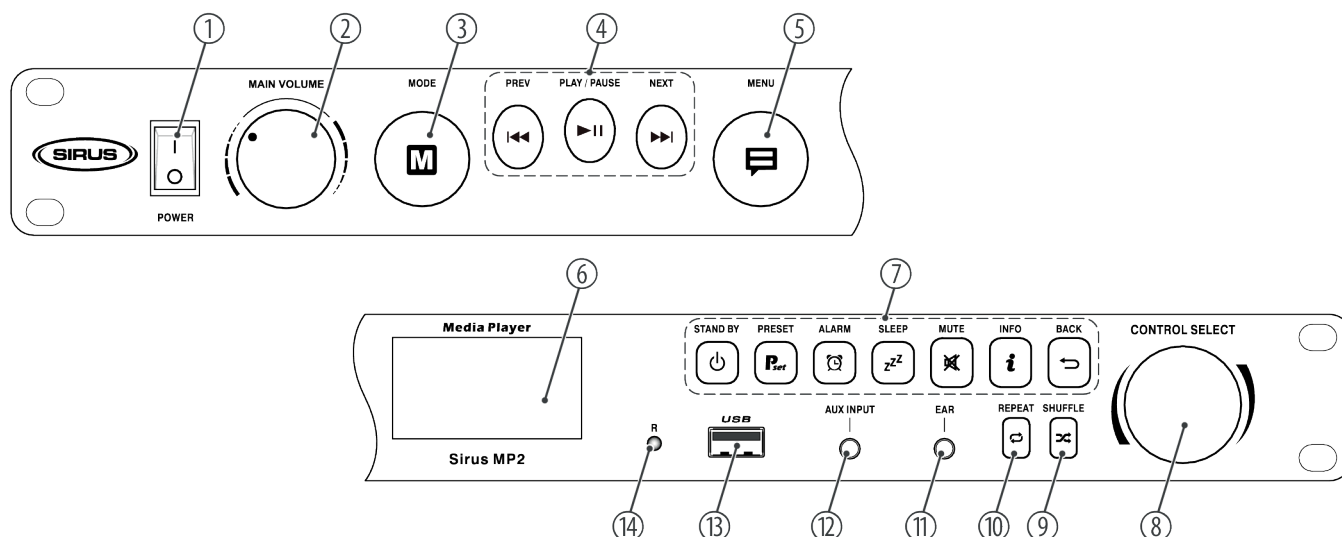
Insert the battery into the remote control

Push the lock of the battery holder towards the centre of the housing and pull out the battery holder like a drawer. Insert the battery. The battery is correct, if the positive pole points to the housing bottom of the remote control. Slide the battery holder back into the remote until it clicks into place.



5 Connections and operating elements

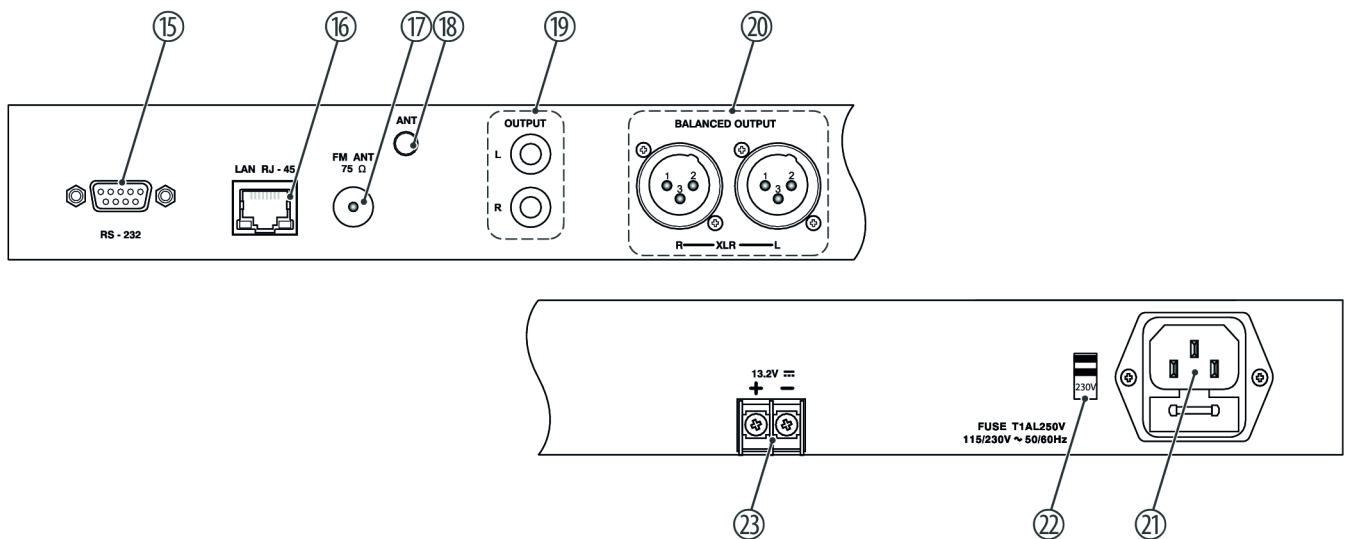
Front panel



1	[POWER]	Main switch to turn the device on and off
2	[MAIN VOLUME]	Rotary control for adjusting the volume
3	[MODE]	Button for mode selection
4	⏮	Skip back to the previous track / page
	⏸	Start or resume playback / pause
	⏭	Skip to the next track. Keep pressed for scanning / fast forward
5	[MENU]	Opens the menu of the currently set mode
6	Display	
7	[STAND BY]	Activates or deactivates the standby mode (display of time and date). Turns the sleep function off.
	[PRESET]	<p>Calls up preset stations or stores stations in memory locations.</p> <p>Hold down [PRESET] until the display shows 'Save preset'. Select one of the 10 memory locations to save the radio station currently being played.</p> <p>Briefly press [PRESET] and then select one of the listed radio stations. If a stored radio station is played, the display below shows the memory location (display shows 'P1' ... 'P10').</p> <p>There are 10 memory locations each for Internet radio, DAB and FM.</p>
	[ALARM]	Activates the alarm, turns the alarm off when it sounds, and toggles between the two alarms in standby.
	[SLEEP]	<p>At playback: Switches to standby after the set duration.</p> <p>When the alarm sounds: switches to snooze for an set duration.</p>

	[MUTE]	Mutes or unmutes
	[INFO]	Displays additional information about the radio station or the track being played. Press repeatedly [INFO] to see more information on the display. Automatically switches back to the 'Now Playing' display.
	[BACK]	Back to the previous page
8	[CONTROL SELECT]	Turn [CONTROL SELECT] to select a menu item and press [CONTROL SELECT] to confirm.
9	[SHUFFLE]	Plays the tracks in random order
10	[REPEAT]	Repeats tracks
11	[EAR]	Connection for headphones, designed as 3.5 mm mini jack socket
12	[AUX INPUT]	Connection for audio sources (e.g. MP3 player), designed as 3.5 mm mini jack socket
13	[USB]	USB port
14	[R]	Sensor for receiving remote control signals. When using the remote control, point it at the device. Do not place any objects in front of the device in this area and do not stick any stickers over the sensor, otherwise the remote control will be obstructed.

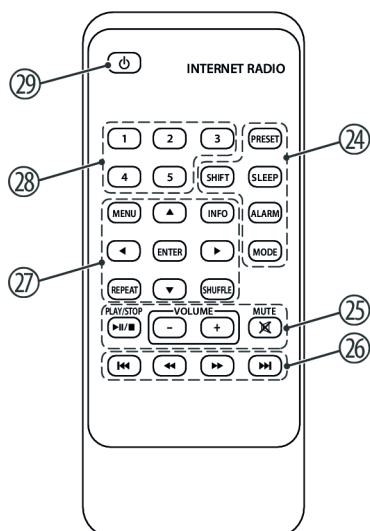
Rear panel



15	[RS - 232]	9-pin serial interface
16	[LAN RJ - 45]	Connection for Ethernet cable for connection to a network
17	[FM ANT 75 Ω]	Connection for antenna cable
18	[ANT]	PIF antenna for WIFI
19	[OUTPUT] / [L] / [R]	Unbalanced RCA output. Here you can connect e.g. the line input of a mixer, amplifier or similar device using an RCA cable.

20	[BALANCED OUTPUT]	Balanced XLR output. Here you can connect e.g. the line input of a mixer, amplifier or similar device using XLR cables.
21	IEC chassis plug for the power supply. Connect the device to a grounded power outlet using the supplied power cord.	
22	Sliding switch to toggle the supply voltage	
23	[13.2V]	Screw terminal block for the alternative power supply with 13.2 DC.

Remote control



24	[PRESET]	<p>Calls up preset stations or stores stations in memory locations.</p> <p>Hold down [PRESET] until the display shows 'Save preset'. Select one of the 10 memory locations to save the radio station currently being played.</p> <p>Briefly press [PRESET] and then select one of the listed radio stations. If a stored radio station is played, the display below shows the memory location (display shows 'P1' ... 'P10').</p> <p>There are 10 memory locations each for Internet radio, DAB and FM.</p>
	[SHIFT]	Selection of presets 6 to 10. Press [SHIFT] and then one of the number buttons [1] to [5] to select locations 6 to 10.
	[SLEEP]	<p>At playback: Switches to standby after the set duration.</p> <p>When the alarm sounds: switches to snooze for an set duration.</p>
	[ALARM]	Activates the alarm, turns the alarm off when it sounds, and toggles between the two alarms in standby.
	[MODE]	Button for mode selection
25	[PLAY / STOP]	Start playback / pause / stop playback
	[VOLUME] / [-] / [+]	Volume control buttons
	[MUTE] / [speaker icon]	Mutes or unmutes
26	[skip back]	Skip back to the previous track / page
	[scan backward]	Scan / search backward
	[scan forward]	Scan / search forward
	[skip forward]	Skip to the next track
27	[MENU]	Opens the menu of the currently set mode
	[up arrow]	Up in menu or list
	[INFO]	Displays additional information about the radio station or the track being played. Press repeatedly [INFO] to see more information on the display. Automatically switches back to the 'Now Playing' display.

	◀	Back to the previous page
	[ENTER]	Confirms the selection
	▶	Confirms the selection
	[REPEAT]	Repeats tracks
	▼	Down in menu or list
	[SHUFFLE]	Plays the tracks in random order
28	Calling up or saving presets	
	[1]	Location 1 or 6
	[2]	Location 2 or 7
	[3]	Location 3 or 8
	[4]	Location 4 or 9
	[5]	Location 5 or 10
29	⏻	Activates or deactivates the standby mode (display of time and date). Turns the sleep function off.

5.1 Display types

There are six display types:

- Standby (clock)
- Start screen (mode)
- Playback
- Dialogue
- Error / information
- Menu

If the text is too long and is not fully displayed, the display shows the upper part first. After a few seconds, the display scrolls up so you can read the rest of the text.

Standby



In standby mode, the time, date and active alarms are displayed.

Start screen



In each mode, a start screen is displayed after it is called up. The last radio station or track selected in the respective mode is then played. If this is not possible, the device tries to establish a connection to the last radio station or network selected or prompts you to enter corresponding input.

Playback



The display shows information about the audio source and the track being played, if available.

Dialogue



The display shows dialogues so that you can change settings. These can be simple yes-no queries or complex display, e.g. for entering a network key. The selected option is displayed with a white background. The current setting is marked with an asterisk.

Error / information



The display shows special messages for a few seconds and then automatically returns to the previous display.

Menus



Turn [CONTROL SELECT] to select a menu item and press [CONTROL SELECT] to confirm. A scroll bar on the right edge of the display means that there are more options than can be shown on the display.

Each mode has its own menu with specific options for the mode. In addition, each mode menu also contains the two final options 'System settings >' and 'Main Menu >'. The '>' indicates that there is a submenu for this menu item.

The 'System settings >' menu allows access to system settings and information such as network, time, language and software update.

The ('Main menu') allows access to all modes and the sleep and alarm functions.

6 Setup

6.1 Setup wizard

When the device is switched on for the first time, a setup wizard is started to set the date and time as well as the network connection. The device is then ready for use.

In the ('System settings') you can change these settings at any time and also restart the setup wizard.



1. ➤ Choose 'YES' to start the setup wizard.
2. ➤ If you select 'NO', the subsequent display asks whether you want to start the setup wizard the next time you turn on the device.
 - ⇒ The system starts without configuring the time and date or the network settings and displays the main menu.



If the device is disconnected from the power supply before the setup wizard has finished, it will start again the next time the device is switched on.

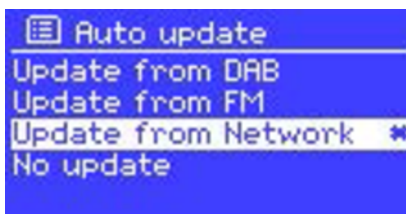
6.1.1 12 / 24 hour display

- Choose 'Set 12/24 hour' and then select the desired option to display the time in 12 or 24 hour mode.

6.1.2 Time / Date

Time and date can be entered manually or updated automatically. With the automatic update, time and date are automatically synchronized with external clocks.

Automatic update



The automatic update takes place via DAB, FM or the Internet. Select the mode you normally use for the clock to be updated. DAB and FM use the time signals transmitted via the radio stations. In network mode, the time signal of the "Frontier Silicon Internet" radio portal is used as soon as the device is connected via a network.

1. ➤ Select one of the displayed options.
2. ➤ Select your time zone when updating over the network.

3. ➤ If there is a daylight saving time change in your country, the time updated via the network may differ by one hour. To correct this, enable the 'Daylight savings' option during winter time.



When updating via DAB or FM, the 'Daylight savings' option has no effect.

The time of the device is updated using the set source as soon as a time signal is received.

Manual setting



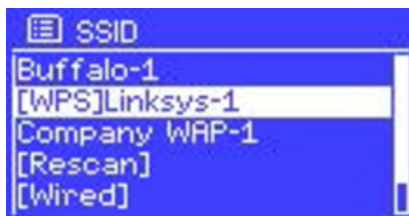
After selecting the 'No update' option, the setup wizard will prompt you to enter the time and date manually.

Date and time are displayed in 'TT-MM-JJJJ' and 'SS:MM AM/PM' format, with the first value 'TT' flashing. Adjust each value with [CONTROL SELECT]. When a value has been set, the next value to be entered flashes.

6.1.3 Network

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

To connect your device to the network, you need a wired router and an Ethernet cable (RJ45 network) or a WIFI router with the associated network key, if applicable.



1. ➤ Under 'WLAN region/country > Wi-Fi network (SSID)', select one of the networks displayed. The four most recently connected WiFi networks are saved. In the system settings you can view the list, remove networks or view the network properties, e.g. to troubleshoot network problems.
2. ➤ To connect to a wired network, ensure that the router is connected to the device's RJ45 socket using an Ethernet cable and select 'Wired'.
 - ⇒ If the network is open (not encrypted), the device will be connected immediately.

Network encrypted as standard



1. ➤ Use [CONTROL SELECT] to enter the network key by placing the cursor on the respective character and pressing the rotary switch.
 - ⇒ Each character entered is displayed in the bar above.
2. ➤ Use 'BKSP', 'OK' and 'CANCEL' to delete the selected characters from right to left.

WPS encrypted network



When networks are WPS-encrypted, the network name begins with WPS. The connection can be made in three different ways:



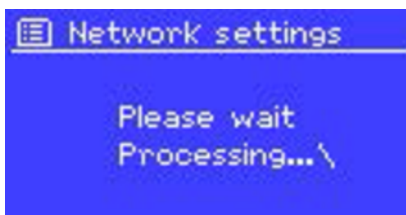
1. ➤ If you choose the 'Push Button' option, you will be prompted to press the connect button on your router.

⇒ The device searches for an available network and connects.

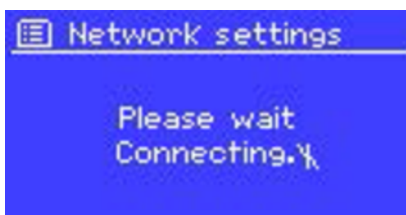


2. ➤ If you select the 'Pin' option, the device generates an 8-digit code that you enter on your wireless router or access point.
3. ➤ If you select the 'Skip WPS' option, then enter the network key as described above.

Completing setup



The device tries to connect to the set network.



If the connection cannot be established, the device will return to the previous display and try again.



The network connection has been established.



Setup is complete and the setup wizard exits.

If the network connection is interrupted, the device tries to reconnect automatically.

6.2 General Settings

Equalizer



1. ➔ Select '*System settings > Equaliser*' to adjust the EQ.



2. ➔ Choose one of the preset modes or create your own profile with custom bass, treble and loudness on / off.

Language

English is set as the default language. Select '*System settings > Language*' to select a language.

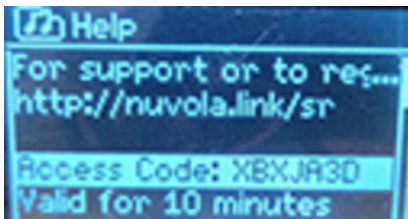
Available languages: English, Danish, Dutch, German, Italian, French, Spanish, Finnish, Norwegian, Portuguese, Turkish, Polish, Swedish.

Information

The display shows information about the current system, including the radio ID, the unique code that can be used to identify this specific radio device. There is also a sticker with the radio ID on the rear of the device.

6.3 Internet radio portal

You can register the device in the free "Frontier Silicon Internet" radio portal in order to be able to listen to a large number of radio stations and to compile lists of favourites. To register you need a unique access code for your device.



1. ➤ In Internet radio mode, select 'Station list > Help' in the menu.
⇒ The 'Access code', which is only valid for 10 minutes, is displayed.
2. ➤ Register your device on the portal website <http://nuvola.link/sr>.
⇒ You can use the portal's offers immediately after completing your registration.



The access code to the portal must not be confused with the radio ID.

6.4 Setting up a music server

You can play music from your PC's music library via UPnP Media Sharing. To do this, you must first set up a UPnP server on your PC using suitable software.

7 Operating

7.1 Internet radio mode



The device can play thousands of radio stations and podcasts broadcast worldwide via a broadband internet connection.

If you call up the Internet radio mode with *[MODE]* or via the '*Internet radio*' menu, the device connects to the "Frontier Silicon Internet" radio portal and calls up the station list. The stations are sorted in various categories, e.g. Country, pop music, etc. Once you select a station, the device connects directly to the station.

You can set up numerous lists of favourite channels on the portal using the device or a PC with a web browser.

Last listened



When you enter Internet radio mode, the last radio station you listened to is selected. Select '*Last listened*' to select another station from the list of recently listened radio stations.

Favourites

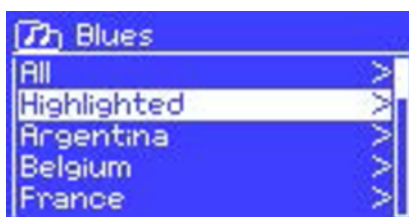
Favourites are saved in the "Frontier Silicon Internet" radio portal in a list of favourites combined with different radio stations under your account.

1. ➤ Hold down *[CONTROL SELECT]* until the display shows '*Favorite added*'.
⇒ The station currently being played is saved as a favourite and appears in the favourites list.
2. ➤ Select '*Station list > My favorites*' to choose a favourite.

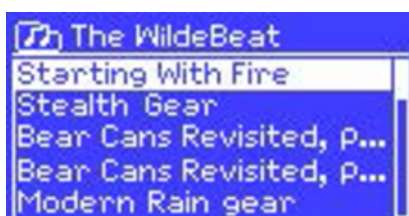
Browsing



1. ➤ Select '*Station list*' and then '*Stations*' or '*Podcasts*' to search for internet radio broadcasts.
2. ➤ Scroll through the menus to find shows.



Searching



You can also search for internet broadcasts for stations or podcasts using keywords in the title.

1. ➤ Select 'Station list' and then 'Stations' or 'Podcasts'.

2. ➤ To enter the keyword, select the appropriate characters and confirm with 'OK'.
⇒ Each character entered is displayed in the bar above.

3. ➤ Select one of the shows from the list.

4. ➤ For podcasts, you can also select a specific episode.



Adding stations

You can also listen to radio stations that are not listed on the “Frontier Silicon Internet” radio portal. You can add your own stations in the portal. Select ‘*Station list* > *My added stations* > [Station]’ to select the added stations with the device.

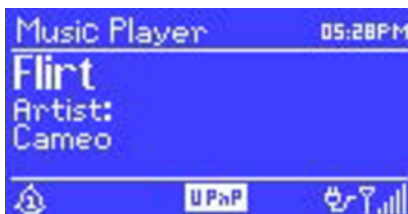
Information about the current programme

During playback, the name and description are shown on the display. Information about the artist and title is also displayed, if available. Press [INFO] to display further information.

Each time you press [INFO], different information is displayed:

- Artist and title name (default selection, if available)
- Station name
- Genre and location of the station
- Signal strength
- Codec and sampling rate
- Playback buffer
- Current date

7.2 Music player mode



The music player plays audio files in the formats MP3, AAC, WMA or FLAC from a computer in the LAN or from a USB stick or an external hard drive.



1. ➤ Call up the music player mode with [MODE] or via the ‘*Music player*’ menu.
2. ➤ Select ‘*Shared media*’ or ‘*USB playback*’ depending on the audio source you want.

7.2.1 Shared media data (from the UPnP media server)



1. ➤ Select the menu item '*Shared media*'.

If you have set up the sharing of media data, you will now see an entry consisting of '<Computer name>: <Share name>'. If you have set up shares on several computers, the alternatives are listed here. Select the desired option.

⇒ The display shows the menus and folders of the media server on your PC.

2. ➤ Select the desired track and press *[CONTROL SELECT]*. Press briefly to start the track right away. Press long to add the track to the playlist. You can also add an entire album to the playlist.

Wake-on-LAN (WOL)

When shared media is selected, the available music servers are displayed.

A question mark in front of a server name means that the server has already been selected before and supports Wake-on-LAN functionality, but cannot currently be found in the network. If you select a server with a question mark, the device tries to connect to the server. If a connection cannot be established, the server is no longer available on the network.

You can also delete servers with question marks from the list of existing servers via '*Prune servers > Yes*'.

7.2.2 Playback via USB

1. ➤ Select '*USB playback*' to play audio files from a USB mass storage device, e.g. a stick or hard drive.

⇒ The display shows the folder structure of the USB medium.

2. ➤ Select the desired track and press *[CONTROL SELECT]*. Press briefly to start the track right away. Press long to add the track to the playlist. You can also add an entire folder to the playlist.

Track data display

- When a track is playing, press *[INFO]* to display additional information. Each time you press *[INFO]*, different information is displayed.

7.2.3 Playlists

The unit's playlist can contain up to 500 tracks. The tracks can have different sources (UPnP server, USB medium).

1. ➤ Select '*My playlist*'.
2. ➤ Turn *[CONTROL SELECT]* to scroll through the playlist. UPnP tracks show the track name, USB media tracks show the file name.
3. ➤ Briefly press *[CONTROL SELECT]* to start playback from a track.

4. ➤ Press and hold [CONTROL SELECT] to delete a track from the playlist and press 'YES' to confirm.

If you play a track outside of the playlist, the playlist remains saved. The playlist remains also saved in standby.

7.2.4 Repeat / Shuffle play

To repeat a track and play tracks in random order, select 'Repeat play' or 'Shuffle play'.

7.2.5 Information about the current playback

During playback, title and artist (UPnP) or the file name (USB) are shown on the display. There is a status bar to display the elapsed playback time or the total running time. Symbols for UPnP or USB appear at the bottom of the display. Press [INFO] to display further information.

Each time you press [INFO], different information is displayed:

- UPnP: Bars for playback time (default setting), album, codec / sampling rate, bars for playback buffer, current date
- USB: Bars for playback time (standard setting), artist, album, folder, complete file directory, bit rate / codec / sampling rate, bars for playback buffer, current date

7.3 DAB radio mode



The DAB radio receives digital DAB / DAB + radio and displays information about the station, the stream and the track being played.

- Call up the DAB radio mode with [MODE] or via the 'DAB' menu.

7.3.1 Station scan



If the station list in DAB radio mode is empty, the device will automatically search for available radio stations.

You can also start the station scan manually:

1. ➤ Select '*Scan*' to start the station scan manually.
 ⇒ The existing stations are updated or reloaded.
 After the station scan, the available radio stations are displayed.
2. ➤ Select '*Prune invalid*' to delete stations that cannot be reached.

7.3.2 Selecting stations

Turn *[CONTROL SELECT]* to scroll through the channel list and press *[CONTROL SELECT]* to select and play. The display shows information about the station, title or programme.

7.3.3 Information about the current playback

During playback, the name of the stream and the DLS (Dynamic Label Segment) information of the station, e.g. programme name, title, contact information, are displayed in real time. Programmes in stereo are marked with an icon at the top of the display. Press *[INFO]* to display further information.

Each time you press *[INFO]*, different information is displayed:

- DLS text
- Programme type
- Ensemble name / frequency
- Signal strength / error rate
- Bit rate / codec / channels
- Current date

7.3.4 Settings

Dynamic Range Compression (DRC)

Some DAB programmes also offer Dynamic Range Compression (DRC). This feature allows radios to compress the dynamic range of the audio stream output so that the volume of soft sounds is increased and the volume of loud sounds is decreased. This can be useful when listening to music with a wide dynamic range in a noisy environment.

- ➔ Select 'DRC' and then 'DRC high', 'DRC low' or 'DRC off' to change the DRC of the device.



The DRC can only be set if DRC data is transmitted from the radio station.

Station order

The station list can be sorted in different ways, alphanumerically, by ensemble or by validity. Station groups that broadcast together are listed under an ensemble. In the list sorted by validity, first the valid and then the deactivated stations are listed.

- ➔ Select 'Station order' and then 'Alphanumeric', 'Ensemble' or 'Valid' to change the sorting of the stations.

7.4 FM radio mode



The FM radio receives analogue radio and shows RDS (Radio Data System) information about the station and the programme.

- ➔ Call up the FM radio mode with [MODE] or via the 'FM' menu.

7.4.1 Station scan

- ➔ Press [CONTROL SELECT] to start the station scan.
 - ⇒ The frequency display scrolls as the unit scans the FM band.
- ➔ You can also start a station search by turning or holding down [CONTROL SELECT].

7.4.2 Information about the current playback

During playback, one of two sets of information is shown on the display:

- With RDS: The service name (e.g. station name) is displayed by default. Press *[INFO]* to display further information. Each time you press *[INFO]*, different information is displayed: RDS radio text, RDS programme type, frequency, current date.
- Without RDS: The currently set frequency is displayed.

7.4.3 Settings

Search settings

By default, the FM search stops at every available station. In this way, stations with weak signals can also be selected.

- ➔ Select '*Scan setting > Strong stations only? > Yes*' if you want the scan to stop for stations with good signal strength only.

Audio settings

By default, stereo stations are played in stereo. With weak signal stations, the playback in stereo can be very noisy.

- ➔ Select '*Audio setting > FM weak reception: Listen in mono only > Yes*' if you want signal weak stations to be played in mono.

7.5 Aux-in mode



In Aux-in mode, the device can receive audio data from an external source, e.g. an MP3 player.

1. ➔ Turn the volume on the device and, if possible, on the external audio source to minimum.
2. ➔ Connect the external audio source via the 3.5 mm mini jack socket.
3. ➔ Call up the Aux-in mode with *[MODE]* or via the '*Aux in*' menu.
4. ➔ Adjust the volume as required on the device and, if possible, on the external audio source.

7.6 Alarms and Sleep



Two independent alarms with snooze function can be set. There is also a sleep function to switch off the device after a set period.

7.6.1 Alarms

1. ➤ Select 'Alarms' to setup or change the alarms.
2. ➤ Select the alarm number ('1' or '2') and set the following parameters:

Menu item	Options	Meaning
'Enable'	'on' / 'off'	Enables or disables the alarm
'Frequency'	'Daily' / 'Once' / 'Weekends' / 'Weekdays'	Sets the alarm to repeat (daily, once, on weekends, on weekdays)
'Time'		Sets the alarm time
'Mode'	'Buzzer' / 'Internet radio' / 'DAB' / 'FM'	Sets the alarm tone (beeper, internet radio, DAB radio, FM radio)
'Preset'	'Last listened' / '1' ... '10'	Selects the preset (last heard, memory locations '1' ... '10')
'Volume'	'0' ... '20'	Sets the alarm sound volume

3. ➤ Confirm the settings with 'Save' at the bottom of the display.
 - ⇒ The display indicates the active alarms with a bell symbol at the bottom left.
4. ➤ If the alarm sounds at the set time, you can switch it off temporarily with [SLEEP]. You can change the snooze time with [CONTROL SELECT].
 - ⇒ The device turns to standby again for the specified duration, with the alarm symbol flashing.

7.6.2 Sleep

- Select 'Sleep' and then 'Sleep OFF', '15 MINS', '30 MINS', '45 MINS' or '60 MINS' to setup the Sleep timer.
 - ⇒ The device returns to the main menu.

7.7 Operating via app

You can also operate the device using the "UNDOK" app for mobile devices with Android or iOS. The app is available in the Apple® AppStore and in the Google® Play Store.

The app instructions are available for download on the product page of our homepage www.thomann.de.

7.8 Reset to factory defaults

When performing a factory reset, all user-related settings are reset to the default values. The settings for time / date, the network configuration and all default settings are deleted. The current software version of the device and the registration at the "Frontier Silicon Internet" radio portal are retained.

➔ Select 'System settings > Factory reset Proceed > Yes' to reset the device to factory defaults.

7.9 RS232 internet radio command codes

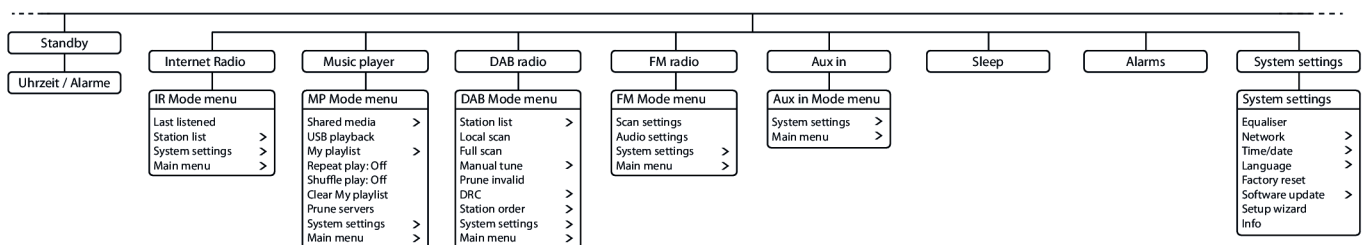
The computer and the device communicate via UART.

Start bit	1	Data bits	8
Stop bit	1	Parity bit	none
Code	HEX	Baud rate	19200

Function	Code	Function	Code
STAND BY	0x01	REPEAT	0x27
1	0x02	SHUFFLE	0x2A
2	0x03	PLAY / STOP	0x2B
3	0x04	VOLUME-	0x2C
4	0x05	VOLUME+	0x2D
5	0x06	MUTE	0x2E
M1	0x07	PREV	0x2F
M2	0x0A	F.B	0x30

Function	Code	Function	Code
M3	0x0B	F.WD	0x31
M4	0x0E	NEXT	0x32
M5	0x0F	6	0x33
SHIFT	0x15	7	0x34
PRESET	0x17	8	0x35
SLEEP	0x18	9	0x36
MENU	0x19	10	0x37
INFO	0x1A	M6	0x3A
ALARM	0x1B	M7	0x3B
ENTER / TUNER SCAN	0x1C	M8	0x3C
MODE	0x1D	M9	0x3D
MENU UP / TUNING UP	0x1E	M10	0x3E
MENU DOWN / TUNING DOWN	0x1F	INTERNET RADIO Mode	0x3F
AUTO SCAN UP	0x20	MUSIC PLAYER Mode	0x40
AUTO SCAN DOWN	0x21	DAB Mode	0x41
LEFT (BACK)	0x22	FM Mode	0x42
RIGHT	0x26	AUX IN Mode	0x43

7.10 Menu overview



8 Technical specifications

Input connections	Voltage supply	IEC chassis plug C14
		Screw terminal block 13.2 V $\overline{\text{---}}$ (alternative)
	Audio signal	1 × USB connections (max. 64 GB)
		1 × RJ-45
		1 × RS232, 9-pin
	Aux In	1 × 3.5 mm mini jack socket
Output connections	Line	2 × XLR plug
		2 × RCA socket
	Headphones	1 × 3.5 mm mini jack socket
Playback speed control range	$\pm 20\%$	
Playback formats	AAC/AAC+, MP3, FLAC, WMA, WAV	
WIFI	compatible with IEEE 802.11 b/g/a/n	
Frequency of operation	2.4 GHz and 5 GHz	
Max. transmission power	20 dBm	
Frequency response	20 Hz ... 20 kHz	
Signal-to-noise ratio	50 dB @ 1 kHz	
Output level	0.9 V @ 1 kHz ± 2 dB	
Power consumption	45 W	
Operating supply voltage	115/230 V \sim 50/60 Hz	
Fuse	5 mm × 20 mm, 1 A, 250 V, slow-blow	
Dimensions (W × H × D)	483 mm × 44 mm (1 RU) × 238 mm	
Weight	3.2 kg	
Ambient conditions	Temperature range	0 °C...40 °C
	Relative humidity	20 %...80 % (non-condensing)

Further information

Design	19" rack-mountable
MP3-capable	yes
Digital output	No
Master tempo	No

9 Plug and connection assignment

Introduction

This chapter will help you select the right cables and plugs to connect your valuable equipment in such a way that a perfect sound experience is ensured.

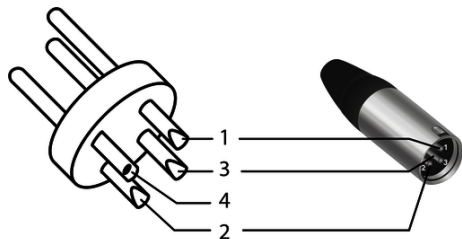
Please note these advices, because especially in ‘Sound & Light’ caution is indicated: Even if a plug fits into the socket, an incorrect connection may result in a destroyed power amp, a short circuit or ‘just’ in poor transmission quality!

Three-pole 1/8" mini phone jack (stereo, unbalanced)



1	Signal (left)
2	Signal (right)
3	Ground, shielding

XLR plug (balanced)



1	Ground, shielding
2	Signal (in phase, +)
3	Signal (out of phase, -)
4	Shielding on plug housing (option)

RCA connection



Drawing and table indicate the pin assignment of an RCA plug.

1	Signal
2	Ground, shielding

10 Protecting the environment

Disposal of the packaging material



For the transport and protective packaging, environmentally friendly materials have been chosen that can be supplied to normal recycling.

Ensure that plastic bags, packaging, etc. are properly disposed of.

Do not just dispose these materials with your normal household waste, but make sure that they are fed to a recovery. Please follow the notes and markings on the packaging.

Disposal of batteries



Batteries must not be disposed of as domestic waste or thrown into fire. Dispose of the batteries according to national or local regulations regarding hazardous waste. To protect the environment, dispose of empty batteries at your retail store or at appropriate collection sites.

Disposal of your old device



This product is subject to the European Waste Electrical and Electronic Equipment Directive (WEEE) in its currently valid version. Do not dispose with your normal household waste.

Dispose this device through an approved waste disposal firm or through your local waste facility. When discarding the device, comply with the rules and regulations that apply in your country. If in doubt, consult your local waste disposal facility.

