

2CKA001473B8724 | 30.05.2018

# Product manual

## Busch-AudioWorld®

### 8216 U Busch-Radio iNet

Valid from Firmware V 01.06



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## 1 Notes on the instruction manual

Please read through this manual carefully and observe the information it contains. This will assist you in preventing injuries and damage to property, and ensure both reliable operation and a long service life for the device.

Please keep this manual in a safe place.

If you pass the device on, also pass on this manual along with it.

Busch-Jaeger accepts no liability for any failure to observe the instructions in this manual.

If you require additional information or have questions about the device, please contact Busch-Jaeger or visit our Internet site at:

[www.BUSCH-JAEGER.de](http://www.BUSCH-JAEGER.de)

## 2 Safety

The device has been constructed according to the latest valid regulations governing technology and is operationally reliable. It has been tested and left the factory in a technically safe and reliable state.

However, residual hazards remain. Read and adhere to the safety instructions to prevent hazards of this kind.

Busch-Jaeger accepts no liability for any failure to observe the safety instructions.

### 2.1 Information and symbols used

The following Instructions point to particular hazards involved in the use of the device or provide practical instructions:

**Danger**

Risk of death / serious damage to health

- The respective warning symbol in connection with the signal word "Danger" indicates an imminently threatening danger which leads to death or serious (irreversible) injuries.

**Warning**

Serious damage to health

- The respective warning symbol in connection with the signal word "Warning" indicates a threatening danger which can lead to death or serious (irreversible) injuries.

**Caution**

Damage to health

- The respective warning symbol in connection with the signal word "Caution" indicates a danger which can lead to minor (reversible) injuries.

**Attention**

Damage to property

- This symbol in connection with the signal word "Attention" indicates a situation which could cause damage to the product itself or to objects in its surroundings.

**NOTE**

This symbol in connection with the word "Note" indicates useful tips and recommendations for the efficient handling of the product.



This symbol alerts to electric voltage.

## 2.2 Intended use

This device is a radio for flush-mounted installation. The device is part of the Busch-AudioWorld® system.

The device is intended for the following:

- Operation according to the listed technical data,
- Installation in dry interior rooms and suitable flush-mounted boxes,
- Use with the connecting options available on the device.

The intended use also includes adherence to all specifications in this manual.

Busch-Jaeger Elektro hereby declares that radio system type 8216 U conforms to Directive 2014/53/EU.

The complete text of the EU Declaration of Conformity is available at the following Internet address:

8216 U	<a href="http://www.busch-jaeger-katalog.de/2CKA008200A0155,artikel.html">http://www.busch-jaeger-katalog.de/2CKA008200A0155,artikel.html</a>
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Table 1: Link to Declaration of Conformity

## 2.3 Improper use

Each use not listed in See "Intended use" on page 6 is deemed improper use and can lead to personal injury and damage to property.

Busch-Jaeger is not liable for damages caused by use deemed contrary to the intended use of the device. The associated risk is borne exclusively by the user/operator.

The device is not intended for the following:

- Unauthorized structural changes
- Repairs
- Outdoor use
- The use in bathroom areas

## **2.4 Target group / Qualifications of personnel**

### **2.4.1 Operation**

No special qualifications are needed to operate the device.

### **2.4.2 Installation, commissioning and maintenance**

Installation, commissioning and maintenance of the device must only be carried out by trained and properly qualified electrical installers.

The electrical installer must have read and understood the manual and follow the instructions provided.

The electrical installer must adhere to the valid national regulations in his/her country governing the installation, functional test, repair and maintenance of electrical products.

The electrical installer must be familiar with and correctly apply the "five safety rules" (DIN VDE 0105, EN 50110):

1. Disconnect
2. Secure against being re-connected
3. Ensure there is no voltage
4. Connect to earth and short-circuit
5. Cover or barricade adjacent live parts

## 2.5 Safety instructions



### **Danger - Electric voltage!**

Electric voltage! Risk of death and fire due to electric voltage of 100 ... 240 V. Dangerous currents flow through the body when coming into direct or indirect contact with live components. This can result in electric shock, burns or even death.

- Work on the 100 ... 240 V supply system may only be performed by authorised and qualified electricians.
- Disconnect the mains power supply before installation / disassembly.
- Never use the device with damaged connecting cables.
- Do not open covers firmly bolted to the housing of the device.
- Use the device only in a technically faultless state.
- Do not make changes to or perform repairs on the device, on its components or its accessories.
- Keep the device away from water and wet surroundings.



### **Caution! - Risk of damaging the device due to external factors!**

Moisture and contamination can damage the device.

- Protect the device against humidity, dirt and damage during transport, storage and operation.

## 3 Information on protection of the environment

### 3.1 Environment



#### **Consider the protection of the environment!**

Used electric and electronic devices must not be disposed of with domestic waste.

- The device contains valuable raw materials which can be recycled. Therefore, dispose of the device at the appropriate collecting depot.

All packaging materials and devices bear the markings and test seals for proper disposal. Always dispose of the packaging material and electric devices and their components via the authorized collecting depots and disposal companies.

The products meet the legal requirements, in particular the laws governing electronic and electrical devices and the REACH ordinance.

(EU Directive 2012/19/EU WEEE and 2011/65/EU RoHS)

(EU REACH ordinance and law for the implementation of the ordinance (EC) No.1907/2006).

## 4 Setup and function

### 4.1 Functions

The device is a functional radio with various setting options and is installed flush-mounted in the wall. The device offers you, for example:

- Various possible combinations with other devices.
  - E.g. the combination with an Busch-iDock as connecting option for a different player.
- One memory for up to 8 stations (favourite stations).
- Central switching for all playing devices.
- A central clock.
- An alarm call function.
- A sleep function.
- A duration of play setting.
- An automatic overload detection (for more detailed information, see See “Automatic overload detection“ on page 67).

4.2 Possible combinations

		 8216 U
	8218 U	X
	8222 EB	X (2x / 4x)
	8223 U	X (1x / 2x)
	8224 EB	X (2x / 4x)
	8252-xxx	X

Table 2: Possible combinations

## 5 Technical data

Designation	Value
Nominal voltage:	110 ... 230 V AC, $\pm 10\%$ , 50 / 60 Hz
Operating temperature:	5°C to +40°C
Protection type:	IP 20
Power consumption during the idle state	
▪ ECO mode:	$\leq 0.1$ W
▪ Standby mode:	$\leq 0.5$ W
▪ Premium mode:	$\leq 5$ W
Storage temperature:	-20°C to +70°C
Resolution:	128 x 100
Display size	3.8 cm (1.5")
Maximum core cross section of loudspeaker terminals:	0.8 mm <sup>2</sup>
Admissible loudspeaker impedance:	4 ... 8 $\Omega$
Frequency range:	100 - 10,000 Hz
Wi-Fi standard:	802.11 b/g
Send/receive frequency:	2.4 GHz
Maximum transmission power:	100 mW
Maximum streaming rate:	192 kbps
Supported formats:	mp3, AAC(+), OGG, m3u, PLS

Table 3: Technical data

## 6 Connection, installation / mounting



### **Danger - Electric voltage!**

Risk of death due to electrical voltage of 100 ... 240 V during short-circuit in the low-voltage conduit.

- Low-voltage and 100 ... 240 V conduits must not be installed together in a flush-mounted box!



### **Caution! - WLAN signal is too weak!**

If the WLAN signal is too weak at the mounting location planned for the device, the device cannot be commissioned later.

- Before starting work with a WLAN-capable device, check whether the WLAN signal is strong enough at the location planned for the installation of the device.
- If in doubt, select a different mounting location.

### 6.1 Requirements for the electrician



### **Danger - Electric voltage!**

Install the device only if you have the necessary electrical engineering knowledge and experience.

- Incorrect installation endangers your life and that of the user of the electrical system.
- Incorrect installation can cause serious damage to property, e.g. due to fire.

The minimum necessary expert knowledge and requirements for the installation are as follows:

- Apply the "five safety rules" (DIN VDE 0105, EN 50110):
  1. Disconnect
  2. Secure against being re-connected
  3. Ensure there is no voltage
  4. Connect to earth and short-circuit
  5. Cover or barricade adjacent live parts.
- Use suitable personal protective clothing.
- Use only suitable tools and measuring devices.
- Check the type of supply network (TN system, IT system, TT system) to secure the following power supply conditions (classic connection to ground, protective earthing, necessary additional measures, etc.).

## 6.2 Mounting



**Caution! The device can sustain damage when coming into contact with hard objects!**

The plastic parts of the device are sensitive.

- Pull the attachment off only with your hands.
- Do not lever parts off with screwdrivers or similar hard objects.

The flush-mounted insert must only be installed in flush-mounted wall boxes according to DIN 49073-1, Part 1, or suitable surface-mounted housings.

To mount the device, perform the following steps:

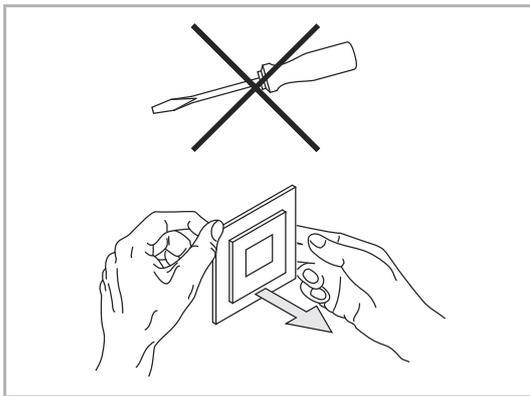


Fig. 1: Wall mounting: pulling off the attachment

1. Pull the attachment off.
  - If the device is already mounted or assembled, pull off the attachment from the flush-mounted insert with the aid of the frame.

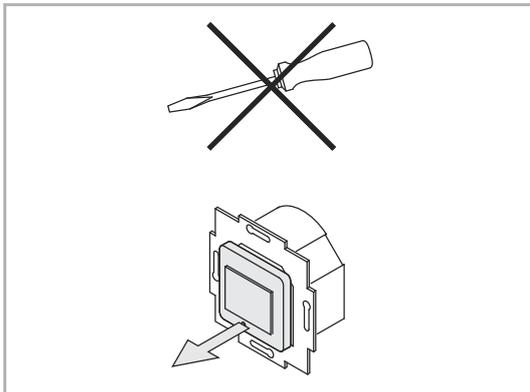


Fig. 2: State of the device at the point of delivery: pulling off the attachment

- If the state of the device is at the point of delivery, pull off the attachment from the flush-mounted insert with your hands.
- Pull the attachment off only with your hands!
- Do not lever parts off with screwdrivers or similar hard objects. This damages the device.
- When pulling off, first the resistance of the spring clamps must be overcome.

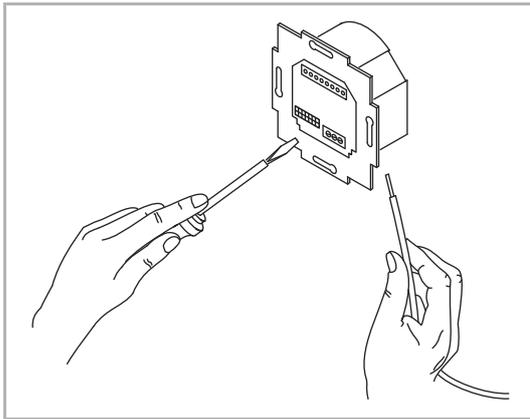


Fig. 3: Connecting the cables

2. Connect the cables to the flush-mounted insert.
  - For the connection assignment, see chapter 6.3 “Electrical connection” on page 16.

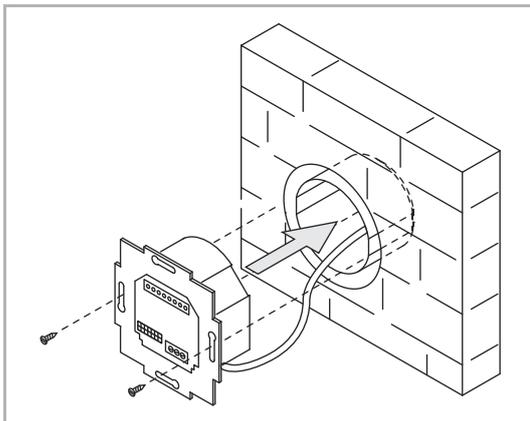


Fig. 4: Mounting the flush-mounted insert

3. Mount the flush-mounted insert.

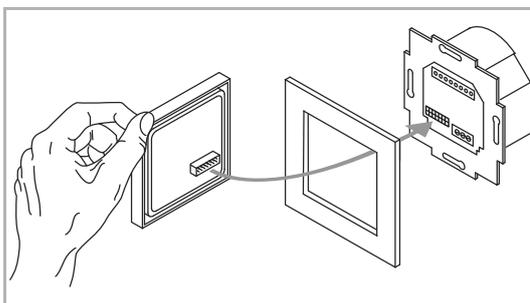


Fig. 5: Mounting the display

4. Plug the attachment together with the frame onto the flush-mounted insert.
  - Ensure that the plug-in connection on the rear side does not get jammed.
  - If mounting is difficult, check whether a burr has formed at the lock-in opening of the flush-mounted insert and remove it.

The device is now mounted.

### 6.3 Electrical connection

#### 6.3.1 Loudspeaker

For MONO mode, the loudspeaker can be connected to the left (L- / L+) or right (R- / R+) connecting terminals.

For STEREO mode, two loudspeakers can be connected, one to the left (L- / L+) and one to the right (R- / R+) connecting terminal.

#### 6.3.2 Mains voltage

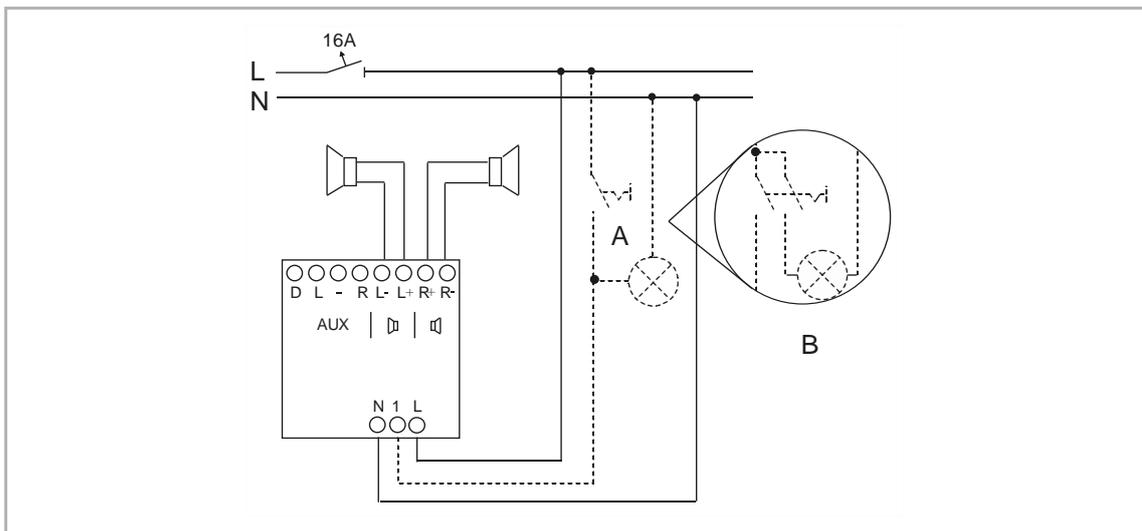


Fig. 6: Electrical connection

[A] Simultaneous activation with room lighting.

[B] Connection of fluorescent lamps or energy-saving lamps with a 2-pole switch.

## 7 Commissioning



### Caution! - WLAN signal is too weak!

If the WLAN signal is too weak at the mounting location planned for the device, the device cannot be commissioned later.

- Before starting work with a WLAN-capable device, check whether the WLAN signal is strong enough at the location planned for the installation of the device.
- If in doubt, select a different mounting location.

For more detailed information on possible Wi-Fi errors, see See “Interrupted streaming (interrupted transmissions)” on page 67.

### 7.1 Mains voltage activation

#### 7.1.1 State of the new device at the point of delivery

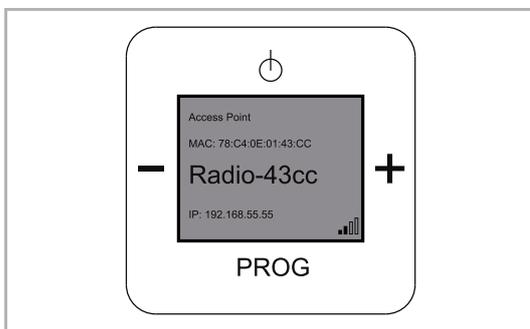


Fig. 7: State of the device at the point of delivery

1. Switch on the mains power supply. If the state of the device is at the point of delivery, the display shows a date, the latest software version and the serial number. The device will then switch itself off.
2. Reactivate the device. The display will show that it is an access point. It will also show the name of the device and the WLAN receiving status.



### NOTE

The name of the device depends on the respective device. It is compiled from the product name and the first four digits of the MAC address.

In this manual the device name "Radio-43cc" is used, which can also be seen in the graphics.

Important for you is the name shown on the display of your device.

#### 7.1.2 The device has already been in use in a different network

1. If the device has been in use in a different network, reset it to the factory settings.
2. Press the entire rocker switch for approximately 5 seconds.

## 7.2 Connecting the WLAN-capable device with the radio

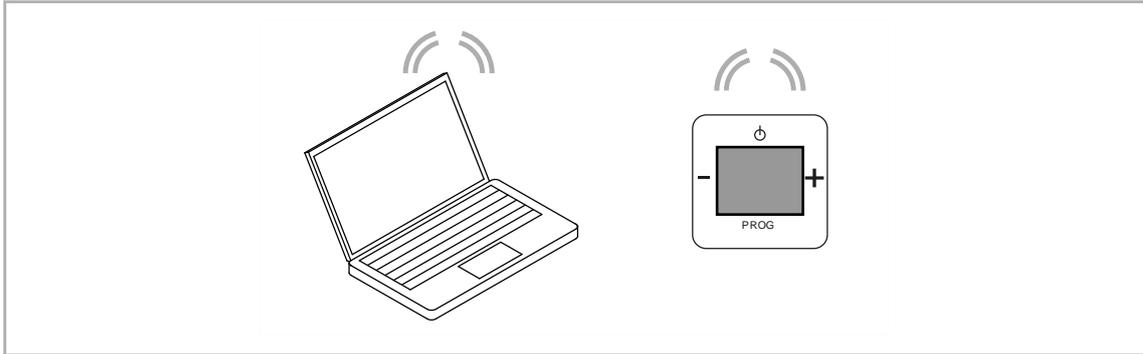


Fig. 8: Connecting the WLAN-capable device with the radio

1. Press the "ON/OFF" button.
2. Search for the WLAN networks with a WLAN-capable device (dependent on the operating system).
3. Check whether the WLAN network "Radio-43cc" is displayed.
4. Establish a connection with the WLAN network "Radio-43cc".

## 7.3 Connecting the radio with the WLAN (Access Point mode)

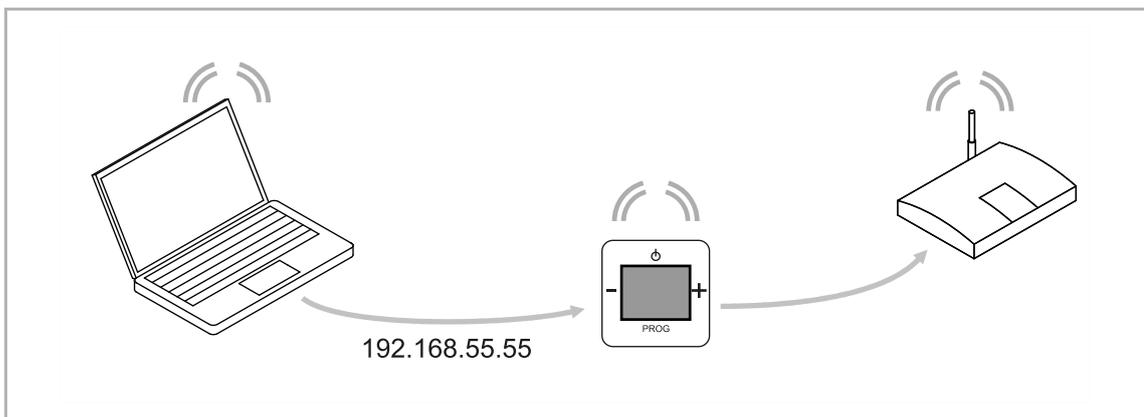


Fig. 9: Connecting the radio with the Wi-Fi

1. In the address line of the browser, enter "http://radio" or the default IP address of the radio (http://192.168.55.55).
2. Select the desired language in "Language setting".
3. Enter the network name (SSID) and the password used in your network.
4. Then select "DHCP" (recommended) or "User-defined".



### Notice

Observe lowercase and uppercase letters. For "Radio", uppercase and lowercase letters are possible.

5. Change the name of the device if required and click "Save".
  - The radio starts again.
  - The time (CET) is displayed after 2 minutes. The reference >"Access Point mode deactivated. "Radio mode is now active!" is displayed.
  - If necessary, the radio carries out an automatic Firmware update.
6. Wait for approximately 2 minutes, until the date and time are displayed!
  - The radio is ready.
7. Press the "ON/OFF" button to listen to the first pre-set radio station.

## 7.4 The device cannot find a WLAN connection

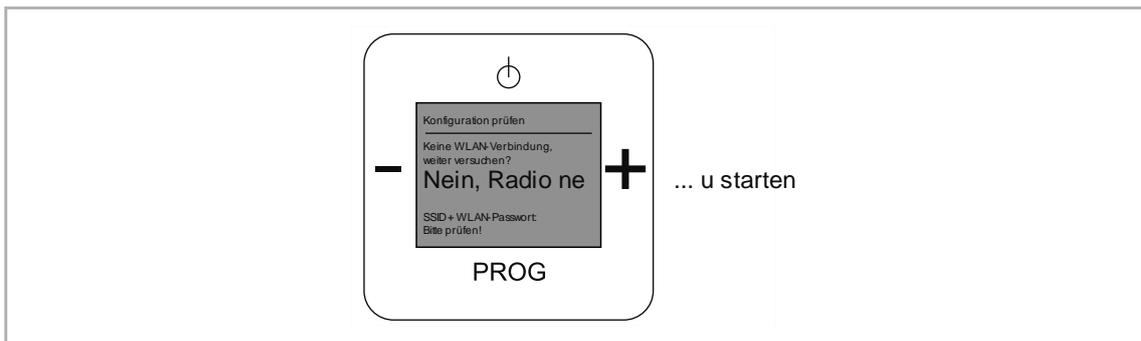


Fig. 10: No WLAN connection

1. Wait a few minutes if the device cannot find the WLAN connection immediately.
2. If it still cannot find the WLAN connection, restart the device.
  - Press the entire rocker switch for approximately 5 seconds.
3. Check the network name (SSID) entered and the password.
4. Carry out initial commissioning again.



### NOTE

If you press the "ON/OFF" button during the search, the device changes into the "Firmware update" function.

If you press the "ON/OFF" button again, the device changes to the main menu. The device can be restarted from all functions.

## 7.5 Setting up the device

To set up your device you have two options:

1. Setting up the device manually, see chapter 9.4 "Functions of extended operation / Setting up the device manually" on page 27.
2. Setting up the device via WLAN, see chapter 9.5 "Setting up the device via WLAN network" on page 53.

## 8 Updating options

The device offers the option of updating the software, see chapter 9.4.19 “Menu “Settings” - “Firmware update”” on page 49.

## 9 Operation

### 9.1 Operating modes

The device has two operating modes.

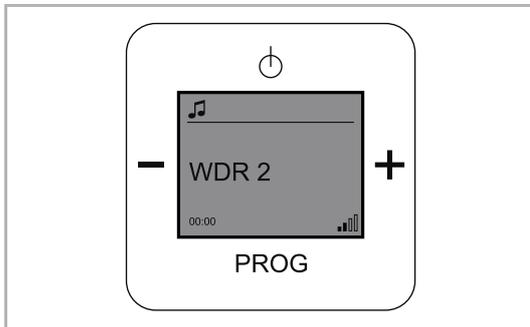


Fig. 11: Standard operation

**Standard operation, see chapter 9.2  
“Normal operation“ on page 22**

- E.g. for playing music

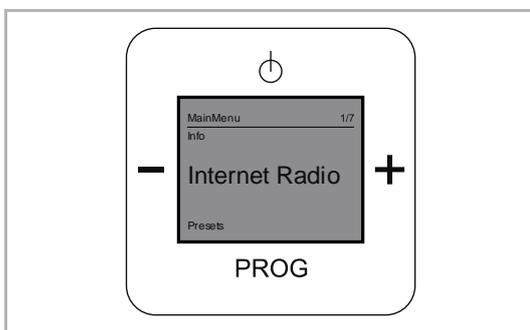


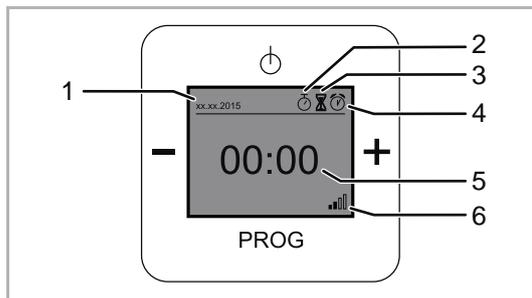
Fig. 12: Extended operation

**Extended operation, see chapter 9.3  
“Extended operation“ on page 24**

- E.g. Alarm clock, timer or settings

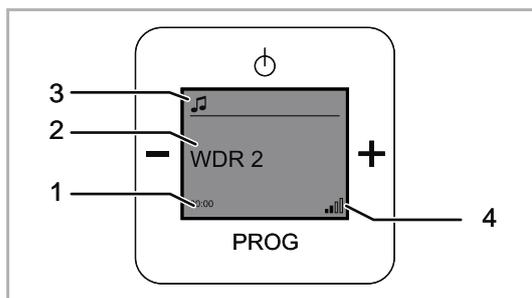
## 9.2 Normal operation

### 9.2.1 Display



- [1] Date display
- [2] Sleep function icon (sleep timer)
- [3] Duration of play icon (short-time timer)
- [4] Alarm call function icon (alarm clock)
- [5] Time
- [6] WLAN reception indicator

Fig. 13: Display overview, standby



- [1] Time
- [2] Current radio station
- [3] Music icon (radio is active)
- [4] WLAN reception indicator

Abb. 14: Overview of radio display

### 9.2.2 Button assignment

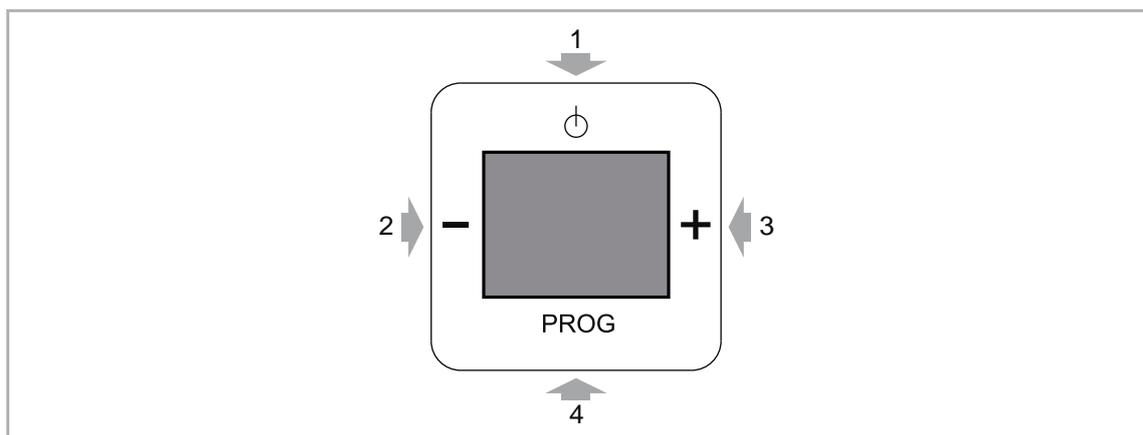


Fig. 15: Button assignment for operation

- [1] ON / OFF
- [2] Lower volume  
Favourite station back
- [3] Higher volume  
Favourite station forward
- [4] Change to the favourite stations  
Confirm the selection of the favourite stations

### 9.2.3 Adjusting the volume

Use the following steps to adjust the volume:

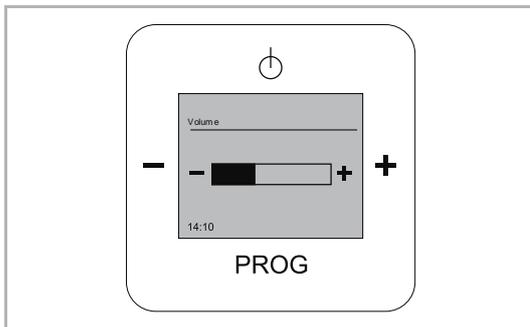


Fig. 16: Adjusting the volume

1. During normal operation press the buttons "MINUS" [1] or "PLUS" [2].
  - The device adjusts the volume.

### 9.2.4 Selecting the station

Use the following steps to change a station (favourites):

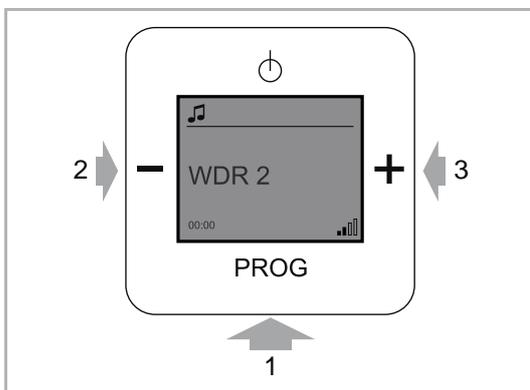


Fig. 17: Changing stations

1. Activate the "PROG" [1] button.
  - The device switches to the list of the preset stations.
  - Eight positions are available for preset stations.
2. Use the (PLUS / MINUS) buttons [2]/[3] to switch to the desired station.
3. Confirm the selection with the "PROG" button [1].
  - The device switches to standard operation.
  - The station is being played.

The station has been changed.

### 9.3 Extended operation

The device has a main menu with a subdivision of menu levels and menu items.

The menu levels have individual menu items in which the following operating functions can be carried out:

- Starting or stopping functions.
- Setting functions.

To change to the main menu, perform the following steps:

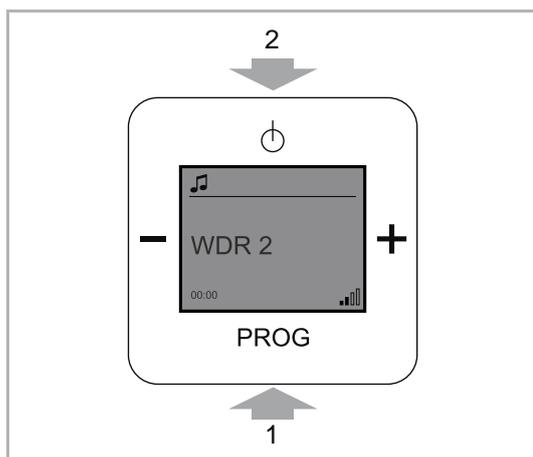


Fig. 18: Change to main menu

1. Press the "PROG" button and immediately thereafter the "ON/OFF" button.
  - The device switches to the main menu.
2. Switch to the desired menu item.
  - See the following chapter.
  - After 5 seconds and without an entry in a main level the device switches back to standard operation.

Observe the following options for the main menu:

- Non-relevant function
  - If a menu item and its setting options is not relevant for you, you can change to a different menu item by pressing the "PLUS/MINUS" buttons. With the "ON/OFF" button you jump back one level.
- Incorrect menu selection
  - If you are inadvertently in the wrong menu level, press the "ON/OFF" button. You return to the menu level.
- Setting confirmed
  - After a setting has been made and confirmed with the "PROG" button, the menu returns to the menu item. After a brief pause the device changes back to the radio mode.

- Adjusting the volume
  - You can adjust the volume in the following menus via the "PLUS/MINUS" button.

Menu level	Menu item
Internet Radio	TuneIn Select a radio station. When you hear the station, you can adjust the volume.
Favourites (Favourite station)	Station list Select a radio station. When you hear the station, you can adjust the volume.
Using the server (My music)	My music/UPnP Select a radio station. When you hear the station, you can adjust the volume.
AUX	Busch iDock Select your music from your player. As soon as you hear the music, you can adjust the volume.

Table 4: Adjusting the volume in menus

### 9.3.1 Display

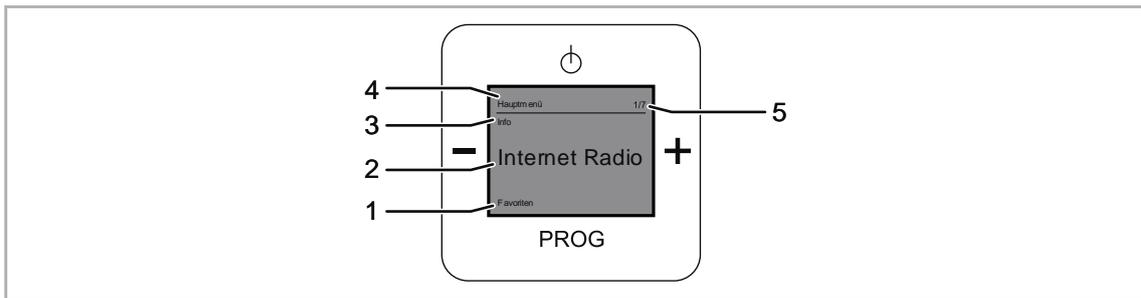


Fig. 19: Display overview of extended operation

- [1] Next menu item
- [2] Selected menu item
- [3] Previous menu item
- [4] Menu / menu level
- [5] Menu number

### 9.3.2 Button assignment

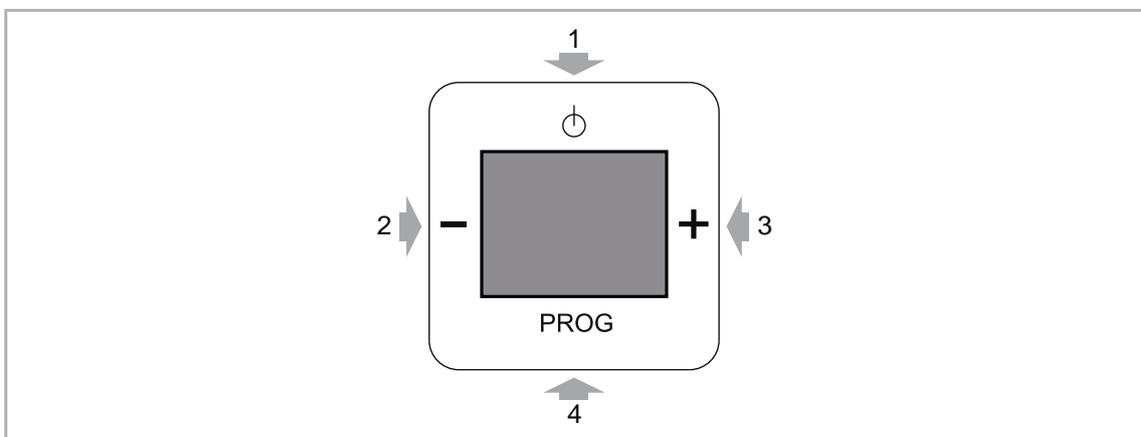


Fig. 20: Button assignment for extended operation

- [1] One level higher
- [2] Preceding menu item
- [3] Next menu item
- [4] Brief press of the button: Calling up the menu / confirming the selection  
Long press of the button (at least 5 seconds): Switch to extended operation

## 9.4 Functions of extended operation / Setting up the device manually

### 9.4.1 RESET (resetting the device)

If you wish to delete all the settings you have made and to re-enter them, the device must first be fully reset to its state at the point of delivery.

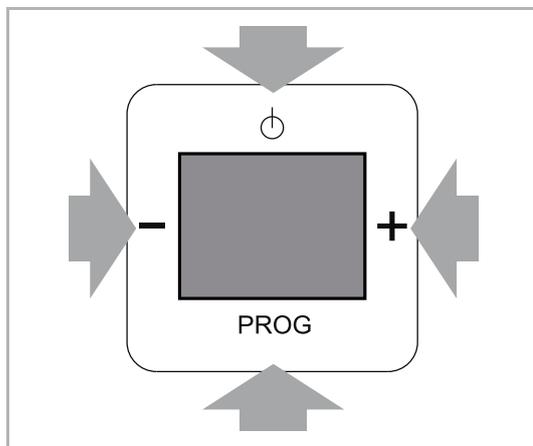


Fig. 21: Resetting the device

1. Press all four buttons on the device simultaneously for approximately 5 seconds.
  - All settings of your device have now been reset.
2. Commission the device anew, see chapter 7.1.2 “The device has already been in use in a different network” on page 17.
3. Set the device anew.
  - Reset manually, see chapter 9.3 “Extended operation” on page 24.
  - Reset online, see chapter 9.5 “Setting up the device via WLAN network” on page 53.

### 9.4.2 Data backup

Via the WLAN connection the device offers the option of making a data backup of the settings made, See “Configuration file” on page 63.

### 9.4.3 Overview – The main menus

The manual settings or the start / stop of functions is carried out in the following menus.

Observe the references to the respective menu items mentioned in the following.

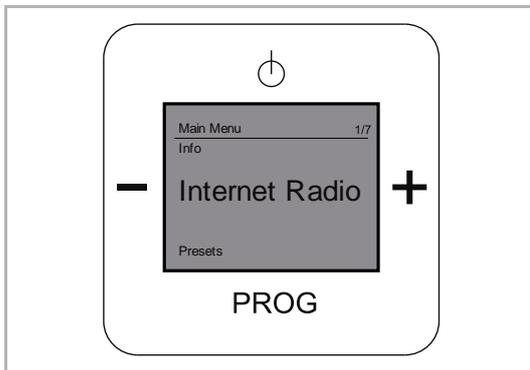


Fig. 22: Main menu "Internet Radio"

Internet Radio (1 / 7), see chapter 9.4.4 "Menu "Internet Radio"" on page 31

- TuneIn
  - Online radio

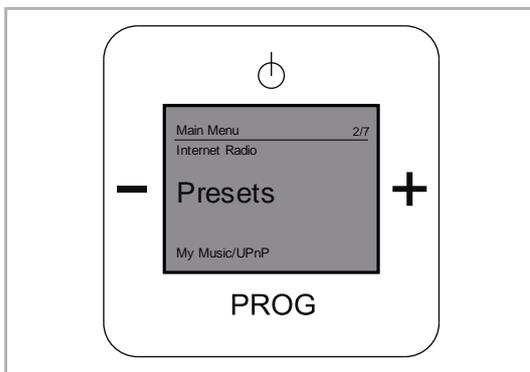


Fig. 23: Main menu "Favourites"

Favourites (Favourite station) (2 / 7), see chapter 9.4.5 "Menu "Favourites" (Favourite stations)" on page 31

- Station list
  - 1 to 8 stations

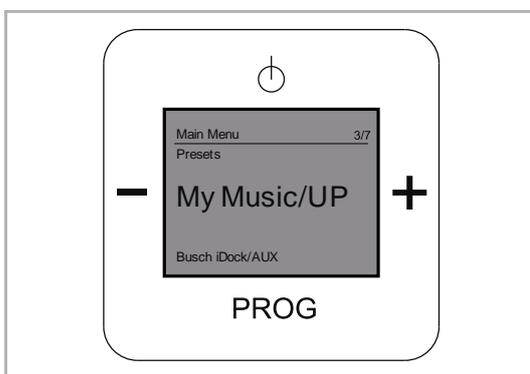


Fig. 24: Main menu "My music / UPnP"

My music / UPnP (use server) (3 / 7), see chapter 9.4.6 "Menu "My music/UPnP"" on page 33

- My music / UPnP
  - Access to other devices

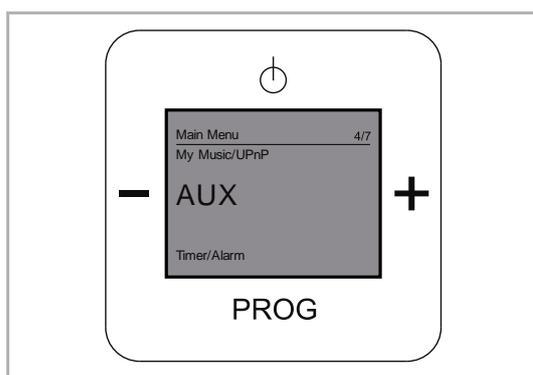


Fig. 25: Main menu "Busch-iDock/AUX"

Busch-iDock/AUX (4 / 7), see chapter 9.4.7 "Menu "AUX" (My player)" on page 34

- Busch-iDock/AUX
  - Access to an external device via the Busch-iDock station

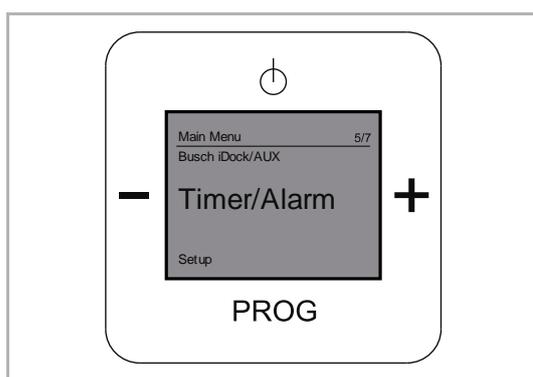


Fig. 26: Main menu "Timer / alarm"

"Timer / alarm (5 / 7), from Chapter 9.4.8 "Menu "Timer/alarm" - "Alarm clock"" on page 35

- Alarm clock
  - Alarm call function
- Duration of play (short-time timer)
  - Adjusting duration of play
- Sleep function
  - Adjusting off-period

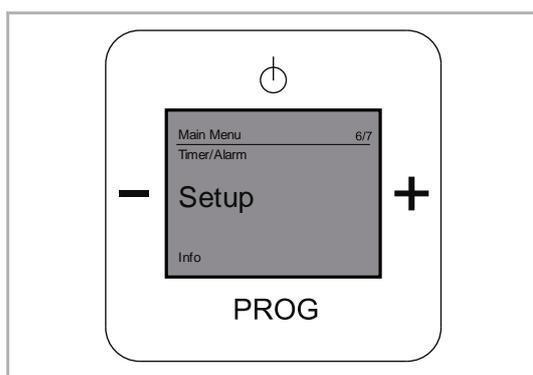


Fig. 27: Main menu "Settings"

Settings (6 / 7), from Chapter 9.4.11 "Menu "Settings" - "Language"" on page 41

- Language
- Audio mode
  - "Mono" or "Stereo""Mono" or "Stereo"
- Sound mode
  - Setting the music style / genre
- Display mode
  - Screen display
- Lighting
  - Display illumination
- Energy efficiency
  - Energy consumption
- Summertime
  - Normal:
    - No automatic changeover between summertime and wintertime.
  - Automatic:
    - Automatic changeover
- Restart the radio
- Firmware update.

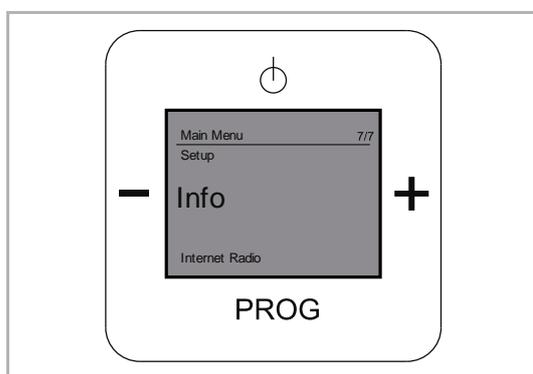


Fig. 28: Main menu "Info"

Info (7 / 7), see chapter 9.4.20 "Menu "Info"" on page 50

- Information about the device and the firmware

These menu levels and menu items are described in the following chapters.

#### 9.4.4 Menu "Internet Radio"

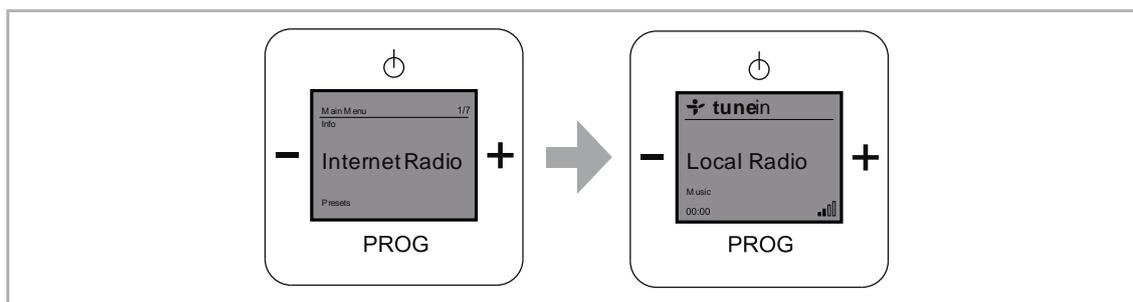


Fig. 29: Menu level "Internet Radio"

In menu level "Internet Radio" you find menu item "TuneIn".

TuneIn is an online Internet radio.

The device offers you additional local and international live radio stations, talk shows, stations according to your style of music and sports stations.

TuneIn menu	Functions / settings
Local radio	All local radio stations are listed under this menu item.
Music	Select this menu when you wish to listen to a specific style of music / genre.
Talk	In this menu item you will find a selection of talk-show stations.
Sport	Here you can switch on the current sports talk-show stations.
Locations	Select your radio station according to a continent.
Languages	Select the desired language from the list of languages.
Podcasts	A podcast (audio file) contains audio information about a topic that can be played with a player and listened to. The recorded live programs of some radio stations can be called up at a later point in time as a podcast and listened to. Select this menu to listen to a cut of an older live show from a radio station.

5 TuneIn

1. Select menu "Internet Radio".
2. Wait until the connection has been established.
3. Select a TuneIn menu.
4. Select a station from the list.
  - The device establishes the Internet connection to the selected station.
  - As soon as the connection has been established you can hear the station.



#### Notice

Please note that the menu items are filters which can influence each other. For example, the selection of a language limits the stations on offer to this selection.

#### 9.4.5 Menu "Favourites" (Favourite stations)

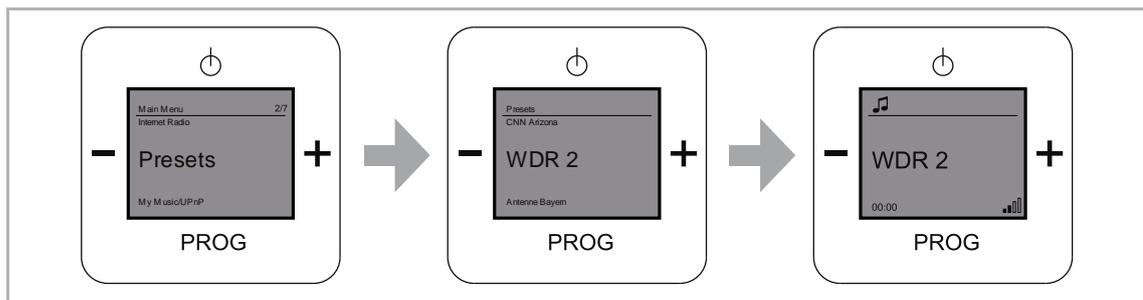


Fig. 30: Menu level "Favourites".

The "Favourites" menu offers you the option of selecting your favourite station from the set station list. It will play when the device is switched on.

1. Select menu "Favourites".
  - The stored stations are displayed.
2. Select your favourite station.
3. Confirm your selection by pressing the "PROG" button.



#### NOTE

The station list can be set online via the WLAN connection. To set the station list, see chapter 9.5.1 "WLAN connection with the radio" on page 53 and see chapter 9.5.5 "Screen "Station list"" on page 64

### 9.4.6 Menu "My music/UPnP"

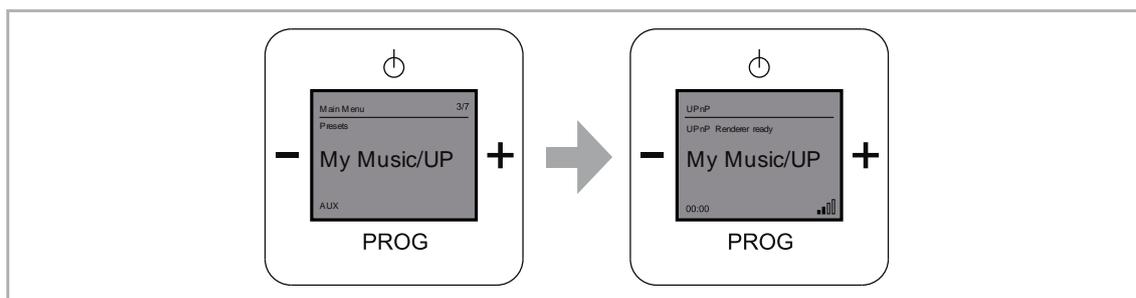


Fig. 31: Menu level "My music/UPnP"

Menu level "My music/UPnP" allows you universal networking of devices without a server and computer and the exchange of services.

You can play your music from a server located in the network.

Preconditions:

Smartphone or tablet with iOS or Android operating system and UPnP replay app, e.g. bubble UPnP

1. Select the menu "My music/UPnP".
  - The radio is now ready to play music that runs on a UPnP server.
2. Start the UPnP replay app on your mobile device.
3. Select the music source in the app, e.g. your Smartphone (local server) or a media server (e.g. NAS drive).
4. Select "Radio-INet-xxx" as player (renderer) in the app.
5. Select a piece of music from the playlist and start the replay.
  - The music is replayed from the radio.

### 9.4.7 Menu "AUX" (My player)

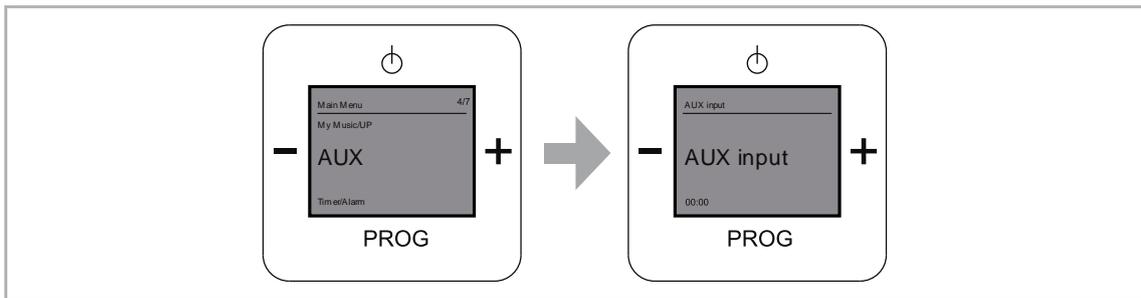


Fig. 32: Menu level "AUX"

Menu "AUX" describes the use of external players. You can use the Busch-iDock via this menu. The Busch-iDock can play music from your iPhone, iPod or a different player via the device and the loudspeakers.

A different player can be connected via the lateral jack socket.



**NOTE**

To use this function the Busch-iDock station must be connected and available. Additional information on the Busch-iDock is available at [http://www.busch-jaeger-media.de/busch-jaeger\\_D/Standard/index.jsp](http://www.busch-jaeger-media.de/busch-jaeger_D/Standard/index.jsp)

1. Ensure that an Busch-iDock station is available!
2. Connect an iPhone, an iPod, or a different player.
  - Select the suitable connecting option:

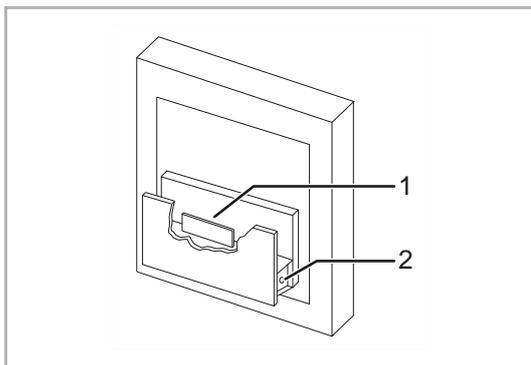


Fig. 33: Busch-iDock Station

- [1] Connection for Apple devices with 30-pole dock connector (only for iPod, iPhone).
- [2] Jack socket (for other players)

3. Select your desired music from your iPod, iPhone or a different player.
4. Then select "Play".
  - The device shows "iPod" on its display and you hear the music you have selected.

### 9.4.8 Menu "Timer/alarm" - "Alarm clock"

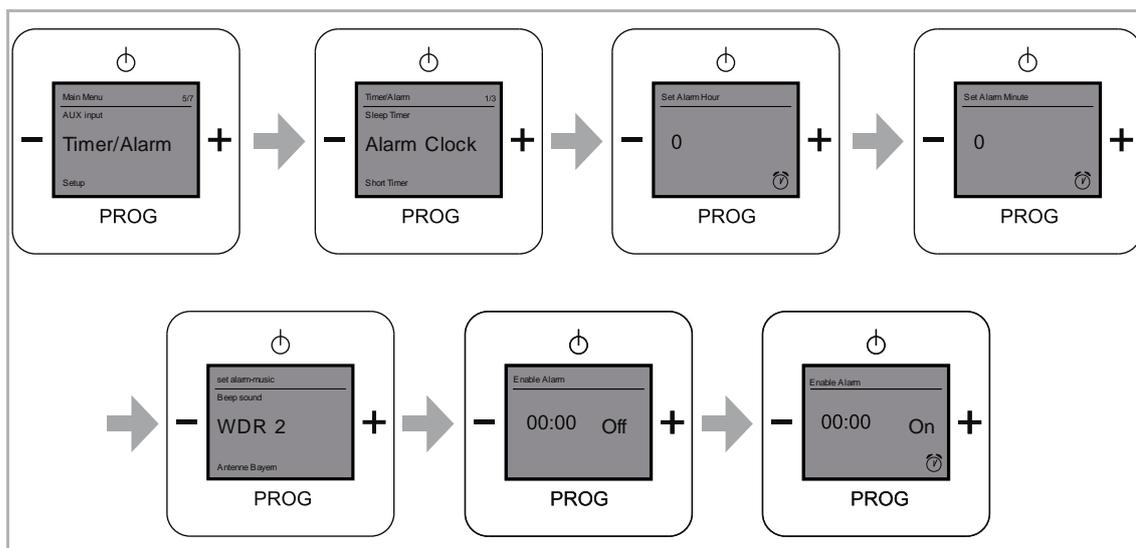


Fig. 34: Menu item "Alarm clock"

The "Alarm clock" menu describes the alarm call function in menu level "Timer/alarm". The alarm call function is switched on or off via this menu.

#### Activating the alarm call function

1. Select menu "Timer/alarm".
2. In the next menu, select menu item "Alarm clock".
3. Set the value for the "Alarm hour".
  - Alarm hour describes the time specified between 0 to 24 hours.
4. Confirm the "Alarm hour".
  - The menu automatically switches to the next setting option.
5. Set the value for the "Alarm minute".
  - Alarm minute describes the time specified between 0 to 59 minutes.
6. Confirm the "Alarm minute".
  - You can now choose between you favourite stations and an electronic alarm tone with the "PLUS/MINUS" buttons.
7. Switch the alarm call function on by pressing the "PLUS" button.
  - The display shows the set time for the alarm call function and the "ON" status with the icon.
8. Confirm the activation of the alarm call function by pressing the "PROG" button.

**NOTE**

When you have set the alarm time and activated the alarm call function, the alarm clock icon is not displayed! The alarm clock icon will appear in the display after you have switched from the menu to the main display with the "On/Off" button.

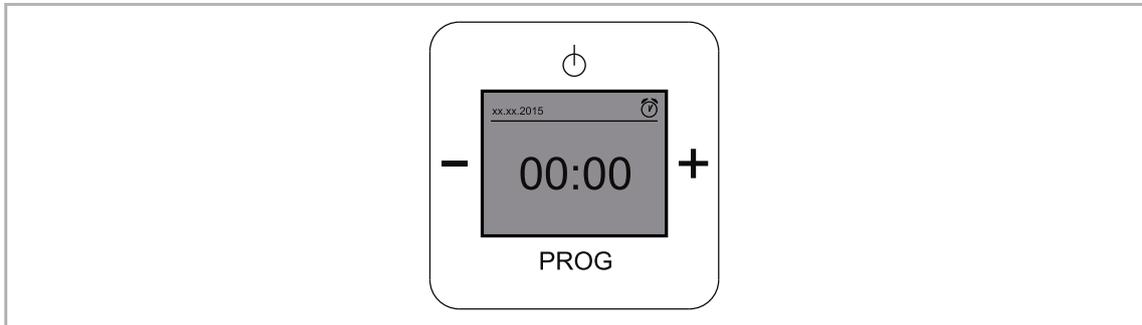


Fig. 35: Main display - alarm clock has been set

**Deactivating the alarm call function**

1. Select menu "Timer/alarm".
2. In the next menu, select menu item "Alarm clock".
3. Switch to setting option "Alarm activation".
4. Switch the alarm call function off by pressing the "MINUS" button.
  - The display shows the time set for the alarm call function and the "OFF" status.
5. Confirm the deactivation of the alarm call function by pressing the "PROG" button.

### 9.4.9 Menu "Timer/alarm" - "Short-time timer" (Duration of play)

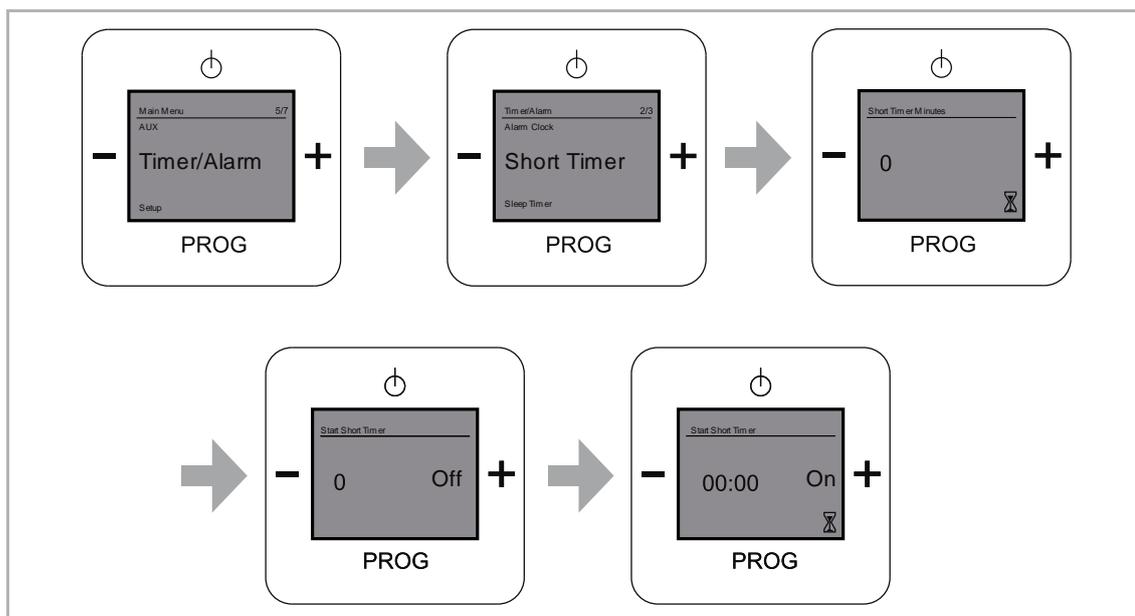


Fig. 36: Menu item "Short-time timer".

The "Short-time timer" menu describes the duration of play of the radio in menu level "Timer/alarm".

You can activate the radio's duration of play via this menu. The radio switches off when this time has expired.

#### Activating the duration of play

1. Select menu "Timer/alarm".
2. In the next menu, select menu item "Short-time timer".
3. Set the value for the "Short-time timer minutes".
  - Short-time timer minutes describes the time between 0 to 59 minutes.
4. Confirm the "Short-time timer minutes".
  - The menu automatically switches to the next setting option "Activate short-time timer".
  - The display shows the time set for the duration of play and the "OFF" status.
5. Switch the duration of play on by pressing the "PLUS" button.
  - The display shows the set time for the duration of play and the "ON" status with the icon.
6. Confirm the activation of the duration of play by pressing the "PROG" button.

**NOTE**

When you have set the "Short-time timer" and activated it, the "Short-time timer" icon is not displayed! The Short-time timer icon will appear in the display after you exit the main display.

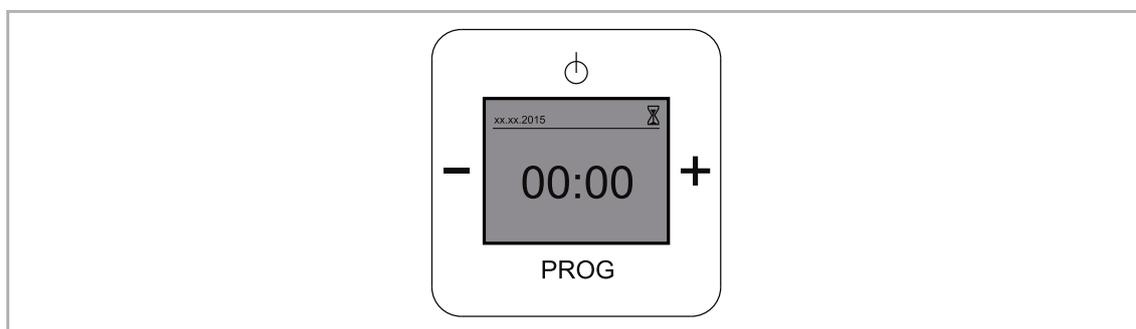


Fig. 37: Main display - "Short-time timer" has been set

**Deactivating the duration of play**

1. Select menu "Timer/alarm".
2. In the next menu, select menu item "Short-time timer".
3. Switch to setting option "Short-time timer activation".
4. Switch the duration of play off by pressing the "MINUS" button.
  - The display shows the time set for the duration of play and the "OFF" status.
5. Confirm the deactivation of the duration of play by pressing the "PROG" button.

### 9.4.10 Menu "Timer/alarm" - "Sleep timer"

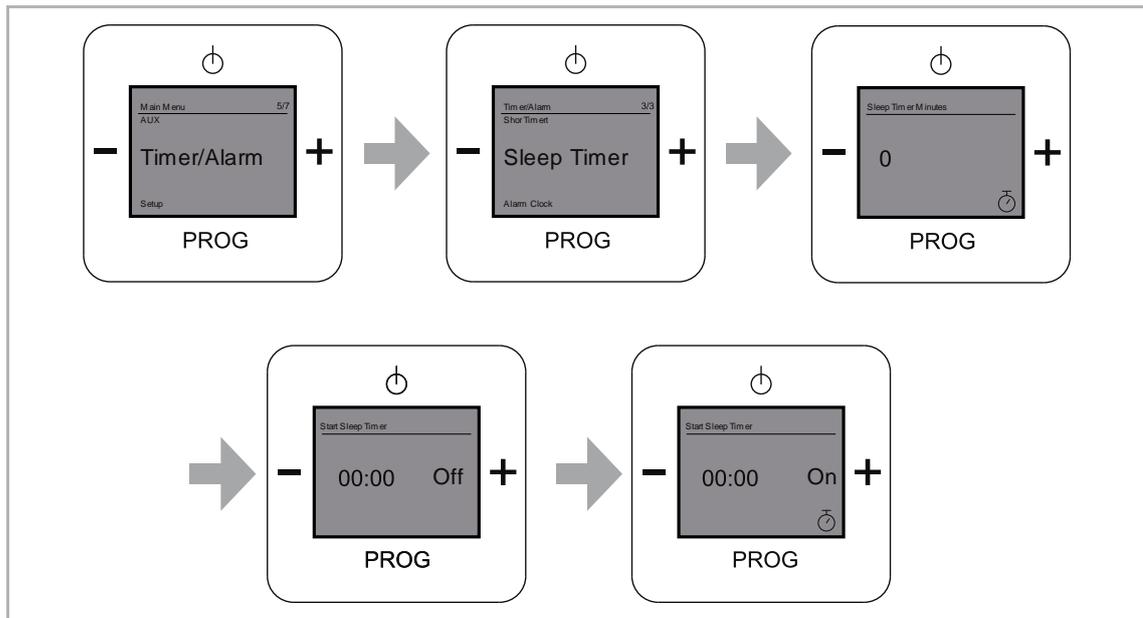


Fig. 38: Menu item "Sleep timer"

The "Sleep timer" menu describes the sleep function in menu level "Timer/alarm". Via this menu you can fix a specific time for the device to deactivate itself.

#### Activating the sleep function

1. Select menu "Timer/alarm".
2. In the next menu, select menu item "Sleep timer".
3. Set the value for the "Sleep timer minutes".
  - Sleep timer minutes describes the time between 0 to 59 minutes.
4. Confirm the "Sleep timer minutes".
  - The menu automatically switches to the next setting option "Activate sleep timer".
  - The display shows the minutes set for the sleep function and the "OFF" status.
5. Switch the sleep function on by pressing the "PLUS" button.
  - The display shows the set time and the "ON" status with the icon.
6. Confirm the activation of the sleep function by pressing the "PROG" button.

**NOTE**

When you have set the "Sleep timer" and activated it, the "Sleep timer" icon is not displayed! The sleep timer icon will appear in the display after you exit the main display.



Fig. 39: Main display - "Sleep timer" has been set

**Deactivating the sleep function**

1. Select menu "Timer/alarm".
2. In the next menu, select menu item "Sleep timer".
3. Switch to setting option "Sleep timer activation".
4. Switch the sleep function off by pressing the "MINUS" button.
  - The display shows the set time and the "OFF" status.
5. Confirm the deactivation of the sleep function by pressing the "PROG" button.

### 9.4.11 Menu "Settings" - "Language"

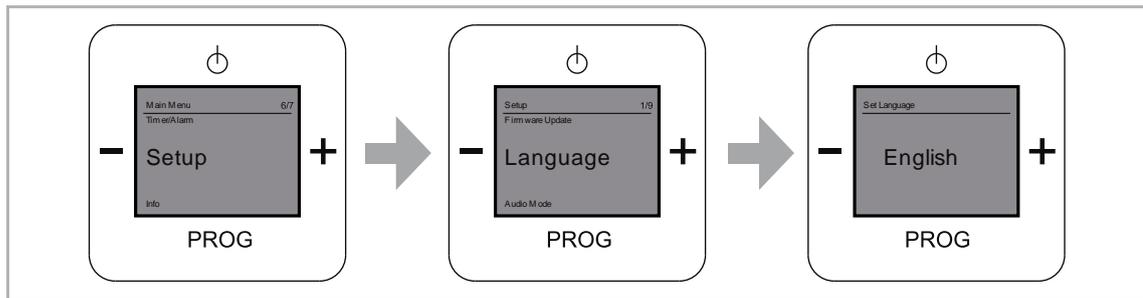


Fig. 40: Menu item "Language"

In menu item "Language" you find menu level "Settings".

The device offers you several languages for selection.

#### Selecting languages

1. Select menu "Settings".
2. In the next menu, select menu item "Language".
3. Use the "PLUS" button to change the languages.
4. Select the desired language.
5. Confirm your selection with the "PROG" button.

### Foreign language is set

If a foreign language has been set, use the following steps for a reset:

1. Switch the radio on.
  - Tip on the "ON / OFF" button.

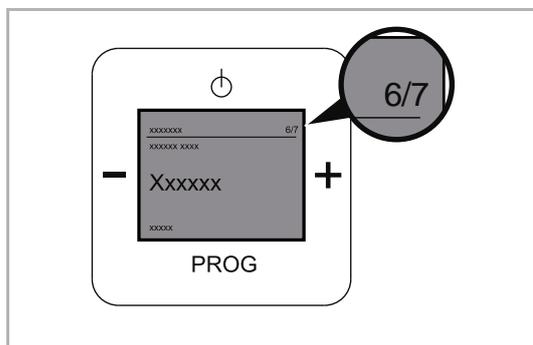


Fig. 41: Foreign language "Main menu"

2. Press the "PROG" button and immediately thereafter the "ON/OFF" button.
  - The device switches to the main menu.
  - The right numeral of the menu number must be a "7".
3. Switch to menu number "6/7" with the "PLUS" button.

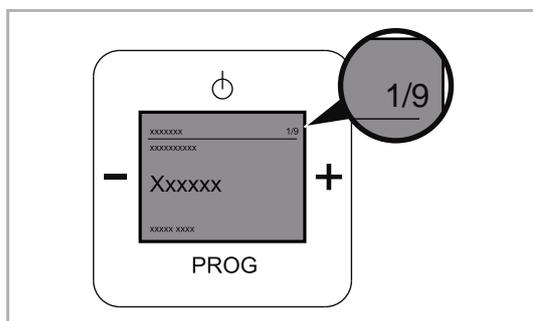


Fig. 42: Foreign language "Settings menu"

4. Switch to the menu with the "PROG" button.
  - The device switches to menu "Settings".
  - The right numeral of the menu number must be a "9".
5. Switch to menu number "1/9" with the "PLUS" button.

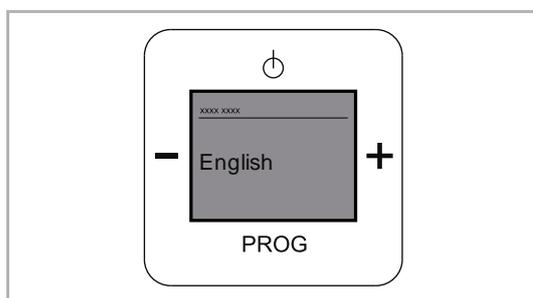


Fig. 43: Foreign language "Language menu"

6. Switch to the menu with the "PROG" button.
  - The current language will be displayed.
7. Switch to your language with the "PLUS" button.
8. Confirm your language with the "PROG" button.
  - The device changes the language.

### 9.4.12 Menu "Settings" - "Audio mode"

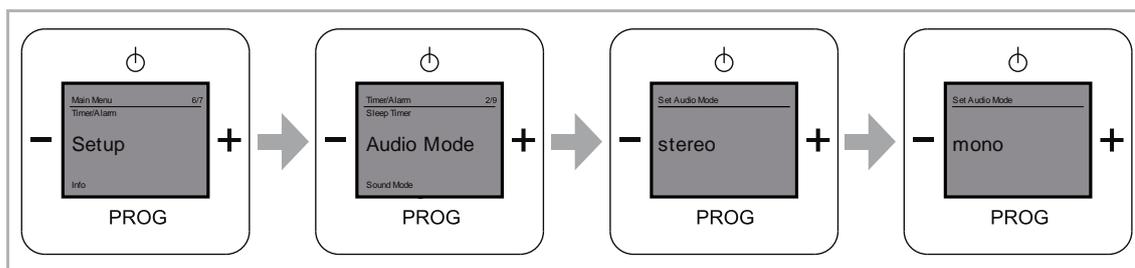


Fig. 44: Menu item "Audio mode"

The "Audio mode" menu describes the output quality. In this menu you select between mono and stereo mode.

Select from the following setting options:

Menu function	Description
Stereo	Output quality with two loudspeakers.
Mono	Output quality with one loudspeaker.

Table 6: Stereo / Mono

#### Setting the output quality

1. Select menu "Settings".
2. In the next menu, select menu item "Audio mode".
3. Use the "PLUS" button to change the audio mode.
4. Select the desired audio mode.
5. Confirm your selection with the "PROG" button.



#### Notice

"Stereo" mode is possible only with two connected loudspeakers.

### 9.4.13 Menu "Settings" - "Sound mode" (Genre)

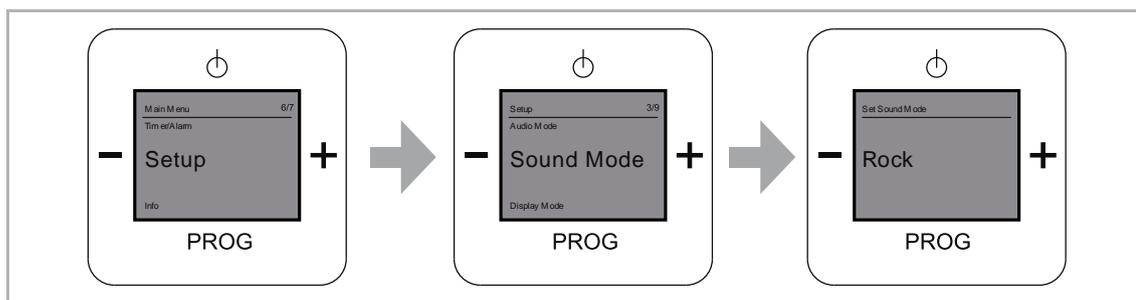


Fig. 45: Menu item "Sound mode"

In this menu the desired music style / genre is set.

Select from the following setting options:

Music style	Description
Speech	This has been specially developed and is suitable for talk-show stations.
Rock	This has been specially developed for music with electric and acoustic instruments and singing.
Jazz	Supports Jazz-specific instrumental song elements.
Classic	This has been specially developed for folk music.
Electro	This has been specially developed for music produced electronically.

Table 7: Music style / genre

Setting the music style / genre

1. Select menu "Settings".
2. In the next menu, select menu item "Sound mode".
3. Use the "PLUS" button to change the sound mode.
4. Select the desired sound mode.
5. Confirm your selection with the "PROG" button.
  - The device takes over the music style / genre.

### 9.4.14 Menu "Settings" - "Display mode"

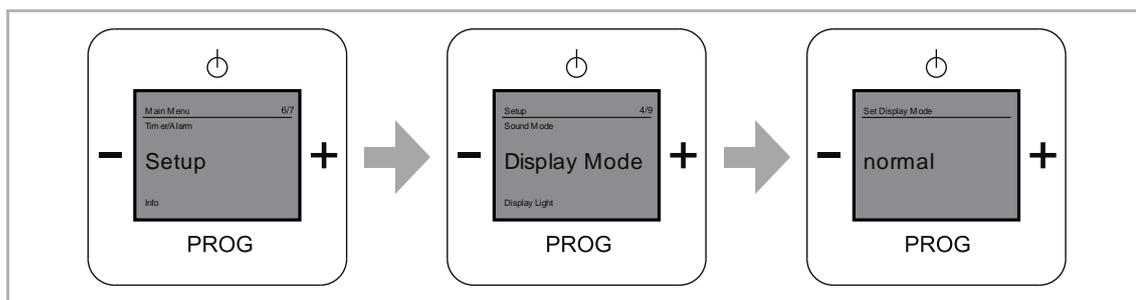


Fig. 46: Menu item "Display mode"

In this menu the desired display is set.

Select from the following setting options:

Menu function	Description
Normal	The display is white and the menu structure is black.
Inverse	The display is black and the menu structure is white.

Table 8: Display mode

Setting the display

1. Select menu "Settings".
2. In the next menu, select menu item "Display mode".
3. Use the "PLUS" button to change the display.
4. Select the desired display.
5. Confirm your selection with the "PROG" button.

### 9.4.15 Menu "Settings" - "Illumination"

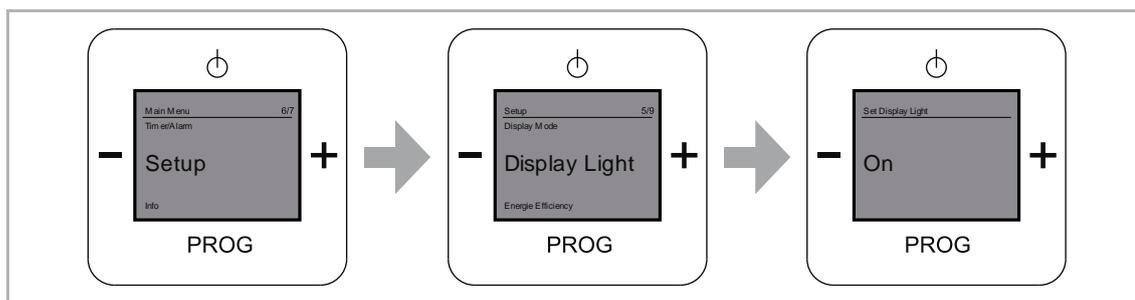


Fig. 47: Menu item "Illumination"

In this menu the desired display illumination is set.

Select from the following setting options:

Menu function	Description
ON	The display is permanently illuminated.
Automatic	The display illumination switches itself off independently after 20 seconds.
OFF	The display is not illuminated.

Table 9: Display illumination

Setting the display illumination

1. Select menu "Settings".
2. In the next menu, select menu item "Illumination".
3. Use the "PLUS" button to change the setting option.
4. Select the desired illumination.
5. Confirm your selection with the "PROG" button.

### 9.4.16 Menu "Settings" – "Energy efficiency"

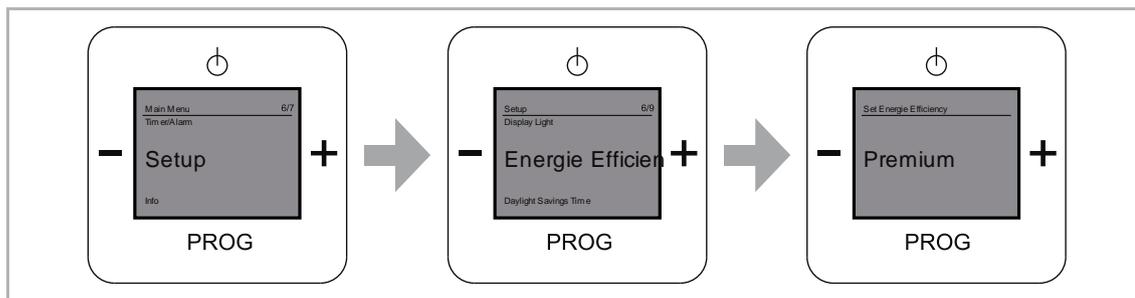


Fig. 48: Menu item "Energy efficiency"

In this menu the desired energy consumption together with connecting speed to an Internet radio / URL link is set when the device is started up again.

Select from the following setting options:

Menu function	Description
Premium	The device switches into standby mode and maintains the connection to the Internet. The device plays when reactivated.
Standby	The device remains permanently in standby mode.
Eco	The device switches off completely. When switching back on, the URL station must be called up again. The device is ready for operation only after the URL has been fully loaded. This process may take quite some time.

Table 10: Energy efficiency

Setting the energy consumption / connecting speed

1. Select menu "Settings".
2. In the next menu, select menu item "Energy efficiency".
3. Use the "PLUS" button to change the setting option.
4. Select the desired "Energy efficiency".
5. Confirm your selection with the "PROG" button.

### 9.4.17 Menu "Settings" – "Summertime"

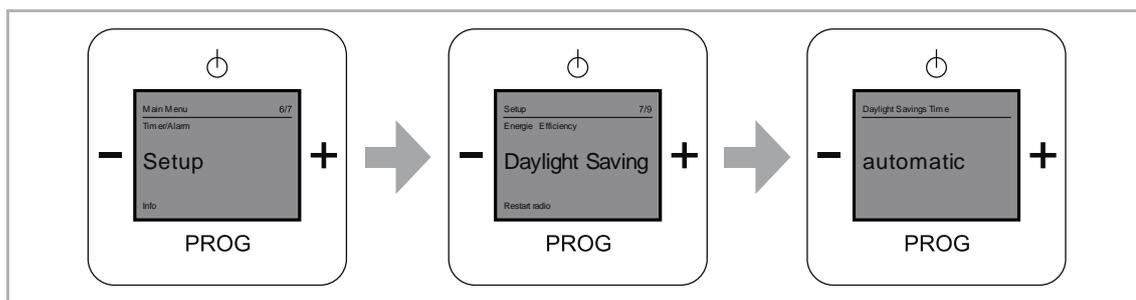


Fig. 49: Menu item "Summertime"

The "Summertime" menu offers the option of an automatic changeover between summertime and wintertime.

Select from the following setting options:

Menu function	Description
Normal	No changeover, the set time is retained.
Automatic	There is an automatic adjustment to summertime.

Table 11: Summertime

#### Setting summertime

1. Select menu "Settings".
2. In the next menu, select menu item "Summertime".
3. Use the "PLUS" button to change the setting option.
4. Select the desired setting.
5. Confirm your selection with the "PROG" button.

#### 9.4.18 Menu "Settings" - "Restart the radio"

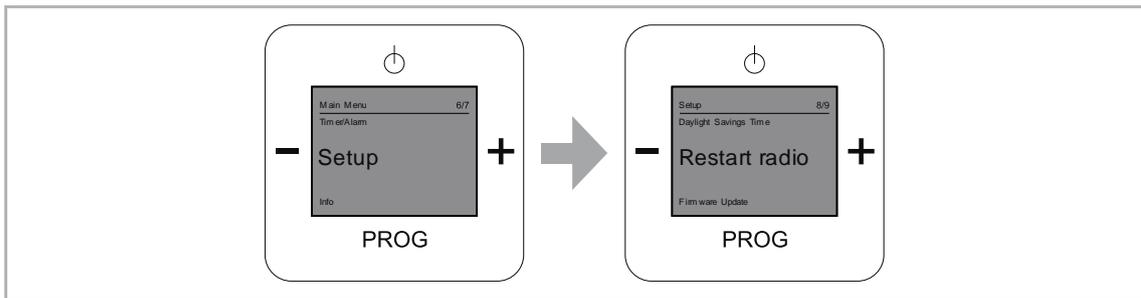


Fig. 50: Menu item "Restart the radio"

Menu "Restart the radio" offers the option of restarting the radio and the WLAN connection, e.g. after being disconnected from the network.

All other settings are retained.

Restart the radio

1. Select menu "Settings".
2. In the next menu, select menu item "Restart the radio".
3. Confirm your selection with the "PROG" button.

#### 9.4.19 Menu "Settings" - "Firmware update"

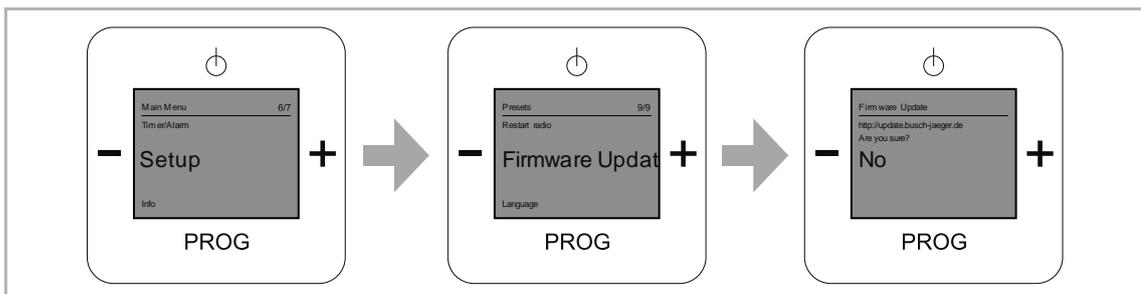


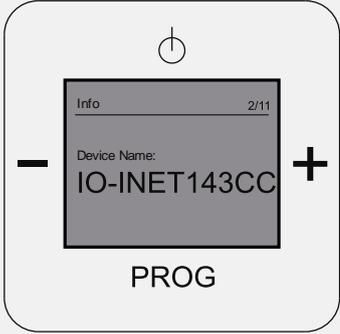
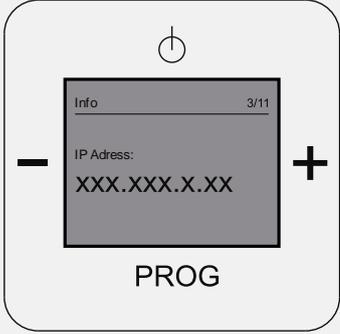
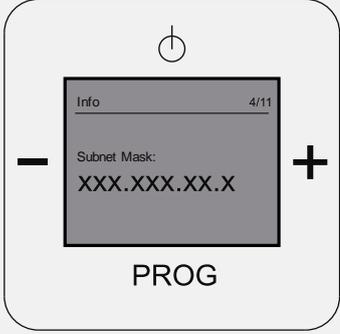
Fig. 51: Menu item "Firmware update"

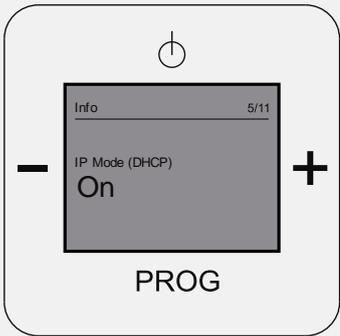
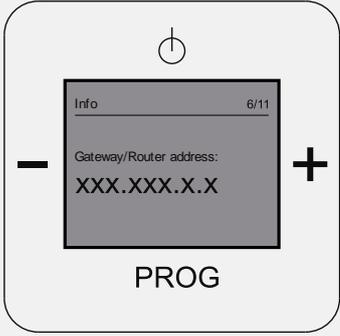
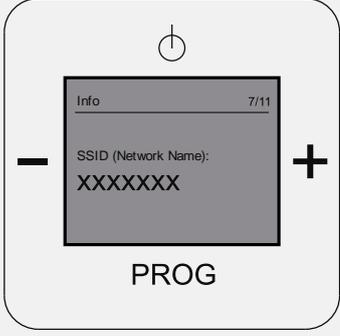
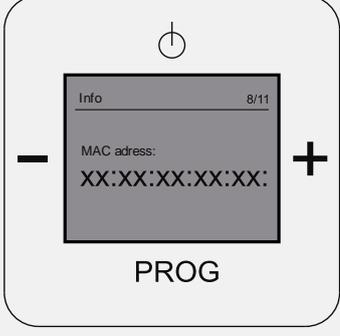
Menu "Firmware update" offers the option of updating the software of the device.

Firmware update

1. Select menu "Settings".
2. In the next menu, select menu item "Firmware update".
3. Use the "PLUS" button to select setting option "Yes".
4. Confirm the selection with the "PROG" button.

9.4.20 Menu "Info"

Display	Info	Description
	<p>Wi-Fi strength</p>	<p>The display shows the menu level, the menu item number, the Wi-Fi status / reception and the SSID number.</p>
	<p>Device name</p>	<p>Here the name of the device is displayed. You will see it on your external device during initial commissioning to the wireless network connections.</p>
	<p>IP Address</p>	<p>The IP address is required for chapter "Setting device via Wi-Fi", see chapter 7.3 "Connecting the radio with the WLAN (Access Point mode)" on page 18.</p>
	<p>Subnet mask</p>	<p>The subnet mask is specified by the address structure of your network.</p>

Display	Info	Description
	<p>IP mode (DHCP)</p>	<p>The IP mode describes the IP addresses the device uses, see chapter 9.5.3 "Screen "Network settings" " on page 57.</p>
	<p>Gateway / router address</p>	<p>IP address of your router</p>
	<p>SSID (Wi-Fi name)</p>	<p>The SSID is your Wi-Fi name</p>
	<p>Mac address</p>	<p>The MAC address is a clear designation of every network-capable device. The address is needed if you wish to allow only defined devices on your router.</p>

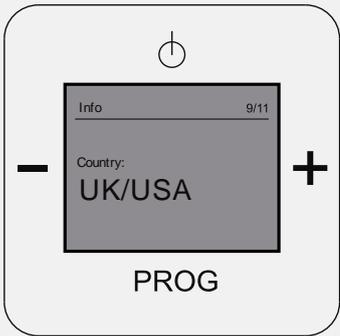
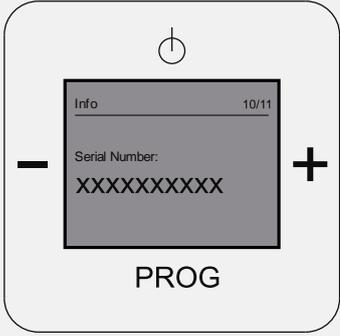
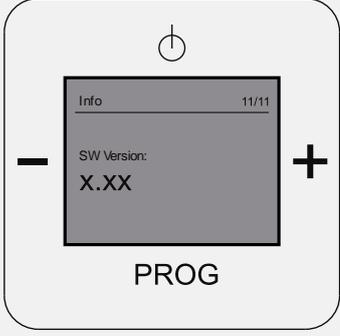
Display	Information	Description
 <p>The screenshot shows a device display with a power button icon at the top. Below it, a box contains 'Info' on the left and '9/11' on the right. The main text reads 'Country: UK/USA'. To the left of the box is a minus sign and to the right is a plus sign. Below the box, the word 'PROG' is displayed.</p>	<p>Country</p>	<p>Here you find the language which has been set or the country in which the set language is spoken. The time is automatically adjusted.</p>
 <p>The screenshot shows a device display with a power button icon at the top. Below it, a box contains 'Info' on the left and '10/11' on the right. The main text reads 'Serial Number: XXXXXXXXXXXX'. To the left of the box is a minus sign and to the right is a plus sign. Below the box, the word 'PROG' is displayed.</p>	<p>Serial number</p>	<p>Here you find the serial number of your device.</p>
 <p>The screenshot shows a device display with a power button icon at the top. Below it, a box contains 'Info' on the left and '11/11' on the right. The main text reads 'SW Version: X.XX'. To the left of the box is a minus sign and to the right is a plus sign. Below the box, the word 'PROG' is displayed.</p>	<p>SW Version</p>	<p>Here you find the latest software version of your device.</p>

Table 12: Device information

---

## 9.5 Setting up the device via WLAN network

### 9.5.1 WLAN connection with the radio

To set up your device with WLAN, carry out the following steps:

1. Switch the radio on.
  - The device connects itself with the WLAN network.
2. Connect your PC or your tablet (again) with your network.
3. Open the browser and enter the IP address of the radio in the address line.
  - Attention: This is not the IP address you entered during the initial setup.
    - To display the IP address of the radio, switch to the main menu of the radio with the "PROG" button and "On / Off" ..
    - Select menu level "Info" with the "PLUS / MINUS" buttons.
    - Press the "PROG" button.
    - Select menu level "IP address" with the "PLUS / MINUS" buttons.
    - Here the IP address of the device is displayed.
4. After entering the IP address of the radio in the browser, the extended configuration menu is displayed.

The WLAN setup is described in the following chapters.

## 9.5.2 Screen "Start page"

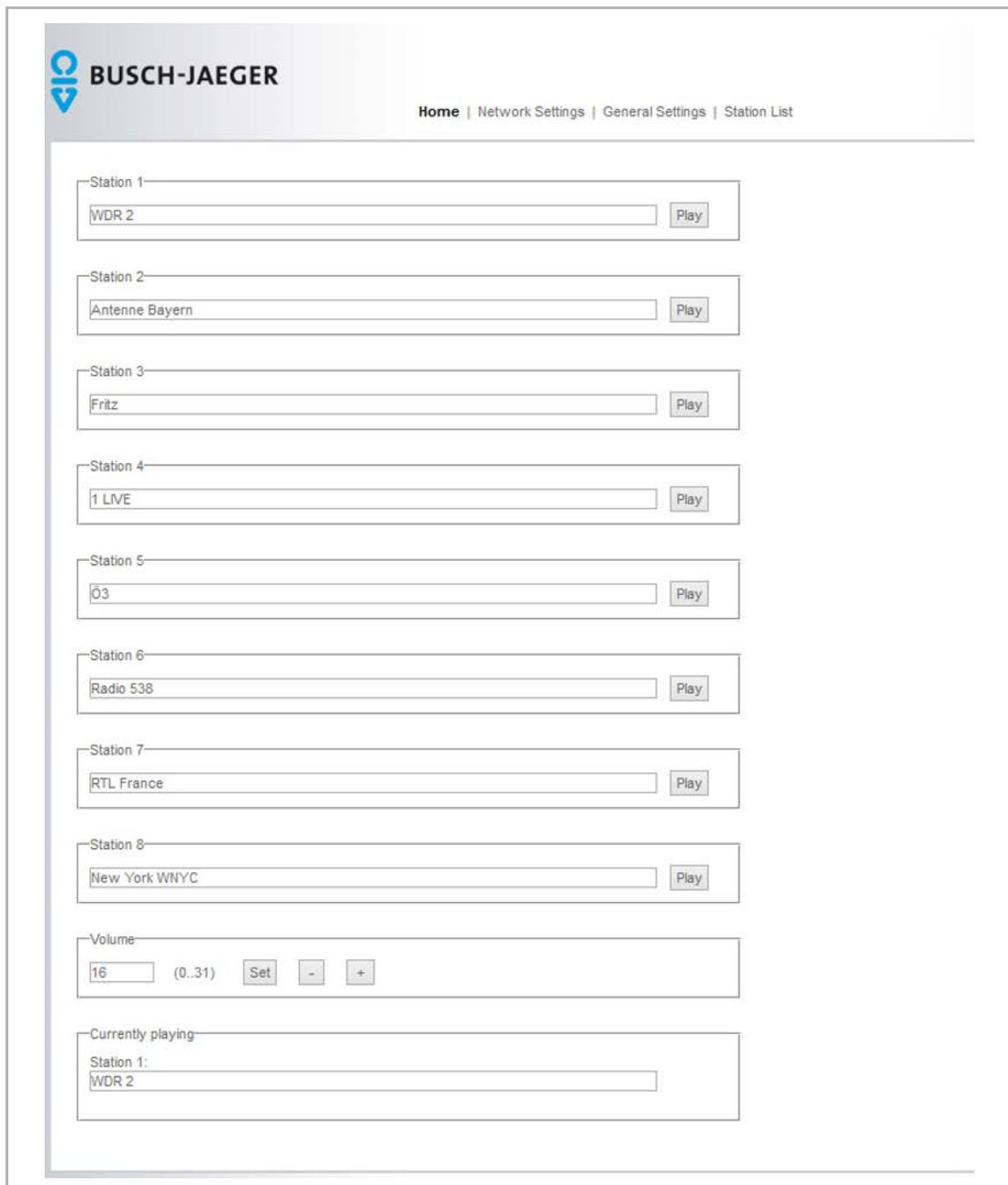


Fig. 52: Configuration menu "Start page"

The "Start page" configuration menu opens after a few seconds.

**Notice**

If the configuration menu does not open, check your wireless network connections on the device! If there is no connection, connect your external device to the device.

If the device shows a time, it has located a Wi-Fi network and you can carry out the Wi-Fi setup!



In this menu the individual stations with the stored radio stations can be viewed and the volume adjusted.

Input field	Description
Station 1 to X	By clicking on "Play" behind the station you immediately change to the desired radio station.
Volume	<p>You can adjust the volume in the lower section of the menu by entering a number (0 - 31).</p> <p>Confirm your entry by clicking "Set".</p> <p>Minimal adjustments to the volume can be made by clicking "+ / -".</p>

Table 13: Configuration menu "Start page"

### 9.5.3 Screen "Network settings"

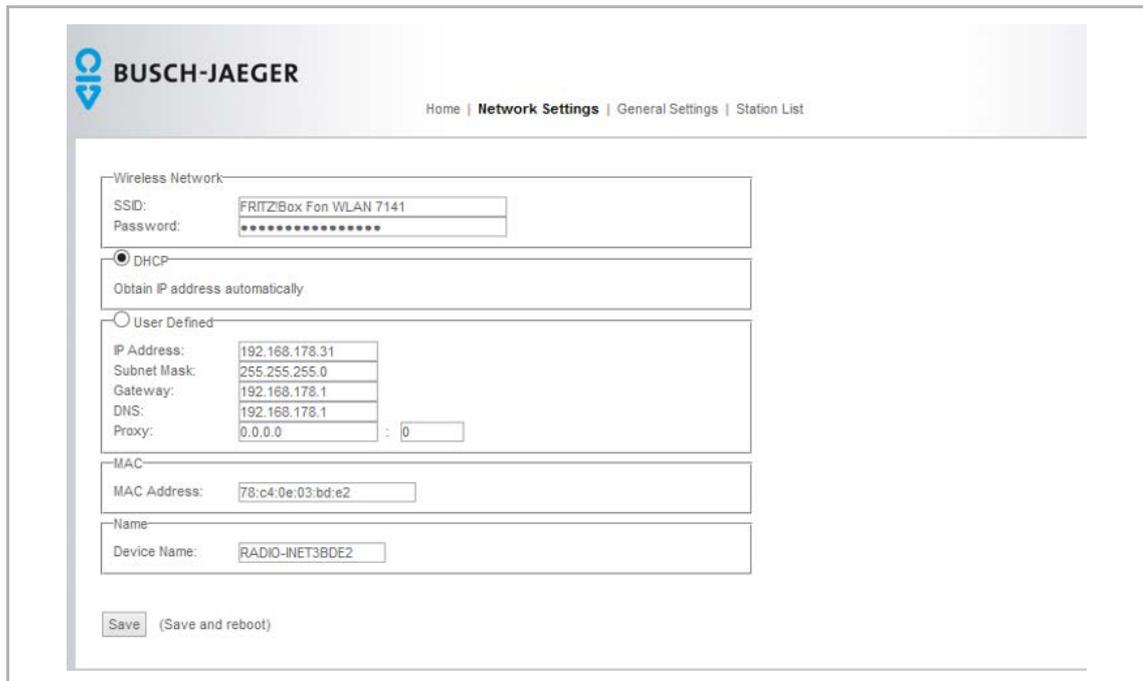


Fig. 53: Screen "Network settings"

1. Click "Network settings".

This menu displays the set Wi-Fi network with the associated password, the setting of the automated (DHCP) and user-defined IP address, the MAC address and the name of the device.

Wi-Fi	
Input field	Description
SSID	Enter the Wi-Fi name of your network in the field.
Password	Enter the password of your network in the field.

Table 14: Configuration menu "Wi-Fi"

DHCP
Select "DHCP" if the device is to automatically obtain an IP address.

Table 15: Configuration menu "DHCP"

User-defined
Select "User-defined" if you wish to assign an IP address to the device. Enter your data in the next input fields.

Table 16: Configuration menu "User-defined"

---

MAC	
Input field	Description
MAC address	This address is needed if you wish to allow the device on your router.

Table 17: Configuration menu "MAC"

Nome	
Input field	Description
Nome	This is the pre-set name of the device. The name can be changed.

Table 18: Configuration menu "Name"

2. Click "Save", to store the settings.

## 9.5.4 Screen "General settings"

**BUSCH-JAEGER**

Home | Network Settings | **General Settings** | Station List

**Illumination**

Brightness:  (0% - 100%)

Backlight:  Off  On  Automatic

Display Mode:  Normal  Inverse

**Audio**

Audio Mode:  Mono  Stereo

Sound Mode:  Rock  Jazz  Classic  Electro  Speech

Audio World:  Enable

**Language**

Language:

**Local Time**

hh:mm  :

Save this time to radio

Get time from internet automatically

Time Zone:  (-12 .. +12)

Daylight Savings:  Automatic

Time:

**Alarm**

Alarm:  Enable

Set Alarm Time:  :  Hour:Minute

**Short Timer**

Short Timer:  Enable

Set Alarm Time:  Minutes

**Sleep**

Sleep:  Enable

Set Sleep Time:  Minutes

**Switch Input**

Function:  Switch  Pushbutton  Automatic

Line Voltage:  110V  230V

Save Settings

**Configuration file**

Download [Download config file](#)

Upload, choose file  Keine Datei ausgewählt.

Upload config file, then radio restarts

**Firmware**

Current Firmware Version

Start automatic update

Fig. 54: Screen "General settings"

This menu contains the general settings of the device.

1. Click "General settings".
  - The description of the individual setting options are contained in the following tables.
  - Remember to save the settings at the end. When changing pages the new settings are lost and the previous state is restored.

LCD illumination	
Input field	Description
Brightness	Set the desired brightness of the display in percent.
Background illumination	Select between the following options: <ul style="list-style-type: none"> <li>▪ OFF (the display is not illuminated)</li> <li>▪ ON (the display is permanently illuminated)</li> <li>▪ Automatic (the display lighting switches itself off independently after 20 seconds)</li> </ul>
LCD mode	Select between the following options: <ul style="list-style-type: none"> <li>▪ Normal (the display is white and the menu structure is black)</li> <li>▪ Inverse (the display is black and the menu structure is white)</li> </ul>

Table 19: Configuration menu "LCD illumination"

Audio	
Input field	Description
Audio mode	In this menu you select between mono and stereo mode. <ul style="list-style-type: none"> <li>– "Stereo" mode is possible only with two connected loudspeakers.</li> </ul>
Sound mode	In this menu the desired music style / genre is set. <ul style="list-style-type: none"> <li>▪ Rock               <ul style="list-style-type: none"> <li>– This has been specially developed for music with electric and acoustic instruments and singing.</li> </ul> </li> <li>▪ Jazz               <ul style="list-style-type: none"> <li>– Supports Jazz-specific instrumental song elements.</li> </ul> </li> <li>▪ Classic               <ul style="list-style-type: none"> <li>– This has been specially developed for folk music.</li> </ul> </li> <li>▪ Electro               <ul style="list-style-type: none"> <li>– This has been specially developed for music produced electronically.</li> </ul> </li> <li>▪ Speech               <ul style="list-style-type: none"> <li>– This has been specially developed and is suitable for talk-show stations.</li> </ul> </li> </ul>
Audio World	The option "Audio World" is a Busch-Jaeger program for synchronising several devices. It offers the possibility of listening to the same radio station through several devices in different rooms.

Table 20: Configuration menu "Audio"

Voice	
Input field	Description
Voice	In this menu you select the language that is displayed in the menus of the radio.

Table 21: Configuration menu "Language"

Local time	
Input field	Description
Hrs:Min	<p>Manual:</p> <ul style="list-style-type: none"> <li>– Set the current time in hours and minutes.</li> <li>– Activate the function "Take over the displayed time in the radio".</li> </ul> <p>Automatic:</p> <ul style="list-style-type: none"> <li>– Activate the function "Take over the time from the Internet automatically".</li> </ul>
Time zone	Here you have the option to move your time zone forward or back.
Summer time	<p>The "Summertime" menu offers the option of an automatic changeover between summertime and wintertime.</p> <ul style="list-style-type: none"> <li>▪ Activated: <ul style="list-style-type: none"> <li>– There is an automatic adjustment to summertime.</li> </ul> </li> <li>▪ Deactivated: <ul style="list-style-type: none"> <li>– No changeover, the set time is retained.</li> </ul> </li> </ul>

Table 22: Configuration menu "Local time"

Alarm clock	
Input field	Description
Alarm	<p>The alarm call function is switched on or off via this menu.</p> <ul style="list-style-type: none"> <li>▪ Switching the alarm clock on: <ul style="list-style-type: none"> <li>– Activate the checkbox.</li> </ul> </li> <li>▪ Switching the alarm clock off: <ul style="list-style-type: none"> <li>– Deactivate the checkbox.</li> </ul> </li> </ul>
Set alarm time	Fix the alarm time by first entering the number for the hour and the minutes.

Table 23: Configuration menu "Alarm"

Short-time timer (Duration of play)	
Input field	Description
Short-time timer	<p>You can activate the radio's duration of play via this menu. The radio switches off when this time has expired.</p> <ul style="list-style-type: none"> <li>▪ Activating the duration of play: <ul style="list-style-type: none"> <li>– Activate the checkbox.</li> </ul> </li> <li>▪ Deactivating the duration of play: <ul style="list-style-type: none"> <li>– Deactivate the checkbox.</li> </ul> </li> </ul>
Set alarm time	Fix the duration of play by entering the number for the minutes.

Table 24: Configuration menu "Short-time timer"

Sleep timer (sleep function)	
Input field	Description
Sleep timer	<p>Via this menu you can fix a specific time for the device to deactivate itself.</p> <ul style="list-style-type: none"> <li>▪ Activating the sleep function: <ul style="list-style-type: none"> <li>– Activate the checkbox.</li> </ul> </li> <li>▪ Deactivating the sleep function: <ul style="list-style-type: none"> <li>– Deactivate the checkbox.</li> </ul> </li> </ul>
Setting the time	Enter the number for the minutes at which the device is to switch itself of.

Table 25: Configuration menu "Sleep timer"

Switching input	
<p>In function "Switching input" you specify whether the radio is to be additionally switched on or off via an external switch, e.g. with a light switch when you enter the room. To do so, the switch must be connected via the extension unit input.</p>	
Input field	Description
Job Type	<p>switch</p> <ul style="list-style-type: none"> <li>– Set this item if you would like to operate the extension input with a switch.</li> </ul> <p>Push-button</p> <ul style="list-style-type: none"> <li>– Set this item if you would like to operate the extension input with a push-button.</li> </ul> <p>Automatic</p> <ul style="list-style-type: none"> <li>– In this setting the radio automatically recognizes the operation at the extension unit.</li> </ul>
Mains voltage	Here select the mains voltage for your device.

Table 26: Configuration menu "Switching input"

2. To store the settings made, click on the "Save" button [1].

**Additional functions**

<b>Configuration file</b>	
<p>The data of the online setup of your device are stored on the WEB server of the radio.</p> <ul style="list-style-type: none"> <li>– The storage is specific to the device. You always see exclusively the data of your device.</li> </ul> <p>If you switch to the online configuration you will see the data of your last configuration. This data set can be stored as configuration, e.g. on a PC.</p> <p>You can upload this configuration file to the WEB server of the radio for use as a backup or it to set up further devices at a later point in time. The displayed settings are then automatically updated and downloaded to your device.</p> <ul style="list-style-type: none"> <li>– The configuration file can be uploaded to the WEB server of the radio after the initial configuration and after a later configuration.</li> </ul>	
<b>Input field</b>	<b>Description</b>
Do download	<p>The online configuration file of your device is downloaded from the WEB server of the radio.</p> <ul style="list-style-type: none"> <li>– You need not select a file. The download takes place automatically after the button has been pressed.</li> <li>– During this process the configuration file is stored automatically in the "Download" folder of the multimedia device with which you have established the connection.</li> <li>– The configuration file can then be renamed. You do not require a special name.</li> </ul>
Configuration file for uploading	<p>The configuration file you have stored is uploaded to the WEB server of the radio by your multimedia device.</p> <ul style="list-style-type: none"> <li>▪ Browse: <ul style="list-style-type: none"> <li>– Here you select your configuration file.</li> </ul> </li> <li>▪ Upload: <ul style="list-style-type: none"> <li>– The values of the configuration file are read automatically into the settings of the online configuration.</li> <li>– The settings of your device are updated automatically. They now contain the values from the configuration file.</li> <li>– The device is then restarted again.</li> </ul> </li> </ul>

Table 27: Configuration menu "Configuration file"

<b>Firmware (update of device software)</b>	
<b>Input field</b>	<b>Description</b>
Latest firmware version	<p>The latest version of the firmware is displayed in this field.</p> <ul style="list-style-type: none"> <li>▪ Update: <ul style="list-style-type: none"> <li>– The update of the firmware on your device is started with the "Update" button.</li> </ul> </li> </ul>

Table 28: Configuration menu "Firmware"

### 9.5.5 Screen "Station list"

**BUSCH-JAEGER**

Home | Network Settings | General Settings | **Station List**

Station 1

URL:

Name:

Station 2

URL:

Name:

Station 3

URL:

Name:

Station 4

URL:

Name:

Station 5

URL:

Name:

Station 6

URL:

Name:

Station 7

URL:

Name:

Station 8

URL:

Name:

Save station list to iRadio

Fig. 55: Screen "Station list"

In this menu, you can change your radio stations.

1. Click "Station list".
  - In this menu, you can change your radio stations.

Station X	
Input field	Description
URL	Copy the stream link from the browser window of your favourite station and enter it here.
Name	Enter the name here that is to be shown in the display of your device.

Table 29: Configuration menu "Wi-Fi"

2. Click "Save", to store the settings.

**For example:**

The Internet site "<http://www.listenlive.eu/>" offers a tidy collection of station.

1. Switch to this site and select your language on the start page.
  - A list of stations is displayed.
2. Select a station from the list, e.g. "WDR 2".
3. Click with the right mouse button on the transmission rate (in this case "128 Kbps") and in the context menu which opens switch to the Characteristics function.
4. Copy the station address from the context menu and transfer it into the station list of your radio.
  - The station address has the suffix "m3u".
5. Finally, enter the station name into the station list.

The station address has been set up.

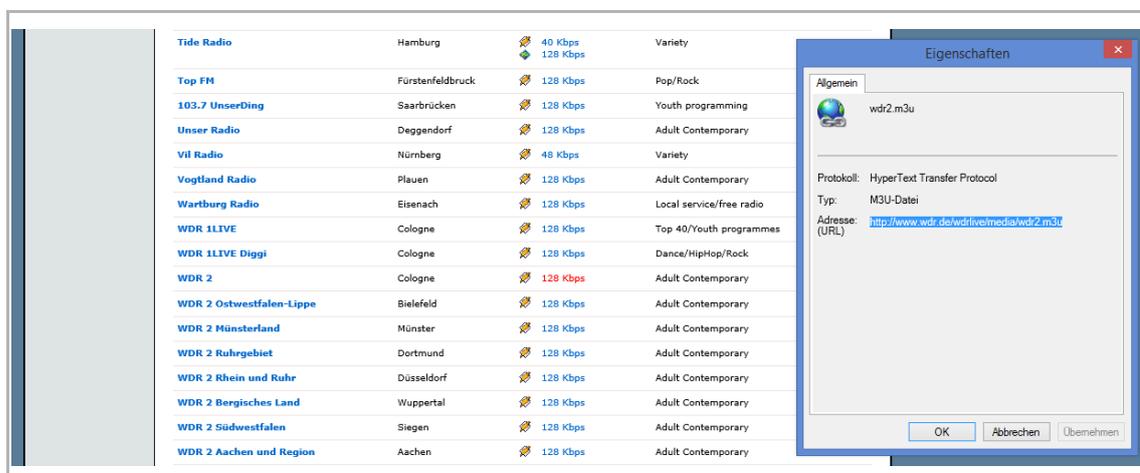


Fig. 56: Example: Copying the station address

---

## 10 Maintenance

### 10.1 Cleaning

**Caution! - Risk of damaging the device!**

- When spraying on cleaning agents, these can enter the device through crevices.
  - Do not spray cleaning agents directly onto the device.
- Aggressive cleaning agents can damage the surface of the device.
  - Never use caustic agents, abrasive agents or solvents.

Clean dirty devices with a soft dry cloth.

- If this is insufficient, the cloth can be moistened slightly with a soap solution.

## 11 FAQ and Tips

### **Automatic overload detection:**

The device has an automatic overload detection function. This function switches off the loudspeaker output at overload.

- To reset the automatic overload detection, switch the device ON, OFF and then ON again.
- If necessary, reduce the volume.

### **Interrupted streaming (interrupted transmissions)**

The frequent occurrence of interrupted transmissions may have several reasons.

Wi-Fi strength (minimum reception field strength):

- The Wi-Fi strength is displayed in the "INFO" menu on the device: see chapter 9.4.20 "Menu "Info"" on page 50. The Wi-Fi strength should amount to at least  $> -75$  dBm.
  - Field strengths under  $-75$  dBm do not permit a fault-free rendering of Internet radio stations.

URL of the Internet radio station / volume of data streams:

- If the setting of the data stream volume is too high, the cache may deplete. Various URLs with different data transmission rates are available in the Internet radio stations.
  - In case of frequent interrupted transmissions, you can select a URL with a low data transmission rate.
  - Select the current URL of the desired radio station with a data stream of a maximum of 128 kbps.
- Outdated URLs also frequently result in interrupted transmissions.

Network data load too high.

- If the bandwidth of the Wi-Fi router or access point no longer (or only occasionally) suffices the selected data stream, audio rendering faults can occur. The reasons for this problem usually lies with other devices connected to the network, such as a gaming console, laptop, PC, TV, etc.
  - Reduce the number of connected devices or applications that use the network.

Internet bandwidth (occasionally) too low.

- If the available bandwidth in your own network is too high, the data transmission from the Internet may also cause a bottleneck, leading to interrupted transmissions. Typical causes may include file downloads, games with an Internet connection or audio/video streaming to other Internet-compatible devices.
  - Reduce the number of connected devices or applications that use the Internet.
- A further reason may be an LTE Internet connection. This connection, for example, switches back to a UMTS connection with a low data bandwidth when the data volume has been used up.

Interaction of various systems.

- The device supports Wi-Fi standards IEEE 802.11 b / IEEE 802.11 g and WPA/WPA2 encoding methods.
  - Not every manufacturer of Wi-Fi components (routers / access points) has implemented these standards into its products with sufficient care. Various Internet forums report that this problem may cause interrupted transmissions.
  - Pure IEEE 802.11 n operation is not supported. The device does not set up a connection to the access point. IEEE 802.11 b/g/n mixed mode, on the other hand, is supported.
    - Recently, mixed mode has been deactivated during firmware updates to routers and access points (e.g. AVM Fritz!Box).

### Mixed networks 2.4 GHz and 5 GHz.

- If a router or access point supports both transmission frequencies, faults / problems may occur when the device accesses it.
  - Deactivate the 5 GHz clock cycle unless absolutely required.
  - Practical experience has shown that some laptops crash with a blue screen in case of operation at both transmission frequencies.

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