

Operating Instructions

Intercom amplifier insert with display 8214 U



1	Safety.....	3
2	Intended use	3
	2.1 Environment.....	3
3	Operation	4
	3.1 Key assignment	4
	3.2 Display and icons	4
	3.3 Navigation menu	5
	3.4 Overview of the menu structure	6
	3.4.1 Function of the menu buttons.....	6
	3.5 Adjusting the device	7
	3.6 SETUP menu	7
	3.6.1 Selecting languages.....	8
	3.6.2 ZONE	8
	3.6.3 Illumination.....	9
	3.6.4 Tone.....	10
	3.6.5 Type of call.....	11
	3.6.6 Quit	12
	3.7 Settings in the modification menu	13
	3.7.1 Call zone	14
	3.7.2 Channel II.....	15
	3.7.3 Room monitoring.....	15
	3.7.4 CALL reject function.....	16
	3.7.5 Automatic sleep mode.....	17
	3.7.6 Baby monitoring.....	17
	3.7.7 Alarm clock On/Off	18
	3.7.8 Time	19
	3.7.9 Version.....	19
	3.7.10 Rest (resetting the device)	20
	3.7.11 Quit	20
4	Technical data.....	21
5	Setup and function	22
	5.1 Features of function and equipment.....	22
	5.2 Possible combinations	23
6	Installation and electrical connection	24
	6.1 Requirements for the electrician	24
7	Mounting / Installation	25
	7.1 Requirements for the electrician	25
	7.2 General mounting instructions	25
	7.3 Mounting	26
	7.4 Electrical connection	27
	7.4.1 Installation / connection possibilities	28
8	Cleaning.....	28

1 Safety



Warning

Electric voltage!

Risk of death and fire due to electrical voltage of 230 V.

- Work on the 230V supply system may only be performed by authorised electricians!
- Disconnect the mains power supply prior to installation and/or disassembly!

2 Intended use

The device is part of the Busch-AudioWorld® system and is to be used exclusively with the components that are supplied and licensed as described in the "Structure and Function" chapter. The device must only be installed in dry indoor rooms.

2.1 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 2002/96/EC WEEE and 2002/95/EC RoHS)

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

3 Operation

3.1 Key assignment

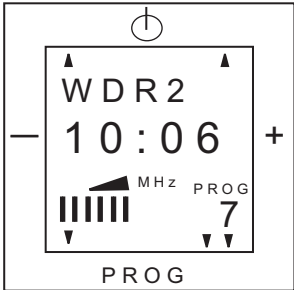





Fig. 1: Key assignment

Button	Operation	Navigation menu	Adjusting the menu item	Adjusting values	RESET
	ON / OFF	Menu back			Press all buttons of the rocker switch simultaneously for approx. 5 seconds
	Quiet	Select menu	Select menu item	Adjust values	
	Loud				
PROG	OK	Open menu		Accept value	

3.2 Display and icons

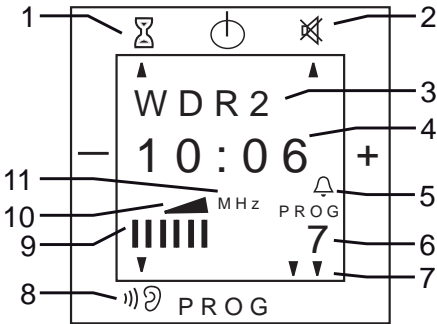


Fig. 2: Display

No.	Function
1	Automatic shut-off function icon (sleep function)
2	REJECT CALL icon (Please do not disturb function)
3	Menu info / info field and station name
4	Menu options / frequency display / clock
5	Alarm clock icon
6	Menu level / station memory location
7	SETUP / MENU symbol
8	Room monitoring symbol
9	Balance/ volume level
10	Volume symbol
11	Frequency symbol

3.3 Navigation menu

The navigation menu describes the basic options of a menu item and the response of the device.

ChangeChannel

Briefly pressing the PROG button switches between stored stations / sources!

Setting the menu

The display of the menu item to be set flashes.

Quit the entry

Press button "ON / OFF" to quit the following menus without saving.

Skipping submenus

Press buttons "+/-" to change the selection.

Volume adjusting

Press the "+/-" buttons to increase or decrease the volume.

Confirm the entry

Press the "PROG" button to confirm the entry.

The setting has been saved.

Alarm On / Off

The device is switched off.

1. Press the "PROG" button for approx. 3 seconds.
 - The current state will be changed. The alarm clock is activated or deactivated!

Sleep function

The device must be switched on!

1. Press the "ON / OFF" button for approx. 3 seconds.
2. Change the desired time with the "PLUS / MINUS" button. (only steps of 5 minutes are possible!)
3. Confirm your entry with the "PROG" button.

The device will switch off automatically after the time setting for the sleep function.

CALL (pre-set call zone)

An announcement can be made when pressing the entire surface of the display.

Wait for the acoustic signal!

When receiving a call from another zone the device remains active on this zone for 15 seconds.

This allows an answer to be made directly.

3.4 Overview of the menu structure

3.4.1 Function of the menu buttons

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

The menu levels consist of individual menu items in which the desired settings can be made.

Menu	Menu level	Menu item	Settings
1 / 2	SETUP		
		Language	xx languages are available for selection
		ZONE	Select your call zone between 0 ... 15
		Lighting	3 illumination options are available for selection
		Tone	3 tones are available for selection
		Type of call	Specify the type of call for the device
		Quit	Quit SETUP menu
2 / 2	Modification menu		
		Call zone	Setting the call zone
		Channel	2 options are available:
		Room monitoring	Switching on or off
		Reject call function	Suppressing function of the voice messages
		Automatic sleep mode	Activating or deactivating the automatic shut-off function
		Baby monitoring	Activating or deactivating the acoustic monitoring function
		Alarm clock	Activating or deactivating the alarm call function
		Time	
		Version	Displays the version of the device
		RESET	Reset to state at point of delivery
		Quit	Quit the modification menu

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

3.5 Adjusting the device

3.6 SETUP menu



Note

Ensure that the central unit is switched on and reproduces a signal source before you start the SETUP of the intercom amplifier insert.

The setup is carried out automatically during initial commissioning or when resetting the settings (RESET).

If certain functions are not relevant for you, by pressing the "PLUS / MINUS" button you can change to the next menu item.

Carry out the device settings in the following order.

A detailed description of the individual steps is contained in the following sub-sections.

Please switch the device on.

No.	Function
1	Selecting languages
2	Select the zone
3	Set the illumination of the display
4	Set the tone
5	Set the call type
6	Quit

3.6.1 Selecting languages

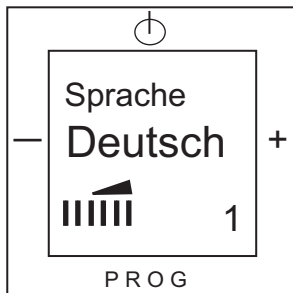


Fig. 3: Selecting languages

The "Language" menu is displayed automatically during initial commissioning. The device offers you several languages for selection.

Selecting languages

The language selection flashes.

1. Confirm the selection with the "PROG" button.
2. Select the desired language with the "PLUS / MINUS" button.
3. Confirm your language selection with the "PROG" button.

The device automatically switches to the next SETUP menu item "ZONE".

3.6.2 ZONE

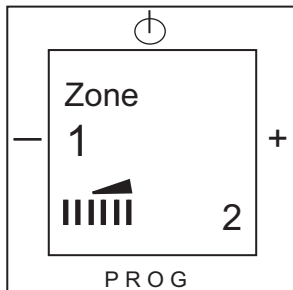


Fig. 4: Selecting the zone

The "ZONE" menu is displayed automatically during initial commissioning. The device offers you several call zones for selection. Assign your device to a call zone position!

Selecting the zone

The zone selection flashes.

1. Confirm the selection with the "PROG" button.
2. Select the desired zone (1 to 15) with the "PLUS / MINUS" button.
3. Confirm your zone with the "PROG" button.

The device automatically switches to the next SETUP menu item "ILLUMINATION".

3.6.3 Illumination



Fig. 5: Setting the illumination

In this menu you can select the illumination of the display.
The device offers you three options.

ILLUMINATION	Functions / settings
OFF	The illumination is off at all times.
Automatic mode	After pressing a button the display remains on for 20 seconds.
ON	In an activated state the illumination remains permanently on.

Setting the illumination

The illumination selection flashes.

1. Confirm the selection with the "PROG" button.
2. Select the type of illumination with the "PLUS / MINUS" button.
3. Confirm your selection with the "PROG" button.

The device automatically switches to the next SETUP menu item "TONE".

3.6.4 Tone

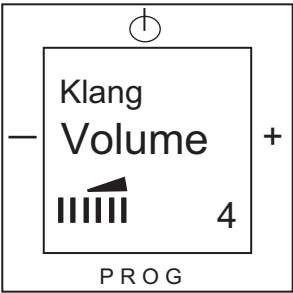


Fig. 6: Setting the tone

In this menu you can set the tone for your device.
The tone is the output quality of the radio or the voice message.
The device offers you four options.

TONE	Functions / settings
Volume	Balanced tone
BASS	Suitable for four deep tones
Treble	Suitable for treble tones
Exit	Exit the menu

Set the tone

The tone selection flashes.

1. Confirm the selection with the "PROG" button.
2. Select the desired tone with the "PLUS / MINUS" button.
3. Confirm your selection with the "PROG" button.

The device automatically switches to the next SETUP menu item "EXIT".

3.6.5 Type of call

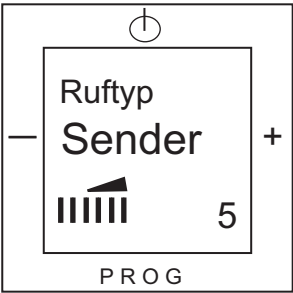


Fig. 7: Setting the call type

In this menu you can set the call type for your device.
The type of call determines how your device is "called". In the menu you can set whether your device is only a signal receiver or a signal transmitter.
The device offers you two options.

TYPE OF CALL	Functions / settings
Transmitter	The device sends signals
Receiver	The device receives signals

Set the call type

- The selection of the call type flashes.
1. Confirm the selection with the "PROG" button.
 2. Select the desired call type with the "PLUS / MINUS" button.
 3. Confirm your selection with the "PROG" button.

The device automatically switches to the next SETUP menu item "EXIT".

3.6.6 Quit



Fig. 8: Quitting the SETUP menu

In this menu you select the next procedure.
The device offers you two options.

Quitting SETUP menu

1. Confirm your selection with the "PROG" button to exit the setup menu.

The device is ready for operation!



Note

In addition, further settings can be made (see chapter 3.7 Modification menu on page 13).

3.7 Settings in the modification menu

To change the settings, press the "PROG" button for approximately 5 seconds.

If certain functions are not relevant for you, press the "PLUS / MINUS" button to switch to the next menu item.

Modification options

No.	Function
1	Call zone
2	Channel
3	Room monitoring
4	Reject call function
5	Sleep automatic (automatic shut-off function)
6	Baby monitoring (acoustic monitoring function)
7	Alarm clock
8	Time
9	Version
10	Reset
11	Quit

3.7.1 Call zone

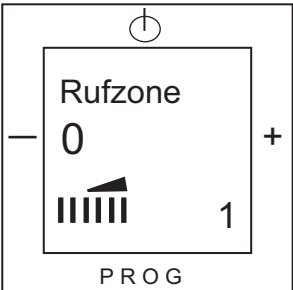


Fig. 9: Setting the call zone

In this menu you can set the call zone.
The call zone determines
The device offers you two options.

Call zone	Functions / settings
0	All zones
1 ... 15	Selected zone

Changing the call zone

- The call zone selection flashes.
1. Confirm your selection with the "PROG" button.
 2. Select the desired function with the "PLUS / MINUS" button.
 3. Confirm your selection with the "PROG" button.
 4. Press the centre of the display to activate the integrated microphone.
 5. Speak your message.
 6. Wait for the acoustic signal!
 7. Press the "PROG" button to quit the item.

3.7.2 Channel II

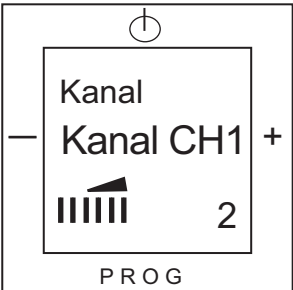


Fig. 10: Selecting the function

In this menu you can select the channel.
The device offers you two options.

CHANNEL II	Functions / settings
Channel CH 1	AUX 1 - output via an external signal output
Channel CH 2	Tuner / AUX 2 - output quality from the central unit

Changing channel

The channel selection flashes.

1. Confirm your selection with the "PROG" button.
2. Select the desired function with the "PLUS / MINUS" button.
3. Confirm your selection with the "PROG" button.

3.7.3 Room monitoring

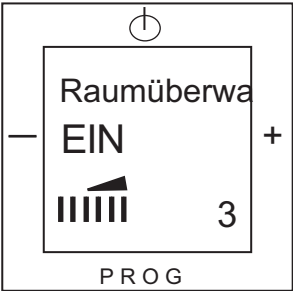


Fig. 11: Switching room monitoring on or off

In this menu you can switch room monitoring on or off.

3.7.4 CALL reject function

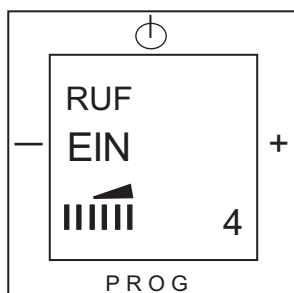


Fig. 12: Switching CALL reject function on or off

In this menu you can switch the CALL reject function on or off.

The CALL reject function is a suppressing function of the voice messages.

Changing channel

The CALL reject call function flashes.

1. Confirm your selection with the "PROG" button.
2. Select the desired function with the "PLUS / MINUS" button.
3. Confirm your selection with the "PROG" button.



Note

Ensure that no voice messages can be received while making settings in this menu!

3.7.5 Automatic sleep mode

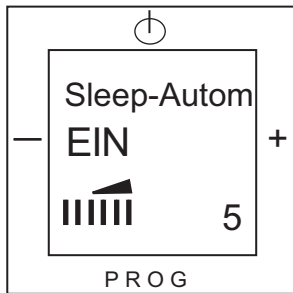


Fig. 13: Automatic sleep mode

This menu offers the option of activating an automatic shut-off function.

Setting the automatic sleep mode

The automatic sleep mode selection flashes.

1. Confirm your selection with the "PROG" button.
2. Select ON / OFF with the "PLUS / MINUS" button to activate or deactivate the function.
3. Confirm your selection with the "PROG" button.

The next menu item "Baby monitoring" is displayed.

3.7.6 Baby monitoring

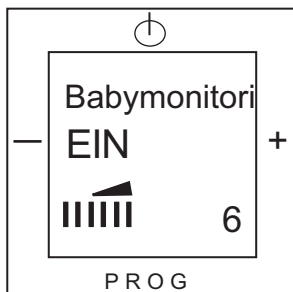


Fig. 14: Baby monitoring

This menu offers the option of setting an acoustic monitoring function.

Setting baby monitoring

The baby monitoring selection flashes.

1. Confirm your selection with the "PROG" button.
2. Select ON / OFF with the "PLUS / MINUS" button to activate or deactivate the function.
3. Confirm your selection with the "PROG" button.

The next menu item "Alarm clock" is displayed.

3.7.7 Alarm clock On/Off



Fig. 15: Setting the alarm clock

In this menu you can set the alarm clock.
The device offers you four options.

Alarm clock	Functions / settings
ON / OFF	Activating or deactivating the alarm clock
Alarm time	Setting the alarm time - Hours - Minutes
Alarm tone	Setting the alarm tone - Signal - Music
Exit	Quitting a menu item

Set alarm clock

The alarm clock selection flashes.

1. Confirm your selection with the "PROG" button.
2. Set the alarm time.
3. Press the "PLUS / MINUS" button to set the hours of the alarm time.
4. Confirm the alarm time hour with the "PROG" button.
5. The menu then changes the setting option to the minutes of the alarm time.
6. Press the "PLUS / MINUS" button to set the minutes of the alarm time.
7. Confirm the alarm time minutes with the "PROG" button.

The next menu item "Alarm tone" is displayed.

Setting the alarm tone

1. Confirm your selection with the "PROG" button.
2. Select the alarm tone.
3. Confirm the alarm tone with the "PROG" button.

Quitting a menu item

1. Confirm your selection with the "PROG" button.

The menu item is automatically exited and the device switches to the next menu item "TIME".

3.7.8 Time



Fig. 16: Setting the time

In this menu you can set the time for the time display.

Set time

The time selection flashes.

1. Confirm the selection with the "PROG" button.
2. Set the hour with the "PLUS / MINUS" button.
3. Confirm your hour entry with the "PROG" button.
4. Set the minutes with the "PLUS / MINUS" button.
5. Confirm your minutes entry with the "PROG" button.

3.7.9 Version

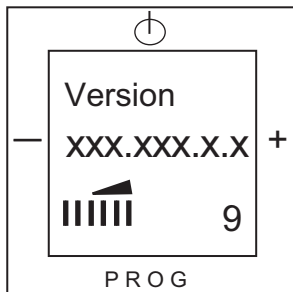


Fig. 17: Software version

This menu shows the currently used software version of the device.

3.7.10 Rest (resetting the device)

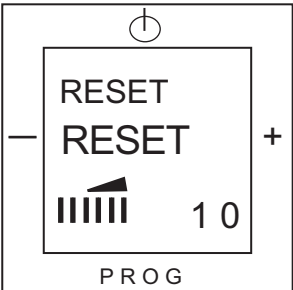


Fig. 18: RESET

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.

Resetting the device

1. Press buttons "PLUS / MINUS" simultaneously for approx. 5 seconds.
 - RESET flashes.
 - The device is reset and changes to the SETUP menu.

All settings of your device have now been reset. Check all settings and re-set them, see chapter "**Fehler! Verweisquelle konnte nicht gefunden werden.**" on page **Fehler! Textmarke nicht definiert..**

3.7.11 Quit



Fig. 19: Exit the modification menu

In this menu you select the next procedure.
The device offers you two options.

QUIT	Functions / settings

Exiting the modification menu

1. Confirm your selection with the "PROG" button to exit the modification menu.

The device displays the standard monitor.

4 Technical data

Designation	Value
Rated voltage	15 V DC, SELV
Nominal current	150 mA
Output power	2 x 1 W (16 Ohm)
Receiver sensitivity (Audio bus)	3 V _{ss}
Admissible loudspeaker impedance	8 – 16 Ohm
Distortion factor	< 1 %
Protection type	IP 20
Temperature range	5 °C to 40 °C
Frequency range	20 ... 20,000 Hz

5 Setup and function

The intercom amplifier insert is intended for individual volume control and for a voice message to fifteen call zones. With an additional broadcast function.

5.1 Features of function and equipment

- 2-channel stereo / mono
- Digital volume control with adjustable tone control
- Station selection adjustable in dependence of central unit
- Channel change 1 / 2
- Intercom call voice message (for 15 zones + broadcast)
- Room monitoring function
- "REJECT CALL" - suppression of voice messages
- Integrated alarm / sleep function
- Permanent storage of user parameters
- With automatic shut-off function (sleep automatic)
- With acoustic monitoring function (baby monitoring)

5.2 Possible combinations

	 8214 U		 8208
 1751-2x	X	 8211 U	X
 1751-7x	X	 8221 U	X
 1751-8x	X	 822X EB	X
 2147 U-x	X	 8251-2x	X
 8202	X	 8251-21x	X
 8208	X	 8251-8x	X
 8209-101	X		

6 Installation and electrical connection



Warning

Electric voltage!

Risk of death due to electrical voltage of 230 V during short-circuit in the low-voltage line.

- Low-voltage and 230 V lines must not be installed together in a flush-mounted socket!

6.1 Requirements for the electrician



Warning

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 from power;
 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 supply network type (TN system, IT system, TT system) to secure the following power supply conditions (classic connection to ground, protective earthing, necessary additional measures, etc.).

7 Mounting / Installation



Warning

Electric voltage!

Risk of death due to electrical voltage of 230 V during short-circuit in the low-voltage line.

- Low-voltage and 230 V lines must not be installed together in a flush-mounted socket!

7.1 Requirements for the electrician



Warning

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 from power;
 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 supply network type (TN system, IT system, TT system) to secure the following power supply conditions (classic connection to ground, protective earthing, necessary additional measures, etc.).

7.2 General mounting instructions

- Terminate all branches of the wiring system via a connected bus device (e.g., indoor station, outdoor station, system device).
- Do not install the system controller directly next to the bell transformer and other power supplies (to avoid interference).
- Do not install the lines of the system bus together with 230 V- lines.
- Do not use common cables for the connecting wires of the door openers and wires of the system bus.
- Avoid bridges between different cable types.
- Use only two wires for the system bus in a four-core or multi-core cable.
- When looping, never install the incoming and outgoing bus inside the same cable.
- Never install the internal and external bus inside the same cable.

7.3 Mounting

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.

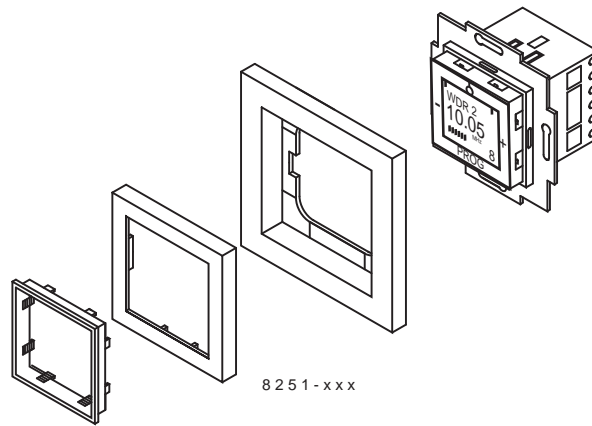


Fig. 20: Installation

7.4 Electrical connection

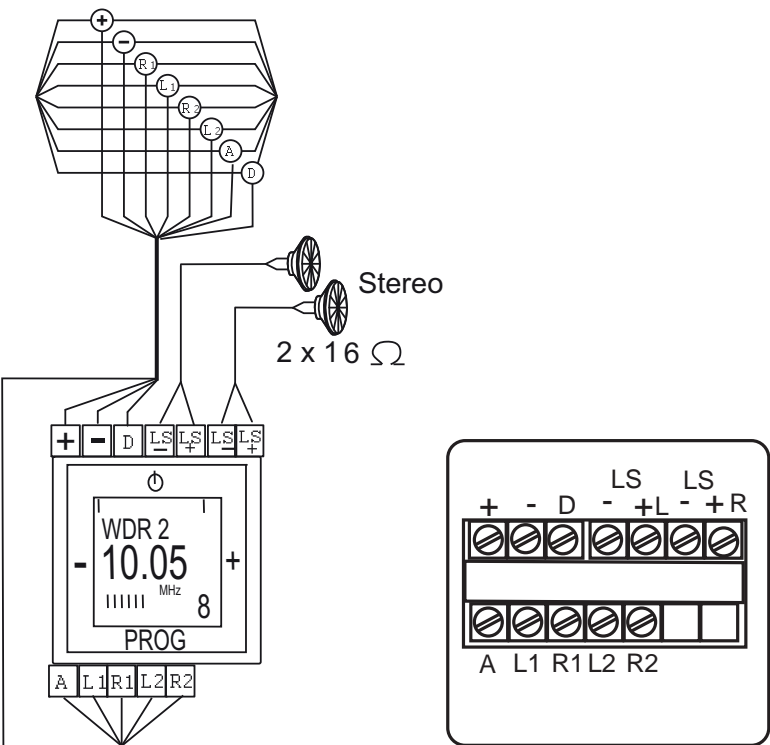


Fig. 21: Connection diagram

No.	Assignment
+	Operating voltage (+terminal), 15 V (0.8 mm core diameter)
-	Operating voltage (-terminal), 15 V (0.8 mm core diameter)
D	Control information for step-by-step switching of programs and broadcast
LS -	Volume of loudspeaker 1 (lower)
LS -	Volume of loudspeaker 1 (louder)
LS -	Volume of loudspeaker 2 (lower)
LS -	Volume of loudspeaker 2 (louder)
A	Voice signal (for broadcasting)
L ₁	Left channel 1
R ₁	Right channel 1
L ₂	Left channel 2
R ₂	Right channel 2

7.4.1 Installation / connection possibilities

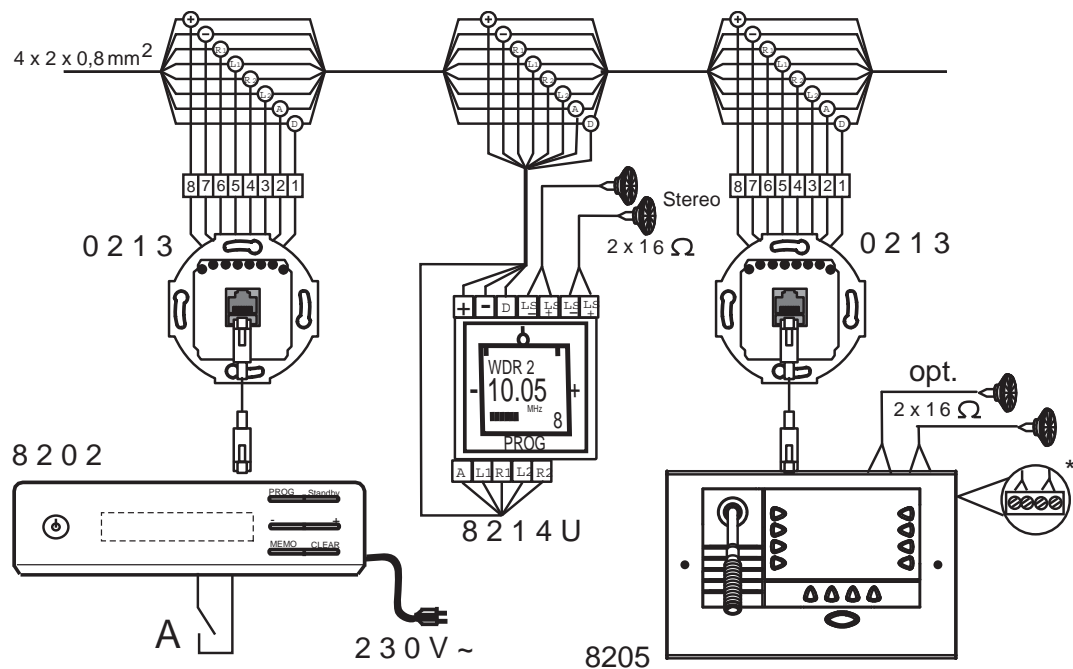


Fig. 22: System diagram for selective call

No.	Function
A	Floating contact (switch/push-button)
*= When external loudspeakers are connected the internal loudspeaker is switched off	

8 Cleaning

Dirty units can be cleaned with a dry cloth. If this is not sufficient, a cloth slightly moistened with a soap solution can be used. Caustic cleaning agents or solvents must not be used.

Operating Instructions

A member of the ABB Group

Busch-Jaeger Elektro GmbH

PO box
58505 Lüdenscheid

Freisenbergstraße 2
58513 Lüdenscheid
Germany

www.BUSCH-JAEGER.com

info.bje@de.abb.com

Central sales service:

Phone: +49 (0) 2351 956-1600

Fax: +49 (0) 2351 956-1700

Notice

We reserve the right to at all times make technical changes as well as changes to the contents of this document without prior notice.

The detailed specifications agreed to at the time of ordering apply to all orders. ABB accepts no responsibility for possible errors or incompleteness in this document.

We reserve all rights to this document and the topics and illustrations contained therein. The document and its contents, or extracts thereof, must not be reproduced, transmitted or reused by third parties without prior written consent by ABB.

Copyright© 2012 Busch-Jaeger Elektro GmbH
All rights reserved

1473-1-8316 | Rev. 01 | 02.10.2012