DPC 8000

en |

DYNACORD
GERMAN ENGINEERING EXCELLENCE

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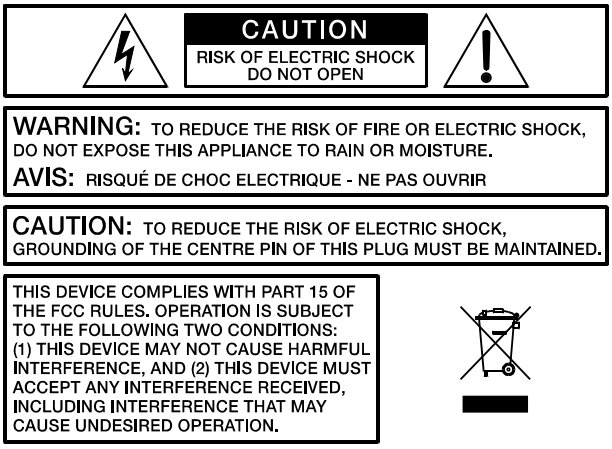
1 Safety notes



Danger!

The lightning symbol inside a triangle notifies the user of high-voltage, uninsulated lines and contacts inside the devices that could result in fatal electrocution if touched.

Warning!

An exclamation mark inside a triangle refers the user to important operating and service instructions in the documentation for the equipment.

1. Read these safety notes.
2. Keep these safety notes in a safe place.
3. Heed all warnings.
4. Observe all instructions.
5. Do not operate the device in close proximity to water.
6. Use only a dry cloth to clean the unit.
7. Do not cover any ventilation slots. Always refer to the manufacturer's instructions when installing the device.
8. Do not install the device close to heaters, ovens, or other heat sources.
9. Note: The device must only be operated via the mains power supply with a safety ground connector. Do not disable the safety ground connection function of the supplied power cable. If the plug of the supplied cable does not fit your mains socket, please contact your electrician.
10. Ensure that it is not possible to stand on the mains cable. Take precautions to ensure the mains cable cannot become crushed, particularly near the device connector and mains plug.
11. Only use accessories/extensions for the device that have been approved by the manufacturer.
12. Unplug the device if there is risk of lightning strike or in the event of long periods of inactivity. However, this does not apply if the device is to be used as part of an evacuation system!
13. Have all service work and repairs performed by a trained customer service technician. Service work must be carried out immediately following any damage such as damage to the mains cable or plug, if fluid or any object enters the device, if the device has been used in rain or become wet, or if the device has been dropped or no longer works correctly.

14. Please ensure that no dripping water or spray can penetrate the inside of the device. Do not place any objects filled with fluids, such as vases or drinking vessels, on top of the device.
15. To ensure the device is completely free of voltage, unplug the device from the power supply.
16. When installing the device, ensure that the plug is freely accessible.
17. Do not place any sources of open flame, such as lit candles, on top of the device.
18. This PROTECTION CLASS I device must be connected to a MAINS socket with a safety ground connection.

Caution!

Use only manufacturer-approved carts, stands, brackets, or tables that you acquired together with the device. When using carts to move the device, make sure the transported equipment and the cart itself cannot tip over or cause injury or material damage.

IMPORTANT SERVICE INFORMATION

Caution!

This service information is for use by qualified service personnel only. To avoid the risk of electric shock, do not perform any maintenance work that is not described in the operating instructions unless you are qualified to do so. Have all service work and repairs performed by a trained customer service technician.

1. Repair work on the device must comply with the safety standards specified in EN 60065 (VDE 0860).
2. A mains isolating transformer must be used during any work for which the opened device is connected to and operated with mains voltage.
3. The device must be free of any voltage before performing any alterations with upgrade sets, switching the mains voltage, or performing any other modifications.
4. The minimum distance between voltage-carrying parts and metal parts that can be touched (such as the metal housing) or between mains poles is 3 mm, and must be observed at all times.
5. The minimum distance between voltage-carrying parts and circuit parts that are not connected to the mains (secondary) is 6 mm, and must be observed at all times.
6. Special components that are marked with the safety symbol in the circuit diagram (note) must only be replaced with original parts.
7. Unauthorized changes to the circuitry are prohibited.
8. The protective measures issued by the relevant trade organizations and applicable at the place of repair must be observed. This includes the properties and configuration of the workplace.
9. Observe the guidelines with respect to handling MOS components.

Danger!

SAFETY COMPONENT (MUST BE REPLACED BY ORIGINAL PART)

2 Brief description

The DPC 8015 is a call station for the PROMATRIX 8000 system. As standard, the call station has a goose neck microphone with pop shield and permanent monitoring, a total of 20 buttons, an illuminated LC display, and an integrated loudspeaker. The call station can be modified to suit the user's requirements by connecting up to five DPC 8120 call station extensions, each with 20 customizable function and speed dial buttons.

3 System overview

The PROMATRIX 8000 system includes the DPC 8015 call station and the DPC 8120 call station extension. The call station is equipped with a goose neck microphone, and has 15 customizable selection and function buttons and five pre-programmed menu/function buttons. Up to three alarm buttons or key switches can also be retrofitted. The call station is equipped with an illuminated LC display (122 x 32 pixels). The call station has the following features:

- Microphone with preamplifier and compressor/limiter switch
- Function and selection buttons with programmable button assignment
- Simple labeling of buttons with labeling strips and format template (file in .doc format included in the IRIS-Net scope of delivery)
- Possible to install covered alarm buttons or key switches (optional, three installation slots)
- Possible to connect an external microphone or audio source
- Built-in loudspeaker
- High-resolution LC display
- Comprehensive parameter settings menu on the actual call station
- Microphone and line monitoring
- Error message via LED and buzzer, and error text in the LC display
- Processor control of all functions
- Monitoring of the processor system via watchdog circuit
- Non-volatile FLASH memory for configuration data

The call station is processor-controlled, and equipped with extensive monitoring functions. A watchdog circuit is built in to monitor the processor system. The internal microphone can be monitored for function, interruptions, and short-circuits. Line monitoring for the CAN bus and for audio transmission allows line interruptions and short-circuits to be detected and indicated to the user. The call stations for the PROMATRIX 8000 system can be configured quickly and easily using IRIS-Net. A graphical and conversational user interface allows the user to define all button functions, priorities, options, and other properties.

4 Scope of delivery and warranty

Number	Component
1	DPC 8015 Call Station
1	Patch cable (3 meters)
1	Operating instructions (this document)
1	Warranty card with safety notes

Table 4.1: DPC 8015 scope of delivery

Number	Component
1	DPC 8120 Call Station Extension
1	6-pin connecting cable for call station extension
1	Connecting holder for call station extension
1	Connecting plate for call station extension
6	Screws (self-tapping)
1	Technical information
1	Warranty card with safety notes

Table 4.2: DPC 8120 scope of delivery

Warranty

For information regarding the warranty, see www.dynacord.com

5 Installation

5.1 Top

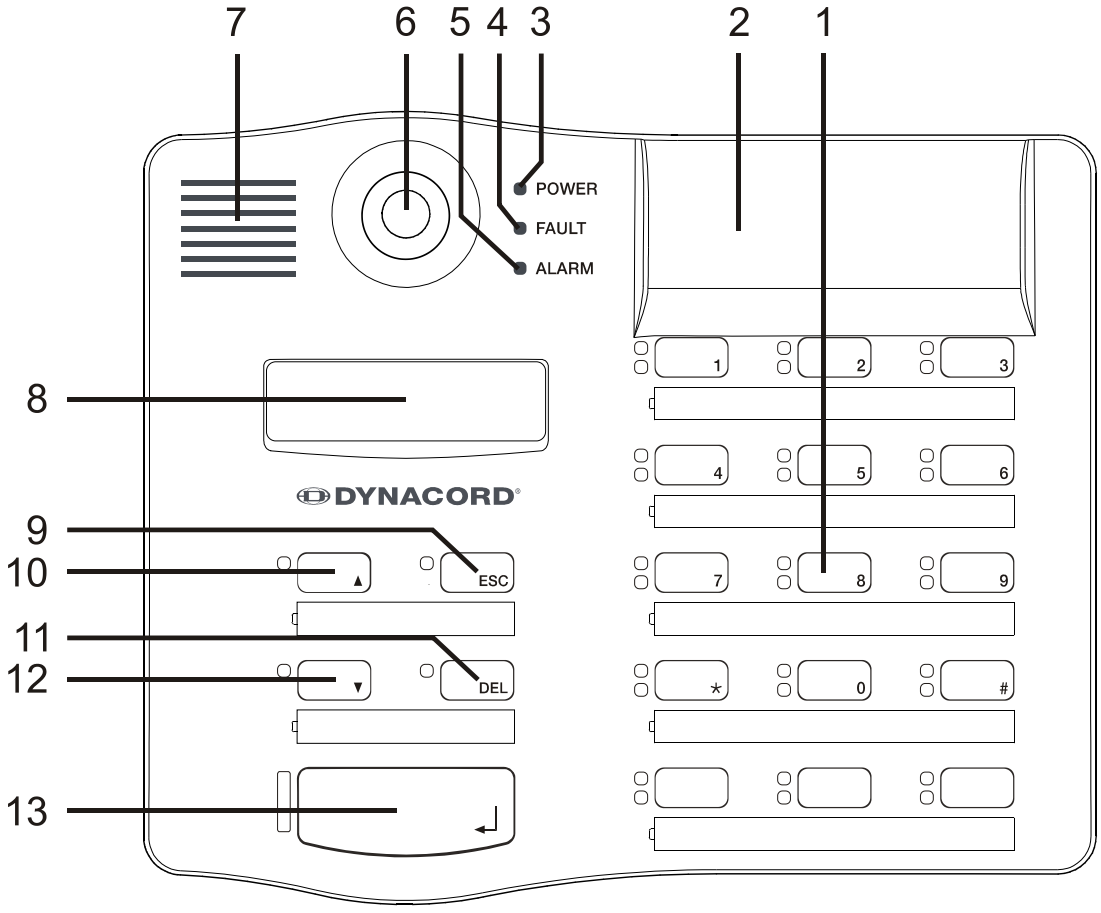


Figure 5.1: DPC 8015

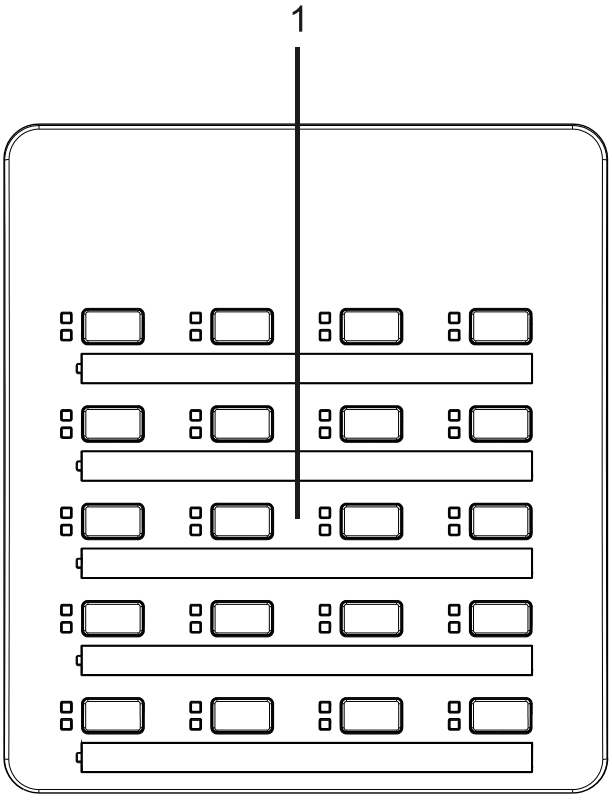


Figure 5.2: DPC 8120

Number	Element	Description
1	Selection buttons	Circuit and group selection buttons with green and yellow LED.
2	Button installation slots	For up to three optional alarm buttons or key switches
3	POWER LED	Illuminates green if the power supply is on
4	FAULT LED	Illuminates yellow if an error occurs
5	ALARM LED	Illuminates red if an alarm is triggered
6	Microphone	Monitored goose neck microphone
7	Loudspeaker	Plays back signal sounds
8	Display	Status/error displays for the call station or the entire PROMATRIX 8000 system
9	ESC button	Acknowledges and advances to next error message
10	↑ button	Activates the PROMATRIX 8000 system
11	DEL button	Selects all zones and groups
12	↓ button	Stops a live audio signal
13	↵ button	For announcements to selected zones

5.2 Bottom

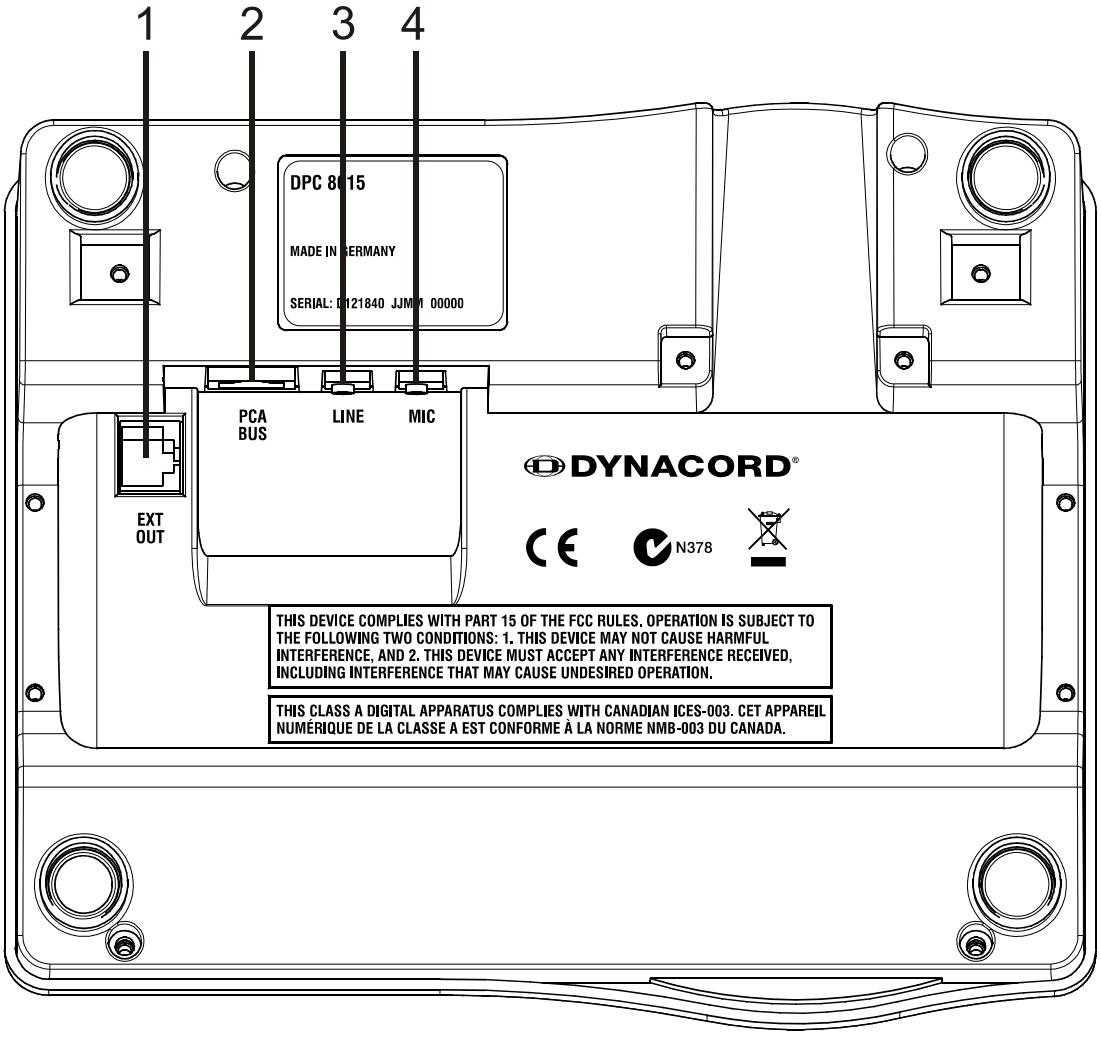


Figure 5.3: DPC 8015

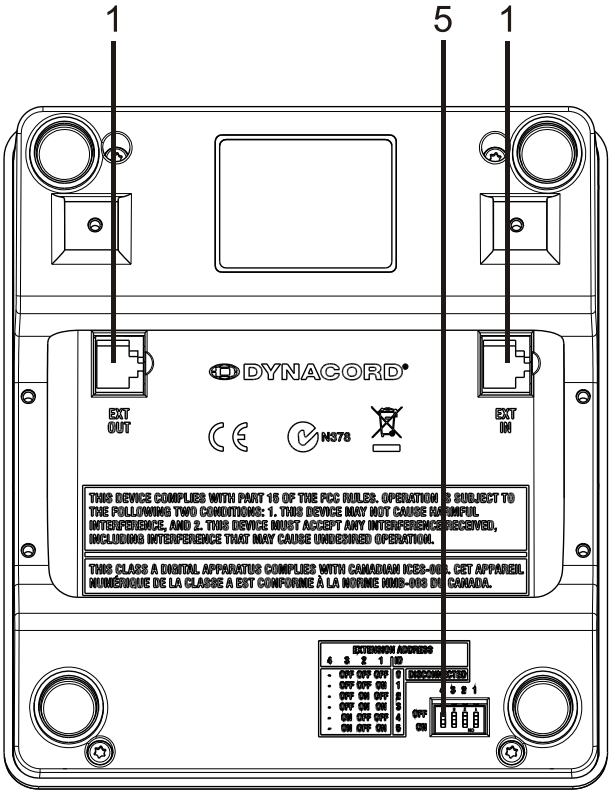


Figure 5.4: DPC 8120

Number	Element	Description
1	EXT interface	Connection for DPC 8120 call station extension
2	PCA BUS interface	Connection to PROMATRIX 8000 CONTROLLER
3	LINE/PTT interface	Connection for external audio devices or a PTT button
4	MIC interface	Connection for external microphone
5	EXTENSION ADDRESS	DIP switch for setting the address of the call station extension

5.3 Delivery condition

The call stations are programmed with the following factory functions and properties settings:

Parameters		Setting/description
CAN address		0 (disconnected)
Name		DPC 8015
Password		Setup menu password-protected, default password: 2222
Opening gong		Off
Buzzer		On (acoustic warning signal)
Compressor		Off
Options	Alarm buttons	Not configured

Parameters		Setting/description
	Key switch	Not configured
	External microphone	Not configured
Button assignment	Selection buttons 1–n	Selection of circuits 1 through n (button 1 = circuit 1, button 2 = circuit 2 etc.)
	↲	Call in selected circuits, priority 5
	↑	Switches system on/off, priority 5
	↓	Stops a live audio signal.
	ESC	Acknowledges and advances to next error message
	DEL	Selects all-call/deletes call pattern
Special functions		Not configured

Warning!
If several call stations need to be operated via a DPM 8016, each call station must be assigned a unique CAN address (1–16). Subsequently changing the CAN address causes the configuration to change.

5.4 Button labeling

The call station buttons are labeled using labeling strips, which are inserted from above. To label a row of buttons, loosen the respective cover on the left-hand side using a suitable slotted screwdriver. Insert the labeled strip into the open label field, and close the label field by evenly pressing down on the cover.

5.5 Retrofit options

The DPC 8015 call station can be retrofitted with a maximum of three covered buttons (EB DPC, item F01U101089) or key switches (NRS90231, item F01U101000). Additional control elements can be used, for example for triggering alarms in certain areas (selection alarm) or for switching the system ON/OFF. The functions are assigned via IRIS-Net during configuration.

5.5.1 Alarm button (EB DPC)

The EB DPC is an optional button for installation in the DPC 8000 series call stations. The transparent cover cap prevents unintentional actuation of the button. A high-efficiency LED is integrated for optical visualization, while also ensuring maximum operational reliability. The button feed lines are monitored by the call station. If an error occurs, this is indicated in the error log of the PROMATRIX 8000 system.

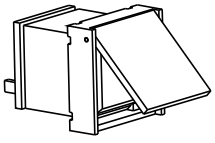
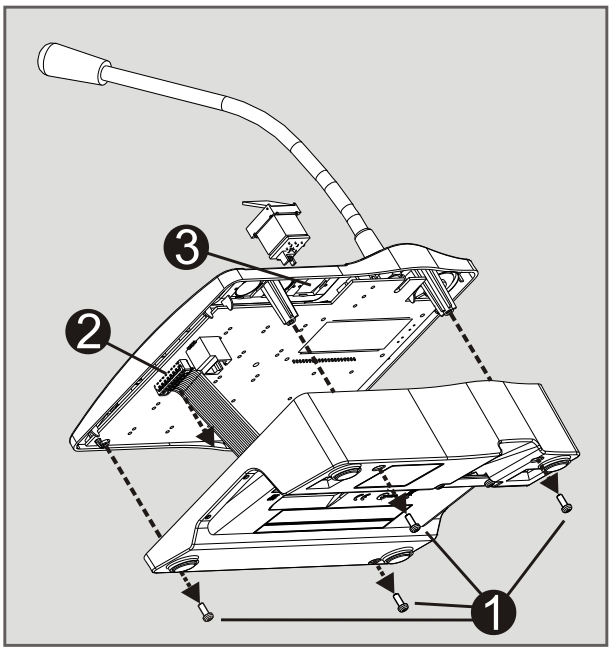
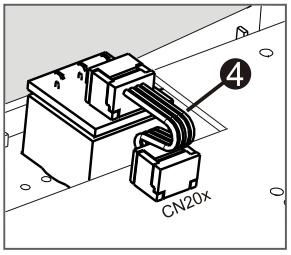


Figure 5.5: EB DPC

Assembly

Note the following information regarding installation of the EB DPC in the DPC 8015 call station.





1. Disconnect the call station from all connectors
2. Unscrew the call station baseplate (4 screws)
3. Unplug the connecting cable from the CN1 plug connector
4. Prepare installation location: Use a sharp object (knife, scriber, or similar) to carefully punch through and cut out the pre-cut rectangle on the inside of the housing. Perform any follow-up work that may be required to the installation location (e.g. filing, trimming)
5. Mount the button into the installation location, and press in evenly (it must be possible for the cover cap to open upward)
6. Depending on whether the right/middle/left installation location is used, plug the ribbon cable into plug connector CN201/CN202/CN203 on the circuit board
7. Plug the connecting cable into CN1 again
8. Re-attach the call station baseplate
9. Re-connect the connections
10. Configure the button using the software

5.5.2 Key switch (NRS 90231)

The NRS 90231 is an optional key switch for installation in the DPC 8000 series call stations. The key switch feed lines are monitored by the control station. If an error occurs, this is indicated in the error log of the PROMATRIX 8000 system.

Figure 5.6: NRS 90231

Assembly

Note the following information regarding installation of the NRS 90231 in the DPC 8015 call station.

1. Disconnect the call station from all connectors
2. Unscrew the call station baseplate (4 screws)
3. Unplug the connecting cable from the CN1 plug connector
4. Prepare installation location: Use a sharp object (knife, scriber, or similar) to carefully punch through and cut out the pre-cut circle on the inside of the housing Perform any follow-up work that may be required to the installation location (e.g. filing, trimming)

Notice!

Note that the lines can only be soldered once the switch has been installed.

5. Bore through the pre-cut side opening for the holding pin of the key switch cover
6. Align the switch and screw tightly in place using the supplied knurled screw
7. The supplied 4-pin cable and the resistances must be connected as shown in the following diagram

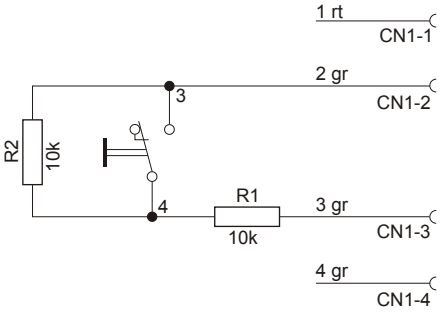


Figure 5.7: Connecting NRS 90231

8. Note the connection sequence of the ribbon cable. The two external cables 1 (red) and 4 (green) must be cut as close to the cut-off point as possible and isolated. The two internal cables 2 (green) and 3 (green) must be soldered to switch connections 3 and 4. The polarity is not important
9. Depending on whether the right/middle/left installation location is used, plug the ribbon cable into plug connector CN201/CN202/CN203 on the circuit board
10. Plug the connecting cable into CN1 again
11. Re-attach the call station baseplate
12. Re-connect the connections
13. Configure the button using the software

6 Activation

6.1 PCA BUS interface

Notice!
If the call station is connected to a DPM 8016 via the PCA BUS, the call station is automatically configured depending on the set CAN address. The call station is ready to use after a few seconds.

The cable for connecting the PCA BUS interface must be fed under the suspension bracket (see the following diagram).

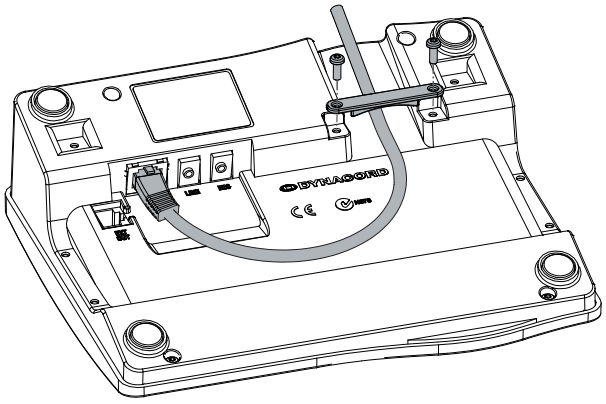


Figure 6.1: PCA BUS interface

6.1.1 Interface description

The PROMATRIX CAN Audio (PCA) BUS interface is used to connect the DPC 8015 call station with a PROMATRIX 8000 system. This is an 8-pin RJ-45 connector that assigns the power supply, control interface (CAN bus), and audio interface. The call station must be connected to the respective wall-mount socket via the enclosed network cable (3 m). The following image shows the assignment of the PCA BUS socket and the corresponding RJ-45 connector.

Notice!
For CAN, AUDIO IN and AUDIO OUT, the wires must be twisted as pairs in each case.

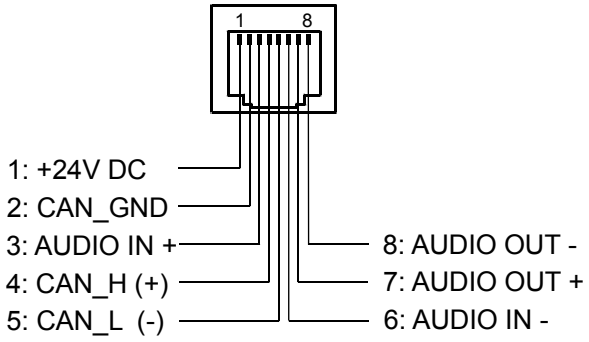


Figure 6.2: Assignment of the PCA bus interface

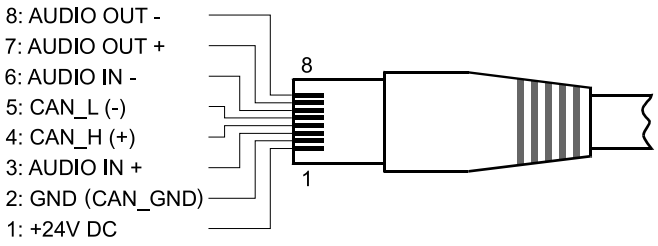


Figure 6.3: Assignment of the PCA bus connector

6.2 LINE interface

Usage as audio input

The LINE interface allows an external audio device (e.g. CD player) to be connected. If configured in IRIS-Net, the audio source connected to this interface can be used for a program in the PROMATRIX 8000 system. The following diagram shows the assignment of a stereo jack plug (3.5 mm, "mini jack") for connection to the LINE socket.

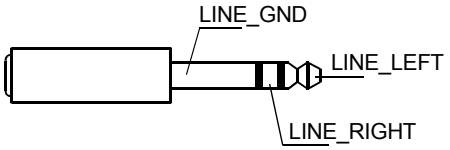


Figure 6.4: Assigning the LINE plug as audio input

Notice!

During announcements, the audio signal on the LINE interface is interrupted.

Use as PTT contact input

When connecting a PTT microphone to a DPC 8015, the LINE interface is used as input for the PTT contact. The PTT function must be set for the call station in IRIS-Net during configuration. The following diagram shows the corresponding assignment of a stereo jack plug (3.5 mm, "mini jack").

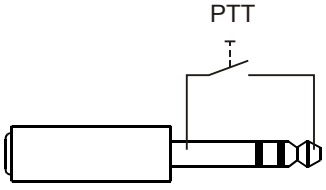


Figure 6.5: Assigning the LINE plug as PTT contact input

6.3 MIC interface

The MIC interface allows a second microphone to be connected. A conventional "PC microphone" (V_{CC} = 3.3 V) can be connected. The following diagram shows the assignment of a 3.5 mm stereo jack plug for connection to the MIC jack.

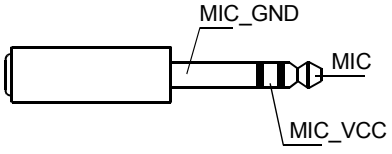


Figure 6.6: Assignment of the MIC plug

6.4 EXT interface

This socket is primarily used to connect a DPC 8120 call station extension. To do so, connect the DPC 8120 to the EXT socket of the call station via the connecting cable provided.

7 Configuration

The call stations of a PROMATRIX 8000 system should be configured on the control panel via a PC using IRIS-Net as this is the simplest method, and there are no restrictions. Only limited programming is possible on the actual call stations themselves. To configure the call station via the LC display, the call station must be switched to menu mode as described below.

Use in menu mode

In menu mode, the call station and certain elements of the PROMATRIX 8000 system can be configured via the built-in LC display. In this mode, certain buttons have a different function than they would in announcement mode. The alternative assignment is specified on the lower right of the respective button.

1. Press the ↓ button, keep it held down, and press the ↑ button at the same time. The display switches from announcement mode to menu mode
2. Use the call station buttons to navigate through the menu and enter settings. The following pages contain information about the menu structure
3. To exit the menu, keep pressing the ESC button until the status display of the announcement mode appears in the LC display.

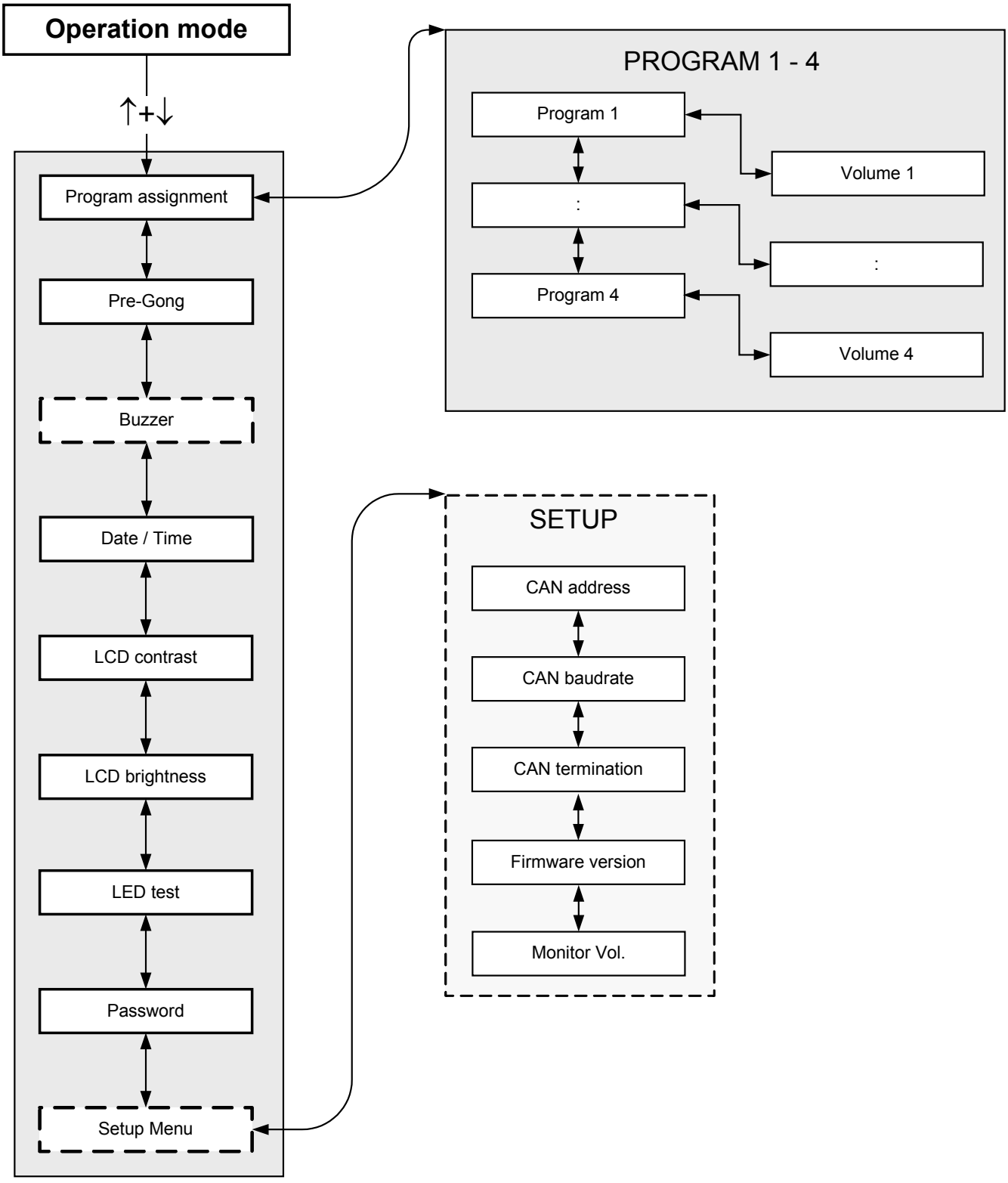


Figure 7.1: Menu structure

7.1 User menu

Program selection

The call station allows programs to be assigned to individual circuits or groups of the PROMATRIX 8000 system. Program transfer has the lowest priority. With single-program technology, the music must be muted or switched off in all circuits for the duration of an announcement. With dual-program technology, music can still be played in rooms where no announcement is being made. If a separate NF output and amplifier is available for each line, announcements and background music can be transmitted completely independently of each other. Pressing the ↲ button takes the user to the Programs submenu. The entries contained in this submenu are described below.

Program X

A list of the programs assigned to the call station in IRIS-Net is displayed. Pressing the ↑ or ↓ button toggles between the programs. If zones have already been assigned to the program, the green LEDs on the selection buttons show the selected circuits/groups.
By pressing the selection buttons, the required circuits/groups can be selected. This is indicated by the corresponding green LEDs.

Notice!

The zone assignment is immediately accepted in the PROMATRIX 8000 system.

The assignment remains valid until the selection buttons are pressed repeatedly. If the yellow LED of a selection button illuminates, the program cannot be assigned to this circuit or group for topological reasons.
Pressing the ↲ button takes the user to the Volume X submenu, which is described below.

Volume X

The volume currently set in the program is displayed. Pressing the ↑ or ↓ button sets the volume of the program. The volume level is increased or decreased in 1 dB steps. Pressing and holding the ↑ or ↓ buttons continuously increases or decreases the volume.

Notice!

The new volume level is immediately accepted in the PROMATRIX 8000 system.

Pressing the ↲ button accepts the setting selected, and returns the user to the Program X menu.

Opening gong

An opening gong can be programmed for announcements. In announcement mode, the opening gong is transmitted to the selected circuits each time the ↲ button is pressed. The announcement can begin during the opening gong, meaning that the announcer can "interrupt" the gong. Pressing the ↲ button takes the user to the Opening Gong submenu. The current setting of the opening gong ("on" or "off") is displayed. Pressing the ↑ or ↓ buttons toggles between these two statuses. Pressing the ↲ button accepts the setting selected, and returns the user to the User menu.

Buzzer
The built-in loudspeaker can be programmed as an acoustic warning signal. The signal tone sounds in the event of incorrect operation or malfunction, or as a warning. Pressing the ↲ button takes the user to the Buzzer submenu. The current setting of the buzzer ("on" or "off") is displayed. Pressing the ↑ or ↓ buttons toggles between these two statuses. Pressing the ↲ button accepts the setting selected, and returns the user to the User menu.

Notice!
This menu option requires a password.

Date/time
The date and time can be set for the PROMATRIX 8000 system on the call stations. Pressing the ↲ button takes the user to the Date/Time submenu. Pressing the ↑ or ↓ button toggles between the day, month, year, hours, minutes, and seconds. Use the 0–9 buttons on the call station to input entries. Pressing the ↲ button accepts the setting selected, and returns the user to the User menu.

LCD contrast
Pressing the ↲ button takes the user to the LCD Contrast dialog box. In this dialog box, the LCD contrast can be adjusted to the viewing angle by pressing the ↑ or ↓ button. This helps achieve maximum readability for the respective position. Pressing the ↲ button accepts the contrast setting selected, and returns the user to the User menu.

LCD brightness
Pressing the ↲ button takes the user to the LCD Brightness dialog box. In this dialog box, the display brightness can be adjusted by pressing the ↑ or ↓ button. Pressing the ↲ button accepts the brightness selected, and returns the user to the User menu.

LED test
Pressing the ↲ button activates the LED test for the call station and all connected call station extensions. All LEDs flash during this test. Pressing the ↲ button deactivates the LED test, and returns the user to the User menu.

Password input

Notice!
The default password for activation of the Setup Menu and Buzzer menu items is 2222

Pressing the ↲ button takes the user to the Password dialog box. Use the 0–9 buttons on the call station to input entries. Passwords are used to activate call station options.

Setup menu
Pressing the ↲ button takes the user to the Setup menu. The entries in this submenu are described in section *Setup menu, page 22* . If the Setup Menu menu option is not visible, it must be activated via the Password menu item.

7.2 Setup menu

The Setup menu is accessed via the Setup Menu entry in the User menu. If this menu option is not visible, it must be activated via the Password menu option.

CAN address

Pressing the ↵ button takes the user to the CAN Address dialog box. Pressing the ↑ or ↓ button sets the required CAN address. The call station can be assigned a CAN address between 1 and 16.

Pressing the ↵ button accepts the address selected, and returns the user to the Setup menu.

Warning!

By default, all call stations have the address OFF (no address). First of all, a valid address must be entered. Only one call station address may be used for each DPM 8016!

CAN baud rate

Pressing the ↵ button takes the user to the CAN Baud Rate dialog box. Pressing the ↑ or ↓ button toggles between the available baud rates. Pressing the ↵ button accepts the setting selected, and returns the user to the Setup menu.

CAN termination

Pressing the ↵ button takes the user to the CAN Termination dialog box. Pressing the ↑ or ↓ button activates or deactivates the termination on this call station. Termination must be activated on the call station that is connected to the end of the CAN bus. Please see section *CAN bus basics, page 34*.

Pressing the ↵ button accepts the setting selected, and returns the user to the Setup menu.

Firmware version

Displays the version of the call station firmware.

Monitor vol.

Pressing the ↵ button takes the user to the Monitor Vol dialog box. Pressing the ↑ or ↓ button adjusts the volume level of the loudspeaker.

Pressing the ↵ button accepts the setting selected, and returns the user to the Setup menu.

8 Operation

8.1 Indicators

The meanings of the call station LED indicators are summarized below. Standard configuration of the call station is assumed.

LED	Status	Description
Zone (green)	Off	Circuit or group not selected
	Illuminated green	• Circuit or group selected • Special function activated • Direct call activated
Zone (yellow)	Off	Circuit or group not assigned
	Flashing yellow	Circuit or group assigned (alarm or evacuation)
	Illuminated yellow	• Announcement mode: Circuit or group assigned (everything except alarm, evacuation, or background music) • Program assignment mode: Circuit or group cannot be assigned with background music
↑	Off	System is switched off (standby)
	Illuminated green	System is switched on and ready for operation
	Flashing green	System has been switched on and is booting up (activation process)
↓	Off	Pressing the button does not do anything – the action cannot be stopped
	Illuminated green	Pressing the button ends an event that has already started
DEL	Off	No all-call selected
	Illuminated green	All-call pre-selection
↵	Off	The selected circuits are free and a call can be made
	Illuminated green while the speaker button is pressed	The announcement is being transmitted
	Green, flashing slowly	A call station with lower priority is currently transmitting an announcement in at least one selected circuit – this announcement can be interrupted at the cost of the currently active call station

LED	Status	Description
	Green, flashing quickly	• At least one of the selected circuits is occupied with higher priority (announcement, gong, alarm) and cannot be interrupted • A call that has already started will be interrupted by the higher priority
POWER	Off	The call station power supply has been deactivated/interrupted
	Illuminated green	The call station power supply is functioning correctly
FAULT	Off	System is running smoothly
	Illuminated yellow	There is an error in the PROMATRIX 8000 system – details are displayed in the LC display
	Flashing yellow	There is a new, as yet unconfirmed error in the PROMATRIX 8000 system – details are displayed in the LC display
ALARM	Off	No alarm started
	Illuminated red	The alarm was triggered by any station
	Flashing red	The alarm has already been stopped, but is running until the end of the signal

Depending on the current status of the system, the illuminated LC display with 122 x 32 pixels shows time information, operating states, user information, setup information, error messages with precise device/module descriptions, and so on.

Status display in the LC display

During normal operation in announcement mode, the name of the call station (line 1) and the date and time (line 2) are displayed in the LC display.

Error display in the LC display

If an error occurs in the PROMATRIX 8000 system, this is displayed on the call station as follows:

- The FAULT LED flashes, and a signal tone is sounded via the built-in loudspeaker
- The error is displayed in the LC display
- Pressing the ESC button confirms the error message, and deactivates the signal tone. At the same time, the FAULT LED switches from flashing to permanently illuminated. If a new error occurs, confirmation is required once again
- The FAULT LED signals an error in the PROMATRIX 8000 system for as long as it exists

The error display and signal tone must be configured via the configuration in IRIS-Net.

8.2 Functions

After being switched on, the call station will be in announcement mode. The menu mode is used to configure the call station.

Button	Announcement mode	Menu mode
↑	This button switches the system on and off. The activation process may take a few seconds. As soon as the system is ready for operation, the LED illuminates green. To prevent operating errors, press and hold the button for at least three seconds when activating or deactivating the system. The button can be locked via configuration in IRIS-Net.	This button is used to scroll up when navigating through the menu.
ESC	Pressing the ESC button confirms a new error, and disables the signal tone at the same time.	When navigating through the menu, this button acts as the ESC button, i.e. canceling an action or returning to a higher-level menu.
↓	Pressing this button stops a live audio signal (gong, alarm, text). The precise function can be configured in the IRIS-Net software.	This button is used to scroll down when navigating through the menu.
DEL	This button is used to select all circuits for announcements, gong/alarm signals, speech reproduction, or program assignment. Pressing the button once selects all circuits, and the corresponding LEDs and the DEL LED illuminate. Pressing the button again deletes the entire selection. The following options can be selected in IRIS-Net: • Switch between "Select All" and "Delete All" • Select All • Delete All	The button acts as the backspace key for numerical entries.
↵	This button is used to activate an announcement in selected circuits or groups. The precise function of the LED is described in section *Indicators, page 24* . The toggle mode can be programmed optionally.	When navigating through the menu, the button is used to confirm an entry or select a selected entry.

Button	Announcement mode	Menu mode
Selection buttons	There are 15 selection buttons with corresponding LEDs. These are used to select individual circuits or groups for announcements, gong/alarm signals, speech reproduction, or program assignment (press once = on, press again = off). The LEDs show the current selection status (see section *Indicators, page 24*). The buttons can also be assigned a special function or no function (no assignment). The functions are assigned when configuring via a PC.	Entering numbers
ALARM	This button is used to start an alarm signal, which is transmitted to programmable circuits. The alarm LED illuminates as soon as the alarm is triggered. Pressing the ESC button stops the alarm again. The alarm type is defined during configuration of the PROMATRIX system.	

Selection call

The user can make an announcement in freely selectable circuits or groups.
Confirming one or more selection buttons selects the circuits or groups in which the announcement is to be made. The corresponding green LEDs illuminate. A line that has already been selected can be disabled again by pressing the corresponding selection button again, and the relevant green LED switches off. If the yellow LED of a selection button has not switched off, the corresponding zone/group is not free (see section *Indicators, page 24*).
Once the selection has been made, the call is started by pressing the ↵ button. Prior to this, the ↵ LED indicates whether all lines or the call station input are free. If individual lines or the input is occupied by a lower-priority event, the ↵ LED flashes slowly. An announcement can still be made, but this will interrupt another event. If individual lines or the input is occupied by a higher-priority event, the ↵ LED flashes quickly, and the call request is ignored (see the indicator descriptions).
During the announcement, the ↵ LED illuminates green. The ↵ button must be held down until the end of the announcement.
The ↵ LED starts to flash green if a user is interrupted by an event with higher priority. In this case, the announcement must be repeated.
After releasing the ↵ button, the selection remains until the next change. Pressing the DEL button twice deletes the entire selection.

All-call

The announcement is made in all system circuits. The procedure is the same as for the selection call. First, all system circuits are selected by pressing the DEL button. Pressing the ↵ button activates the all-call. The green LEDs for all existing circuit or group buttons and the DEL LED illuminate during the call (see section *Indicators, page 24*). The ↵ button must be held down until the end of the announcement. The ↵ LED behaves in the same way as during the selection call.

General alarm

Notice!

The alarm trigger depends on the priority of the call station from which the alarm is activated. The user can configure the call stations from which an alarm may be triggered. If configured, an alarm can also be triggered if the system is in standby mode. A visual and possibly also acoustic signal is sent to each call station in the system to indicate that an alarm is active.

Alarm buttons can be configured in such a way that an alarm signal is transmitted to all lines. A general alarm signal is transmitted to all lines in the system. Pressing the covered ALARM button triggers the alarm. The button illuminates red during the alarm. An alarm has high priority, and takes precedence over all announcements or signals except for actions that are triggered from the central station.
Pressing the ESC button switches the alarm off again.

Selection alarm

Notice!

The alarm trigger depends on the priority of the call station from which the alarm is activated. The user can configure the call stations from which an alarm may be triggered. If configured, an alarm can also be triggered if the system is in standby mode. A visual and possibly also acoustic signal is sent to each call station in the system to indicate that an alarm is active.

Alarm buttons can be configured in such a way that an alarm signal is only transmitted to certain lines that have been previously selected. As with the selection call, the circuits/groups to which an alarm is to be transmitted must be selected first of all. Then the covered button for the selection alarm must be pressed. The button illuminates red during the alarm. Now the lines for the next alarm can be selected.
Pressing the ESC button switches the alarm off again.

Stopping signals

Pressing the ↓ button stops a current alarm or gong, or cancels speech reproduction. The function of the ESC button (priority, local events etc.) can be configured in IRIS-Net. One exception is the central station (call station with the highest priority), which can cancel any signals.

System on/off

The PROMATRIX 8000 system can be switched on or off with the ↑ button. Normally, this is not possible from any call station. For this reason, this function can be programmed via IRIS-Net.
In deactivated mode (standby), the corresponding LED is off. Pressing the ↑ button switches on the PROMATRIX 8000 system. During the activation process, the ↑ LED flashes, and when the system is ready for operation, the ↑ LED remains illuminated (applies to all call stations in the system).
To switch off the system, the ↑ button must be pressed and held down for approx. three seconds. This requirement prevents unintentional deactivation if the button is pressed accidentally.
The PROMATRIX system can also be switched on or booted up automatically from an external location by pressing the ALARM button or triggering an alarm sequence.

Special functions

Each of the selection buttons on the call station can be assigned a special function. This means a call station can also be used as an input terminal to control lighting, door openers, window blinds, and so on. The volume levels can also be controlled via the Up/Down buttons. More information on this topic can be found in the IRIS-Net documentation.

9 Maintenance

The DPC 8000 does not require any maintenance.

10 Technical data

DPC 8015

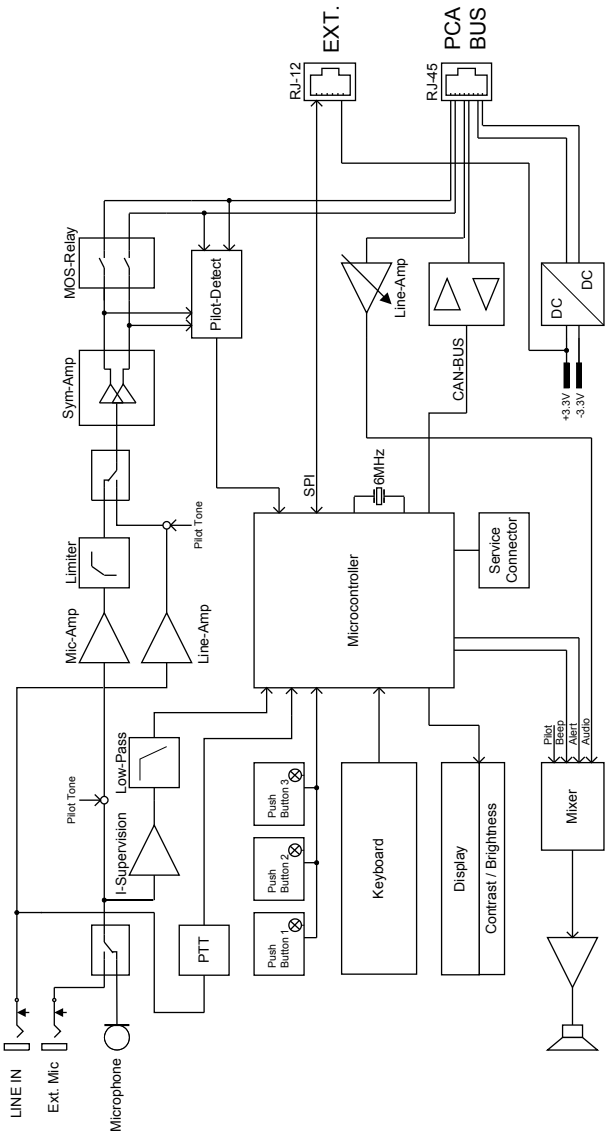
Supply voltage	15–58 V DC
Maximum supply current (without EXTENSIONS)	< 80 mA / 24 V < 110 mA / 18 V
Maximum supply current (with 5 DPC 8120 EXTENSIONS)	< 180 mA / 24 V < 250 mA / 18 V
CAN interface	10–500 kbit/s, 1 x RJ-45, max. length 1000 m
Maximum mic input level	-21 dBu
Maximum line input level	+4 dBu
Maximum NF output level	+12 dBu
Buttons	5 pre-programmed, 15 programmable zone/ function keys
LEDs	Power (green), Fault (yellow), Alarm (red) Green LED per pre-programmed menu button Green and yellow LED per programmable zone/function key
LC display	Lighted LC display (122 x 32 pixel)
External connectors	1 PCA BUS connector (Control data + Audio + Power supply, RJ-45) 1 audio source (line level, phone jack) 1 microphone input (phone jack) 1 EXT connector (call station extension, RJ-12)
Operating temperature	-5 °C to 45 °C
Product dimensions (Width by Height by Depth)	200 by 167 by 65 mm (without microphone)
Net weight	0.6 kg
Options	
• Emergency button	EB DPC (Part No.: F01U101089)
• Key lock switch	NRS 90231 (Part No.: F01U101000)

DPC 8120

Buttons	20 programmable zone/function keys
LEDs	Green and yellow LED per programmable zone/function key
External connectors	2 EXT connectors
Operating temperature	-5 °C to 45 °C

Product dimensions (Width by Height by Depth)	140 by 167 by 65 mm
Net weight	0.35 kg

10.1 Block diagram



10.2 Dimensions

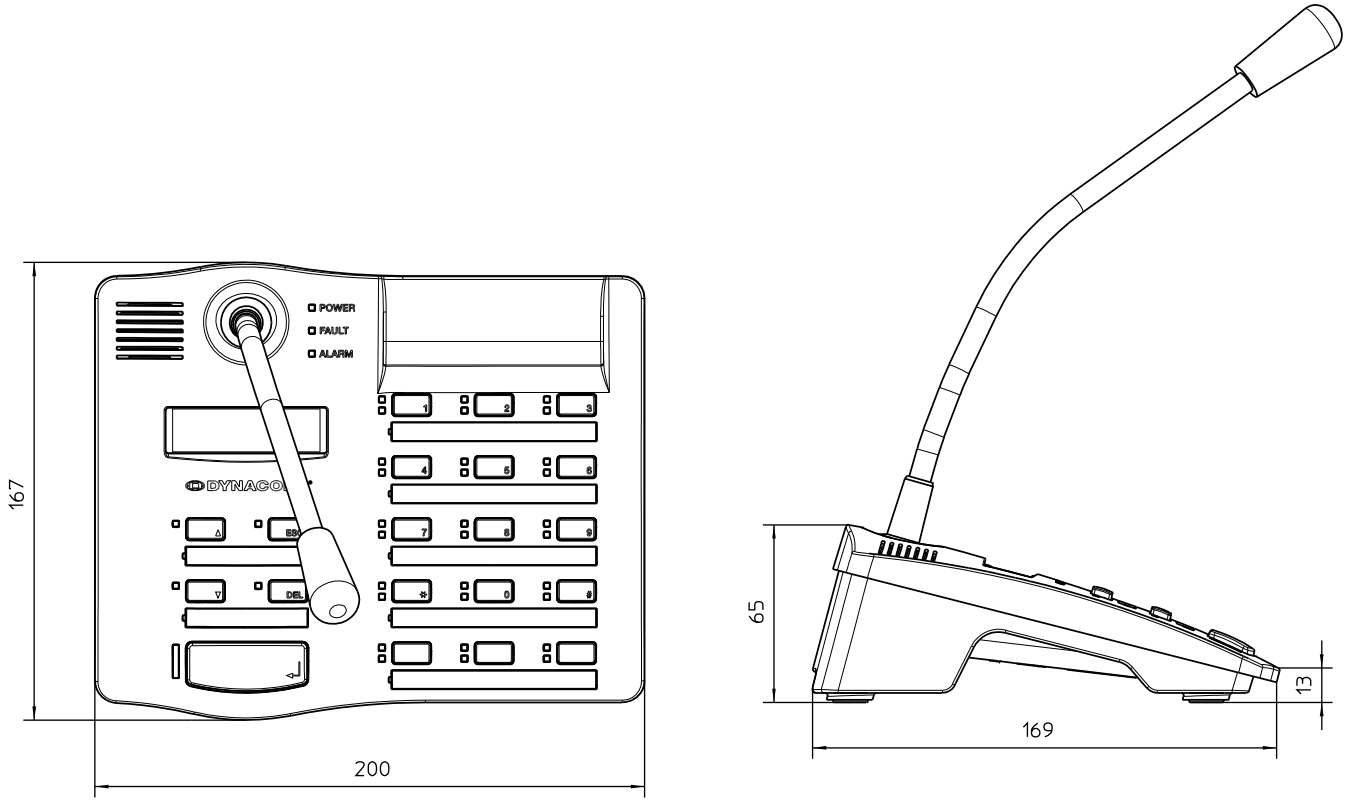


Figure 10.1: DPC 8015

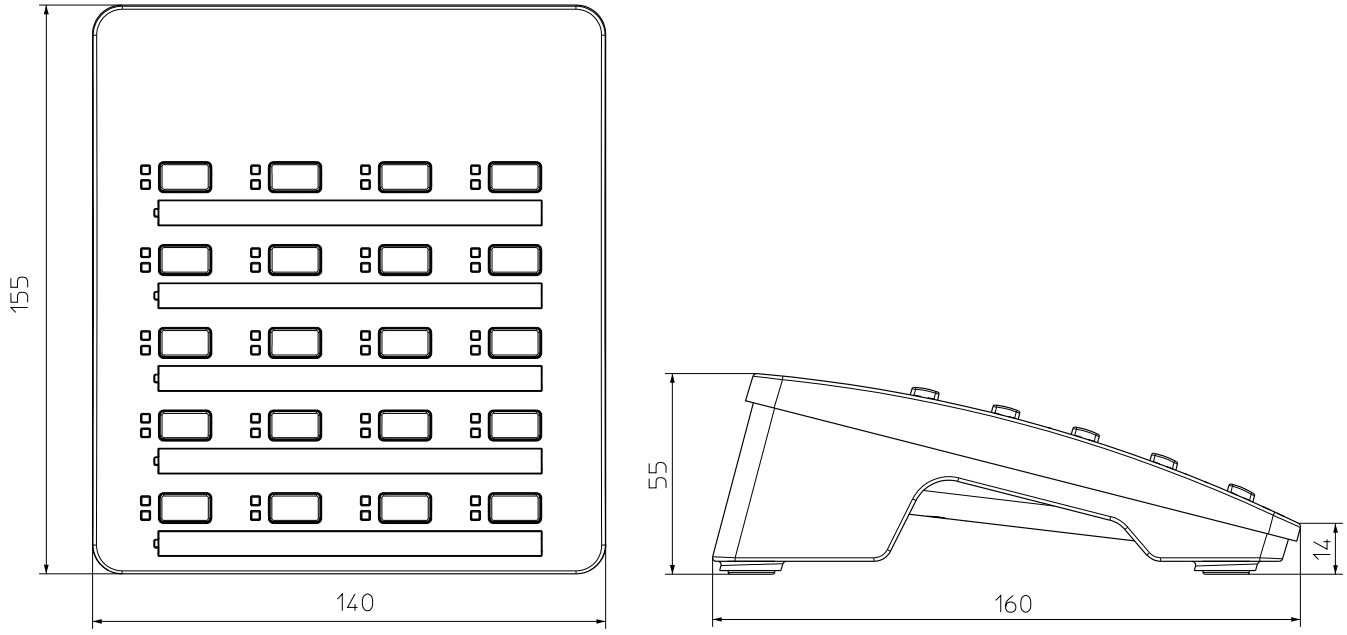


Figure 10.2: DPC 8120

10.3 Standards

The DPC 8000 CALL STATION meets the following standards (version: October 2012):

- EN 54-16

- EN 55103-1
- EN 55103-2
- EN 60945
- FCC
- ICES 003

11 Appendix

11.1 CAN bus basics

The CAN bus uses a bus or line topology as its network topology. This means that all participants are connected to a single twisted pair cable (shielded or unshielded), where the cabling must run from one bus participant to the next. As a result, each device can communicate with any other device without any limitations. The CAN bus must terminate at both ends with a 120-ohm load resistor. If the termination is missing or incorrect, malfunctions can occur as the signal on a bus is reflected at both ends of the bus. This signal is distorted when the reflections overlap with the original signal, which can lead to data loss. To prevent or minimize reflections at the bus ends, terminators are used, which "absorb" the energy of the signal. Since the CAN interface is galvanically isolated from the remaining circuit parts in many EVI audio devices, a shared earth cable (CAN_GND) is added to the network cabling (see the following diagram). In this way, it is ensured that all CAN interfaces in the network have the same potential.

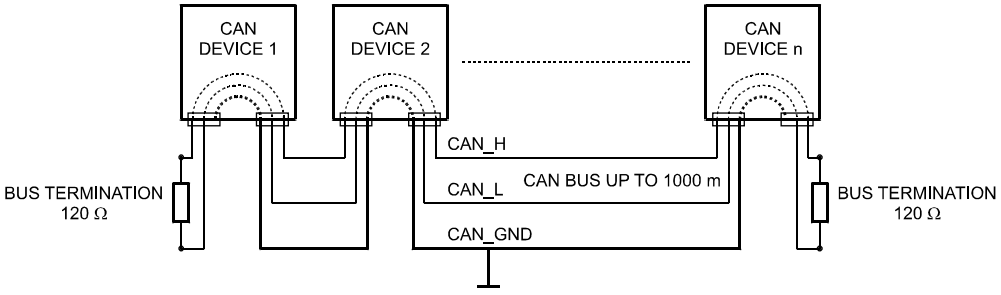


Figure 11.1: CAN bus

11.2 Call station extension

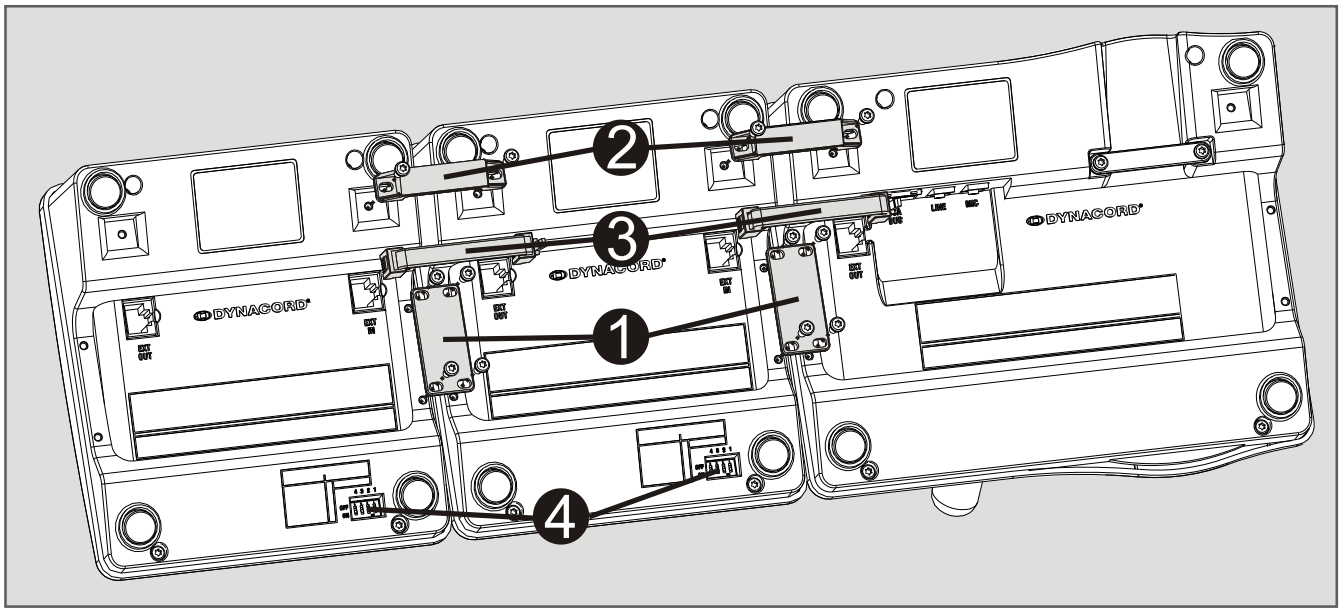
A maximum of five call station extensions (type DPC 8120) can be connected to the DPC 8015 call station. The DPC 8120 call station extension has 20 customizable function and speed dial buttons. A maximum of five call station extensions can be installed on one call station. Each button on the call station extensions has a green and a yellow LED, and the buttons are labeled in the same way as for the call station. In other words, the labels are protected by a transparent covering, and can be changed at any time. The call station can still be used as a standing or flush-mounted device even with call station extensions installed. Like the call station, the call station extension is monitored internally. If an error occurs, this is recorded in the error log of the PROMATRIX 8000 system.

Figure 11.2: DPC 8120

Assembly

See the following information regarding installation of call station extension DPC 8120 on call station DPC 8015.

1. Disconnect the call station from all connectors
2. Align the call station and call station extension next to each other with the top sides facing down (the following diagram shows how to install two DPC 8120s to a DPC 8015)



3. Mount the connecting plate (1) and connecting holder (2) with 4 and 2 screws respectively
4. Insert connecting cable (3) into the EXT socket of the call station or call station extension (the connector will click into place)
5. Set a unique address for the call station extension via the DIP switch EXTENSION ADDRESS (4)

Notice!

When using several call station extensions, these must be assigned addresses in ascending order from left to right (1–5).

6. Re-connect the call station connections
7. Configure the call station extension using the IRIS-Net software

Notice!

If a call station extension is replaced in a call station system that has already been configured, the replacement device must be assigned the address of the first device via the DIP switch EXTENSION ADDRESS.

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