PAVIRO Call Stations

PVA-15CST | PVA-15ECS

en Operation manual

Table of contents

1	**Safety**	**4**
2	**Short information**	**11**
3	**System overview**	**12**
3.1	Top	12
3.2	Bottom	16
4	**Parts included**	**17**
5	**Installation**	**18**
5.1	Delivery condition	18
5.2	Button labeling	20
5.3	Retrofit options	21
5.3.1	Alarm button	21
5.3.2	Key switch	23
6	**Connection**	**26**
6.1	CST BUS	26
6.1.1	Interface description	26
6.2	LINE port	28
6.3	MIC interface	28
6.4	EXT interface	29
7	**Configuration**	**30**
7.1	Main menu	31
7.2	Setup menu	34
8	**Operation**	**36**
8.1	Indicators	36
8.2	Functions	40
9	**Maintenance**	**47**
10	**Technical data**	**48**
10.1	Circuit diagram	51
10.2	Dimensions	52
11	**Appendices**	**53**
11.1	Call station extension	53

1 Safety

Danger!
High risk: This symbol indicates an imminently hazardous situation such as "Dangerous Voltage" inside the product.
If not avoided, this will result in an electrical shock, serious bodily injury, or death.

Warning!
Medium risk: Indicates a potentially hazardous situation.
If not avoided, this could result in minor or moderate bodily injury.

Caution!
Low risk: Indicates a potentially hazardous situation.
If not avoided, this could result in property damage or risk of damage to the unit.

1. **Read these instructions. –** All the safety and operating instructions should be read before the apparatus or system is operated.
2. **Keep these instructions. –** The important safety instructions and operating instructions should be retained for future reference.
3. **Heed all warnings. –** All warnings on the apparatus and in the operating instructions should be adhered to.
4. **Follow all instructions. –** All instructions for installation or use/operating should be followed.
5. **Do no use this apparatus near water. –** Do not use this apparatus near water or a moist environment - for example, near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, near a swimming pool, in an unprotected outdoor installation, or any area which is classified as a wet location.

6. **Clean only with dry cloth. –** Unplug the apparatus from the outlet before cleaning. Do not use liquid cleaners or aerosol cleaners.
7. **Do not block any ventilation openings. Install in accordance with the manufacturer's instructions. –** Openings in the enclosure, if any, are provided for ventilation and to ensure reliable operation of the apparatus and to protect it from overheating. These openings must not be blocked or covered. This apparatus should not be placed in a built-in installation unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
8. **Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat or in direct sunlight.**
9. **No naked flame sources, such as lighted candles, should be placed on the apparatus**.
10. **Do not defeat the safety purpose of the polarized or ground-type plug.** – A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wider blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
11. **Protect the power cord from being walked on or pinched particularly at plug, convenience receptacles, and the point where they exit from the apparatus.**
12. **Only use attachments/accessories specified by the manufacturer. –** Any mounting of the apparatus should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.
13. **Use only with the cart, stand, tripod, bracket or table specified by the manufacturer, or sold with the apparatus. –** When a cart is used, use caution when moving the cart/

apparatus combination to avoid injury from tip-over. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

14. **Unplug this apparatus during lighting storms or when unused for long periods of time. –** Not applicable when special functions are to be maintained, such as evacuation systems.
15. **Refer all servicing to qualified service personnel.** – Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
16. **The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquid, such as vases, shall be placed on the apparatus.**
17. **Batteries (battery pack or batteries installed) shall not be exposed to excessive heat such as sunshine, fire or the like.**

Caution!
Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type. Dispose of used batteries according to the environmental law and procedures.

18. **Professional installation only –** Do not use this equipment in residential applications.
19. **Condensation –** In order to avoid condensation; wait a few hours before turning on the equipment when it is transported from a cold to a warm space.
20. **Hearing damage –** For apparatus with audio output, to prevent possible hearing damage, do not listen at high volume levels for long periods.
21. **Replacement parts –** When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or having the same

characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

22. **Safety check –** Upon completion of any service or repairs to this apparatus, ask the service technician to perform safety checks to determine that the apparatus is in proper operating condition.

Danger!

Overloading – Do not overload outlets and extension cords as this can result in a risk of fire or electric shock.

23. **Power sources –** This apparatus should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply you plan to use, consult your appliance dealer or local power company. For apparatuses intended to operate from battery power, or other sources, refer to the operating instructions.
24. **Power lines –** An outdoor system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outdoor system, extreme care should be taken to keep from touching such power lines or circuits, as contact with them might be fatal. U.S.A. models only – refer to the National Electrical Code Article 820 regarding installation of CATV systems.

Danger!

Object and Liquid entry – Never push objects of any kind into this apparatus through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the apparatus.

25. **Coax grounding –** If an outside cable system is connected to the apparatus, be sure the cable system is grounded. U.S.A. models only: Section 810 of the National Electrical

Code, ANSI/NFPA No.70-1981, provides information with respect to proper grounding of the mount and supporting structure, grounding of the coax to a discharge apparatus, size of grounding conductors, location of discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

26. **Protective grounding –** An apparatus with class I construction shall be connected to a power outlet socket with a protective grounding connection.
Protective earthing – An apparatus with class I construction shall be connected to a mains socket outlet with a protective earthing connection.

Note for power connections

– For permanently connected equipment, a readily operable mains plug or all-pole mains switch shall be external to the equipment and in accordance with all applicable installation rules.
– For pluggable equipment, the socket-outlet shall be installed near the equipment and shall be easily accessible.

This label may appear on the bottom of the apparatus due to space limitations.

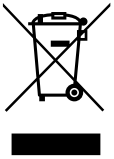
Caution!
To reduce the risk of electrical shock, DO NOT open covers. Refer servicing to qualified service personnel only.

Warning!
To prevent fire or shock hazard, do not expose units to rain or moisture.

Warning!
Installation should be performed by qualified service personnel only in accordance with the National Electrical Code or applicable local codes.

Warning!
Power disconnect: If the apparatus is mains powered and a power supply cord set is provided, the disconnect device is the mains plug of the power cord set.
If an AC-DC adapter is provided and the mains plug that is part of the direct plug-in device, the AC-DC adapter is the disconnect device.
The socket outlet shall be near the apparatus and shall be easily accessible.

Warning!
To avoid electric shock, do not connect safety extra-low voltage (SELV) circuits to telephone-network voltage (TNV) circuits. LAN ports contain SELV circuits, and WAN ports contain TNV circuits. Some LAN and WAN ports both use RJ-45 connectors. Use caution when connecting cables.



Old electrical and electronic appliances
Electrical or electronic devices that are no longer serviceable must be collected separately and sent for environmentally compatible recycling (in accordance with the European Waste Electrical and Electronic Equipment Directive).
To dispose of old electrical or electronic devices, you should use the return and collection systems put in place in the country concerned.

Only used at altitude not exceeding 2000m.

Only used in non-tropical climate regions.

2 Short information

The PVA-15CST and PVA-15ECS are call stations for the PAVIRO system:

– The PVA-15CST call station is delivered without key switches or alarm buttons, but these optional components can be built in as described in *Retrofit options, page 21*.
– The PVA-15ECS call station has a factory-fitted key switch and two alarm buttons.

Both call stations have a gooseneck microphone with pop shield and permanent monitoring, a total of 20 buttons, an illuminated LC display, and an integrated loudspeaker.

The call stations can be extended to suit the user's requirements by connecting up to five PVA-20CSE call station extensions, each with 20 customizable selection buttons.

Other properties:

– Five menu/function keys (pre-programmed) - one green or one yellow indicator light per button
– 15 selection buttons (customizable) - two indicator lights (green/red) per button
– Numeric zone selection (can be activated during IRIS-Net configuration)
– Label with transparent covering - the label can be changed at any time
– Can be used as a standing or desk/rack flush-mounted device
– Internal monitoring with error logging - complies with all relevant national and international standards
– Easy configuration - use of the Configuration Wizard or IRIS-Net software

3 System overview

3.1 Top

See the table on the following pages for an explanation of the numbers in the top view figures.

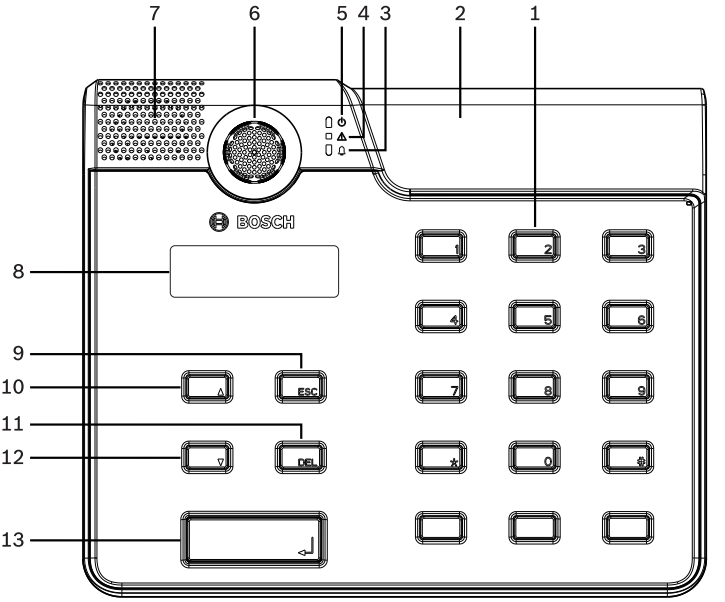


Figure 3.1: Top view PVA-15CST call station

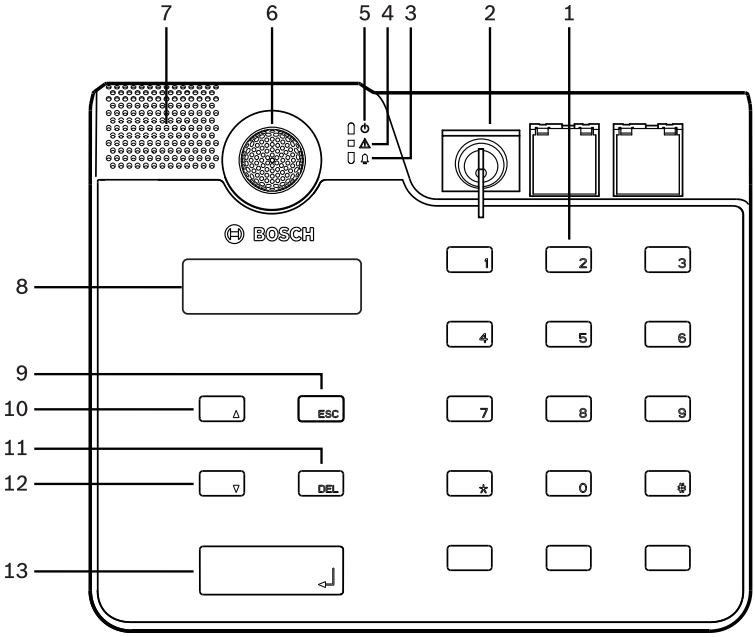


Figure 3.2: Top view PVA-15ECS call station

Nr.	Icon	Element	Description (default configuration)
1		Selection buttons/ numeric keypad	User programmable zone/ group selection buttons with two indicator lights.
2		Area for key switch and alarm buttons: – The key switch prevents unauthorized use of the call station. – The alarm buttons are used to broadcast an alarm signal. They have a transparent cover to prevent unintentional actuation.	– PVA-15CST call station: has provision for installing an optional key switch and alarm buttons. – PVA-15ECS call station: is factory-fitted with a key switch and two alarm buttons.
3	🔔	Voice alarm indicator light	Illuminates red if the system is in the voice alarm condition state.
4	⚠	Combined fault warning indicator light	Illuminates yellow if a fault occurs.
5	⏻	Power indicator light	Illuminates green if the power supply is on.

Nr.	Icon	Element	Description (default configuration)
6		Microphone	Monitored goose neck microphone.
7		Loudspeaker	Audible fault or VAC warning.
8		Display	Status/error displays for the call station or the entire system.
9		ESC button	Acknowledges and advances to next error message, with indicator light.
10		▲ button	Switches the system on/off (standby), with indicator light.
11		DEL button	- (no default configuration).
12		▼ button	Stops a live audio signal, with indicator light.
13		↵ button	For announcements to selected zones, with indicator light.

See also

– *Retrofit options, page 21*

3.2 Bottom

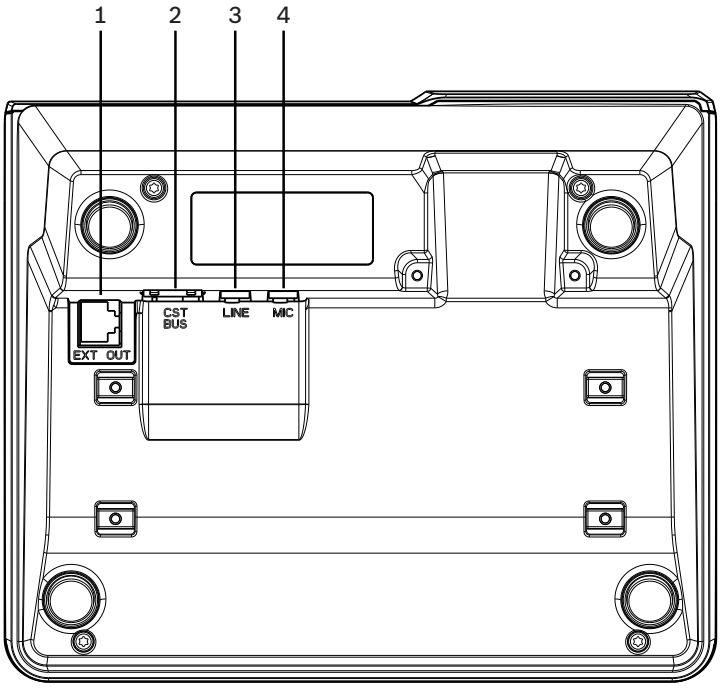


Figure 3.3: Bottom view PVA-15CST and PVA-15ECS call stations

Nr.	Element	Description
1	EXT OUT port	Connection for call station extension
2	CST BUS port	Connection to controller
3	LINE port	Connection for external audio devices or a PTT button
4	MIC port	Connection for external microphone

4 Parts included

Quantity	Component
1	PVA-15CST or PVA-15ECS call station
1	Patch cable (3 meters)
7	Blank paper strips
1	Strain relief (bracket)
2	Screws for strain relief
1	Cover release tool
1	Operation manual
1	Important safety instructions

5 Installation

5.1 Delivery condition

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

Parameters		**Setting/description**
CAN address		0 (disconnected)
CAN baud rate		10 kbit/s
CAN termination		off
Name		PVA-15CST / PVA-15ECS
Password		Setup menu password-protected, password: 2222
Prechime		Off
Buzzer		On (acoustic warning signal)
Compressor		Off
Options	Alarm buttons	Not configured
	Key switch	Not configured
	External microphone	Not configured
Button assignment	Selection buttons 1-n	Selection of zone 1 through n (button 1 = zone 1, button 2 = zone 2 etc.)
	↵	Call in selected zones/groups, default priority 50
	▲	Switches system on/off, default priority 40
	▼	Stops an active audio signal, default priority 69

Parameters		Setting/description
	ESC	Acknowledges and advances to next error message
	DEL	- (no default configuration)
Special functions		Not configured

Warning!
If several call stations need to operate with a single controller, each call station must be assigned a unique CAN address (1-16). Subsequently, if the CAN address changes, the configuration has to be changed as well.

5.2 Button labeling

The call station buttons are labeled using labeling strips, which are inserted from above. Execute following steps to label the buttons:

1. Carefully loosen the transparent cover on the top using the included release tool. A provision for releasing the cover is made at the top of the cover on the right side of the microphone.
2. Insert the release tool into the provision for release and move the tool to the right side.
3. The top snaps will release from the housing.
4. Insert the tool at the left side of the microphone and move to the left.
5. Now the cover can be removed.
6. Insert the labeled paper strips into the label fields.
7. Reattach the transparent cover: Align the bottom cover snaps with the holes in the call station housing, then push the top cover snaps gently and equally into the holes.

5.3 Retrofit options

Notice!
This section applies to the PVA-15CST call station only.

The call station can be retrofitted with a maximum of three covered buttons PVA-1EB and / or one key switch PVA-1KS. 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.

5.3.1 Alarm button

The PVA-1EB is an optional button for installation in the call station. 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 system.

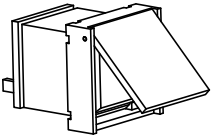
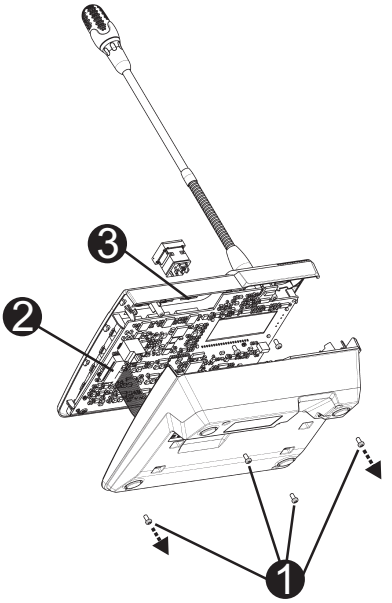
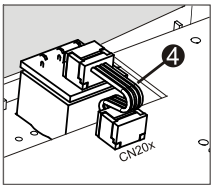


Figure 5.1: PVA-1EB

Assembly
Note the following information regarding installation of the PVA-1EB in the call station.

Notice!
An application note for the PVA-1EB is available.





1. Disconnect the call station from all connectors.
2. Unscrew the call station baseplate (4 screws ❶).
3. Carefully remove the baseplate from the upper part, start on the top left corner of the call station.
4. Unplug the connecting cable from the CN1 plug connector ❷.
5. Prepare installation location ❸: Use a sharp object (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).

6. Mount the button into the installation location, and press in evenly (it must be possible for the cover cap to open upward).
7. Depending on whether the right/middle/left installation location is used, plug the ribbon cable ❹ into plug connector CN201/CN202/CN203 on the circuit board.
8. Plug the connecting cable into CN1 again.
9. Carefully re-attach the call station baseplate.
10. Re-connect the connections.
11. Configure the button using the software.

The call station can be retrofitted with a maximum of three covered buttons PVA-1EB and / or one key switch PVA-1KS. 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.

5.3.2 Key switch

The PVA-1KS is an optional key switch for installation in the call station. The key switch feed lines are monitored by the control station. If an error occurs, this is indicated in the error log of the system.

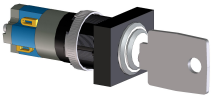


Figure 5.2: PVA-1KS

Assembly

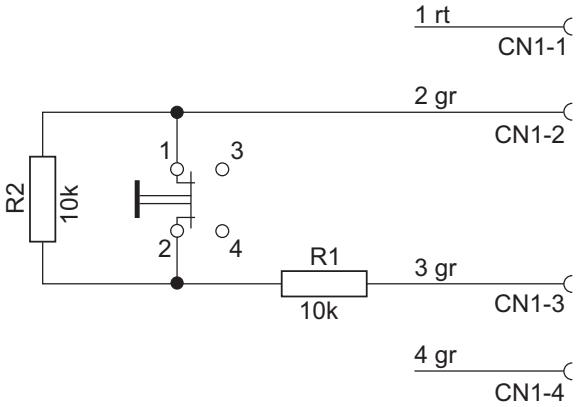
Note the following information regarding installation of the key switch in the call station.

1. Disconnect the call station from all connectors
2. Unscrew the call station baseplate (4 screws)
3. Carefully remove the baseplate from the upper part, starting on the top left corner of the call station.
4. Unplug the connecting cable from the CN1 plug connector

5. Prepare installation location: Use a sharp object (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.

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



9. 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 1 and 2. The polarity is not important.

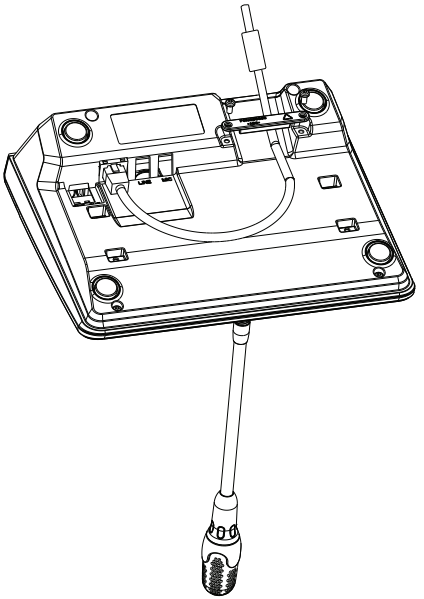
10. Depending on whether the right/middle/left installation location is used, plug the ribbon cable into plug connector CN201/CN202/CN203 on the circuit board
11. Plug the connecting cable into CN1 again
12. Carefully re-attach the call station baseplate
13. Re-connect the connections
14. Configure the button using the software

6 Connection

6.1 CST BUS

Notice!
If the call station is connected to a controller via the CST 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 CST BUS must be connected as shown in the illustration below. Use the supplied strain relief bracket and two screws to fix the cable.



6.1.1 Interface description

The CST BUS port is used to connect the call station with a controller. This is an 8-pin RJ-45 port 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 CST BUS port and the corresponding RJ-45 connector.

Notice!
It is mandatory to use shielded twisted pair cables for connecting: CAN (4, 5), AUDIO CONTROLLER TO CALL STATION (3, 6) and AUDIO CALL STATION TO CONTROLLER (7, 8).

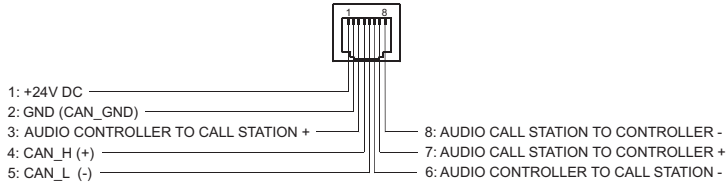


Figure 6.1: Pin assignment of CST BUS port

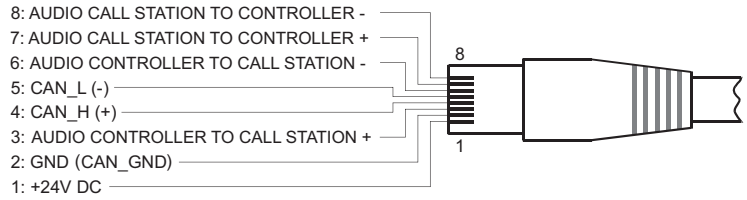


Figure 6.2: Pin assignment of CST BUS connector

Power supply

The minimum supply voltage of the call station is 15 V DC. As the minimum supply voltage of the controller is 18 V DC, the maximum allowable voltage drop at the connection wiring between controller and call station is 3 V DC. Please refer to the technical data (e. g. supply current) of the call station or call station extension to select appropriate connection cables, especially for long cable runs.
If the voltage drop is higher than 3 V DC, the minimum supply voltage of the controller has to be increased to ensure the minimum supply voltage of the call station.

6.2 LINE port

Usage as audio input

The LINE port allows an external audio device (e.g. wireless microphone receiver) to be connected. The following diagram shows the assignment of a stereo jack plug (3.5 mm, "mini jack") for connection to the LINE port.

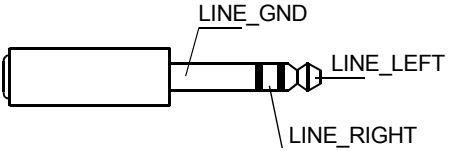


Figure 6.3: Assigning the LINE plug as audio input

Use as PTT contact input

When connecting a PTT microphone to a call station, the LINE port 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").

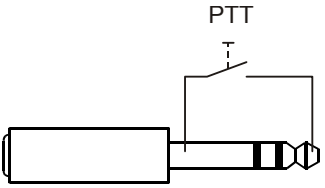


Figure 6.4: Assigning the LINE plug as PTT contact input

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.

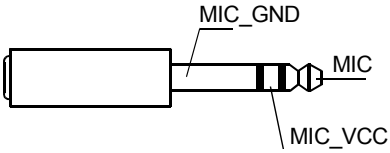


Figure 6.5: Assignment of the MIC plug

6.4 EXT interface

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

7 Configuration

The call stations must be configured 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.

Menu

To open the main menu when the call station is in idle status: Press the ▼ Button, keep it held down, and press the ▲ button at the same time.

Program Assignment	Program 01	Volume	See section *Main menu, page 31*
	Program 02	Volume	
	:		
	Program 16	Volume	
Date/Time			
Set Language			
Indicator Test			
LCD Contrast			
LCD Brightness			
Monitor Volume			
CST Setup	Input Password		See section *Setup menu, page 34*
CST Setup Menu	CAN Address		
	CAN Baudrate		
	CAN Termination		

Firmware Version		
Buzzer On/Off		
Prechime		
Compressor On/Off		
Show Date & Time		

7.1 Main menu

This section describes the Main Menu of the PAVIRO call station.

Program Assignment

The call station allows programs to be assigned to individual zones or groups of the PAVIRO system. Programs normally have lower priority than other audio signals (e.g. announcements or messages). With single-program technology, the music must be muted or switched off in all zones/groups 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 audio output and amplifier is available for each zone/group, 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.

A list of the programs (e.g. Program 01 to Program 16) assigned to the call station in IRIS-Net is displayed. Only assigned programs are listed. 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 zones/groups.

By pressing the selection buttons, the required zones/groups can be selected. This is indicated by the corresponding green LEDs.

Notice!
The zone assignment is immediately accepted in the PAVIRO system.

The assignment remains valid until the selection buttons are pressed again.
Pressing the ↵ button takes the user to the Volume submenu, which is described below:
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 PAVIRO system.

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

Date/Time
The date and time can be set for the PAVIRO system on the call stations. The indication of this menu item can be edited in the CST Setup Menu. Pressing the ↵ button takes the user to the Date/Time dialog. 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 Main Menu.

Set Language
Pressing the ↵ button takes the user to the Set Language dialog. In this dialog, the language of the display content can be selected by pressing the ▲ or ▼ button. Pressing the ↵ button accepts the language selected, and returns the user to the Main Menu.

Indicator Test
Pressing the ↵ button activates the indicator test for the call station and all connected call station extensions. All LEDs flash during this test and the speaker will be activated. Pressing the ↵ button deactivates the indicator test, and returns the user to the Main Menu.

LCD Contrast
Pressing the ↵ button takes the user to the LCD Contrast dialog. In this dialog, 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 Main Menu.

LCD Brightness
Pressing the ↵ button takes the user to the LCD Brightness dialog. In this dialog, the display brightness can be adjusted by pressing the ▲ or ▼ button. Pressing the ↵ button accepts the brightness selected, and returns the user to the Main Menu.

Monitor Volume
Pressing the ↵ button takes the user to the Monitor Volume dialog. Pressing the ▲ or ▼ button adjusts the volume level of the loudspeaker. Pressing the ↵ button accepts the setting selected, and returns the user to the Main Menu.

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

Notice!
The default password for activation of the CST Setup Menu is 2222. The password can be changed in the IRIS-Net software.

7.2 Setup menu

This section describes the CST Setup Menu of the PAVIRO call station.

CAN Address
Pressing the ↵ button takes the user to the CAN Address dialog. 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 CST Setup Menu.

Notice!
Address 0 (delivery status) disables remote communication between the call station and the PVA-4CR12 . The call station does not appear in the system, even though it is physically connected to the CAN bus. Each CAN address may exist only once at a PVA-4CR12 . Otherwise, network conflicts may arise.

CAN Baudrate
Pressing the ↵ button takes the user to the CAN Baudrate dialog. Pressing the ▲ or ▼ button toggles between the available baud rates. Pressing the ↵ button accepts the setting selected, and returns the user to the CST Setup Menu.

CAN Termination
Pressing the ↵ button takes the user to the CAN Termination dialog. 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. Pressing the ↵ button accepts the setting selected, and returns the user to the CST Setup Menu.

Firmware Version
Displays the version of the call station firmware.

Buzzer On/Off
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 dialog. 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 CST Setup Menu.

Prechime
A prechime can be programmed for announcements. In announcement mode, the prechime is transmitted to the selected zones/groups each time the ↵ button is pressed. The announcement can begin during the prechime, meaning that the announcer can "interrupt" the prechime. Pressing the ↵ button takes the user to the Prechime dialog. The current setting of the prechime ("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 CST Setup Menu.

Compressor On/Off
Pressing the ↵ button takes the user to the Compressor On/Off dialog. Pressing the ▲ or ▼ button activates or deactivates the microphone signal compressor. Pressing the ↵ button accepts the setting selected, and returns the user to the CST Setup Menu.

Show Date & Time
Pressing the ↵ button takes the user to the Show Date & Time dialog. Pressing the ▲ or ▼ button activates or deactivates the indication of the Date/Time menu item in the menu. Pressing the ↵ button accepts the setting selected, and returns the user to the CST Setup Menu.

8 Operation

8.1 Indicators

The meanings of the call station indicator lights are summarized below. Standard configuration of the call station is assumed.

Indicator light	Status	Description
Zone (green)	Off	Zone or group not selected
	Illuminated green	– Zone or group selected – Special function activated – Direct call activated
Zone (red)	Off	The audio signal transmitted has a priority below the VAC priority.
	Illuminated red	The audio signal transmitted has a priority equal or above the VAC priority.
▲	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

Indicator light	Status	Description
	Illuminated green	Pressing the button ends an event that has already started
↲ (the function of this indicator light is configurable in IRIS-Net)	Off	The selected zones are free and a call can be made
	Illuminated green while the speaker button is pressed	The announcement is being transmitted
	Green, flashing	A call station with lower priority is currently transmitting an announcement in at least one selected zone – this announcement can be interrupted at the cost of the currently active call station
	Green, flashing quickly	– At least one of the selected zones or groups is occupied with higher priority (announcement, chime, 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

Indicator light	Status	Description
FAULT	Off	System is running smoothly
	Illuminated yellow	There is an error in the system – details are displayed in the LC display
	Flashing yellow	There is a new, as yet unconfirmed error in the system – details are displayed in the LC display
VOICE ALARM	Off	No alarm started
	Illuminated red	The alarm was triggered
	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 LC display shows time information, operating states, user information, setup information, error messages with precise device descriptions, and so on.

Status indication 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.

Fault indication in the LC display

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

– The FAULT indicator light flashes, and a signal tone is sounded via the built-in loudspeaker
– The fault is displayed in the LC display

– Pressing the ESC button confirms the fault message, and deactivates the signal tone. At the same time, the FAULT indicator light switches from flashing to permanently illuminated. If a new error occurs, confirmation is required once again
– The FAULT indicator light signals an error in the system for as long as it exists

The fault 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 indicator light 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.	When navigating through the menu, this button is used to scroll up.
ESC	Pressing the ESC button confirms a new error, and disables the signal tone at the same time. Press the button again to show the next error message.	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 (chime, alarm, text). The precise function can be configured in the IRIS-Net software.	When navigating through the menu, this button is used to scroll down.

Button	Announcement mode	Menu mode
DEL	- (no default configuration)	The button acts as the backspace key for numerical entries.
↵	This button is used to activate an announcement in selected zones or groups. The function of the indicator light is described in section *Indicators, page 36*. The toggle mode can be programmed optionally.	When navigating through the menu, this button is used to confirm an entry or select a selected entry.
Selection buttons	There are 15 selection buttons with corresponding indicator lights. These buttons are used to select: – individual zones or zone groups for announcements (see section *Delivery condition, page 18*), – chime/alarm signals, – speech reproduction, or – program assignment (press once = on, press again = off). The indicator lights show the current selection status (see section *Indicators, page 36*). The buttons can be assigned a special function or no function (no assignment). The functions are assigned during configuration with a PC. Depending on the	Used to enter numbers.

Button	Announcement mode	Menu mode
	configuration, these selection buttons can be used as a numeric keypad for zone selection.	
ALARM	This button (if installed) is used to start an alarm signal, which is transmitted to programmable zones. The alarm indicator light 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 PAVIRO system.	
Key switch	The Key switch (if installed) enables or prevents access to defined buttons. The access level of the buttons can be programmed in IRIS-Net.	

Call selection

Programmed zones or zone groups can be selected for announcements:

– Press one or more selection buttons on the call station or call station extension(s) to select the zone(s) or zone group(s). The corresponding green indicator light will come on.
– To disable a zone or zone group that has already been selected, press the corresponding selection button again. The relevant green indicator light will go out.

– If the red indicator light of a selection button does not go out, an alarm or high priority evac message is distributed in the corresponding zone or zone group (see section *Indicators, page 36*).

Call selection using the numeric keys feature

The numeric keys feature can also be used to select programmed zones or zone groups. This can be useful, for example, if the call station does not have a call station extension.

– Make sure the NUMERIC KEYS option is set to ON in the Configuration tab of the IRIS-Net software.
  The key assignment is saved in IRIS-Net when the ON button is disabled, but the numeric feature will not work. See the IRIS-Net manual for more information.
– Press any number between 1 and 999 to enter one or more zones or zone groups.
– Use the * key to indicate a zone group and the # key to confirm the entry of a zone or zone group. A total of 16 zones/zone groups can be assigned at the same time.
  For example to select zone groups 1 and 2 and zones 80, and 90 select: *1# *2# 80# 90#.
– The selected zones and zone groups are shown in the display.
  For example: G1 G2 Z80 Z90.
– If an incorrect zone or zone group number is entered, a beep is sounded to alert the user.
– To remove a zone or zone group from a list, reselect the zone or zone group and then press the * key.
  For example to remove zone group 1 from previous the list select: *1*. The display will then show G2 Z80 Z90
– To remove all zones or zone groups from the list, press the * key for longer than 3 seconds.
– To recall the last selected zone or zone group, press the # key for longer than 2 seconds.

Start the call

– Once the selection has been made, press the ↵ button to start the call.
  The function of the indicator light for indicating the availability of the selected zones is configured in IRIS-Net. Refer to section *Indicators, page 36*.
– During the announcement, the ↵ indicator light illuminates green.
– Hold the ↵ button down until the end of the announcement. If configured in IRIS-Net, the ↵ indicator light 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 selection is made.

All-call

The announcement is made in all system zones. This function can be assigned to a button in IRIS-Net. The procedure is the same as for the selection call.

– Press the all-call button to select all system zones.
– Pressing the ↵ button to activate the all-call. The green indicator lights for all existing zone or group buttons and the indicator light of the all-call button illuminate when “all” is selected.
– Hold the ↵ button down until the end of the announcement. The ↵ indicator light 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 zones/groups. A general alarm signal is transmitted to all zones/groups 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 zones/groups that have been previously selected. As with the selection call, the zones/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 zones/groups 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 chime, or cancels speech reproduction. The function of the ▼ button (priority, local events etc.) can be configured in IRIS-Net.

System on/off

The 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 indicator light is off. Pressing the ▲ button switches on the system. During the activation process, the ▲ indicator light flashes, and when the system is ready for operation, the ▲ indicator light 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 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 call station does not require any special maintenance. For hygienic reasons and a clean appearance, the call station can be cleaned with a soft cloth.

10 Technical data

Electrical

CAN BUS port	10, 20, or 62.5 kbit/s, 1 × 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 / numeric keypad.
Built in alarm buttons (PVA-15ECS only)	2 alarm buttons (with transparent cover) for broadcasting an alarm signal. The button feed lines are monitored by the call station.
Built in key switch (PVA-15ECS only)	Key switch for preventing unauthorized use of the call station. The key switch feed lines are monitored by the call station.
Indicator lights	Power (green), Fault (yellow), Alarm (red) Green or yellow LED per pre-programmed menu button Green and red LED per programmable zone/function key
LC display	Back-lit LC display (122 × 32 pixel)

Ports	1 CST BUS port (Control data + Audio + Power supply, RJ-45) 1 audio source (line level, phone jack) 1 microphone port (phone jack) 1 EXT OUT port (call station extension, RJ-12)
DC power input	15-58 V
Maximum supply current (without call station extensions)	Standby/Idle/Announcement/ Alert: 24 V / 80 mA / 1.92 W
Maximum supply current (with 5 call station extensions)	Standby/Idle/Announcement/ Alert: 24 V / 190 mA / 4.56 W

Mechanical

Color	RAL 9017 (traffic black)
Product dimensions (Height x Width x Depth)	166 mm x 200 mm x 66 mm (without microphone)
66 mm (without microphone)	E1, E2, E3
Net weight (PVA-15CST)	0.6 kg
Net weight (PVA-15ECS)	1.64 kg
Shipping weight (PVA-15CST)	1.1 kg
Shipping weight (PVA-15ECS)	1.82 kg

Environmental

Operating temperature	-5 °C to +45 °C (+23 °F to +113 °F)
Storage and transport temperature	-25 °C to +70 °C (-13 °F to +158 °F)

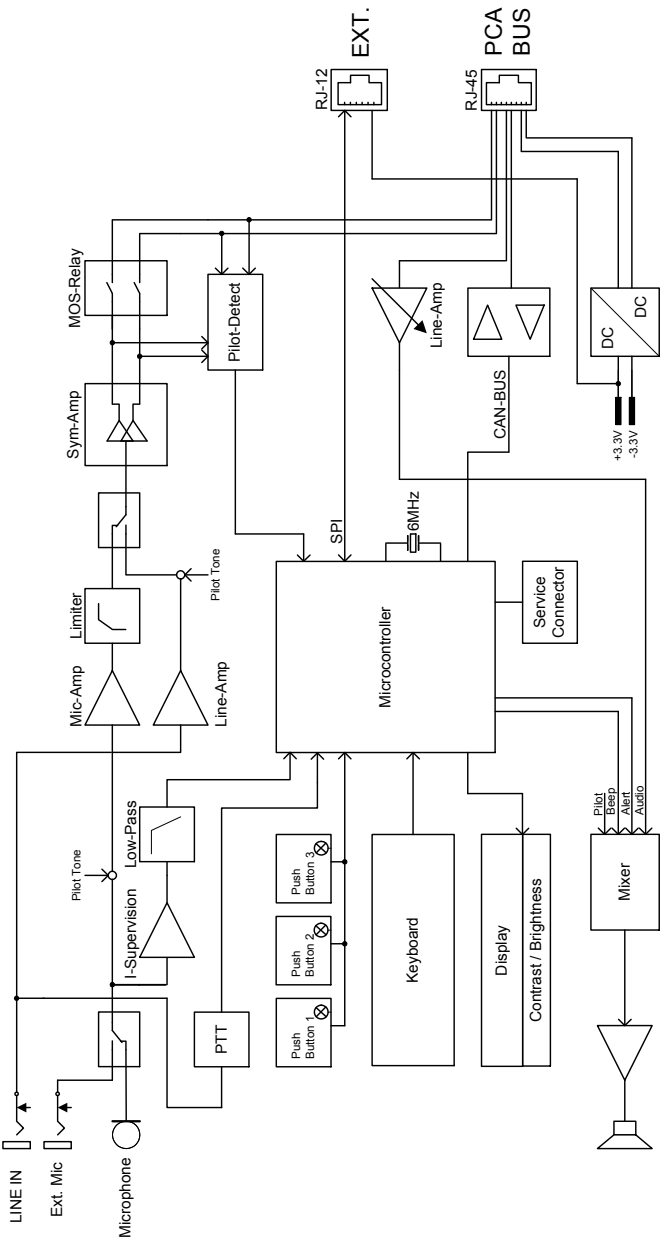
Supply current

	PVA-15CST/ PVA-15ECS	PVA-1EB	PVA-1KS	PVA-20CSE
Standby	60 mA	0 mA	0 mA	0 mA
Idle (no audio)	80 mA	0 mA	0 mA	15 mA
Announcement mode (-10 dB)	80 mA	8 mA	0 mA	15 mA
Alert (alarm) mode (-3 dB)	80 mA	8 mA	0 mA	15 mA

Regulations

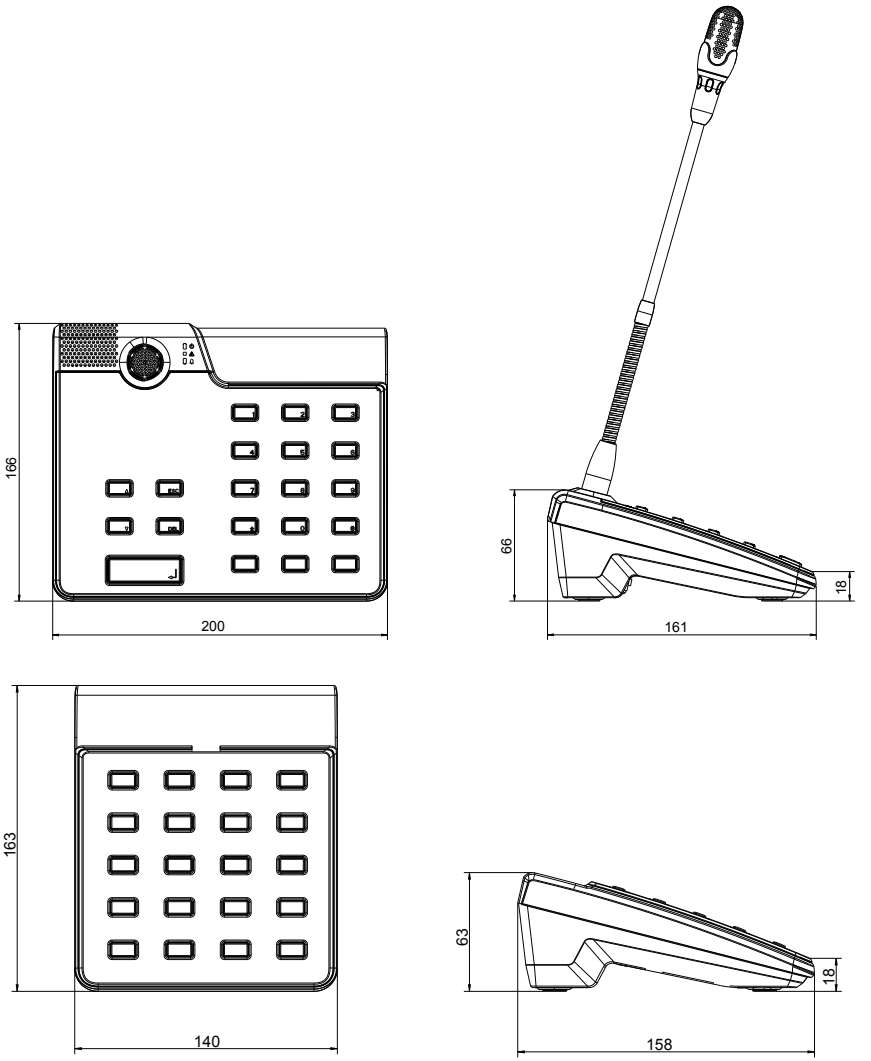
- FCC - This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:
  - This device may not cause harmful interference, and
  - This device must accept any interference received, including interference that may cause undesired operation.
- ICES-003 - This class B digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

10.1 Circuit diagram



10.2 Dimensions

The PVA-15CST and PVA-15ECS call stations have the same external dimensions. Only the PVA-15CST call station is shown in the following figure:



11 Appendices

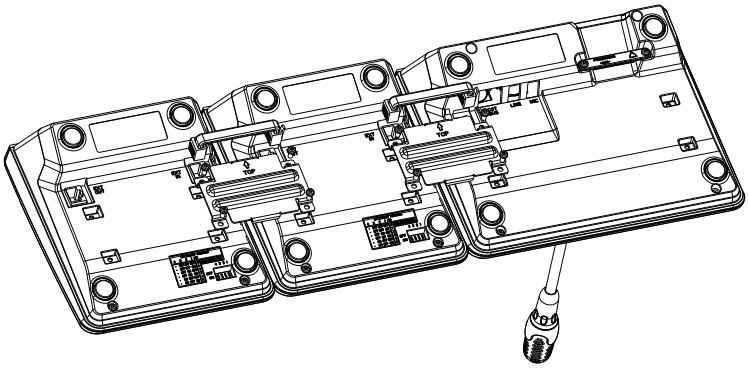
11.1 Call station extension

A maximum of five call station extensions can be connected to the call station. The call station extension has 20 customizable selection buttons. Each button on the call station extensions has a green and a red indicator light, 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 system.

Assembly

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

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.
3. Mount the connecting plate with 4 screws (Torx T10), please note the TOP symbol on the connecting plate.



4. Insert connecting cable 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 (see table below).

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 replaced device via the DIP switch EXTENSION ADDRESS.

DIP Switch				**ID**	**Comment**
4	**3**	**2**	**1**		
-	OFF	OFF	OFF	0	Disconnected
-	OFF	OFF	**ON**	1	
-	OFF	**ON**	OFF	2	
-	OFF	**ON**	**ON**	3	
-	**ON**	OFF	OFF	4	
-	**ON**	OFF	**ON**	5	

Tab. 11.1: Extension address

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