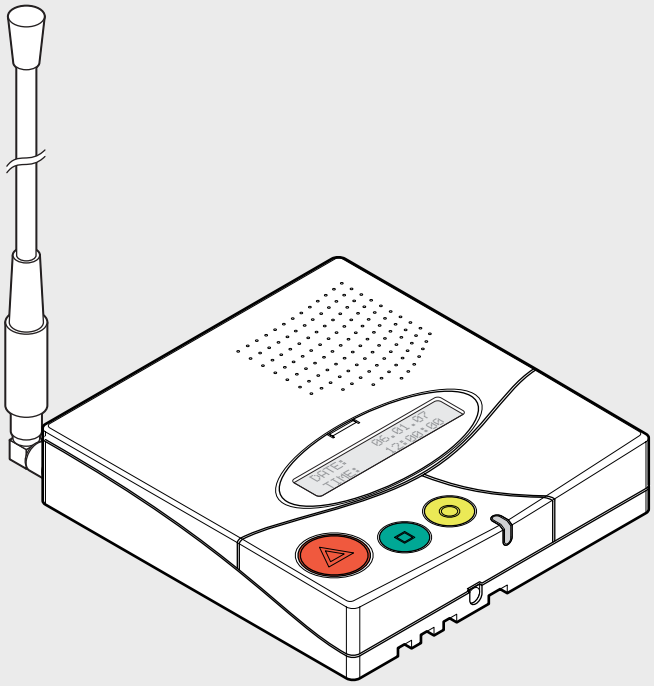


NurseCall Main Unit

BOSCH

User Manual

Table of Contents

1 Identification

1.1 Document

Name	No.
User Manual	970.010

Table 1.1 Document No.

Version	Description
v1.3 | 2008.09	First Edition

Table 1.2 Version Management

1.2 Customer support addresses

TeleAlarm SA Bosch Group
Unterer Quai 37
CH-2502 Biel-Bienne
Switzerland
Phone: +41 32 327 25 40

Bosch Security Systems BV
Postbus 80002
NL-5600 JB Eindhoven
Netherlands
Phone: 0900 8212499

Bosch Security Systems France
Atlantic 361
361, avenue du Général de Gaulle
F-92147 Clamart
France
Phone: + 33 (0)825 12 8000

Bosch Security Systems nv/sa
Torkonjestraat 21F
B-8510 Marke
Belgium
Phone: +32 (0)56 20 02 40

Bosch Sicherheitssysteme GmbH
Haus-ServiceRuf
Ingersheimer Straße 16
D-70499 Stuttgart
Germany
Phone: 01805-47726724

Bosch Security Systems AB
Vestagatan 2
416 64 Göteborg
Sweden
Phone: +46 (0)31 722 5300

Bosch Security Systems Ltd
Broadwater Park
North Orbital Road
Denham
UB9 5HN
United Kingdom
Phone: 01 895-878088

2 Generalities

2.1 Document

NOTICE!
The words written in italic in this document are explained in the glossary.
▶ See *Section 14 Glossary*, page 89.

2.2 *NurseCall* System

Alarms and *Messages* arriving from *NurseCall Transmitters* are managed and stored by the *NurseCall Main Unit*. This unit is compatible with the *NurseCall Master*.

NOTICE!
The document "*NurseCall General Overview*" explains the system concept.

2.3 NurseCall Main Unit

Up to 500 *Transmitters* can be managed by the *NurseCall Main Unit*.

The basic configuration of the *NurseCall Main Unit* can handle incoming data as stand-alone unit (display and acoustic signal).

If the *NurseCall Main Unit* is connected to optional peripherals using the RS232-Interface, the information is additionally transmitted to these peripherals. Several other configurations are available upon request.

NOTICE!
RS-232 connection possibilities, see *Section 4.2.5 RS-232 interface*, page 21.

NurseCall Main Unit can be connected to other *Receiver Units*, such as a *Relay Unit*.

NOTICE!
Connection of several Receiver Units together in one system (Main-Relay configuration), see *Section 4.2.6 RS-485 interface*, page 23.

If an *Alarm* or a *Message* is received by the unit, following information is displayed and transmitted to connected peripherals:

- Identification of *Alarm*/*Message*;
- Floor number / room number / bed number or a single number;
- Date and time;
- Quality of received radio signal;
- Type of storage (*Alarm* or *Event*);
- Identification of the unit receiving the *Alarm*/*Message* (Main / Relay).
- Local position if *Localization Mode* is selected.

The attribution of a floor number / room number / bed number or a single number to a *Transmitter* can be selected (0 to 254). The attribution is programmed in the *NurseCall Main Unit*.

NOTICE!
Attribution of a floor number / room number / bed number or a single number to a *Transmitter*, see *Section 7.5 Transmitters*, page 53.

The radio receiving range is sufficient with the supplied antenna.
This range depends highly on the distance and the material of your building.

If you wish to improve your radio receiving range, two solutions can be offered:

1. Use of a remote high quality antenna.

NOTICE!
In order to achieve an improvement with other antennas, basic rules have to be fulfilled. Contact a specialist for correct installation.

2. Main - Relay connection of several Relay Units.

Further Receiver Units (Relay Units) can be connected using the RS485-Interface.
Maximum bus length: up to 1200 m.

NOTICE!
The *NurseCall* system can be equipped with the optional function *Localization*. If an *Alarm* is received by the unit, the actual position of the *Transmitter* is shown on the display.

IS76 Beacons with Ferrite Antennas or IS75 Beacons with wire loop should be installed on door frames or corridors in the building to be supervised. When passing one of these beacons, the *Transmitter* updates its current position. At *Alarm* triggering, the *Transmitter* does not only transmit its identification (who sent the *Alarm*), but also the position of the last passed beacon.

3 Safety Instructions

WARNING!
The *User* / *Installer* should read and understand this chapter before any intervention on the *NurseCall Main Unit*.

3.1 Chapter overview

Safety Instructions for a safe and trouble-free operation of the *NurseCall Main Unit*.

3.2 Introduction

3.2.1 Principle

NOTICE!
In case of unclear information, please contact your local representative.

3.2.2 Importance of safety instructions

Each safety and protection instruction in this manual must be adhered to in order to avoid personnel injuries, property damages or environmental pollution.
In a similar manner, the legal bylaws, the measures in prevention of accidents and for the protection of the environment, as well as the recognised technical rules aiming at appropriate and safe working conditions which as applied in the country and at the place of use of the *NurseCall Main Unit* must be adhered to.

3.2.3 Disregarding safety rules

Disregarding the safety rules, as well as existing legal and technical regulations, may lead to accidents, to property damages or to environmental pollution.

3.3 Environmental conditions

WARNING!
The *NurseCall Main Unit* must not be located near a water tap or any other source of water.
The electrical safety of the *NurseCall Main Unit* is only guaranteed if the electrical installation is conform to the national reglementation and if this installation works properly.
The *NurseCall Main Unit* may not be used in buildings prone to fire and explosion hazards.

CAUTION!
The *NurseCall Main Unit* may not be used under exposure to the direct sunlight, to heat, to dust or to an excessive humidity (only use the equipment in a clean environment).

▶ Install the *NurseCall Main Unit* in a dry place, away from any source of heat.

CAUTION!
Interferences
Avoid immediate proximity to other electric devices such as a television.

3.4 General safety instructions

DANGER!
Electrocution
During maintenance operations, when the *NurseCall Main Unit* is powered and its casing is removed, the *NurseCall Main Unit* may not be left unattended.

CAUTION!
The *NurseCall Main Unit* may only be connected to the electrical sources as described in *Section 13.1 Electrical specifications*, page 73.

CAUTION!
Maintenance and repairs may only be performed in conformance with the instructions and by authorized *Technical Personnel* only.
The sole possession of the User Manual does not allow the personnel to perform any kind of repair on the *NurseCall Main Unit*.
Take into account all the warnings and follow all the instructions displayed on the *NurseCall Main Unit* and those which are printed in the documentation.
Never try to use replacement pieces other than those authorized by the manufacturer of the *NurseCall Main Unit*.

CAUTION!
It is mandatory to use the products specified in the present User Manual to clean the *NurseCall Main Unit*. If you plan to use another product, only do so after having obtained the authorisation of the manufacturer.

WARNING! Electro **S**tatic **D**ischarge
The *NurseCall Main Unit* contains highly sensitive electronic components. It should be opened only in an **ESD** protected environment with respect to the following precautions:

- Discharge yourself from electrostatic loads by touching a grounded conductive surface before opening the unit.
- Avoid touching conductive parts inside the *NurseCall Main Unit* if not absolutely necessary.

CAUTION!
Never let any liquid enter the system. In case of liquid spill inside the *NurseCall Main Unit*, act immediately as follows:

1. Switch off the *NurseCall Main Unit* using the main switch under the casing.
2. Unplug the power supply adaptor.
3. Dry up the *NurseCall Main Unit*.
4. Clean the *NurseCall Main Unit*.
5. Check its electrical functions.

NOTICE!
For further information, please contact your local representative.

3.4.1 Observation and information

In case of defective operation or any other technical incident for which no remedy is described in this manual, please contact immediately your local representative.

3.5 Special safety instructions

Appropriate safety instructions linked to specific risks are described in the corresponding section of this manual.

4 Description

4.1 General description

4.1.1 Top view

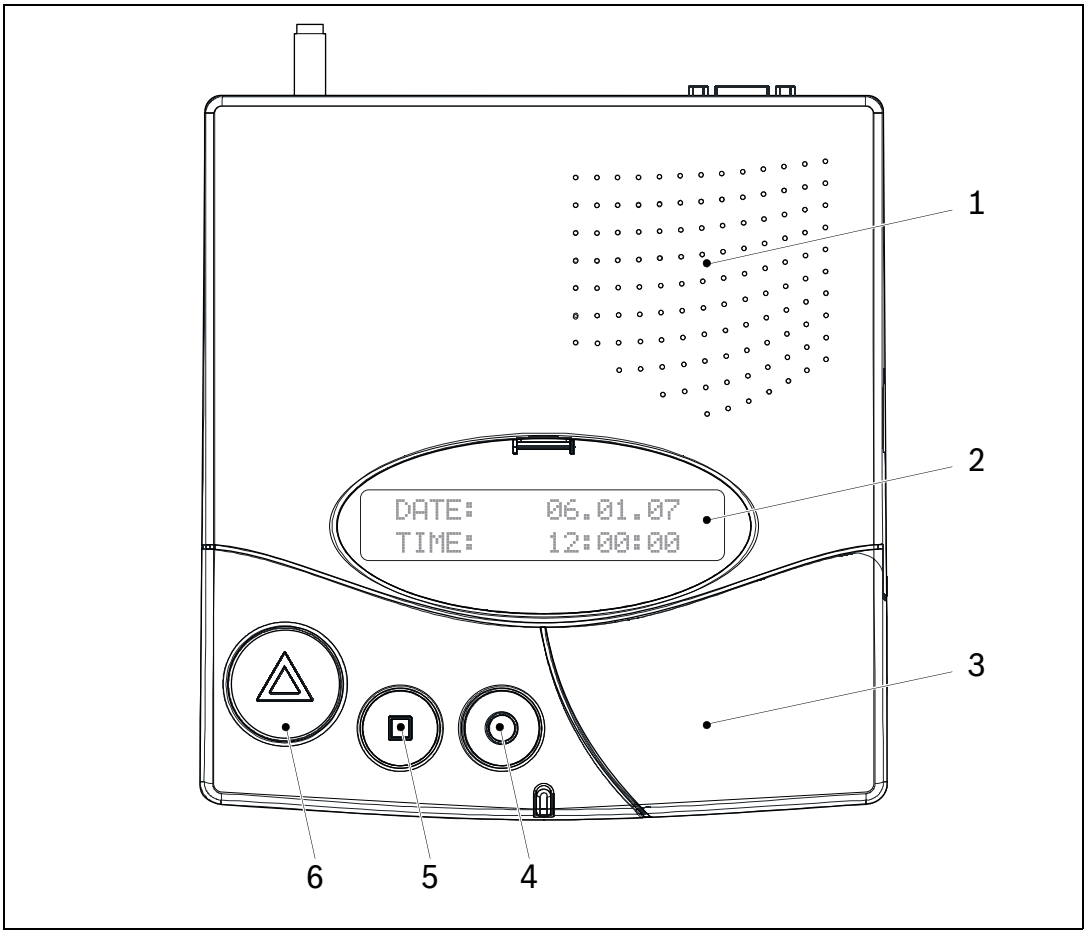


Fig. 4.1 Top view

1. Loudspeaker (See *Section 4.2.1 Loudspeaker*, page 18)

2. Display (See *Section 4.2.2 Display*, page 18)

3. Keyboard (under the cover) (See *Section 4.2.3 Keyboard*, page 18)

4. **Yellow** button
Used to view more details about the *Event* or *Alarm* currently displayed (Date and time, position, etc...).

5. **Green** button
Used to acknowledge an *Alarm* locally (See *Section 8.2.3 Local Acknowledgement*, page 62)

6. **Red** button + light
This button is not used. The light is blinking red during an *Alarm* and pressing the button does not activate a function.

4.1.2 Bottom view

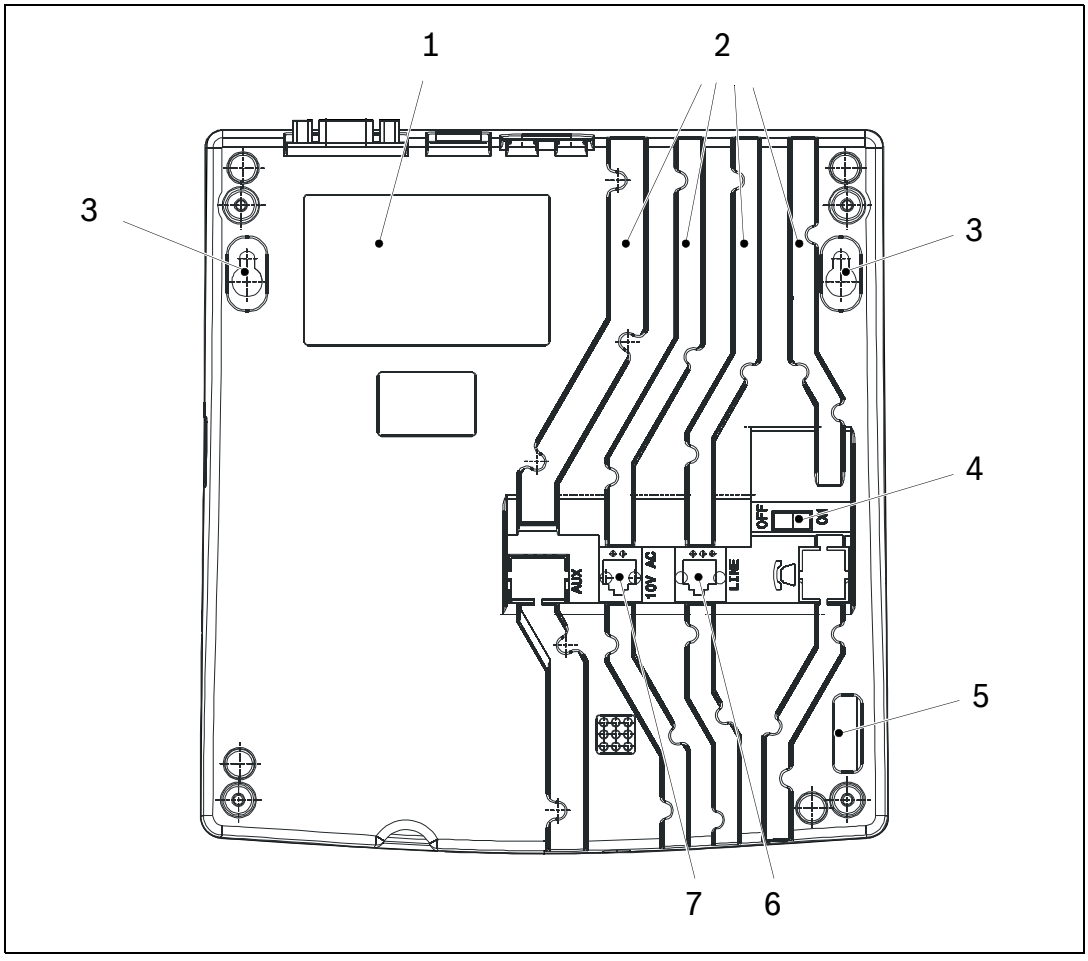


Fig. 4.2 Bottom view

1. Identification label

▶ See *Section 4.2.4 Identification label*, page 20 for detailed description.

2. Cable channels

3. Wall mounting holes (distance between holes, 157 mm)

▶ See *Section 6.2.3 Wall installation*, page 28 for detailed description.

4. ON/OFF switch

5. Serial No.

6. LINE socket (used for firmware update)

▶ See *Section 13.7.1 LINE socket (unit bottom)*, page 84 for wiring.

7. 10V AC socket

▶ See *Section 13.7.2 Power socket (unit bottom)*, page 84 for wiring.

4.1.3 Front view

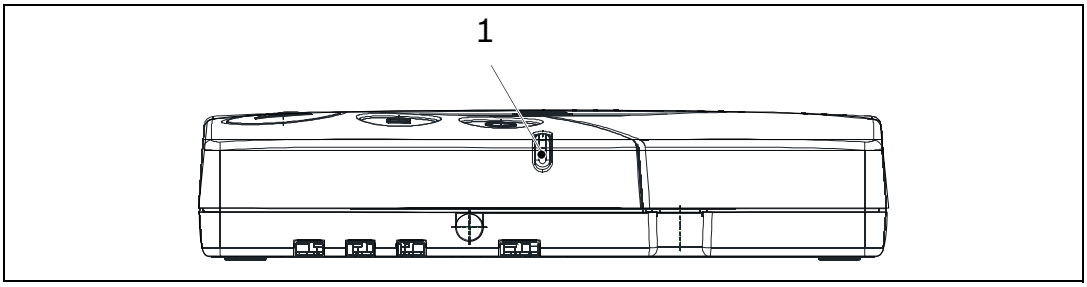


Fig. 4.3 Front view

1. LED Indicator

Status	LED
Standby mode (normal operation)	GREEN (permanent)
Backup battery low	GREEN (blinking)
Power supply disconnected	GREEN (flashing)
Help, Assistance or Fire	RED (blinking)
Programming mode	ORANGE (blinking)

Table 4.1 LED Indicator

4.1.4 Rear view

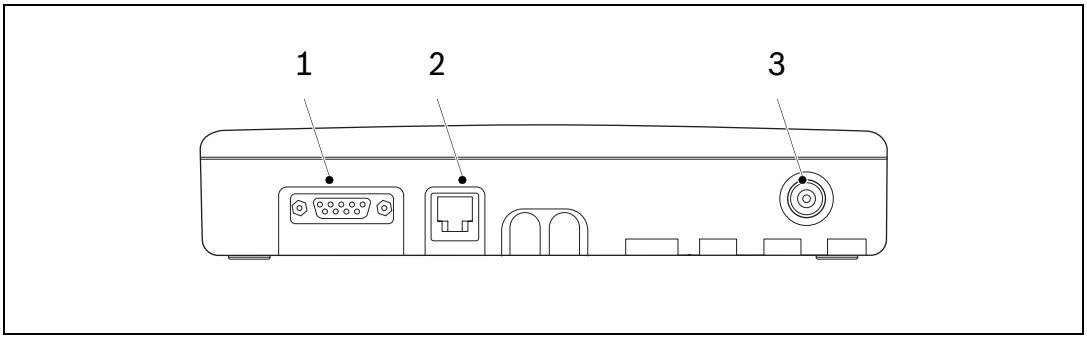


Fig. 4.4 Rear view

1. RS-232 connector

▶ See *Section 13.7.3 RS-232 (unit rear)*, page 85 for wiring.

2. RS-485 connector

▶ See *Section 13.7.4 RS-485 (unit rear)*, page 85 for wiring.

3. Antenna connector

4.2 Detailed description

4.2.1 Loudspeaker

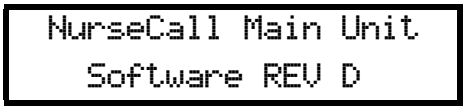
When one of the following *Alarms*/*Messages* is received by the *NurseCall Main Unit*, the internal loudspeaker is activated (until *Acknowledgement*).

Status	Loudspeaker
Power supply disconnected	Dual-Tone beep every minute
Call for Help, *Reserve Call*, *Technical Call*	4 second interval, one tone
Error message	15 second interval, one tone
Disconnection of a Relay Unit from RS485-bus	1 minute interval, one tone
Call for Assistance / *Fire Alarm*	Continuously dual-tone beep
Local Acknowledgement	Short beep

Table 4.2 Loudspeaker

4.2.2 Display

The *NurseCall Main Unit* is equipped with a 2 x 20 characters display that guides the operator during the programming.
During normal operation, *Alarms* and *Messages* are displayed.



4.2.3 Keyboard

The keyboard has 21 alphanumeric keys. They are used for *NurseCall Main Unit* programming or during normal operation.

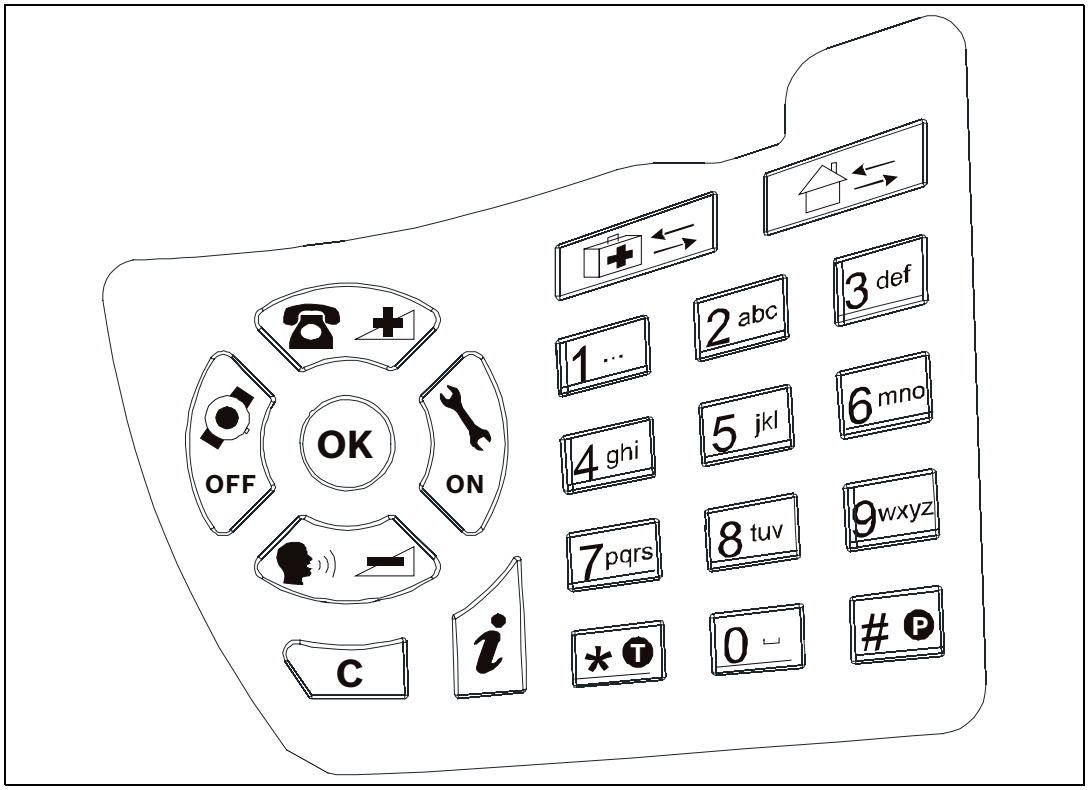


Fig. 4.5 Keyboard

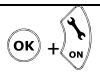
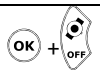
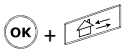
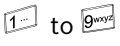
Keys	Programming Mode	Normal Operation
	Access to *Parameters* programming ▶ See *Section 7.3 Parameters*, page 39	Not used
	Access to *Transmitters* programming ▶ See *Section 7.5 Transmitters*, page 53	Not used
	To scroll up to the next parameter	To increase the volume of the loudspeaker ▶ See *Section 8.1 Loudspeaker volume adjusting*, page 59
	To scroll down to the next parameter	To decrease the volume of the loudspeaker ▶ See *Section 8.1 Loudspeaker volume adjusting*, page 59
	To set a parameter value to OFF or to go to the previous programming field	To scroll down to the previous *Alarm*/*Event*
	To set a parameter value to ON or to go to the next programming field	To scroll up to the next *Alarm*/*Event*
	To confirm a value or a command	Not used
	To cancel an entry or a command. To quit the programming mode	Not used
	To check the value of a *Parameter* or a *Transmitter*	To check the status of the backup battery ▶ See *Section 10.3 Backup battery monitoring and checking*, page 65
	Not used	Not used
	NPS programming function ▶ See *Section 7.1.2 Programming with NPS software*, page 36	Not used
	To enter a value	Not used
	To erase all programmed *Acknowledgement Transmitters* during a specific procedure ▶ See *Section 7.5.8 Erasing all Acknowledgement Transmitters*, page 57	Not used
	to disable the Beep codes See *Section 7.3.5 RS-232 output setting*, page 41	Not used
	To enter a value or to set the default values See *Section 7.3.5 RS-232 output setting*, page 41	To launch the *Event*/*Alarm* display mode

Table 4.3 Keys functions

4.2.4 Identification label

The identification label is located under the unit and allows its precise identification.

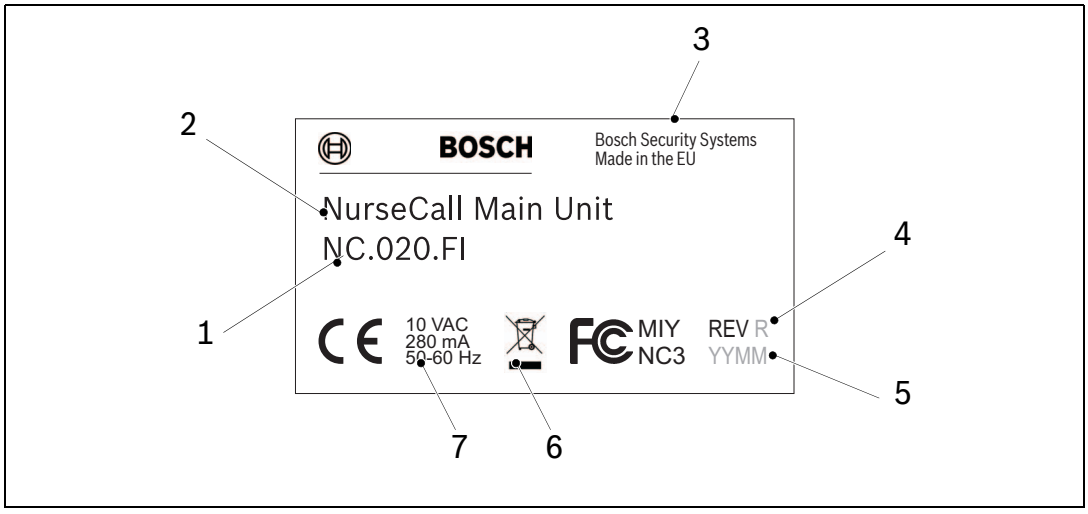


Fig. 4.6 Identification label

1. Identification No. (NC = *NurseCall*, 020 = Main Unit, FI = Finished Product @ 434 MHz)
2. Product name
3. Identifier of origin
4. Revision of software or hardware
5. Year and Month of manufacturing
6. *Crossed-out wastebasket symbol
7. Voltage, current and frequency information

* The *NurseCall Main Unit* is marked with a crossed-out wastebasket symbol. This means that, at the end of its useful lifespan, the product shall be disposed separately from ordinary household wastes in accordance to the EU Directive 2002/96/EC.

4.2.5 RS-232 interface

A 9-pole SUB-D connector at the rear of the housing can be used for connection to a
- printer;
- paging system;
- DECT phone system;
- PC with *Alarm Management Software*.

NOTICE!
- ▶ For the hardware configuration of this interface, see *Section 6.2.6 Connecting the RS-232*, page 31.
- ▶ For the programming of this interface, see *Section 7.3.5 RS-232 output setting*, page 41.
- ▶ For the wiring of the connector, see *Section 13.7.3 RS-232 (unit rear)*, page 85.

Connection to a printer

To protocol all *Events*, a printer with serial connection (RS232-Interface) and endless paper should be used. Printers with a parallel port can be used together with an intermediate serial - parallel converter.

NOTICE!

The paper printout corresponds to the indication at the display of the *NurseCall Main Unit*.

Data rate: 9600 Bauds. Transmission: asynchronous with a 10 bit-structure (1 startbit, 8 databits without parity, 1 stopbit).

The operating status of the printer cannot be tested (switched on/off, paper status).

The following printer is recommended:

- SCRIPTOS.

Connection to a paging system

The *NurseCall* system uses several protocols, standard ESPA 4.4.4. protocol, a specific Multitone protocol (Access 700-MEP) as well as the DeTeWe protocol.

- ▶ See *Section 13.5 Paging systems specifications*, page 76 for more information about these protocols.

Connection to a DECT phone system

The *NurseCall* system can transfer the received *Alarms* to DECT handsets Multitone CH60 or CH70.

- ▶ See *Section 13.6 DECT phone system specifications*, page 83 for more information about this system.

Connection to a PC using an Alarm Management Software

At connection / disconnection of a PC using an *Alarm Management Software*, *Events* are generated.

The loudspeaker is disabled during the connection.

NOTICE!
Alarms/*Messages* arriving in the *Alarm Buffer* are repeated every 3 minutes until *Acknowledgement*.
A technical defect (for example POWER OUTAGE) is treated as an *Event* (no *Acknowledgement* necessary).

4.2.6 RS-485 interface

One *NurseCall Main Unit* and up to 32 *NurseCall Relay Units* can be connected to a RS485-bus. The bus must be connected to pins 2 and 5 of the RS-485 socket.

▶ For connector wiring, see *Section 13.7.4 RS-485 (unit rear)*, page 85.

CAUTION!
Keep polarity equal when connecting further units to the RS485 bus!

CAUTION!
Maximum RS485-bus length: 1200 m.

▶ Use ***only one twisted pair cable*** for the interconnection.

NOTICE!
The *Receiver Units* located at the two ends of the bus should be terminated with a 100 Ohm resistor.

▶ See *Section 6.2.8 Connecting the RS-485*, page 33 for more information about the jumper setting.

In this configuration, you always should connect the *NurseCall Main Unit* first. The *NurseCall Relay Units* must then be connected to the RS485-bus one by one (not at the same time). You can add a *Printer Interface* to the RS485-bus in order to connect an additional printer or a giant display. In such configuration, the in-house paging system can be combined with a printer without a PC.

Relay output
In the same connector, a potential free contact is available. It is a low current switching contact. The relay (potential free, switching power max. 48 V / 0.5 A) is activated at a *Call for Help*, *Call for Assistance* or *Fire Alarm*. This relay can be set as closing or switching contact (cycle of 10 seconds on / 10 seconds off). This feature can be used to drive a signal lamp for example.

▶ For connector wiring, see *Section 13.7.4 RS-485 (unit rear)*, page 85.
▶ For relay setting, see *Section 7.3.7 Output relay setting*, page 46.

4.2.7 Antenna

The antenna is connected to the *NurseCall Main Unit* using the adapter supplied with the unit.

▶ See *Section 6.2.4 Installing the antenna*, page 29.

5 Transport

5.1 Transportation

5.1.1 Domestic

Suitable domestic transportation: by car, by truck, by postal parcel and by train.

5.1.2 International and overseas

For international and overseas transportation, hand the *NurseCall Main Unit* in its original package to a shipping agent.

5.2 Transportation data

5.2.1 Box dimensions

1. Length: 39.0 cm (15.35 in)
2. Width: 33.0 cm (12.99 in)
3. Height: 6.0 cm (2.36 in)
4. Weight: approx. 1500 g

6 Installation

6.1 Unpacking

The *NurseCall Main Unit* is carefully packed for transportation.
The components contained in the box are protected, but should be handled with care.
Store the packaging material for further use (storage or transport).
In case of defective or missing equipment, do not try to install the *NurseCall Main Unit*.

▶ Contact immediately your local representative.

1. Take all components out of the box and place the *NurseCall Main Unit* on the working space.
2. Check each component in the box, in accordance with the list of contents below.
3. Check that the *NurseCall Main Unit* and its accessories have not been damaged during transportation.

6.1.1 List of contents

Reference	Description
NC.020.FI	*NurseCall Main Unit*
A 058 400-230/10 400-115/10	Power supply adaptor (Europe) 230VAC/10VAC or Power supply adaptor (UK) 230VAC/10VAC UK or Power supply adaptor (US) 115VAC/10VAC
A120	Antenna 434MHz 1/2 L=34 cm FME
A121	Straight adapter BFME-TNC
A122	Right angled bended adapter BFME-ETNC
C1239	2 m Cable FCC 6/4
970.010	*NurseCall Main Unit* User Manual
970.000	*NurseCall* - General Overview

Table 6.1 Packing list

6.2 Installation

6.2.1 Generalities

▶ Install the *NurseCall Main Unit* in a dry place, away from any source of heat.

CAUTION!
Interferences
Avoid immediate proximity to other electric devices such as a television.

Tools

– Torx T20 screwdriver.

6.2.2 Installation on a piece of furniture

It is recommended to place the *NurseCall Main Unit* on a non-sliding surface. However, do not place anything (blanket, etc.) on top of the unit.

6.2.3 Wall installation

You can fasten the *NurseCall Main Unit* on a smooth wall surface using two screws (distance between holes, 157 mm).
Power and phone line cords should be placed inside the cable channels on the bottom of the *NurseCall Main Unit*.

6.2.4 Installing the antenna

NOTICE!

▶ Use the straight adapter (4) for wall installation and the right angled bended adapter (3) for installation on a piece of furniture.

1. Fasten the adapter (3) or (4) on the antenna connector (1).
2. Fasten the antenna (2) on the adapter.

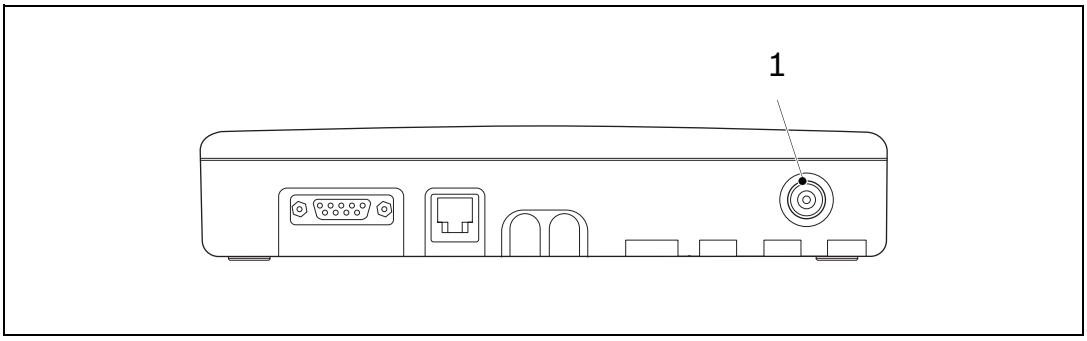


Fig. 6.1 Rear view

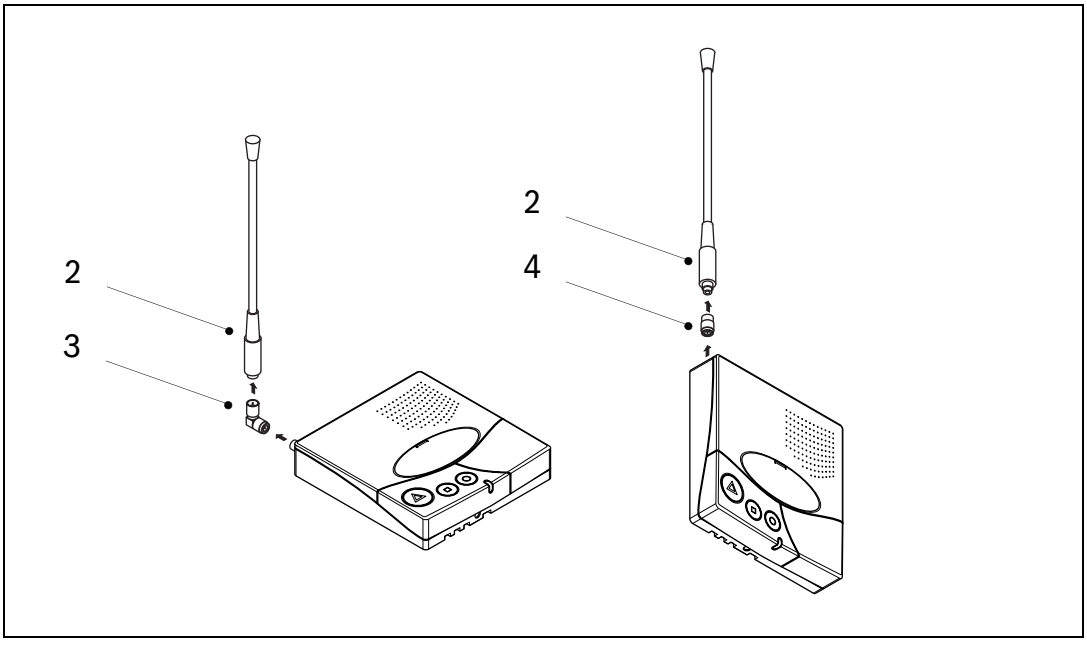


Fig. 6.2 Installing the antenna

6.2.5 Connecting to the mains

The *NurseCall Main Unit* is powered by an adaptor (230 or 115/10VAC).

CAUTION!
In case of a different supply, the equipment must fulfil isolation requirements according to EN60950 standard (fourth edition or later).

The power adaptor should be plugged in a socket-outlet placed near the unit and should be easily accessible at any time.

The cable is connected to the socket labelled 10V AC (1), under the unit.

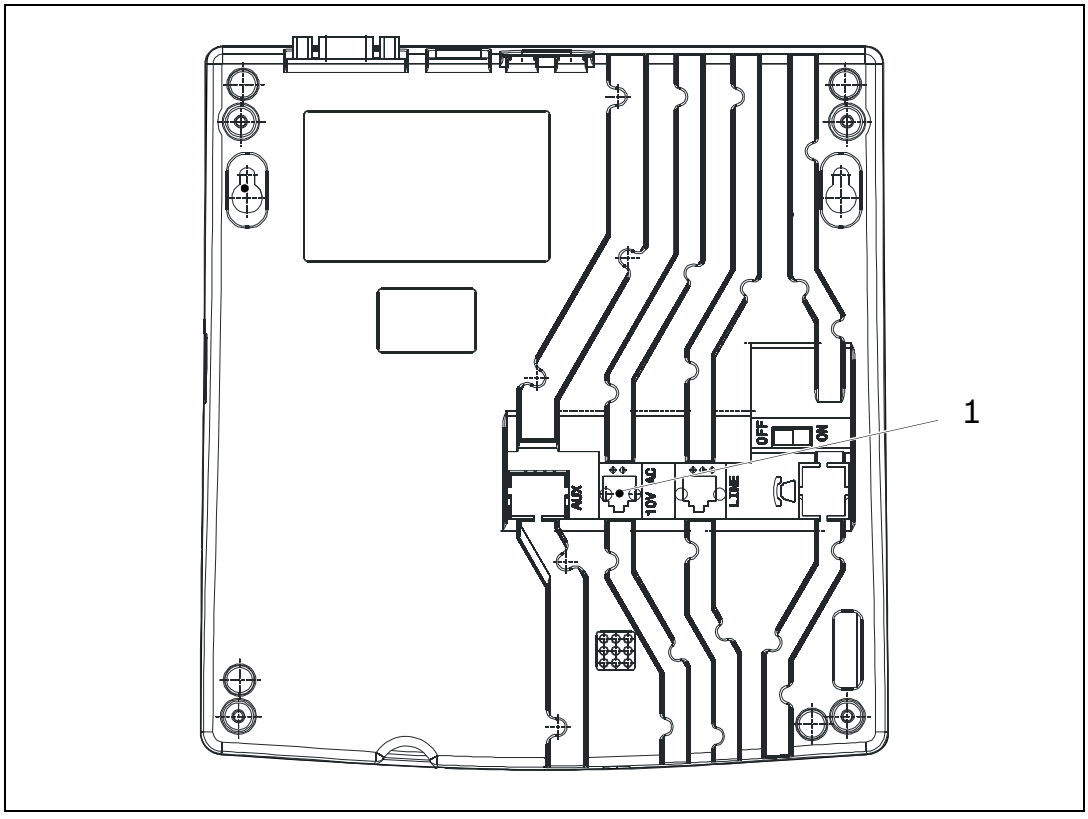


Fig. 6.3 Bottom view

▶ For connector wiring, see *Section 13.7.2 Power socket (unit bottom)*, page 84.

6.2.6 Connecting the RS-232

- ▶ Connect the intended device by the 9-pole SUB-D connector (1) at the rear part of the housing.
- ▶ For connector wiring, see *Section 13.7.3 RS-232 (unit rear)*, page 85.

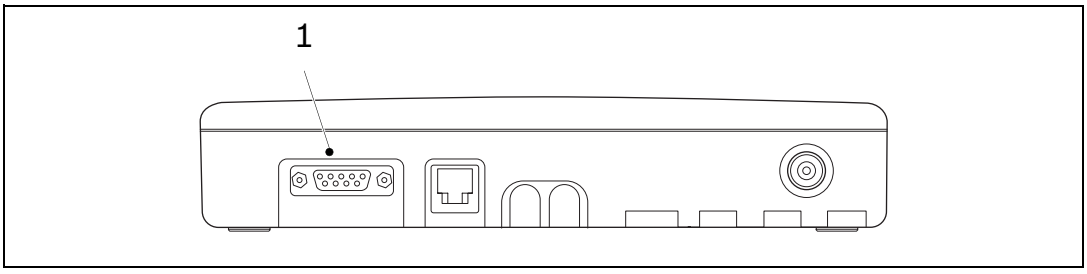


Fig. 6.4 Rear view

NOTICE!
Inside the *NurseCall Main Unit*, the RS-232 interface should be configured with jumpers.

1. Disassemble the unit as described in *Section 10.5.2 Unit Dismantling*, page 66.
2. Remove the communication board as described in *Section Communication board removing*, page 67.
3. Set the jumpers as required in your configuration.
- ▶ See *Section 6.2.7 Setting the jumpers on communication board*, page 32

4. Assemble the communication board and the unit. This is basically the reverse of the dismantling procedure.

6.2.7 Setting the jumpers on communication board

NOTICE!
By default the jumpers are set for connection to DECT phone system.

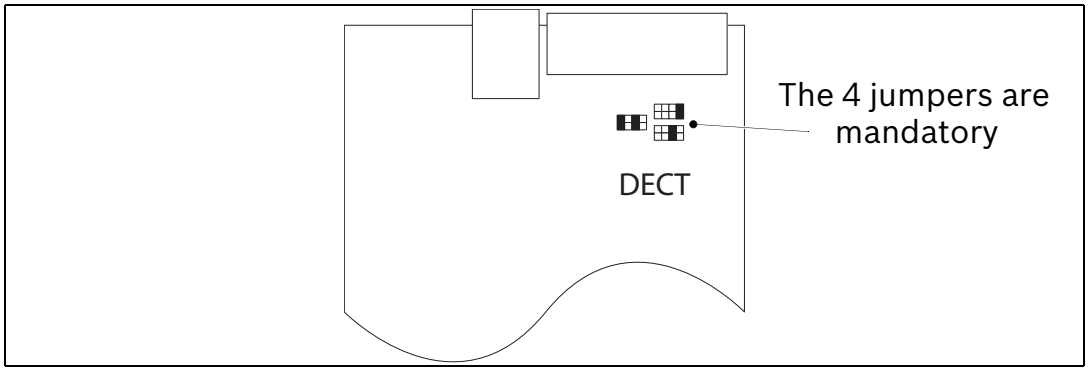


Fig. 6.5 Setting the jumpers for DECT phone system

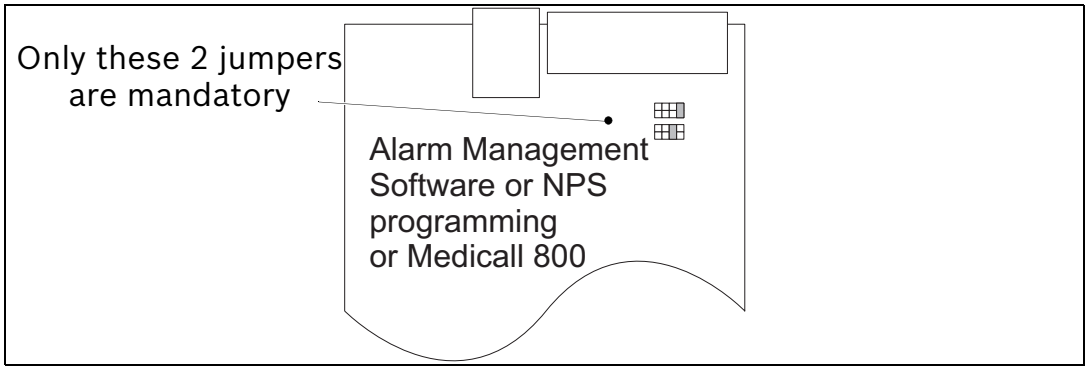


Fig. 6.6 Setting the jumpers for *Alarm Management Software* or NPS programming

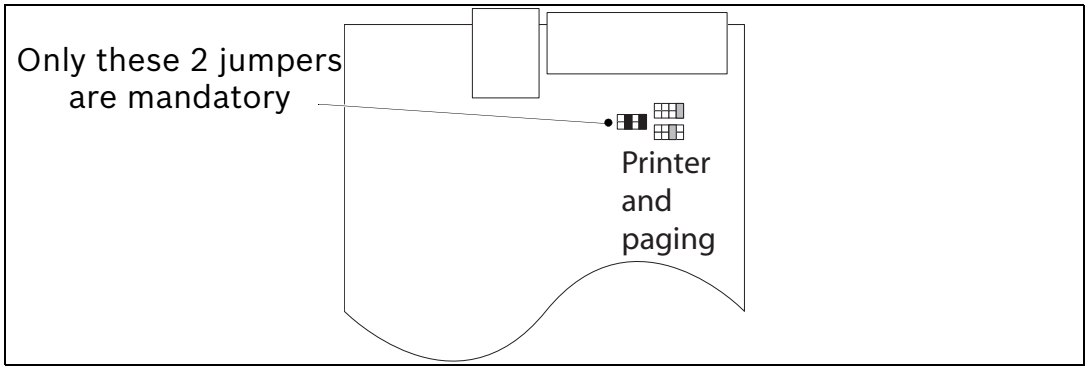


Fig. 6.7 Setting the jumpers for printers and paging systems

6.2.8 Connecting the RS-485

One *NurseCall Main Unit* and up to 32 *NurseCall Relay Units* can be connected to a RS485-bus. Please contact a specialist for correct installation.

▶ See *Section 13.7.4 RS-485 (unit rear)*, page 85 for connector wiring.

CAUTION!
Do not use a star connection for the RS-485 network !

NOTICE!
The *NurseCall Main* or *Relay Units* located at the two ends of the bus must be terminated with a 100 Ohm resistor.

▶ See *Section 6.2.9 Setting the 100 Ohm termination jumper*, page 34.

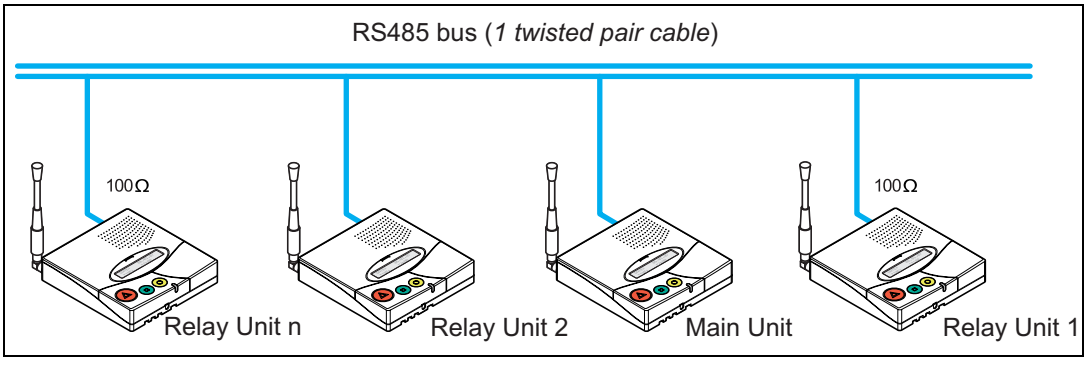


Fig. 6.8 Right connection

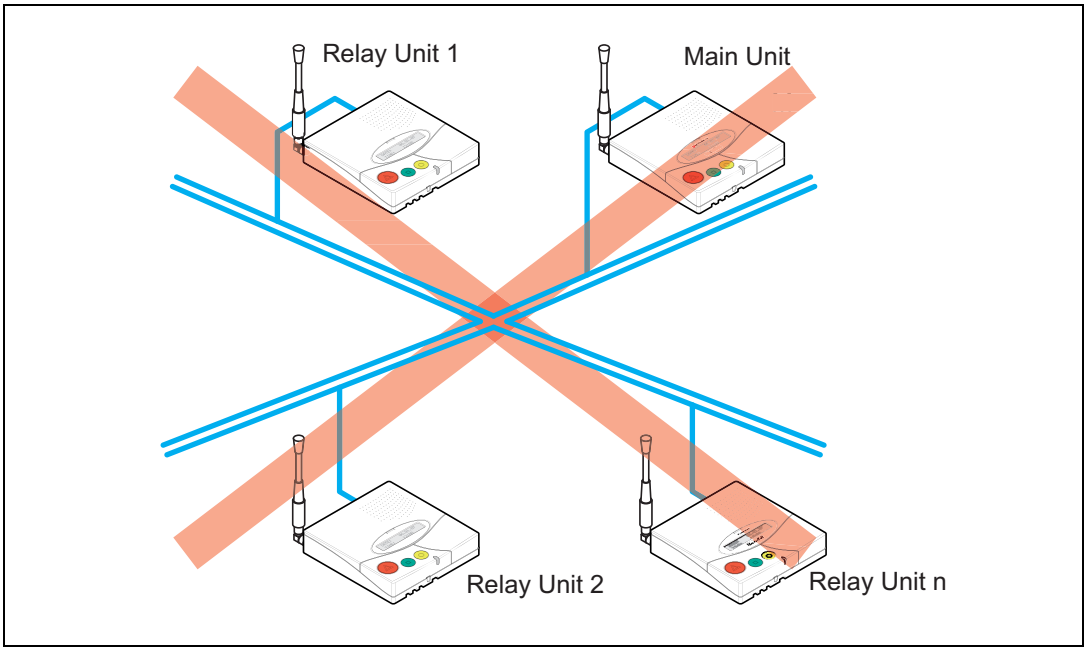


Fig. 6.9 Wrong connection

6.2.9 Setting the 100 Ohm termination jumper

Inside the *NurseCall Main or Relay Units*, the RS-485 interface can be configured with a jumper.

1. Disassemble the unit as described in *Section 10.5.2 Unit Dismantling*, page 66.
2. Remove the communication board as described in *Section Communication board removing*, page 67.
3. Put the 100 Ohm termination jumper J112 (1).

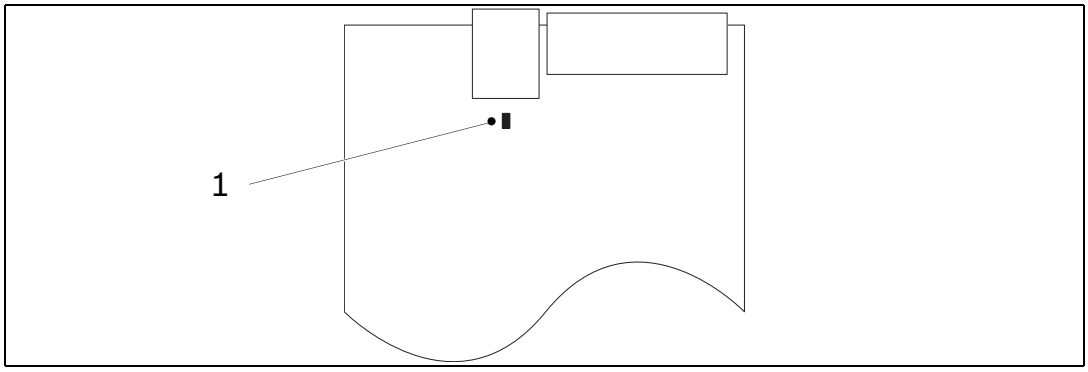


Fig. 6.10 Setting the 100 Ohm termination jumper on the communication board

4. Assemble the communication board and the unit. This is basically the reverse of the dismantling procedure.

NOTICE!
If you do not want to disassemble the *NurseCall Main Unit*, you also can short-out the pins 3 and 4 of the connector. This has the same effect as the jumper setting described above.
▶ See *Section 13.7.4 RS-485 (unit rear)*, page 85 for connector wiring.

7 Programming

7.1 Generalities

CAUTION!
The *NurseCall Main Unit* does not display any *Alarm*/*Message* in the programming mode !

The *NurseCall Main Unit* can be programmed either by using a specific software package called NPS or directly by using the "built-in" keyboard and display.

7.1.1 Programming with keyboard

▶ Carefully open the cover and use the programming keys.

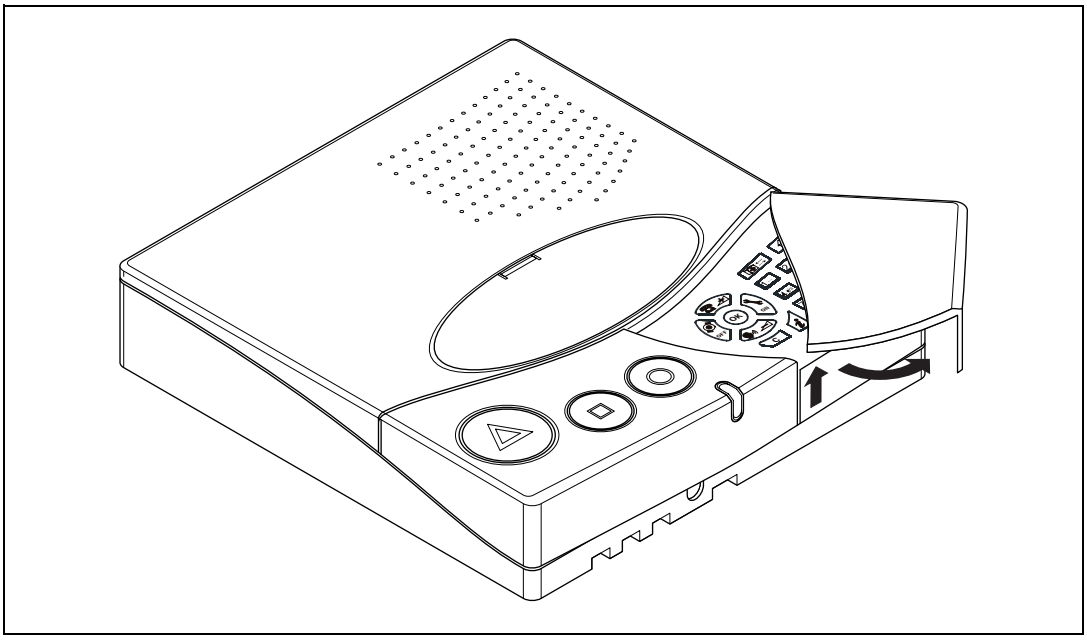


Fig. 7.1 Programming with keyboard

▶ To access the parameters programming, press OK then ON.
See *Section 7.3 Parameters*, page 39 for more details.

▶ To access the special settings programming, press the 0 key three times quickly.
See *Section 7.4 Special settings*, page 48 for more details.

▶ To access the *Transmitters* programming, press OK then OFF.
See *Section 7.5 Transmitters*, page 53 for more details.

7.1.2 Programming with NPS software

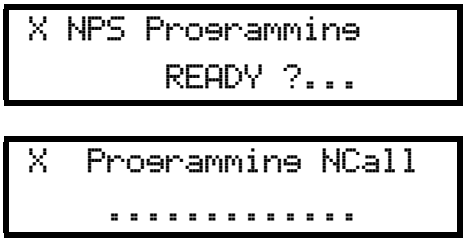
The *NurseCall* system can be programmed with a specific software, called *NPS*.

NOTICE!
In order to program the *NurseCall Main Unit* with this software, you shall connect your PC to the *NurseCall Main Unit* with a RS-232 cable.

▶ For connecting and setting the interface, see *Section 6.2.6 Connecting the RS-232*, page 31.

Enable the programming

1. Press (OK), then .
2. Confirm the command with (OK).



7.1.3 Exiting the programming mode and cancelling entries

▶ Press the (C) key once, or several times.

7.1.4 Key not allowed

▶ If you press a wrong key during the programming, a beep is generated.

7.2 First use

At the first use or when you reset all parameters, the language, the *Localization Mode* and the *Display Mode* for the *Transmitters* identification (floor / room / bed number or a single number) should be programmed.

▶ See also *Section 7.4.2 Resetting all parameters (including date and time)*, page 48.

7.2.1 List of original factory settings

Parameter	Original Factory Setting	Page No.
Language	English	38
* Localization Mode	Yes (ON)	38
* Display Mode	FL,RO,BE (Floor / Room / Bed)	38
Output RS-232	None	41
RPE 670 for paging systems	No	42
Day/Night Mode	No	42
Night begin for paging or phone DECT systems	18h00	42
Night end for paging or phone DECT systems	06h00	42
ID paging for paging systems	2	42
ID *NurseCall* for paging systems	1	42
Number of digits for ESPA 4.4.4	3	42
Mix Mode ESPA 4.4.4 / Alarm Management Software	No	42
First number for DeTeWe paging system	1	42
Local Acknowledgement	Yes	45
Access Code for *Local Acknowledgement*	No	45
Output relay function	Switching	46
Output relay mode	Help + Assistance	46
Assistance and fire priority	No	49
Special texts in German	No	49
Set to Universal *NurseCall*	No	50
Conversion for Universal *NurseCall*	No	50
Last 300 ID codes blocked for Universal *NurseCall*	No	50
Maximum number of *Alarm Transmitters*	500	51
Maximum number of *Acknowledgement Transmitters*	5	52
Maximum number of *Events* buffered	18	52
Checking the daily messages	Yes	52
Repeat *Alarms* timing to RS-232 output	3 min.	52
Speaker Volume	Midrange	59

Table 7.1 Original Factory Settings

* A reset of the unit is mandatory to change these two parameters.

7.2.2 Language

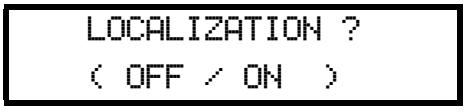
This step allows to select the interface language.

▶ See *Section 7.3.3 Programming the interface language*, page 40 for more details.

7.2.3 Localization Mode

NOTICE!
It is mandatory to perform a reset if you wish to change the value for the *Localization Mode*.
▶ See also *Section 7.4.2 Resetting all parameters (including date and time)*, page 48.

This step allows to switch OFF or ON the indication of the *Transmitter* position (*Localization Mode*) on the *NurseCall Main Unit* display.



▶ Press ON to activate the *Localization Mode* or press OFF to disable this function.

7.2.4 Display Mode

NOTICE!
It is mandatory to perform a reset if you wish to change the value for the *Display Mode*.
▶ See also *Section 7.4.2 Resetting all parameters (including date and time)*, page 48.

This step allows to select the *Display Mode* for the *Transmitters* identification.

▶ Press ON to select FL,RO,BE (floor, room, bed) or press OFF to select NUMBER (Single Number).

7.3 Parameters

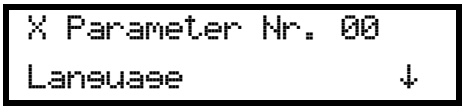
7.3.1 Access to parameters

1. Press OK then ON to access the parameters.

2. Press OK to program these parameters or

   i to check the value of each parameter.

3. Select the parameter you wish to change/ check by scrolling with ☎+ or 🔊−.



7.3.2 List of parameters

No.	Parameter	Reference
00	Language	*Section 7.3.3 Programming the interface language*, page 40
01	Date and Time	*Section 7.3.4 Date and time setting*, page 40
02	RS-232 Output	*Section 7.3.5 RS-232 output setting*, page 41
03	Local Ack.	*Section 7.3.6 Local Acknowledgement setting*, page 45
04	Relay Output	*Section 7.3.7 Output relay setting*, page 46
05	Function ACCOMPANY	*Section 7.3.8 Accompany Mode*, page 46
06	Radio Noise Check	*Section 7.3.9 Radio Noise Check*, page 47

Table 7.2 Programming references

7.3.3 Programming the interface language

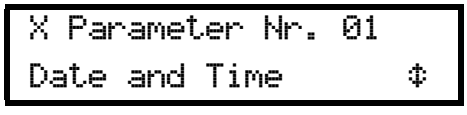
NOTICE!
This setting is also done during the first use.
▶ See also *Section 7.2 First use*, page 37.

NOTICE!
You have the choice between 6 languages:
– 0 = English
– 1 = French
– 2 = German
– 3 = Italian
– 4 = Dutch
– 5 = Swedish

1. Select the parameter No. 00.
2. Press OK.
3. Select the language with the ☎+ and 🔊− keys.
4. Confirm the language selected with OK.

7.3.4 Date and time setting

1. Select the parameter No. 01.
2. Press OK.
3. Set the month with the ☎+ and 🔊− keys.
4. Go to the day with the ON key.
5. Set the day with the ☎+ and 🔊− keys.
6. Go to the year with the ON key.
7. Set the year with the ☎+ and 🔊− keys.
8. Same operation for the time setting (HH:MM:SS).
9. Confirm the setting with OK.

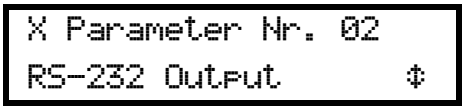


7.3.5 RS-232 output setting

Parameter setting for RS-232 interface programming.

NOTICE!
Select one of the following:
- None
- Printer
- Alarm Management SW
- PAGING
- DECT
- S10-Du

1. Select the parameter No. 02.
2. Press OK.



▶ Set the desired value with the ☎+ and ☎− keys.

3. Confirm the setting with OK.

NOTICE!
For the values None, Printer and Alarm Management SW, you do not have to define more parameters. If you connect a paging or a DECT phone system, more parameters are available

NOTICE!
Inside the *NurseCall Main Unit*, the RS-232 interface should be configured with jumpers.
▶ See *Section 6.2.7 Setting the jumpers on communication board*, page 32.

▶ For detailed paging or DECT phone system programming, see *Section Example of programming*, page 42.

Example of programming

Paging or DECT phone system (RPE 670 system = YES, Day / Night transfer function = YES, ESPA 4.4.4 protocol, Localization Mode = ON and Display Mode = NUMBER).

- For more information about such systems, see *Section 13.5.1 Multitone RPE670 with ESPA 4.4.4. protocol*, page 76 and *Section 13.6.1 Multitone DECT system CS600 and P318 interface*, page 83.

1. If you have selected PAGING, you should select if you wish to use the RPE 670 system (YES) or others (NO) with the  and  keys.

```
X PAGING
  RPE 670 ? NO     ⇕
```

- By using the *DeTeWe* and Medicall 800 protocols, you should answer this question. Nevertheless, the system ignores your answer.

2. Confirm your selection with  .
3. Thereafter, or if you have selected DECT, you should decide if you wish to activate the *Day / Night* transfer function (YES) or not (NO) with the  and  keys.

```
X PAGING
Paser DAY-NIGHT NO ⇕
```

4. Confirm your selection with  .

- If you have activated the *Day* / *Night* transfer function, the *NurseCall* system transfers all *Alarms* during *Night* to the group 24. At *Day*, all groups 00 - 24 can be used. At the moment of the switching from *Day* to *Night* or vice versa, the message "DAY-NIGHT" is transmitted to the activated pagers (DECT phones), in order to signalize the change. In this case, you should program the *Night* starting time (default time = 18h00) and the *Night* end time (default time = 06h00).

5. Set the *Night* starting time and confirm your setting with  .

```
X PAGING
Night Beg.: HH:MM:SS
```

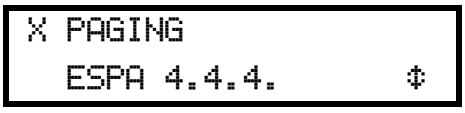
6. Set the *Night* end time and confirm your setting with .

```
X PAGING
Night End : HH:MM:SS
```

- Use the  and  keys for field selection, the  and  keys for value changing.

7. If you have selected PAGING, you should select the protocol (ESPA 4.4.4, DeTeWe, MEP or Medicall 800).

▶ Use the ☎+ and 🔊− keys for selection.



NOTICE!
If you have selected the Medicall 800 protocol, then you can skip the steps 9 to 19.

8. Confirm your selection with OK.

9. If you have activated the DeTeWe protocol, you should program the first number (0-9).

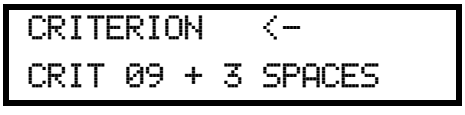
▶ Use the ☎+ and 🔊− keys for selection.

10. If you have activated the ESPA 4.4.4 protocol, you should program the identification number (0-9) of the paging system and the *NurseCall* system (0-9).

▶ Use the OFF and ON keys for field selection and the ☎+ and 🔊− keys for value changing.

11. Confirm your selection with OK.

12. Decide how many characters per information (criterion, floor, room, bed, position) should be transmitted to the paging/DECT system (filter function).

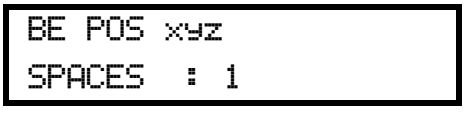


▶ Use the OFF and ON keys for field selection and the ☎+ and 🔊− keys to change the value. You can choose 0-11 characters for the criterion, followed by 0-9 spaces.

13. Press OK to set the filtering of floor/room/bed (or single number).

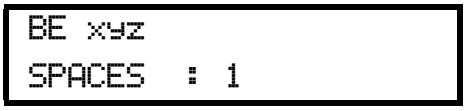
▶ Use the OFF and ON keys for field selection and the ☎+ and 🔊− keys for values changing.

14. Press OK to set the filtering of the position (only if *Localization Mode* is activated).



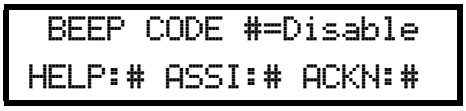
▶ Use the ☎+ and 🔊− keys for number of spaces (0-9) changing.

15. Pressing the hash key [#] allows you to delete the POS indication, useful for Paging systems with only numeric indications.



16. Press [OK] to set the BEEP CODES that will be allocated to each pager. Default values are, for HELP : 7 ; for ASSI : 5 ; for ACKN : 2

- ▶ Use the [☎+] and [🔊−] keys to set the number of the pre-defined beep code (0-9). For ACKN, you can also select X. In that case, the ACKN message will not be sent.
- ▶ Press the hash key [#] to suppress the message that indicates the BEEP CODE. In this case, a hash (#) will appear instead of a beep code number.



Return to programming by pressing key [0 ~].

17. If you have activated the ESPA 4.4.4 protocol and selected the RPE 670 system, you should select the number of digits (2, 3 or 4) with the [☎+] and [🔊−] keys.

18. Press [OK] to activate the Mix Mode or not.

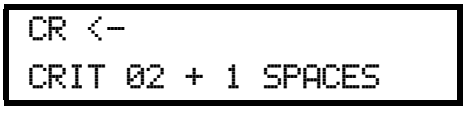
- ▶ Select YES or NO with keys [☎+] and [🔊−].

19. Confirm your selection with [OK].

Example of filtering

- *Display Mode*: FR,RO,BE
- *Localization Mode*: ON

- Criterion filtering:
  2 characters and 1 space



- *Display Mode* filtering:
  1 character + 1 space for the floor number
  2 characters + 0 space for the room number
  2 characters for the bed number

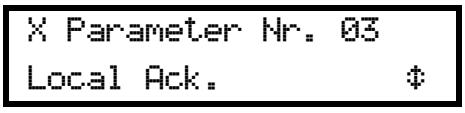
- *Localization Mode* filtering:
  6 spaces between bed number and POS xyz.

In this example, a *Call for Help* from floor 008, room 023, bed 1 with the actual position 248 will generate the following sequence: "HE_8_2301_____POS_248".

7.3.6 *Local Acknowledgement* setting

This parameter setting is used for the setting of the *Local Acknowledgement*.

1. Select the parameter No. 03.



2. Press (OK).
3. Set **NO** if *Acknowledgement* at the *NurseCall Main Unit* shall be disabled or set **YES** if you wish to enable this function.

4. Confirm the setting with (OK).
5. If you have selected **YES**, you should enter the access code.

▶ Press the key 4ghi then 5jkl.

6. Select **YES** if each *Acknowledgement* must be done by entering the code 45 or **NO** if direct *Acknowledgement* with the **Green** button shall be enabled.

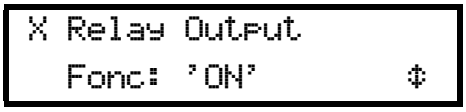
7. Confirm the setting with (OK).

7.3.7 Output relay setting

This parameter setting is used for relay programming as "closing" or "switching" contact.

1. Select the parameter No. 04.
2. Press (OK).

3. Select ON if you wish a "closing" relay or ON/OFF if you wish a "switching" relay.



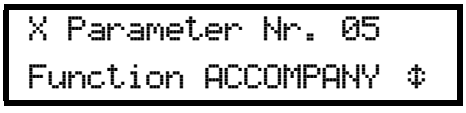
4. Select relay activation according to *Alarms*. You have 3 possibilities:
   - Mode HELP & ASSIST;
   - Mode ASSISTANCE;
   - Mode FIRE;

5. Confirm the setting with (OK).

7.3.8 Accompany Mode

This step allows to switch OFF or ON the *Accompany Mode* in the *NurseCall Main Unit* .

1. Select the parameter No. 05.



2. Press (OK).
3. At the question "ACCOMPANY ?", select YES to activate the *Accompany Mode*, or NO to deactivate the *Accompany Mode*.

Default Parameter is NO.

4. If you select YES, you must choose the range of the doors that will be activated in *Accompany Mode*. The first number is the lower limit, it can vary from 231 to 250. The second number is the upper limit, it is fixed at 254.

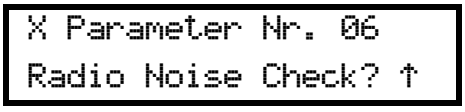
▶ Use the ☎+ and 🔊− keys to change the first number.

5. Confirm the setting with (OK).

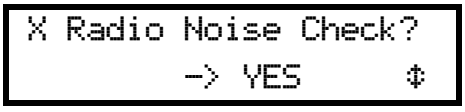
7.3.9 Radio Noise Check

This step allows to switch OFF or ON the *Radio Noise Check* in the *NurseCall Main Unit* .

1. Select the parameter No. 06.

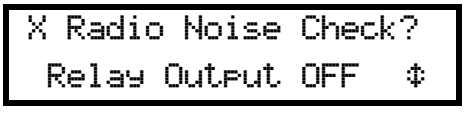


2. Press (OK) .
3. At the question "Radio Noise Check?", select YES or NO.



Default Parameter is YES.

4. If you select YES, you must choose to activate or not the Relay Output.



If you choose ON, the contact will close in case of a Radio Noise event. If you choose OFF, the contact will stay open in case of a Radio Noise event. Default Parameter is OFF.

Use the (☎+) and (🔊−) keys to select ON or OFF.

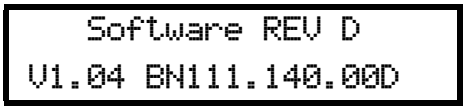
5. Confirm the setting with (OK) .

7.4 Special settings

After pressing the 0~ key three times quickly, you can enter the following special codes.

7.4.1 Displaying firmware version

1. Type the code ***194155***.
2. The version of the firmware will be displayed for a few seconds.



7.4.2 Resetting all parameters (including date and time)

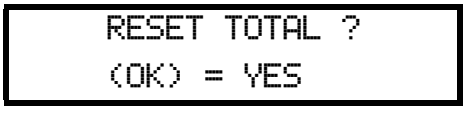
The following procedure is used to reset all programmed parameters of the *NurseCall Main Unit* to the original factory settings.

▶ See also *Section 7.2.1 List of original factory settings*, page 37.

NOTICE!
It is mandatory to perform this command if you wish to change the values for the *Localization Mode* and the *Display Mode*.
▶ See also *Section 7.2.3 Localization Mode*, page 38.
▶ See also *Section 7.2.4 Display Mode*, page 38.

NOTICE!
It is mandatory to perform this command before setting the *NurseCall Main Unit* as Universal *NurseCall* or as Standard *NurseCall*.
▶ See also *Section 7.4.7 Standard NurseCall selection*, page 50.
▶ See also *Section 7.4.8 Universal NurseCall selection*, page 50.

1. Type the code ***194156***.
2. A confirmation is required. Press the OK key to confirm the reset or C if you wish to cancel the reset.
3. After a few seconds, you have to select the language, set the *Localization Mode* ON or OFF and select the *Display Mode*, as for the first use.



▶ See *Section 7.2 First use*

7.4.3 Assistance and fire priority

This command allows to set the *Assistance Call* and the *Fire Alarm* as a priority.
This means that this type of alarms is displayed first.

1. Type the code ***123991***.
2. Confirmation message displayed.

7.4.4 Assistance and fire non priority

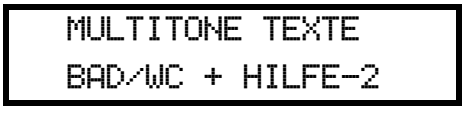
This command allows to set the *Assistance Call* and the *Fire Alarm* as non priority.
This means that the last alarm is displayed (whatever its type). This is the default value.

1. Type the code ***123992***.
2. Confirmation message displayed.

7.4.5 Special texts in German

This command allows to set special texts in German. The displayed criteria are BAD/WC instead of TECHNIK and HILFE-2 instead of NOTRUF2.

1. Type the code ***123007***.
2. Confirmation message displayed.



7.4.6 Standard texts in German

This command allows to set standard texts in German. This is the default value.

1. Type the code ***123008***.
2. Confirmation message displayed.

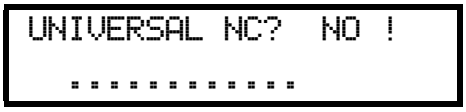
7.4.7 Standard *NurseCall* selection

This command allows to set the *NurseCall* as standard. This is the default value.

CAUTION! It is necessary to perform a general RESET before changing this value.

▶ See *Section 7.4.2 Resetting all parameters (including date and time)*, page 48.

1. Type the code ***001998***.
2. Confirmation message displayed.



7.4.8 Universal *NurseCall* selection

CAUTION! It is necessary to perform a general RESET before changing this value.

▶ See *Section 7.4.2 Resetting all parameters (including date and time)*, page 48.

This command allows to set the *NurseCall* as ''Universal NurseCall''. If this mode is selected, the following parameters are automatically set:

– *Display Mode* set as *FL,RO,BE* (Floor/Room/Bed);

▶ See *Section 7.2.4 Display Mode*, page 38.

– RS-232 output set as *Alarm Management SW*;

▶ See *Section 7.3.5 RS-232 output setting*, page 41.

– 50 *Events* selected.

▶ See *Section 7.4.11 Maximum number of Events buffered (toggle)*, page 52.

The ''Universal NurseCall'' breaks the limitation of 300 or 500 *Transmitters* by using a concept in which the *Transmitters* are not recorded inside the *NurseCall Main Unit*.
In fact, the *NurseCall Main Unit* directly transfers each incoming radio ID code received from the radio or from a *Relay Unit* to its RS-232 communication port.
The *Alarm Management Software* handles the radio codes.

The ID code is sent according to *Display Mode* Floor / Room / Bed.

Example:
ID code 1234 => Floor = 1; Room = 23; Bed = 4

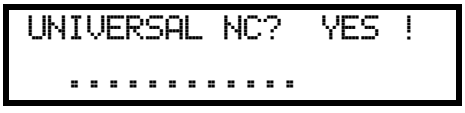
Each type of *Transmitter* has its own ID code range. Regarding the type, the unit adds an offset to the ID code:

Transmitter	ID code range	Offset	Data sent
S37, S35	1 to 4095	0	1 to 4095
S36, smoke detector (old version)	0 to 6560	0	0 to 6560
RAC, smoke detector	1 to 4095	6561	6562 to 10656
RAC, smoke detector (old version)	0 to 6560	6561	6561 to 13121
N45, N46	1 to 4095	13122	13123 to 17217

Table 7.3

Procedure

1. Type the code ***001999***.
2. Confirmation message displayed.



3. Set the CONVERSION CODE OFF or ON with the keys  and  .

▶ If you select ON, the offset are ignored. Then, the information sent out for *Transmitters* RAC, N46 and S37 which have the same ID code, is identical.

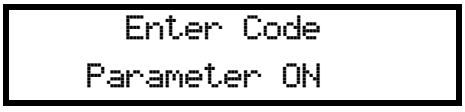
4. Set the LAST 300 BLOCKED function OFF or ON with the keys  and  .

▶ If you select ON, the last 300 ID from previous *Transmitters* which can reach 6560 (respectively 13121 for RAC and smoke detector) are not managed!

7.4.9 Maximum number of *Alarm Transmitters* (toggle)

This command allows to set the maximum number of *Alarm Transmitters* (300=OFF or 500=ON).
The default value is ON.

1. Type the code ***001001***.
2. Confirmation message displayed.



7.4.10 Maximum number of *Acknowledgement Transmitters* (toggle)

This command allows to set the maximum number of *Acknowledgement Transmitters* (5=OFF or 32=ON).
The default value is OFF.

1. Type the code ***001002***.
2. Confirmation message displayed.

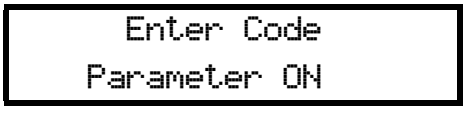
7.4.11 Maximum number of *Events* buffered (toggle)

This command allows to set the number of *Events* buffered (18=OFF or 50=ON).
The default value is OFF.

CAUTION! It is necessary to perform a general RESET before changing this value.

▶ See *Section 7.4.2 Resetting all parameters (including date and time)*, page 48.

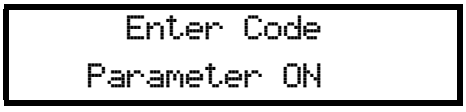
1. Type the code ***001003***.
2. Confirmation message displayed.



7.4.12 Daily message setting (toggle)

Periodically, a message is sent by each *Transmitter* in order to confirm its good functioning condition. To avoid to saturate the *Event Buffer*, disable the daily message check performed by the *NurseCall Main Unit* using this command (Parameter = ON).
("Daily message check enabled"=OFF or "Daily message check disabled"=ON).
The default value is OFF.

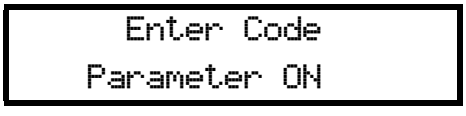
1. Type the code ***001007***.
2. Confirmation message displayed.



7.4.13 RS232 message setting (toggle)

This command allows to set the delay for repeating the messages on the RS-232 interface.
("RS-232 repeat message every 3 minutes"=OFF or "RS-232 repeat message every 1 minute"=ON).
The default value is OFF.

1. Type the code ***001009***.
2. Confirmation message displayed.



7.5 Transmitters

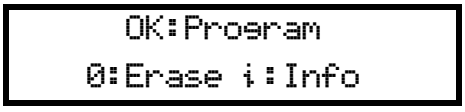
7.5.1 Generalities

▶ To access the *Transmitters* programming, press OK then OFF.

7.5.2 *Alarm Transmitter* programming

1. Select the *Alarm Transmitter* type by pressing ☎+ (to scroll up) or 🔊− (to scroll down). Then, confirm with OK.

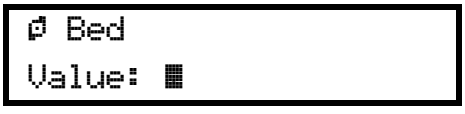
2. Press OK to program the *Transmitter*.



3. Press the radio button of the *Transmitter*.

▶ If the *Transmitter* is not accepted, see *Section 9 Troubleshooting*, page 63.

4. Enter the value for the floor, the room and for the bed or a single number. Confirm each value with OK.



5. Enter the pager group value.
6. Confirm the value with OK.

▶ See also *Section 7.4.9 Maximum number of Alarm Transmitters (toggle)*, page 51 to program the maximum number of *Alarm Transmitters* (300 or 500).

7.5.3 *Alarm Transmitter* checking

1. Select the *Alarm Transmitter* type by pressing (to scroll up) or (to scroll down). Then, confirm with (OK).

2. Press (i) to check the *Transmitter*.

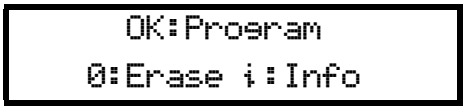
3. Press the radio button of the *Transmitter*.

4. Press (OK) to see the room value.

5. Press (OK) to see the bed value.

6. Press (OK) to see the pager value.

7. Press (OK) to go to the main menu.



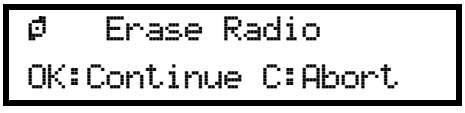
7.5.4 *Alarm Transmitter* erasing

1. Select the *Alarm Transmitter* type by pressing (to scroll up) or (to scroll down). Then, confirm with OK.

2. Press 0 to erase the *Transmitter*.

3. Press the radio button of the *Transmitter*.

4. Press OK to confirm the command.

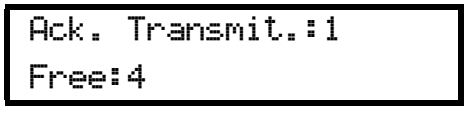


7.5.5 *Acknowledgement Transmitter* programming

1. Select the *Acknowledgement Transmitter* type with (to scroll up) or (to scroll down). Then, confirm with (OK).

2. Press (OK) to program the *Transmitter*.

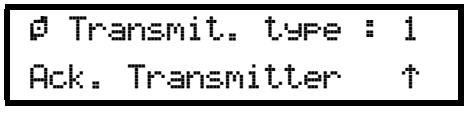
3. Press the radio button of the *Transmitter*.



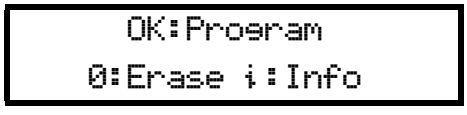
- If the *Transmitter* is not accepted, see *Section 9 Troubleshooting*, page 63.
- See also *Section 7.4.10 Maximum number of Acknowledgement Transmitters (toggle)*, page 52 to program this value to 5 or 32.

7.5.6 *Acknowledgement Transmitter* checking

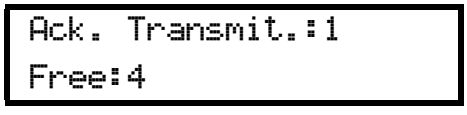
1. Select the *Acknowledgement Transmitter* type with (to scroll up) or (to scroll down). Then, confirm with (OK).



2. Press (i) to check the *Transmitter*.

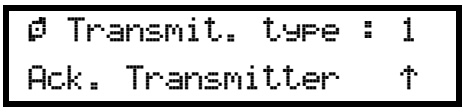


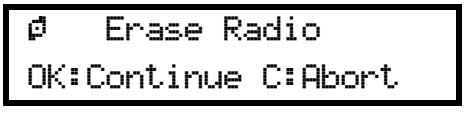
3. Press the radio button of the *Transmitter*.



7.5.7 *Acknowledgment Transmitter* erasing

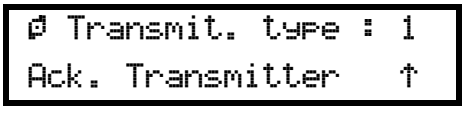
1. Select the *Acknowledgement Transmitter* type with ☎+ (to scroll up) or 🔊− (to scroll down). Then, confirm with OK.
2. Press 0– to select the erase function.
3. Press OK to erase ONE *Acknowledgement Transmitter*.
4. Press the radio button of the *Transmitter*.
5. Press OK to confirm the command.

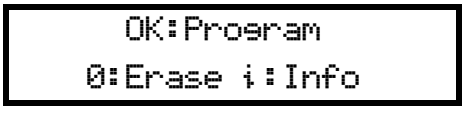


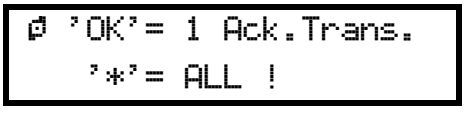


7.5.8 Erasing all *Acknowledgement Transmitters*

1. Select the *Acknowledgement Transmitter* type with ☎+ (to scroll up) or 🔊− (to scroll down). Then, confirm with OK.
2. Press 0– to select the erase function.
3. Press *• to erase ALL *Acknowledgement Transmitters*.
4. Confirm the command with OK.







8 Operating Instructions

8.1 Loudspeaker volume adjusting

▶ Press the  key for higher volume.

▶ Press the  key for lower volume.

8.2 *Alarm*- or *Event Buffer* consulting

The *NurseCall Main Unit* uses an *Alarm Buffer* and an *Event Buffer* for display indication. Following *Alarms/Messages* are stored in the *Alarm Buffer*:

- *Call for Help*;
- *Call for Assistance*;
- *Reserve Call* (*Call for Help 2*);
- *Technical Call*;
- *Fire Alarm*;
- Battery Low Message;
- Error Message;
- Disconnection of a *NurseCall Relay Unit* from the RS485-bus.

If *Alarms* are repeated, only the "oldest" entry remains in the *Buffer*. The *Call for Assistance* replaces the *Call for Help*, *Reserve Call* and *Technical Call* in the *Alarm Buffer*.
All possible entries are stored in the *Event Buffer*. Following messages are directly stored in this *Buffer*:

- *Acknowledgement* N46 (Sent by N46, S35 or S37);
- *Acknowledgement* by *Acknowledgement Transmitter* S35 or S37;
- *Local Acknowledgement* (*Acknowledgement* at the *NurseCall Main Unit* or *Relay Unit*);
- Daily message check;
- Personnel Arrival Message (A, B, C and D);
- Personnel Departure Message;
- Power outage of a *Receiver Unit*;
- Return of power at a *Receiver Unit*;
- Backup Battery Low of a *Receiver Unit*;
- Interruption of the connection interface RS232 *NurseCall* <-> PC;
- Return of the connection interface RS232 *NurseCall* <-> PC
- Connection of a *NurseCall Relay Unit* to the RS485-bus;
- Transmission of the *Event "Door"* by a RAC *Transmitter*.

NOTICE!
The *Alarm* and *Event Buffers* have a capacity of 18 or 50 entries.

▶ See *Section 7.4.11 Maximum number of Events buffered (toggle)*, page 52.

The *Event Buffer* will normally be filled with the last 18 or 50 entries. In the *Alarm Buffer*, only the active *Alarms* are present.

8.2.1 Switching between *Alarm* and *Event Buffers* indication

NOTICE!
The *Alarm Buffer* is indicated by default.
If you are in the *Event Buffer*, the unit changes automatically to the *Alarm Buffer* after 1 minute without activity !

NOTICE!
If there are no entries in the *Alarm Buffer*, the display shows the actual date and time.

- ▶ Switch from *Alarm* to *Event Buffer* and vice versa with the 0 ~ key.
- ▶ Scroll the *Alarms* or the *Events* with buttons ON (upwards) or OFF (downwards).

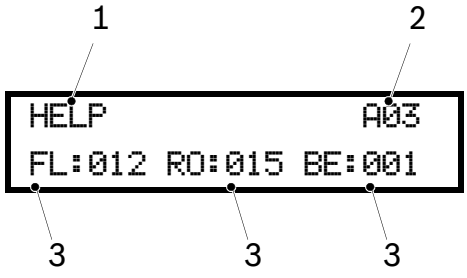
8.2.2 Display indications

NOTICE!
With the **Yellow** button, you can switch between three available information blocks.

Following information is displayed at *Alarm/Message* arriving:

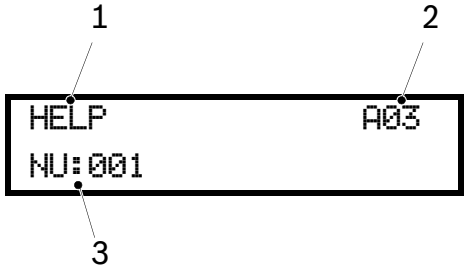
First information block

– In case of "floor / room / bed" *Display Mode*:



1. Criterion of the *Alarm/Message*;
2. *Alarm* (A) - or *Event* (E);
3. Identification of the *Transmitter* location; (floor/room/bed number).

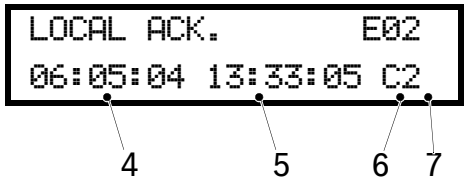
– In case of "single number" *Display Mode*:



1. Criterion of the *Alarm/Message*;
2. *Alarm* (A) - or *Event* (E);
3. Identification of the *Transmitter* location; (three digits).

Second information block

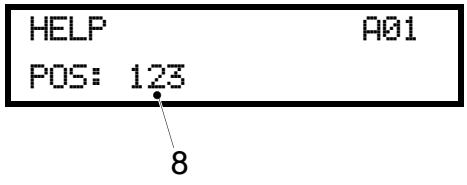
– In both *Display Modes*:



4. Date of the *Event*;
5. Time of the *Event*;
6. *Main Unit* (space) or *Relay Unit* (A...f) identification number;
7. Quality of the received radio signal.

Third information block

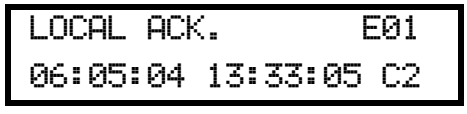
– In both *Display Modes*:



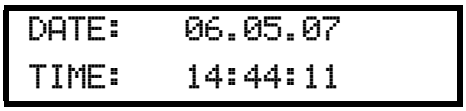
8. Position of the last passed beacon.

In the *Alarm Buffer*, the total number of entries is indicated on top at the right. You can immediately see how many *Alarms* are active (in our example, there are totally 3 *Alarms* in the *Alarm Buffer*.

On the other hand, in the *Event Buffer* the position of the *Event* in the *Buffer* is indicated (E01 corresponds to the latest entry in the *Event Buffer*).



Unit displaying the current date and time



Unit displaying an active *Alarm*

Unit displaying an *Event* in the *Buffer*

8.2.3 *Local Acknowledgement*

▶ The *Local Acknowledgement* is performed on the *NurseCall Main Unit* with the **Green** button.

You can decide if you have to enter a code to confirm the *Acknowledgement* or not.

▶ See *Section 7.3.6 Local Acknowledgement setting*, page 45.

NOTICE!
The *Alarm* receiving an *Acknowledgement* is removed from the *Alarm Buffer*. The *Alarm* and its *Acknowledgement* can then be found in the *Event Buffer*.

***Relay Unit* disconnecting**
If a *Relay Unit* stops communicating with the *Main Unit*, an *Alarm* "Relay Off" is generated on the *Main Unit*.

This *Alarm* can only be acknowledged on the *Main Unit* by pressing the **Green** button, followed by the code "45". Thereafter, an Event "No Relay" is generated.

As soon as the *Relay Unit* communicates again with the *Main Unit*, the *Event* "Relay On" is generated.

NOTICE!
This operation is independent of the *Local Acknowledgement* setting.

9 Troubleshooting

9.1 "Ack. Transmitter already stored" message

This message is displayed if you are trying to program a *Transmitter* as *Alarm Transmitter* or *Acknowledgement Transmitter* and this *Transmitter* was already stored as *Acknowledgement Transmitter*.

9.2 "Radio in use" message

This message is displayed if you are trying to program a *Transmitter* as *Alarm Transmitter* and this *Transmitter* was already stored as *Alarm Transmitter*.

NOTICE!

- ▶ Press OK to continue (to perform an update of the values).
- ▶ Press C to abort the command.

9.3 The Green button does not work

If you are trying to acknowledge an *Alarm* with the **Green** button without success, the *Local Acknowledgement* is probably disabled.

- ▶ To activate the *Local Acknowledgement* function, see *Section 7.3.6 Local Acknowledgement setting*, page 45.

10 Maintenance

10.1 System checking

▶ Perform periodically an *Alarm* test in order to verify the correct function of your *NurseCall* system.

10.2 Power supply monitoring

In case of a power failure, the *NurseCall Main Unit* emits a warning tone and the following message is displayed.

```
Main Power
Error
```

The backup battery ensures that the *NurseCall Main Unit* remains operational even in case of power failure. When fully charged, the battery ensures a power backup of 24 hours. When power returns after a power failure, the battery is recharged and, if it has been completely discharged, it will reach its full capacity after 24 hours of charging time.

10.3 Backup battery monitoring and checking

NOTICE!
The status of the battery is indicated on the top right of the display.

▶ The backup battery voltage is checked with the  key.

```
Checking
Local Battery
```

NOTICE!
– At startup, automatical checking.
– Every 30 minutes, automatical checking.

▶ If the remaining battery capacity drops below 25 %, a warning message is displayed.

```
Local Battery
Empty
```

▶ If the *NurseCall Main Unit* detects that the backup battery is defective, a warning message is displayed.

```
Local Battery
Failure
```

▶ If the backup battery is defective, replace it as described in *Section 10.5.3 Backup battery replacing*, page 67.

10.4 Cleaning

CAUTION!
Avoid using cleaning products, cleansers or detergents.

- Wipe off your *NurseCall Main Unit* occasionally with a dry cloth.

10.5 Parts replacement

10.5.1 Safety instructions

WARNING! Electro **S**tatic **D**ischarge
The *NurseCall Main Unit* contains highly sensitive electronic components. It should be opened only in an **ESD** protected environment with respect to the following precautions:

- Discharge yourself from electrostatic loads by touching a grounded conductive surface before opening the unit.
- Avoid touching conductive parts inside the *NurseCall Main Unit* if not absolutely necessary.

CAUTION!
Never try to use replacement pieces other than those authorized by the manufacturer of the *NurseCall Main Unit*.

10.5.2 Unit Dismantling

Antenna removing

1. Remove the antenna (1) and its adapter (2) or (3).

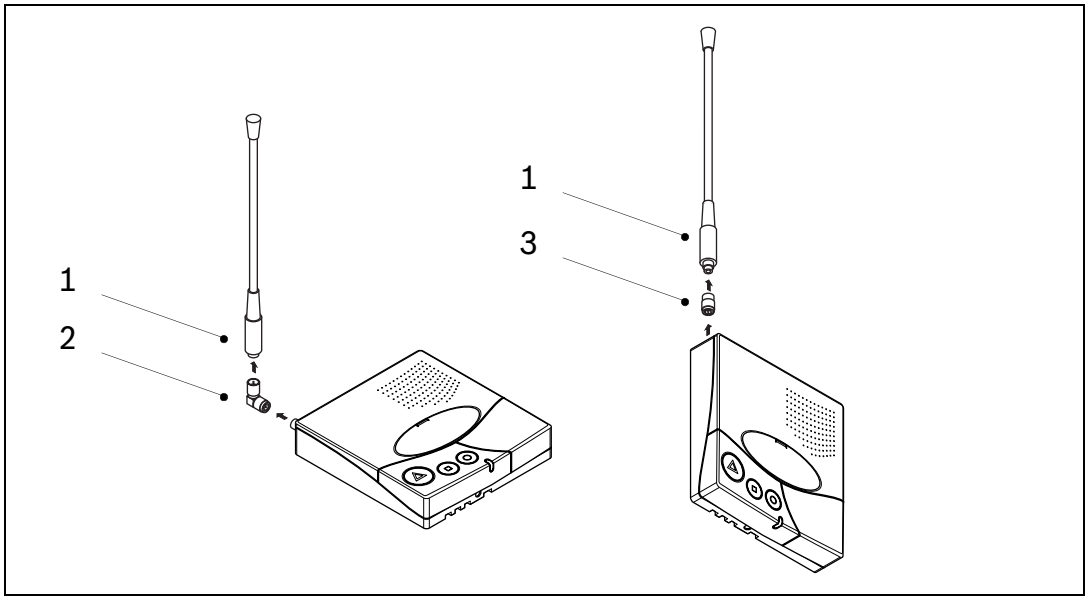


Fig. 10.1 Antenna removing

Communication board removing

CAUTION!

- ▶ Do not damage the battery cable and its connector (7).
- ▶ Do not damage the serial communication board connectors.

1. Unscrew and remove the 4 screws (4) using a Torx T20 screwdriver.
2. Unscrew and remove the screw (5) using a Torx T20 screwdriver.
3. Carefully remove the communication board (6).

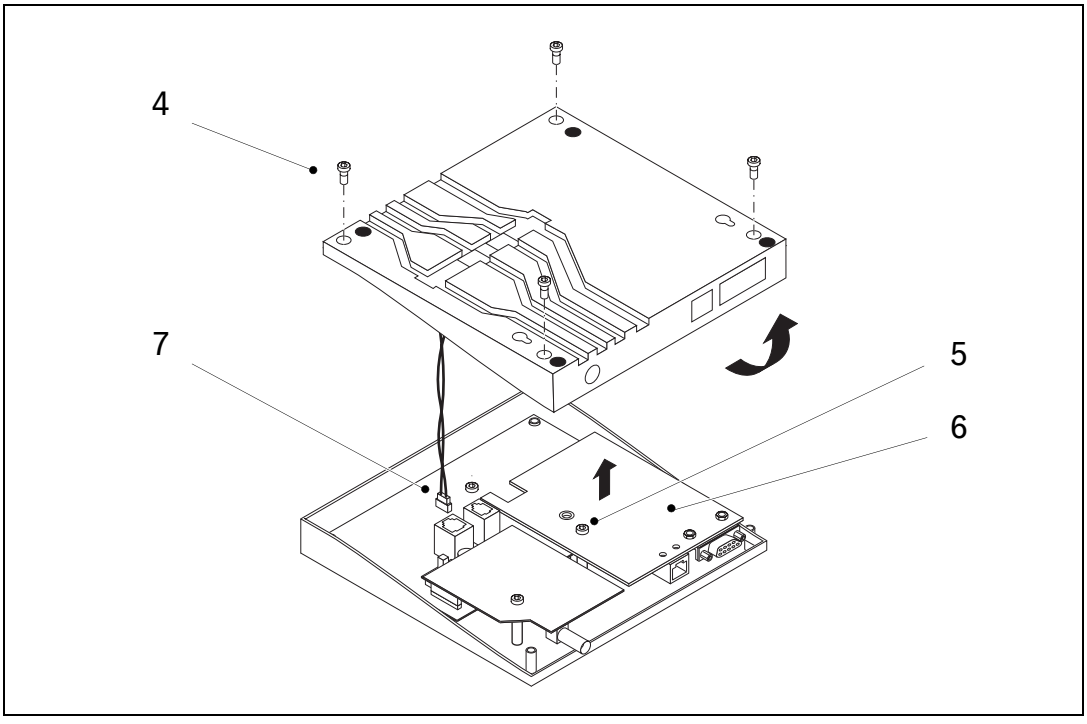


Fig. 10.2 Unit dismantling and communication board removing

10.5.3 Backup battery replacing

Important Safety Instructions

The battery shall be fully charged during 24 hours before using the *NurseCall Main Unit* for the first time, after replacing the battery or after a long "power shortage".

NOTICE!

The battery will charge correctly between +5º C (+41º F) and +45º C (+113º F).

A new battery or one that has not been used for a long time could have reduced capacity the first time it is used.

A rechargeable battery can be charged and discharged hundred of times. However, it will eventually wear out . This not a defect. It is recommended to replace batteries that are not anymore able to ensure a minimum power back-up time of 8 hours (at full charge).

WARNING!

- May explode if exposed to fire;
- Use only original batteries intended for use with your *NurseCall Main Unit*. Using other type of batteries could be dangerous;
- Do not expose the battery to liquids;
- Do not let the metal contacts on the battery touch another metal. This could damage the battery;
- Do not disassemble or modify the battery;
- Do not expose the battery to extreme temperatures, and never above 60º C (+140º F).
- For maximum battery capacity, use the battery at room temperature;
- Keep out of reach of children;
- Use the battery for the intended purpose only;
- Do not allow the battery to be put into the mouth. Battery electrolytes may be toxic if swallowed.

CAUTION!

There is a risk of explosion if battery is replaced by a wrong type.
The battery should be replaced exclusively by *Authorized Personnel*.
Dispose of used batteries according to instructions and regulations.

NOTICE!

Battery type, 6V Ni/MH

Procedure

1. Disassemble the unit like described in *Section 10.5.2 Unit Dismantling*, page 66.
2. Disconnect the battery cable (1).
3. Carefully remove the defective backup battery (2).
4. Place the new backup battery.
5. Connect the new battery cable (1).

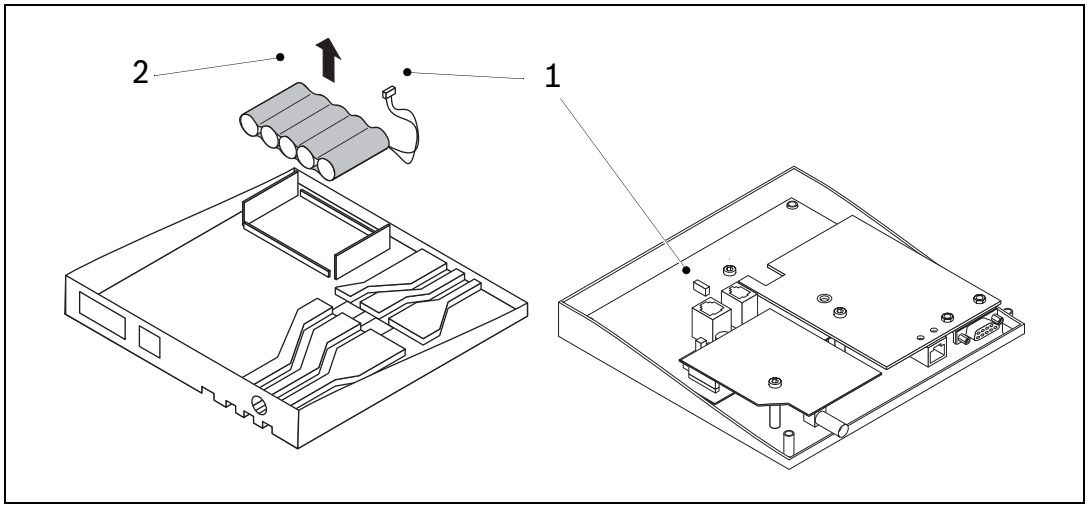


Fig. 10.3 Replacing the backup battery

11 Storage

One can distinguish between long term storage and short term storage.
If the *NurseCall Main Unit* must be temporarily stored, it may not be necessary to wrap it completely.
However, if you wish to store the *NurseCall Main Unit* for longer time, for instance in a storage room or any similar location, it is recommended to use original packing material.

11.1 Short term storage

11.1.1 Short term storage conditions

Unwrapped *NurseCall Main Unit* in a room:

– Protection against direct sunlight and dust.

11.1.2 Long term storage conditions

NOTICE!
The *NurseCall Main Unit* does not loose its programmed parameters when the power supply and the backup battery are disconnected.

NurseCall Main Unit in its original packing material in a storage room:

– Backup battery removed;
– Protection against direct sunlight and dust.

12 Disposal

This chapter describes the appropriate disposal of the *NurseCall Main Unit*.

The *NurseCall Main Unit* is marked with a crossed-out wastebasket symbol.
This means that, at the end of its useful lifespan, the product shall be disposed separately from ordinary household wastes in accordance to the EU Directive 2002/96/EC.
The product and its accessories shall be delivered to an appropriate collection facility that will permit recycling, treatment and environmentally compatible disposal. This will prevent negative impact on the environment and human health and promotes the recycling of materials.
For more information on available collection facilities, contact your local waste collection service or your local representative.

12.1 Disassembly

Only *Authorized Personnel* is allowed to disassemble a *NurseCall Main Unit*.

12.2 Local disposal locations

The nearest disposal locations are established in conformance with the currently applicable laws. Ask the local authorities.

12.3 Returning to the manufacturer

If there is no practical disposal place, the *NurseCall Main Unit* may be returned to your local representative.

12.4 Materials

The *NurseCall Main Unit* must be returned to an authorized point of recycling.
In order to protect people and environment, the *NurseCall Main Unit* must be recycled in an adequate manner. Consequently, all applicable laws and bylaws must be respected.

12.4.1 Battery

NOTICE!
The battery should never be placed in municipal waste. Use a battery disposal facility if available.

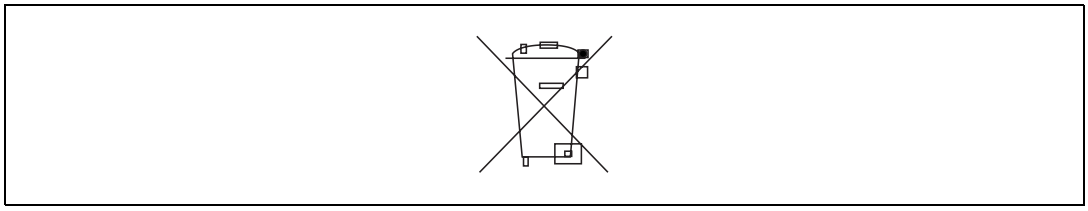


Fig. 12.1 Crossed-out wastebasket symbol

▶ Please check local regulations for disposal of batteries or call your local representative for information.

13 Appendix

13.1 Electrical specifications

Voltage	230 or 115/10VAC
Current	280 mA
Frequency	50/60 Hz
Power	2.8 W max.

Table 13.1 Electrical specifications

13.2 Dimensions and weight

Casing dimensions	**[mm]**
Depth	220
Width	180
Height	40
Antenna	**[mm]**
Height	400
Casing weight	**[g]**
Weight (including antenna and power supply adaptor)	740

Table 13.2 Dimensions and weight

13.3 Environmental conditions

Operating temperature	0 - 40°C

Table 13.3 Environmental conditions

13.4 List of criteria

Criterion	Criterion Number	Alarm (A) or Event (E)	Transmitted to DECT/paging systems	Comment
ERROR	00	A	Yes	System malfunctioning. Example: component defective (N46)
PERSONNEL A	01	E	No	Coded key active (N46)
LOW BATTERY	02	A	Yes	Battery at low level (*Transmitter*)
ACK. N46	03	E	No	*Acknowledgement* (Sent by N46, S35 or S37)
DOOR	04	E	No	Door open or door closed
TECHNICAL	05	A	Yes	*Technical Call* (N46)
PERSONNEL C	06	E	No	Coded key presence (N46)
HELP	07	A	Yes	*Call for Help*
UNKNOWN	08	E	No	Not used
END PERSONNEL	09	E	No	Removed coded key (N46)
PERSONNEL D	10	E	No	Coded key presence (N46)
ASSISTANCE	11	A	Yes	*Assistance Call*
24 HOURS	12	E	No	Daily message check
RESERVE	13	A	Yes	*Reserve Call* (N46)
PERSONNEL B	14	E	No	Coded key presence (N46)
RADIO NOISE	15	E	No	Bad radio transmission (noise)
FIRE	16	A	Yes	*Fire Alarm*
ACK. TRANSM.1	17	E	No	*Acknowledgement* (*Ack. Transmitter* No. 1)
LOCAL ACK.	18	E	No	*Local Acknowledgement* (*Main Unit* or *Relay Unit*)
POWER OUTAGE	19	E	No	*Main Unit* or *Relay Unit* not powered
POWER BACK	20	E	No	Powerer back (*Main Unit* or *Relay Unit*)
COMPUTER OFF	21	E	No	Alarm management PC off
COMPUTER ON	22	E	No	Alarm management PC on
BAT.ACK.TRANSM	23	E	No	Battery at low level (One of the *Ack. Transmitter*)
RELAY ON	24	E	No	*Relay Unit* connected on RS-485 Bus
RELAY OFF	25	A	No	*Relay Unit* disconnected from RS-485 Bus

Table 13.4 List of criteria

Criterion	Criterion Number	Alarm (A) or Event (E)	Transmitted to DECT/paging systems	Comment
NO RELAY	26	E	No	*Relay Unit* off acknowledged (*Main Unit)*
LOW ACCU	27	E	No	Accumulator discharged (*Maint Unit* or *Relay Unit*)
ACK. TRANSM.2	28	E	No	*Acknowledgement* (*Ack. Transmitter* No. 2)
ACK. TRANSM.3	29	E	No	*Acknowledgement* (*Ack. Transmitter* No. 3)
ACK. TRANSM.4	30	E	No	*Acknowledgement* (*Ack. Transmitter* No. 4)
ACK. TRANSM.5	31	E	No	*Acknowledgement* (*Ack. Transmitter* No. 5)
ACK. TRANSM.xx	xx	E	No	*Acknowledgement* (*Ack. Transmitter* No. xx)
ACK. TRANSM.32	58	E	No	*Acknowledgement* (*Ack. Transmitter* No. 32)

Table 13.4 List of criteria

NOTICE!
All *Events* are buffered into the *Event Buffer* of the *NurseCall Main Unit*.

13.5 Paging systems specifications

NOTICE!
The system uses 4 protocols, the standard ESPA 4.4.4. protocol, a specific Multitone protocol (MEP), a specific Medicall 800 protocol and the DeTeWe protocol.

13.5.1 Multitone RPE670 with ESPA 4.4.4. protocol

NOTICE!
Data rate: 9600 Bauds. Transmission: asynchronous with a 10 bit-structure (1 startbit, 7 databits with even parity, 1 stopbit) in half-duplex mode.
Pagingsystem-ID = 2, NurseCall-ID=1.

Only *Alarms/Messages* arriving to the *Alarm Buffer* are transmitted (except "RELAY OFF"). The transmission is fully alpha-numeric. The *Alarms/Messages* are repeated every 1 or 3 minutes until *Acknowledgement* (see *Section 7.4.13 RS232 message setting (toggle)*, page 52).

The *Alarms/Messages* are transmitted to the Multitone user number attributed to the *Transmitter* (default group = 00).

Group	User number
00	12GG
01	13GG
02	14GG
03	15GG
04	16GG
05	17GG
06	18GG
07	19GG
08	20GG
09	21GG
10	22GG
11	23GG
12	24GG
13	25GG
14	26GG
15	27GG
16	28GG
17	29GG
18	30GG
19	31GG
20	32GG
21	33GG

Table 13.5 Attribution table

Group	User number
22	34GG
23	35GG
24	36GG

Table 13.5 Attribution table

NOTICE!
In "floor / room / bed" *Display Mode*, use only alpha-numeric pagers which can display more than 16 characters.

Change *Day / Night*
If you have activated the change *Day* / *Night*, the *NurseCall* system transfers all *Alarms* during *Night* to the group 24. At *Day*, all groups 00 - 24 can be used. When switching from *Day* to *Night* or vice versa, the *Message* "DAY-NIGHT" is transmitted to the activated pagers to signalize the change.

Priority *Alarms*
The *Assistance* and *Fire Alarms* are priority calls transmitted to all activated pagers.

Call repetition
If *Alarms/Messages* are not acknowledged after about 7 minutes, call repetitions are also sent to the group 23.

13.5.2 Multitone RPE670 with MEP protocol

NOTICE!
Data rate: 1200 Bauds. Transmission: asynchronous with a 10 bit-structure
(1 startbit, 7 databits with even parity, 1 stopbit) in half-duplex mode.

Only *Alarms/Messages* arriving to the *Alarm Buffer* are transmitted (except "RELAY OFF"). The transmission is only numeric. The *Alarms/Messages* are repeated every 1 or 3 minutes until *Acknowledgement* (see *Section 7.4.13 RS232 message setting (toggle)*, page 52).

The *Alarms/Messages* are transmitted to the Multitone user number attributed to the *Transmitter* (default group = 00).

Group	User number
00	12GG
01	13GG
02	14GG
03	15GG
04	16GG
05	17GG

Table 13.6 Attribution table

Group	User number
06	18GG
07	19GG
08	20GG
09	21GG
10	22GG
11	23GG
12	24GG
13	25GG
14	26GG
15	27GG
16	28GG
17	29GG
18	30GG
19	31GG
20	32GG
21	33GG
22	34GG
23	35GG
24	36GG

Table 13.6 Attribution table

▶ Use pagers with alphanumeric display. The pagers should be coded as follows:

Code	Alarm / Message
00	*Acknowledgement*
06	*Call for Help*
09	*Call for Assistance*
02	*Reserve Call*
15	*Technical Call*
07	*Fire Alarm*
03	Battery Low Message
01	Error Message
04	"DAY-NIGHT" message to signalize the change from *Day* to *Night*.

Table 13.7 Attribution table

CAUTION!

The transmission takes only place in "single number" *Display Mode*.

▶ See *Section 7.2.4 Display Mode*, page 38.

Change *Day / Night*
If you have activated the change *Day* / *Night*, the *NurseCall* system transfers all *Alarms* during *Night* to the group 24. At *Day*, all groups 00 - 24 can be used. When switching from *Day* to *Night* or vice versa, the *Message* "DAY-NIGHT" is transmitted to the activated pagers to signalize the change.

Priority *Alarms*
The *Assistance* and *Fire Alarms* are priority calls transmitted to all activated pagers.

Call repetition
If *Alarms/Messages* are not acknowledged after about 7 minutes, call repetitions are also sent to the group 23.

13.5.3 Medicall 800 protocol

NOTICE!
Data rate: 9600 Bauds. Transmission: asynchronous with a 10 bit-structure (1 startbit, 8 databits, no parity, 1 stopbit) in half-duplex mode.

The following *Alarms/Messages* are transmitted to the Medicall 800 system.

- Error
- Low Battery
- Technical
- Help
- Assistance
- Reserve
- Fire

Each *Alarm* is sent only with the pager group information corresponding to the transmitter that has sent the *Alarm*. This is performed without any criterion distinction.

Change *Day / Night*
The Medicall 800 protocol does not handle the day / night transfer.

Call repetition
If *Alarms/Messages* are not acknowledged after about 3 minutes, call repetitions are issued.

13.5.4 DeTeWe protocol

NOTICE!
Data rate: 9600 Bauds. Transmission: asynchronous with a 11 bit-structure (1 startbit, 8 databits with odd parity, 1 stopbit) in half-duplex mode.

Only *Alarms/Messages* arriving to the *Alarm Buffer* are transmitted (except "RELAY OFF"). The transmission is fully alpha-numeric. The *Alarms/Messages* are repeated every 1 or 3 minutes until *Acknowledgement* (see *Section 7.4.13 RS232 message setting (toggle)*, page 52).

The *Alarms/Messages* are transmitted to the paging system user number attributed to the *Transmitter* (default group = 00).

Group	User number
00	x00
01	x01
02	x02
03	x03
04	x04
05	x05
06	x06
07	x07
08	x08
09	x09
10	x10
11	x11
12	x12
13	x13
14	x14
15	x15
16	x16
17	x17
18	x18
19	x19
20	x20
21	x21
22	x22
23	x23
24	x24

Table 13.8 Attribution table

NOTICE!
The x value can be programmed.
– See *Section Example of programming*, page 42.

Change *Day / Night*
If you have activated the change *Day* / *Night*, the *NurseCall* system transfers all *Alarms* during *Night* to the group 24. At *Day*, all groups 00 - 24 can be used. When switching from *Day* to *Night* or vice versa, the *Message* "DAY-NIGHT" is transmitted to the activated pagers to signalize the change.

Priority *Alarms*
The *Assistance* and *Fire Alarms* are priority calls transmitted to all activated pagers.

Call repetition
If *Alarms/Messages* are not acknowledged after about 7 minutes, call repetitions are also sent to the group 23.

13.5.5 Other paging systems

NOTICE!
Multitone Access 3000 compact, etc. can be connected if configured correctly (RPE 670 = NO, ESPA 4.4.4.).

NOTICE!
Data rate: 9600 Bauds. Transmission: asynchronous with a 10 bit-structure (1 startbit, 7 databits with even parity, 1 stopbit) in half-duplex mode. Pagingsystem-ID = 2, NurseCall-ID=1.

Only *Alarms/Messages* arriving to the *Alarm Buffer* are transmitted (except "RELAY OFF"). The transmission is fully alpha-numeric. The *Alarms/Messages* are repeated every 1 or 3 minutes until *Acknowledgement* (see *Section 7.4.13 RS232 message setting (toggle)*, page 52).

The *Alarms/Messages* are transmitted to the paging system user number attributed to the *Transmitter* (default group = 00).

Group	User number
00	999
01	998
02	997
03	996
04	995
05	994
06	993
07	992
08	991
09	990

Table 13.9 Attribution table

Group	User number
10	989
11	988
12	987
13	986
14	985
15	984
16	983
17	982
18	981
19	980
20	979
21	978
22	977
23	976
24	975

Table 13.9 Attribution table

Change *Day / Night*

If you have activated the change *Day* / *Night*, the *NurseCall* system transfers all *Alarms* during *Night* to the group 24. At *Day*, all groups 00 - 24 can be used. When switching from *Day* to *Night* or vice versa, the *Message* "DAY-NIGHT" is transmitted to the activated pagers to signalize the change.

Priority *Alarms*

The *Assistance* and *Fire Alarms* are priority calls transmitted to all activated pagers.

Call repetition

If *Alarms/Messages* are not acknowledged after about 7 minutes, call repetitions are also sent to the group 23.

13.6 DECT phone system specifications

NOTICE!
The system can transfer the *Alarms* received to DECT handsets of the types Multitone CH60 or CH70.

13.6.1 Multitone DECT system CS600 and P318 interface

NOTICE!
Data rate: 9600 Bauds. Transmission: asynchronous with a 10 bit-structure
(1 startbit, 7 databits with even parity, 1 stopbit) in half-duplex mode.

Only *Alarms/Messages* arriving to the *Alarm Buffer* are transmitted (except "RELAY OFF"). The transmission is fully alpha-numeric. The *Alarms/Messages* are repeated every 1 or 3 minutes until *Acknowledgement* (see *Section 7.4.13 RS232 message setting (toggle)*, page 52).

The transmission to the DECT system is a team call. The team number must match with the paging group programmed for every single
(default paging group= 00).

Change *Day / Night*
If you have activated the change *Day* / *Night*, the *NurseCall* system transfers all *Alarms* during *Night* to the group 24. At *Day*, all groups 00 - 24 can be used. When switching from *Day* to *Night* or vice versa, the *Message* "DAY-NIGHT" is transmitted to the activated pagers to signalize the change.

Priority *Alarms*
The *Assistance* and *Fire Alarms* are priority calls transmitted to all activated DECT handsets.

Call repetition
If *Alarms/Messages* are not acknowledged after about 7 minutes, call repetitions are also sent to the group 23.

13.7 Connectors

13.7.1 LINE socket (unit bottom)

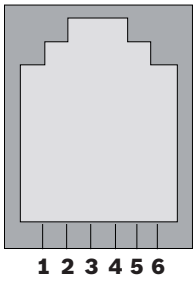
LINE socket	Wiring
	1. Flash Data GND 2. Not used 3. Not used 4. Not used 5. Not used 6. Flash Data IN/OUT

Table 13.10 Line socket wiring

13.7.2 Power socket (unit bottom)

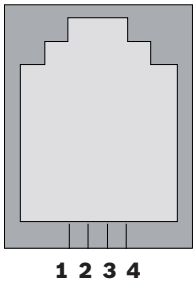
10V AC socket	Wiring
	1. NC 2. AC-1 10-12VAC 3. AC-2 4. GND

Table 13.11 Power socket wiring

13.7.3 RS-232 (unit rear)

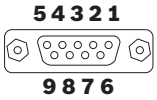
RS-232 socket	Wiring
	1. RTS/CTS 2. RX/TX 3. TX/RX 4. RTS/CTS 5. 0 Volt 6. RTS/CTS 7. RTS/CTS 8. RST/CTS 9. ---

Table 13.12 RS-232 wiring

13.7.4 RS-485 (unit rear)

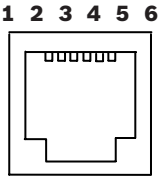
RS-485 socket	Wiring
	1. Relay output (a) 2. RS485 (A) 3. Termination = RS485 (A) 4. RS485(A) when jumper end line is placed 5. RS485 (B) 6. Relay Output (b)

Table 13.13 RS-485 wiring

13.8 EC-Declaration of conformity

Security Systems

BOSCH

CE

EC-Declaration of Conformity

The undersigned, representing the following manufacturer

Manufacturer

TeleAlarm SA, Bosch Group
Security Systems, Product Group Care Solutions

Address:

Rue du Nord 176
2300 La Chaux-de-Fonds
SWITZERLAND

hereby declares that the following product(s)

NurseCall 3 Main Unit
NurseCall 3 Relay Unit

is (are) in conformity with the regulations of the following marked EC-directive(s) and bear(s) thCE - mark accordingly

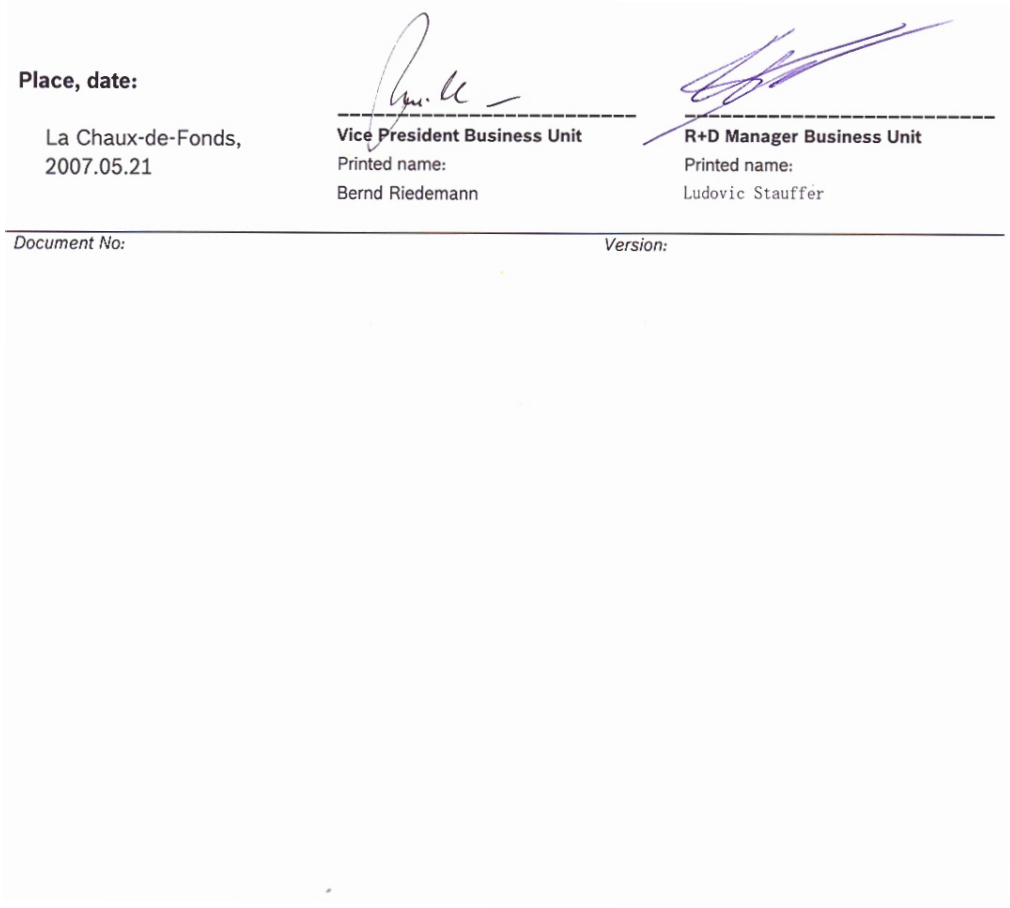
	reference number	title
☒	89/336/EEC	EMC Directive (EMC)
☒	2006/95/EC	Low-Voltage Directive (LVD)
☐	89/106/EC	Construction Products Directive (CPD)
☒	1999/5/EC	Radio equipment and Telecommunications Terminal Equipment (R&TTE), according to annex V
☐	94/9/EC	Electrical Apparatus for Potentially Explosive Atmospheres (ATEX), according to annex IV and VII

The conformity of the product(s) with (above ticked) EC directives is provided by the compliance with the following standard(s):

Standard(s) / date
EN 60950-1 / 2001 + A11 / 2004
EN 55022 / 1998 + A1 / 2000 + A2 / 2003
EN 300220-1 / 2000
EN 50130-4 / 1995 + A1 / 1998 + A2 / 2003
EN 301489-3 / 2002
EN 61000-4-2 / 1995 + A1 / 1998 + A2 / 2001
EN 61000-4-3 / 1996 + A1 / 1998 + A2 / 2001
EN 61000-4-4 / 1995 + A1 / 2001 + A2 / 2001
EN 61000-4-5 / 1995 + A1 / 2001
EN 61000-4-6 / 1996 + A1 / 2001
EN 61000-4-11 / 1994 + A1 / 2001

Template ST10-Q6507, Version 0.04 Page 1

Fig. 13.1 EC-Declaration of conformity, page 1



Place, date:

La Chaux-de-Fonds,
2007.05.21

Vice President Business Unit
Printed name:
Bernd Riedemann

R+D Manager Business Unit
Printed name:
Ludovic Stauffer

Document No:

Version:

Template ST10-Q6507, Version 0.04

Page 2

Fig. 13.2 EC-Declaration of conformity, page 2

Annex to CE Declaration of Conformity

Document No: , version:

No of test report(s) /date
14'723 / 2005.09.05
EMC060315SP01 / 2006.03.15
EMC060315SP02 / 2006.03.15
EMC060315SP03 / 2006.03.15
EMC060315SP04 / 2006.03.15
EMC060315SP05 / 2006.03.15
EMC060315SP06 / 2006.03.15
EMC060315SP07 / 2006.03.15
EMC060315SP08 / 2006.03.15
EMC070416JLC01 / 2007.04.16
EMC070416JLC02 / 2007.04.16
EMC070416JLC03 / 2007.05.10
EMC070416JLC04 / 2007.04.16
EMC070416JLC05 / 2007.04.16
EMC070416JLC06 / 2007.04.16
EMC070416JLC07 / 2007.04.16

Fig. 13.3 EC-Declaration of conformity, page 3

14 Glossary

A

Accompany mode	Special mode to allow authorized staff (holding a S37E Transmitter) to accompany a patient (holding a S37L Transmitter) across areas controlled by detector beacons.
Acknowledgement	Alarm receipt or reset.
Acknowledgement Transmitter	Transmitter used to acknowledge alarms.
Alarm	Signal to warn of a danger.
Alarm Buffer	Memory used to store alarms.
Alarm Management Software	Software installed on a PC to manage alarms or messages.
Alarm Transmitter	Radio transmitter used for alarm triggering (S37 for example).
Assistance Call	Alarm sent to ask for assistance.
Authorized Personnel	Persons who are authorized by their training to perform specific activities with the *NurseCall Main Unit*. An electrician is designated as *Authorized Personnel* involved with the activities related to the connecting of the *NurseCall Main Unit* to the electric power supply.

B

Buffer	Memory used to store events or alarms.

C

Call for Assistance	Alarm sent to ask for assistance.
Call for Help	Alarm sent to ask for help.
Call for Help 2	Alarm sent to ask for help (N46, reserve call).

D

Day	Time duration defined between Night end time and Night starting time. During the Night, the alarms are transfered to the paging group 24.

E

Event	Alarm receiving an acknowledgement. The alarm and its acknowledgement are thereafter defined as event.
Event Buffer	Memory used to store events.
Event "Door"	Special event sent when a door is passed.

F

Fire Alarm	Alarm sent in case of fire.

I

Installer	Persons who are authorized by their training to perform the installation of your system.

L

Local Acknowledgement	Acknowledgement at the *NurseCall Main Unit* or *Relay Unit*.
Localization Mode	Special mode used to send the transmitter position.

M

Main Unit	Receiver unit used to manage and store the alarms and messages arriving from *NurseCall Transmitters* and *Relay Units*.
Message	Signal transmitted to a receiver for information (for example, "DOOR").

N

Night	Time duration defined between Night starting time and Night end time. During the Night, the alarms are transfered to the paging group 24.
NurseCall	Your smart system.

P

Parameter	A user-adjustable value that governs some aspect of a device's performance (Example, Night starting time).

R

Radio Noise Check	Check of the radio noise within the environment of the *NurseCall Main Unit*. A "Radio Noise" event will be created if this function is activated.
Receiver Unit	Main Unit or Relay Unit.
Relay Unit	Receiver unit used to improve radio reception range.
Reserve Call	Alarm sent to ask for help (N46, Call for Help 2).

T

Technical Alarm	Alarm triggered by activating a contact in the N46.
Transmitter	A device used for the generation of signals of any type and form that are to be transmitted.

U

User	Persons who are authorized by their training to use the *NurseCall* system.

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