2N® LiftIP User Manual

v.2.7.0

www.2n.com

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1. Product Introduction

In this section, we introduce the **2N® LiftIP** product, outline its application options and highlight the advantages following from its use.

Here is what you can find in this section:

- 1.1 Product Description
- 1.2 Components and Associated Products
- 1.3 Upgrade
- 1.4 Terms and Symbols

Caution

- This product, its installation and configuration are not intended for persons with physical, sensory or mental disabilities or persons with limited experience and skills unless expert supervision or relevant instructions are provided to them by a person responsible for their safety.

1.1 Product Description

Basic Features

- **2N® LiftIP** is primarily designed for sites where a LAN is available.
- **2N® LiftIP** is a Speakerphone on principle. This means that a microphone and a speaker built-in behind the lift button panel are used for bidirectional communication.
- Connect **2N® LiftIP** to your LAN using an RJ-45 connector. Feed **2N® LiftIP** either from an external 10–30 V DC / 0.5 A power supply or directly from the LAN if equipped with PoE 802.3af supporting elements.
- **2N® LiftIP** can only be used for making calls to pre-programmed numbers and cannot be misused for “calling at someone else's account".
- Connection of an almost unlimited count of communicators is a great advantage.

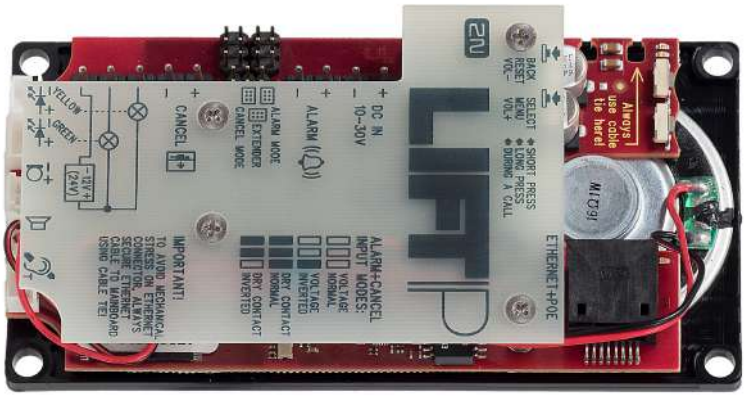
Advantages of Use:

- Basic announcement set playing
- Optimum acoustic properties
- Adjustable speaker volume via audio unit buttons (during a call)
- Recording of up to 8-minute long announcements (10 user messages)
- Recording of user digits in a language other than that of the voice menu
- Check call function once in 3 days (programmable)
- Function indication – two LEDs meeting the applicable lift regulations
- Easy control and configuration – voice menu
- Setting option via the Service Tool application

- Automatic redialling of up to six numbers
- Protection against unintentional/useless startup (CANCEL)
- Call control from control centre
- No additional power supply requirement if PoE is used
- Easy installation into any lift button panel
- Powerful indication options – illuminated pictograms (including bulbs)
- DTMF via RFC-2833 or in-band

1.2 Components and Associated Products

Basic Unit – Universal Design



These units are installed behind the lift panel, which is prepared for installation in advance.

Part No., Name	Description
920640 **2N® LiftIP** – Cabin audio unit	• EN basic module • automatic dialling of up to 6 numbers
920640XE **2N® LiftIP** – Cabin audio unit, cable version	• 920640 + LED, microphone and speaker connected with cables

Extending Modules – External

2N® LiftIP I/O Extender

Part No., Name	Popis
920623E **2N® LiftIP I/O Extender**	• The IO extender helps you extend **2N® LiftIP** with 1 input and 2 outputs.

2N Voice Alarm Station – Audio Unit

2N Voice Alarm Station – Switch

Part No., Name	Description

913660E 2N Voice Alarm Station – Audio Unit	• Audio unit to be installed on the cabin roof and under the cabin
913661E 2N Voice Alarm Station – Switch	• Audio unit – Lift 1 interconnecting switch

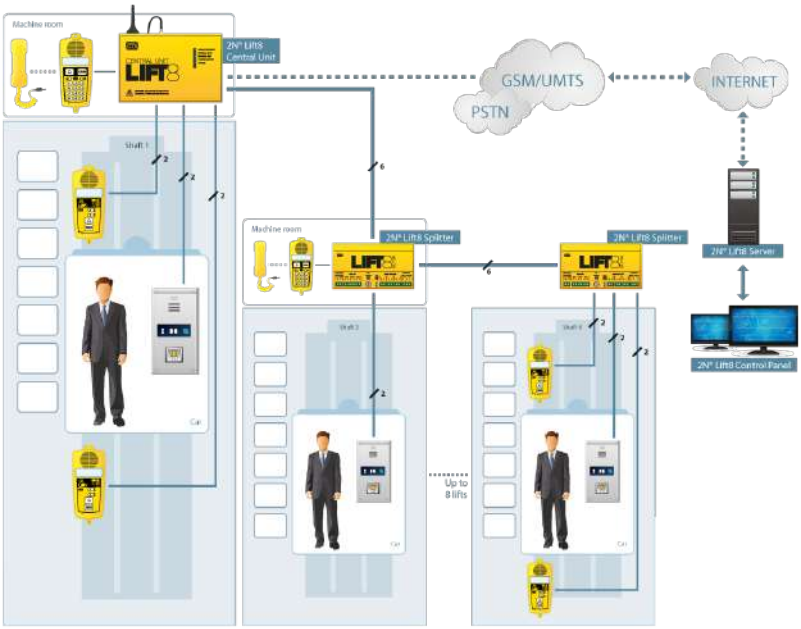
Induction loop

Part No., Name	Description
919621E Induction loop	• Provides lift communication to deaf people • 4m antenna for a good cabin signal, included in the package

Associated 2N Products

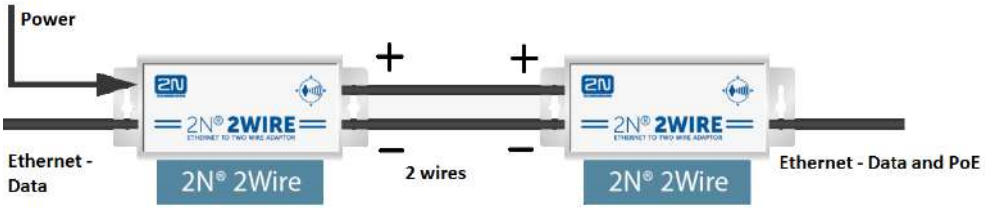
918xxx 2N® Lift8 system:

- Up to 8 lift connectivity
- Cabin, shaft and machine room audio units
- In-built backup rechargeable battery
- Easy control and configuration – voice menu
- Check call function
- Lift blocking option during connection error
- Internal communication – Triphony
- Configuration via phone or PC (USB/Internet)
- USB interface
- User message recording option
- Local control option (InterCom)
- Fireman function


Machine room
2N® Lift8
Central Unit
GSM/UMTS
PSTN
INTERNET
Shaft 1
Machine room
2N® Lift8 Splitter
2N® Lift8 Splitter
2N® Lift8 Server
2N® Lift8 Control Panel
Up to
8 lifts

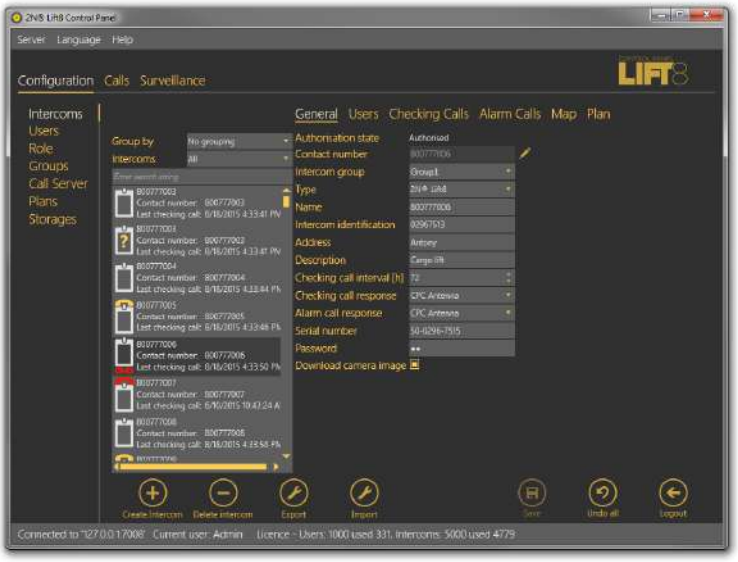
9159014 – 2N® 2Wire

- Analogue 2-wire cables can be used for IP intercom connection including PoE supply.



Cooperating 2N® Applications

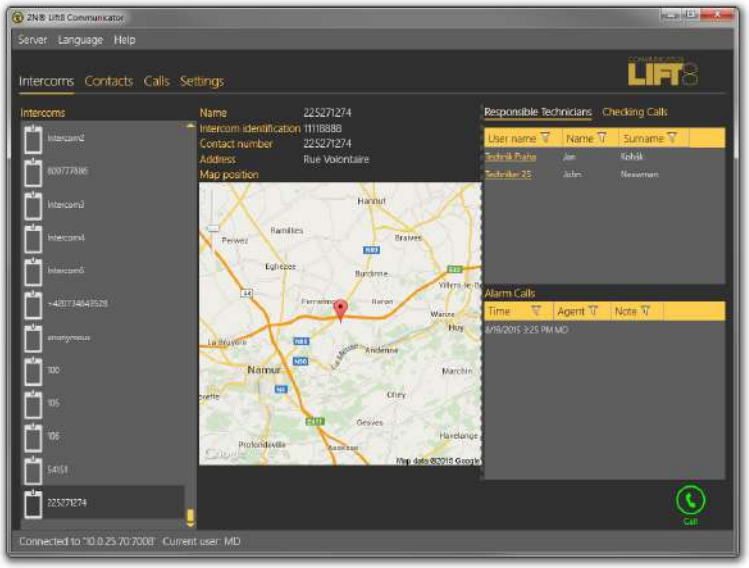
918700E 2N® Lift8 Control Panel



2N® Lift8 Control Panel

The **2N® Control Panel** application is designed for management of users, lifts and rights.

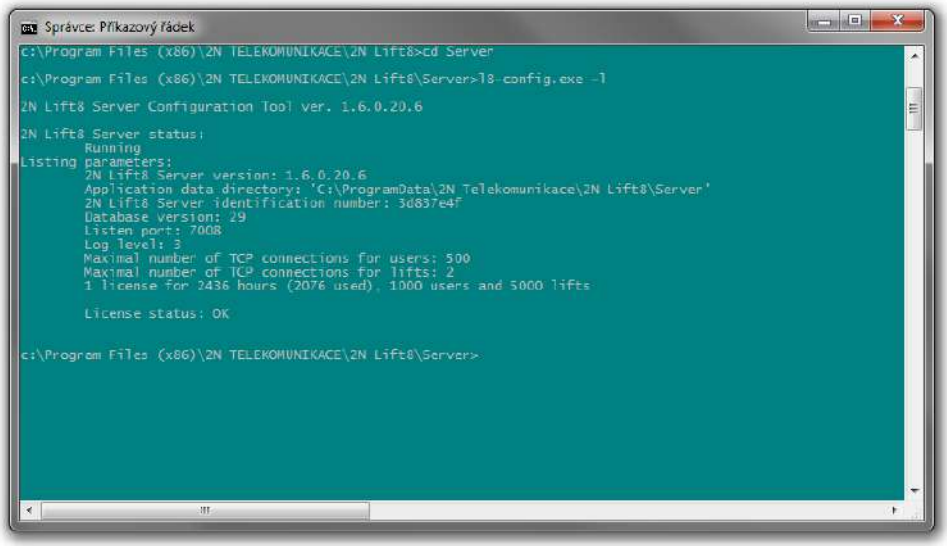
918700E 2N® Lift8 Communicator



2N® Lift8 Communicator

The **2N® Lift8 Communicator** is designed for receiving alarm calls by the control centre.

918700E 2N® Lift8 Server



2N® Lift8 Server

The **2N® Lift8 Server** application processes check calls and mediates communication between the Central Units and PC applications.

1.3 Upgrade

The manufacturer reserves the right to modify the product in order to improve its qualities.

Manual version	Description of changes
1.0	• First product/manual version
2.3	• Direct SIP (calling without Proxy server) • Events (jammed button, rescue end, audio error)
2.4	• IP camera and video call support (H.264) • Protocol logs (SIP, RTSP) • IO extender • Voice Alarm Station
2.5	• LiftIP restart via Service Tool • Audio unit audio test change • New parameter 987 (LED signalling according to EN81-28) • New parameter 810 (Checking call timeout) • New parameter 811 (Manual checking call activation) • New parameter 990 (Enable operational calls at events) • New parameter 963 (Minimum button pressing time to trigger forced/test alarm)

Caution

- The manufacturer keeps upgrading the software according to the customers' needs. The latest firmware version for the **2N® LiftIP software** and the User Manual are available at www.2n.cz.
- Refer to the Service Tool section for the **2N® LiftIP** firmware upgrade details.

1.4 Terms and Symbols

The following symbols and pictograms are used in the manual:

Safety

- **Always abide** by this information to prevent persons from injury.

Warning

- **Always abide** by this information to prevent damage to the device.

Caution

- **Important information** for system functionality.

Tip

- **Useful information** for quick and efficient functionality.

Note

- Routines or advice for efficient use of the device.

2. Description and Installation

In this section, we describe the **2N® LiftIP** product and its installation.

Here is what you can find in this section:

- 2.1 Product Description
- 2.2 Before You Start
- 2.3 Mounting
- 2.4 Connection
- 2.5 Description of LEDs, Terminals, Jumpers and Connectors
- 2.6 System Voice Menu
- 2.7 Voice Alarm Station
- 2.8 IO Extender

2.1 Product Description

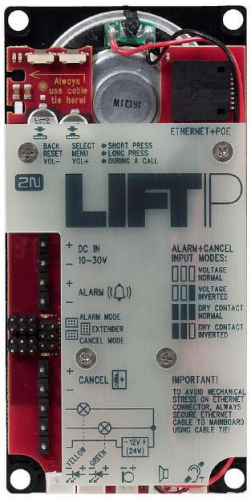
2N® LiftIP is a Speakerphone on principle. It is equipped with a microphone, speaker and RJ-45 Ethernet port. Moreover, it contains power supply terminals, ALARM button, illuminated pictograms (device states according to standard requirements) and CANCEL input (optional cabin door opening signal).

Operation

Activate the ALARM button. The **Wait** pictogram starts shining immediately; the **Connection established** pictogram starts shining when communication has been established.

Universal Design

The electronics board is located between the mounting panel and the instruction-printed cover (see the figure). The total dimensions are 65 (W) × 130 (H) × 24 (D) mm. The speaker and microphone are mounted on the panel. The slide-on terminals included in the delivery are connected to the left. The small connectors in the lower part are intended for induction loops (for deaf people) and LED indicators. Illuminated pictograms/icons (even with bulbs) can easily be connected to the device. The pictograms and the ALARM button are not included in the delivery as they are lift design elements.



2N® LiftIP

2.2 Before You Start

Product Completeness Check – Universal Design

Check before installation whether the product package includes the following:

- motherboard,
- 4 terminals (line, ALARM, CANCEL, pictograms) slid to the left,
- 6 jumpers (2 x 3) inserted on the jumper link for ALARM and CANCEL setting,
- speaker and microphone (plus an additional cable microphone if required by the client),
- Brief manual (printed),
- Download the Service Tool from www.2n.com.

2N® LiftIP Installation Conditions

- **2N® LiftIP** is not intended for outdoor applications.
- The product is connected to the LAN.
- The covering against mechanical damage, water, dust and other influences must be provided by the installing company if necessary.
- The communicator mounting surface must be perfectly flat, for details see Section 2.3 Montáž.

Tip

- The green Ethernet port LED starts flashing on LiftIP to indicate that the LAN and power supply/PoE have been connected.

- Once connected, LiftIP gets the IP address from the DHCP server.
- The Service Tool is equipped with a scan function that finds the LiftIP products in the LAN.

Universal Design

- Make sure that the lift panel is ready for **2N® LiftIP** mounting.

2.3 Mounting

Safety Precautions

⚠ Caution

- Make sure that the position, appearance and marking of the communicator controls (ALARM button, e.g.) are in accordance with the applicable lift standards.

Before You Start

Installation Conditions

- Make sure that the lift panel is ready for installation, including speaker perforation.
- Make sure that the panel includes the required elements:
  - ALARM button;
  - illuminated pictogram **Request received**;
  - illuminated pictogram **Connection established**.
- Make sure that the positions of these pictograms are in accordance with the applicable regulations.
- Make sure that there is a free space of 65 (W) x 130 (H) x 25 (D) mm at least behind the panel.

2N® LiftIP Position

2N® LiftIP can be mounted in any position as required. The optimum position for **2N® LiftIP** is approximately on the level of an adult‘s mouth. Install **2N® LiftIP** on a place where any contact of the operating personnel with the device is eliminated (refer to Safety Precautions).

⚠ Caution

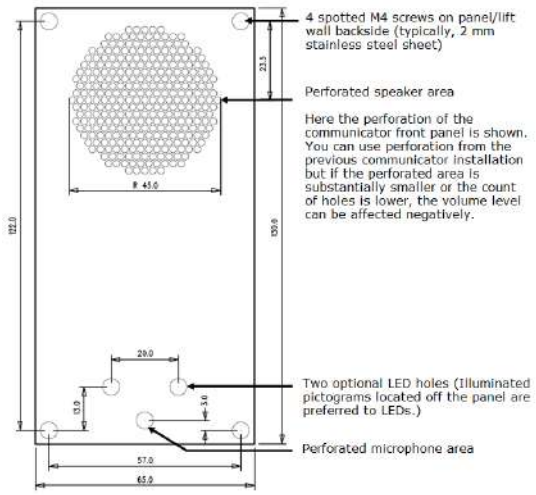
- Installing electronics without the mounting panel is not recommended as the panel is used as electric insulation and the manufacturer cannot guarantee safety if the panel is not used.

2N® LiftIP Electronics Panel Mounting

What you need to mount the electronics panel onto the lift button panel:

- four 57 (W) × 122 (H) mm spot-welded M4 screws;
- sufficiently perforated speaker area (may be larger than as shown in the figure but **may never exceed the panel size** to avoid acoustic fault);
- microphone hole;
- two LED holes if necessary.

Mounting Drawing for 50 mm Speaker Installation



If you use other than the prescribed screws, make sure that the isolation distance between the electronics and substandard fitting elements is 2 mm at least. Make sure that the panel is fitted perfectly to avoid resonance during operation. There may be no gap between the lift button panel and the **2N® LiftIP** panel, or the gap must be sealed properly to eliminate acoustic fault of the speaker and acoustic feedback between the speaker and microphone (see below).

⚠ Caution

- Make sure that microphone hole is sealed properly to record only sounds from the cabin instead of the noise from the shaft or space behind the panel.

Off-Panel Microphone Mounting

By default, the microphone is mounted directly on the **2N® LiftIP** printed circuit (see the drawing for its position). If required, the microphone can be supplied with a cable mounted on a 25mm diameter holder with self-adhesive foil. This allows you to mount the microphone behind any lift button panel hole of the minimum diameter of 3 mm or a group of holes of the same total area.

Switching to an external microphone is automatic (its connection is detected). **The minimum centre-to-centre distance between the speaker and microphone is 90 mm**. A shorter distance may result in acoustic feedback. A longer distance does not matter.

Warning

- Always make sure that the microphone hole is sealed properly against noise from the gap between the lift cabin wall and mounting panel. The microphone should record sounds from the cabin instead of noise from the shaft or the space behind the panel where **2N® LiftIP** is installed !

Off-Panel Speaker Mounting

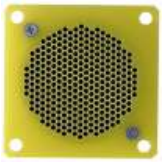
By default, the speaker is mounted on a panel and equipped with a 1m cable. You can also remove the speaker from its panel bed and place it separately. By default, the speaker is mounted on a panel and equipped with a 1m cable for additional amplifier installation. You can also remove the speaker from its panel bed and place it separately. **In that case, respect the electric safety precautions, see below!**

Caution

- Installing the speaker separately, make sure that the grid does not surpass the speaker dimensions in any case to eliminate the acoustic fault between the speaker front and back sides!

Accident Risk

- Mount the 50mm speaker on an insulating (non-metallic) surface only or require an external panel (not included in the delivery), see the figure below.



Caution

- We do not recommend you to install the microphone and speaker on completely different cabin sites (ceiling and wall, e.g.) as the users should find the speaker (grid/perforation) easily and then speak into the microphone near it.

Caution

- You are recommended to turn down the speaker volume to minimise the microphone-speaker feedback (echo).

How to Achieve Ideal Acoustic Properties

To ensure the minimum acoustic pressure according to the EN 81-28:2015 standard requirements, the holes in the communicator speaker covering panel should occupy 20 % of the speaker area at least and be placed above the speaker.

Make sure that the speaker and the microphone fit tightly to the covering panel. If this is impossible due to panel surface unevenness, we recommend you to seal the speaker to avoid speaker sound leakage into the space behind the panel. A correct microphone installation is crucial for high-quality audio transmission and good intelligibility.

Try to minimise the acoustic feedback between the speaker and the microphone during installation.

Indicator Mounting

There are three types of **2N® LiftIP** state indicators:

1. Illuminated pictograms are part of the cabin control panel.
2. LEDs directly on the **2N® LiftIP** electronics plus optional light guides conducting light to two panel holes.
3. Two optional LEDs can be connected to **2N® LiftIP** via a cable.

Note

- Make sure that your indicators comply with the applicable legal regulations. However, no indicators are necessary for the **2N® LiftIP** communication.

2.4 Connection

2N® LiftIP Connection

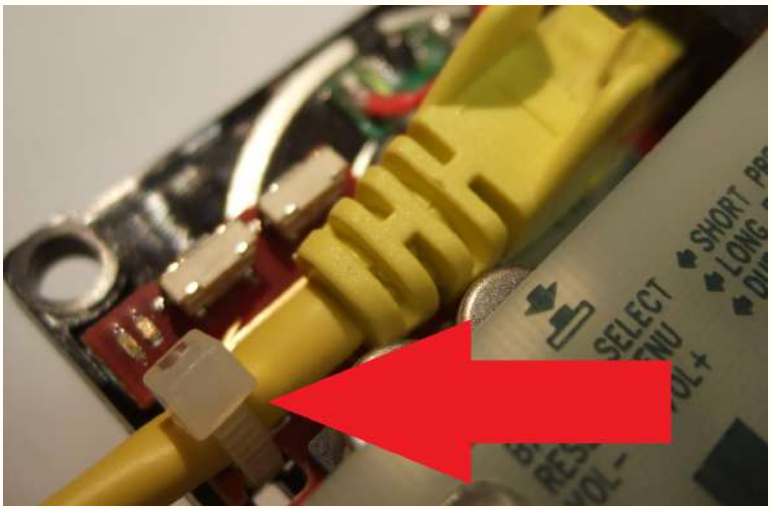
2N® LiftIP is connected to the LAN via a Cat 5e or higher UTP/STP cable terminated with an RJ-45 LAN connector. **2N® LiftIP** can be fed via PoE or an external DC 10–30 V 0.5 A power supply. Once connected, **2N® LiftIP** gets the IP address from the DHCP server. To know the IP address, enter the system voice menu and press and hold the upper MENU button for a long time (see the cover print).

Or, use the **2N® LiftIP Service Tool** application including the network scanner. Refer to Subs. 5.3 Service Tool – Use for details.

Having set the VoIP parameters (SIP server, username, password, etc.) via the Service Tool, you can call **2N® LiftIP** and set additional parameters remotely. **2N® LiftIP** receives DTMF via RFC-2833 by default, or you can set the detector to in-band (parameter 1108, via the Service Tool only).

Caution

- Fit the Ethernet cable to the motherboard using a cable tie to prevent mechanical stress of the connector.



ALARM Connection – Contact Control

Accident Risk

- The button must be safe: make sure that the button contacts are not connected to any other circuits. If these conditions cannot be met, use voltage control.

- Connect the button contacts to the ALARM terminal. ALARM is set to normally open (N/O) by default (all jumpers on).
- The button contact can be both N/O and N/C. Slide the right jumper out for N/C.

- Use jumpers for configuration. The jumper link is below the ALARM terminal.

ALARM Connection – Voltage Control

Tip

- DC voltage ranging from 5 to 48 V can be used. Make sure that the power supply is backed up against power outage.

- Voltage is connected/disconnected for activation/deactivation. ALARM is set to N/O by default.
- Slide all the jumpers off the configuration jumper link to control ALARM by voltage connection.

- Keep only the right jumper on to control ALARM by voltage disconnection.
- Use jumpers for configuration. The jumper link is below the ALARM terminal.

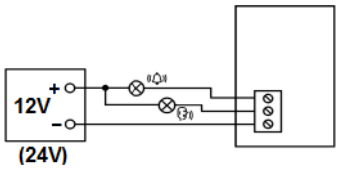
Warning

- Keep polarity (see the cover print).

Indicator Connection

Basic connection

You can use any indicators (illuminated pictograms, e.g.) for basic connection. An external power supply provides a sufficient indicator brightness level. As **2N® LiftIP** contains only switches, connect a circuit for current limitation if necessary, even if LEDs are used.



Requirements

- 12–24 V supply (backed up if the indicators should work at power outage).
- 200 mA permanent current (even with bulbs).
- Make sure that both the indicators are connected!

Warning

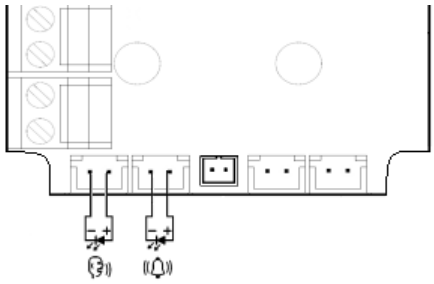
- Keep the power supply polarity!

Use of LEDs mounted on 2N® LiftIP electronics

Do not connect anything in this case. Light guides are used for this purpose to bring light to the two panel holes (refer to Subs. 2.3 **2N® LiftIP** Electronics Panel Mounting). Light guides are not included in the standard accessories.

Cable connected LEDs

Cable connected LEDs are used where illuminated pictograms are unavailable. They are not included in the standard accessories, but supplied separately or as part of customer deliveries. These LEDs are 5 mm in diameter and feature a very high luminosity.



Requirements

- Keep the LED polarity (see the cover print).
- Keep the colours: request confirmation – yellow, connection confirmation – green.

Note

- The printed circuit LED is off in this type of connection.

CANCEL Connection (Door Contact, Optional)

Caution

- Make sure that the door switch or door opening signal indicates that the door is open only if both the internal and external lift doors are open and the people can leave the cabin.

Note

- Using the CANCEL input, program parameter 914 to a time value longer than the maximum lift travel time (i.e. the closed door time). If parameter 914 is set to 0, the CANCEL connection is meaningless and thus needless.

Switch control

- Connect the switch to the CANCEL terminal.
- **2N® LiftIP** is set to N/O contact control by default. All the jumpers are on the jumper link.
- CANCEL can be set as N/C too. Slide out the right jumper for N/C.

Voltage control

DC voltage ranging from 5 to 48 V can be used.

- Slide all the jumpers off the configuration jumper link to control CANCEL by voltage connection.
- Keep only the right jumper on to control CANCEL by voltage disconnection.

Caution

- If voltage presence signals a **closed** door, make sure that the power supply is backed up against power outage.

Warning

- Keep polarity (see the cover print).

Induction Loop Connection

Abide by the applicable regulations that may require induction loop installation as a communicator installation requisite. Connect the induction loop to the LiftIP back connector. Polarity is arbitrary. The induction loop can be part of the delivery including a 4 m cable if agreed so.

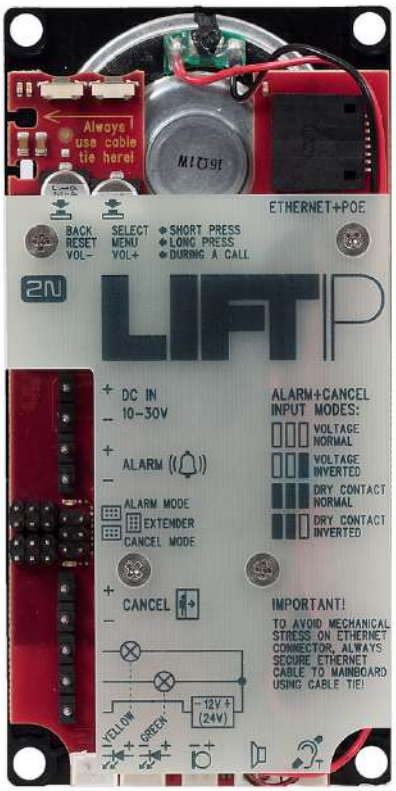
Requirements

- We recommend you to install the induction loop behind a non-metallic, non-magnetic cover to avoid deterioration of the induction loop field radiation.
- Make sure that the induction loop is marked with an appropriate symbol (ear) and its position complies with the applicable standards.

2.5 Description of LEDs, Terminals, Jumpers and Connectors

Description of Terminals, Jumpers and Connectors

Description of terminals

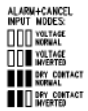
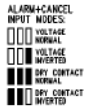


Note

- You can access the terminals without removing the cover.

Description of terminals and connectors

ETHERNET (PoE)	RJ-45 LAN connector (PoE 802.3af)		
DC IN 10–30 V terminal	External power supply (unless PoE is available)	DC 10–30 V 0.5 A	

ALARM terminal	Voltage control	5–48 V DC connection	Use jumpers for configuration. The jumper link is below the ALARM terminal. Voltage connection control: no jumper mounted. Voltage disconnection control: right jumper mounted. N/O contact: all jumpers mounted. N/C contact: left and middle jumpers mounted.	
	Voltage control (inverted)	5–48 V DC disconnection		
	Contact control (N/O)	N/O contact		
	Contact control (N/C)	N/C contact		
CANCEL terminal	Voltage control	5–48 V DC connection	Use jumpers for configuration. The jumper link is above the CANCEL terminal. Voltage connection control: no jumper mounted. Voltage disconnection control: right jumper mounted. N/O contact: all jumpers mounted. N/C contact: left and middle jumpers mounted.	
	Voltage control (inverted)	5–48 V DC disconnection		
	Contact control (N/O)	N/O contact		
	Contact control (N/C)	N/C contact		
Extender (6-pin connector)		Used for Voice Alarm Station connection.		
Indicator connecting terminals		DC 12–24 V / 2× 200 mA externally supplied indicators; keep the wiring diagram.		

<table>
<tr><td colspan="2">“Establishing connection” LED connector</td><td>Yellow</td><td rowspan="2">The LEDs are not included in the standard delivery (excluding the cable version).
By connecting an external LED you will not deactivate the LED on the board.</td></tr>
<tr><td colspan="2">“Connection established” LED connector</td><td>Green</td></tr>
<tr><td colspan="2">External microphone connector</td><td colspan="2">When an external electret microphone (supplied upon request) is connected, the in-built microphone will be disconnected automatically.</td></tr>
<tr><td colspan="2">Speaker connector</td><td colspan="2">The speaker is connected in the standard delivery.</td></tr>
<tr><td colspan="2">Induction loop connector
(optional)</td><td colspan="2">The induction loop is not part of the standard delivery. Install the induction loop behind a non-conductive and non-magnetic cover. Polarity does not matter.
Notes:
If mounted behind a non-conductive and non-magnetic cover, the speaker itself works as an induction loop.
The output is short-circuit resistant. The output power is limited by a resistor.</td></tr>
<tr><td>Button</td><td>BACK, RESET, VOL -</td><td colspan="2">Short press (BACK) – quit the system voice menu
Long press (RESET) – reset the device in approx. 10 s
During a call (VOL -) – decrease the speaker volume</td></tr>
<tr><td>Button</td><td>SELECT, MENU, VOL +</td><td colspan="2">Short press (SELECT) – confirm a selection in the system voice menu (Enter)
Long press (MENU) – enter the system voice menu
During a call (VOL +) – increase the speaker volume</td></tr>
</table>

Warning

- Keep polarity for voltage-controlled ALARM and CANCEL buttons (see the instructions on the cover).

Caution

- You are recommended to turn down the speaker volume to minimise the microphone-speaker feedback (echo).

LED Functions (Back)

State	Red	Yellow	
System at relax	x	x	
Call in progress	x	illuminated	
Audio test / System menu	x	flashing	
Error (to be solved)	flashing	x	
Error (not to be solved by user)	illuminated	x	
Enter system menu (voice menu missing)	flashing 3 times	x	
State (start or upgrade)			
Upgrade package check	x	flashing	
Bootloader	illuminated	illuminated	
Upgrade bootloader	illuminated	flashing	
Upgrade in progress	flashing	flashing	alternately

State	Blue
ALARM activation	illuminated

State	Blue
CANCEL activation	illuminated

Note

- The LEDs are on the LiftIP audio unit back side.

LED Functions (Front – during call)

Colour	Function
Yellow	Establishing connection
Green	Connection established

Note

- The LEDs are on the LiftIP audio unit front side.
- External LEDs can be connected too (Establishing connection, Connection established).

2.6 System Voice Menu

System Voice Menu

Press the MENU/SELECT button for 3 s to enter the system voice menu. The device starts playing the following message: “System voice menu. Press BACK to quit the menu.” If an error is detected, the error number is played. Then, the current IP address and DHCP are read and the factory reset can be performed.

The menu starts playing the following information:

1. If an error is detected: “Warning, the device is not working correctly! Error number ...”.
2. “The IP address is x.x.x.x”.
3. “DHCP is on/off, press SELECT to change the DHCP settings”. If SELECT is not pressed, you will proceed to the next setting.
4. “Press SELECT to restore the factory settings”. If SELECT is not pressed, you will quit the voice menu.

Error number	Error type
1.	Disconnected from network – link layer inactive

Error number	Error type
2.	Link layer active – no IP address assigned
3.	No SIP Proxy registration
4.	System error – upgrade required
5.	One or more mandatory parameters missing for correct function (no alarm number completed)
6.	No check call made
7.	Speaker test (audio test)
8.	Lift8 server registration error
9.	Stuck button

Caution

- Do not press the SELECT button to enable/disable DHCP or restore the factory settings until you have read the whole message.
- By restoring the factory settings you delete parameters 1100–1110.

Note

Error detection

- 15 seconds to get the link
- 30 seconds to get the IP address
- 60 seconds to connect to the SIP Proxy / Lift8 server

2.7 Voice Alarm Station

Description

The **2N® Voice Alarm Station** is a switch that helps you extend **2N® LiftIP** with one or more audio units installed on the cabin roof and under the cabin.

Operation

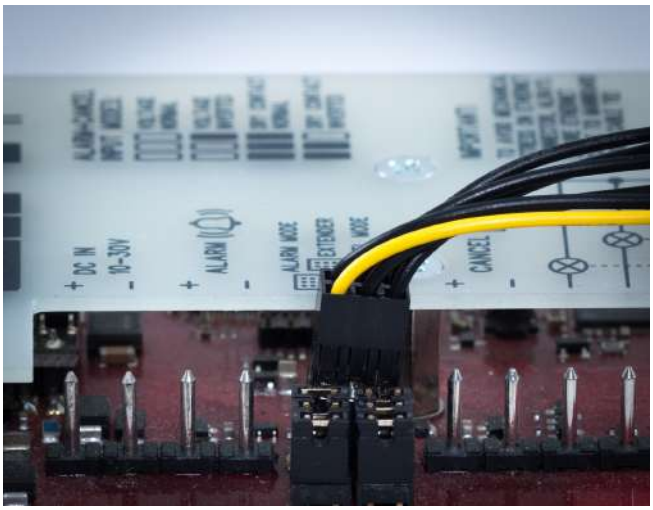
Push Press to call for activation. A call is set up to the number set in **2N® LiftIP** (ALARM button memory 011 to 016).

Caution

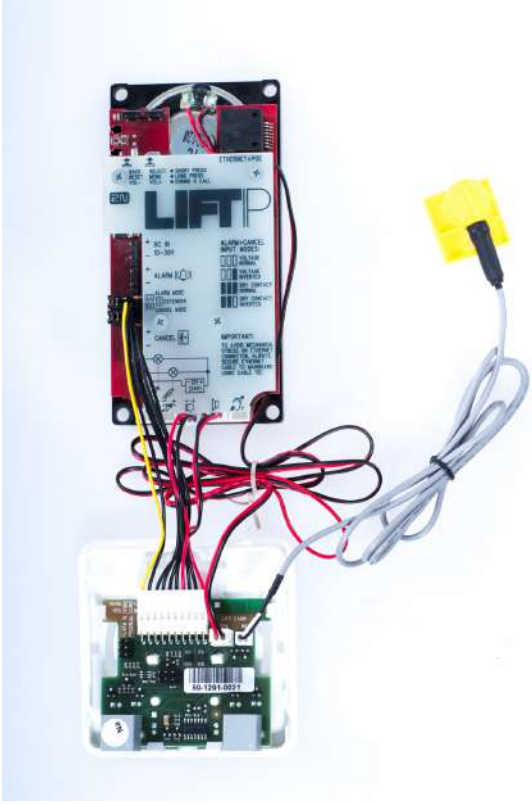
- The audio unit does not contain any call setup LED indicator. A LED is shining on the **2N® LiftIP** audio unit to indicate call setup and connection confirmation.
- You have to wait for approx. 30 s before setting up a call from another audio unit. The switch remembers the last calling audio unit and an alarm call is set up from this last calling audio unit within 30 s.

Mounting

Mount the interconnecting cable connector on the **2N® LiftIP** extender jumper.



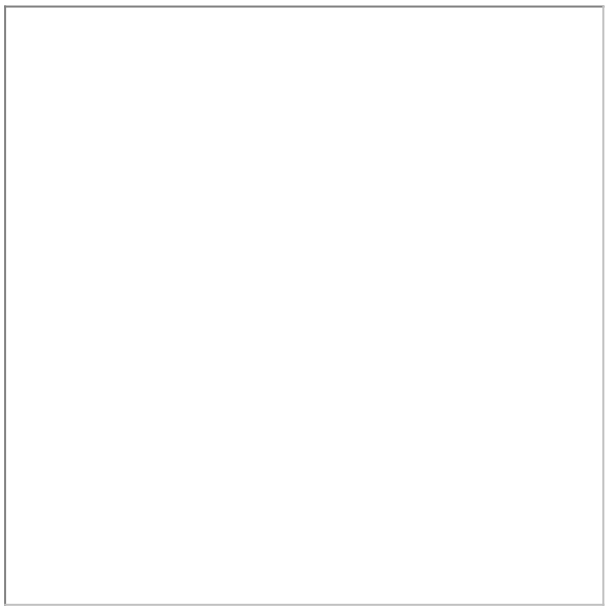
Disconnect the speaker and microphone (external microphone if available).
Connect the cable connectors from the package to the **2N® LiftIP** microphone and speaker connectors (these connectors cannot be confused as they have different sizes and pictograms).



Warning

- Disconnect LiftIP from the power supply while connecting the IO extender (DC 10–30 V or PoE).
- Make sure that all the pins are inserted in the 6-pin connector correctly.
- Keep the correct connector wiring (yellow wire - see the figure below).
- Wrong wiring may lead to a module damage.

Remove the cover from the switch. Interconnect the switch and the **2N® LiftIP** audio unit with the cable enclosed.



Connect the microphone and speaker from **2N® LiftIP** in the switch. The speaker and microphone connectors are properly marked (SPK and MIC). Pull the cables through the holes.

Caution

- If you use the cable version of **2N® LiftIP**, then insert the cabled microphone in the switch MIC connector. Otherwise, this connector remains unoccupied.

Break out the cable holes on the switch upper cover. Then replace the switch cover. Use 2 RJ-12 audio unit connectors on the switch side to interconnect the audio unit and the switch using the cable included in the audio unit package.

Dimensions

Audio unit – Voice alarm station: 225 x 87 x 67 mm

Switch: 81 x 81 x 30 mm

2.8 IO Extender

Description

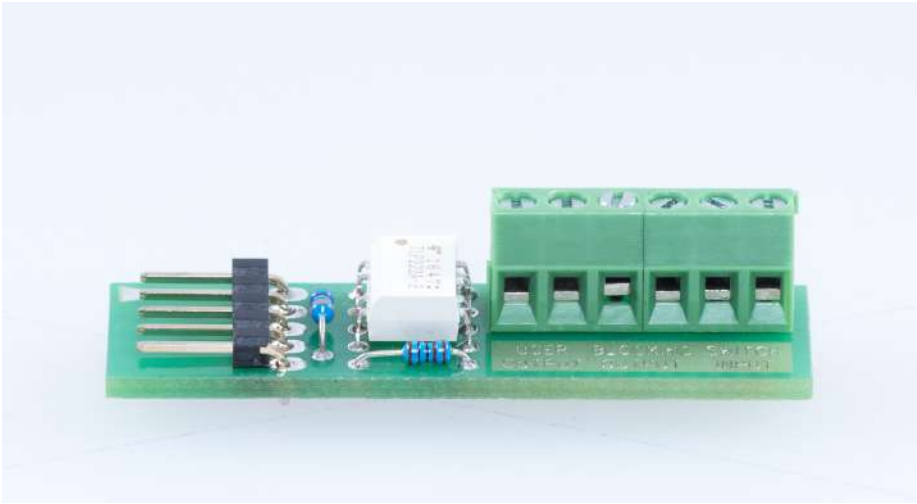
The IO extender helps you extend **2N® LiftIP** to include 1 input and 2 outputs.
The input is used for rescue mode termination (as set in parameter 966–1 or 3) and ALARM 2 call setup. The input is N/O contact controlled.

- A short press (approx. 100 ms) sets up a call to the phone number set in parameters 021–026.

- A long press (approx. 3 s) cancels the rescue process.

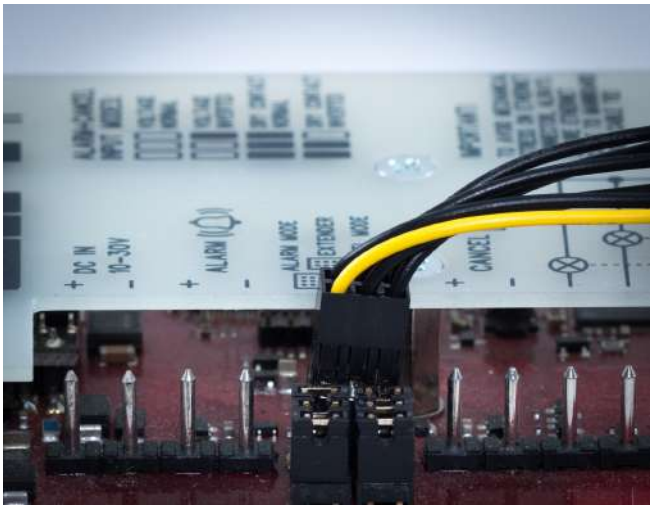
The Blocking output closes if **2N® LiftIP** cannot set up an alarm call (due to an absence of Proxy registration or no number in the Alarm button memory).

The User output is not used for the time being.

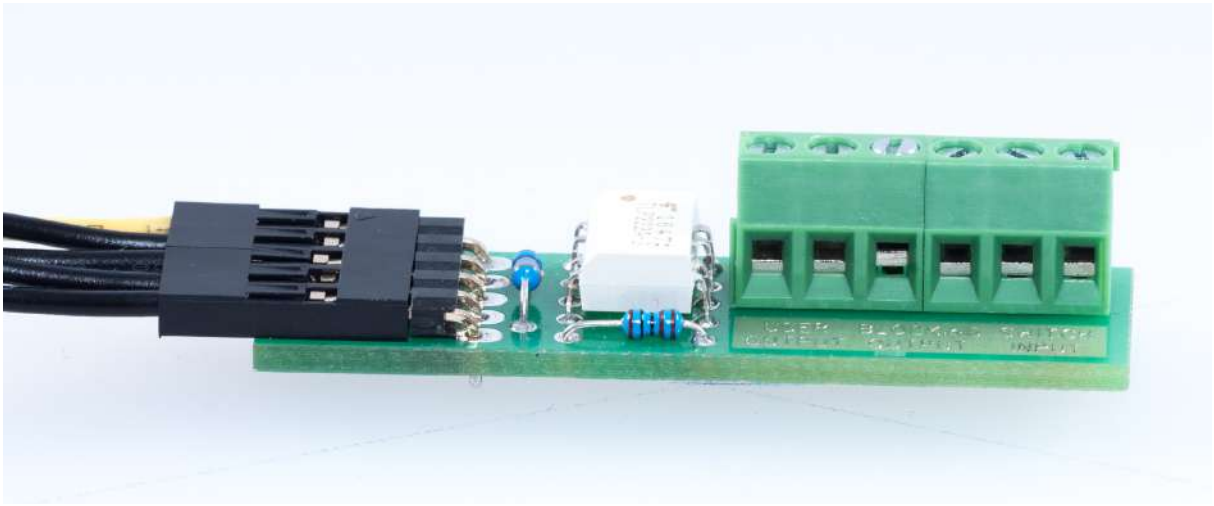


Connection

Connect the IO extender to the Extender connector (refer to Subs. 2.5). The Voice Alarm Station (VAS) can also be connected to this connector.



Interconnect **2N® LiftIP** and the IO extender using a cable (see the figure below).



User output	Blocking output	Switch input
Unused	Activated at lift blocking	N/O contact connection for rescue mode end

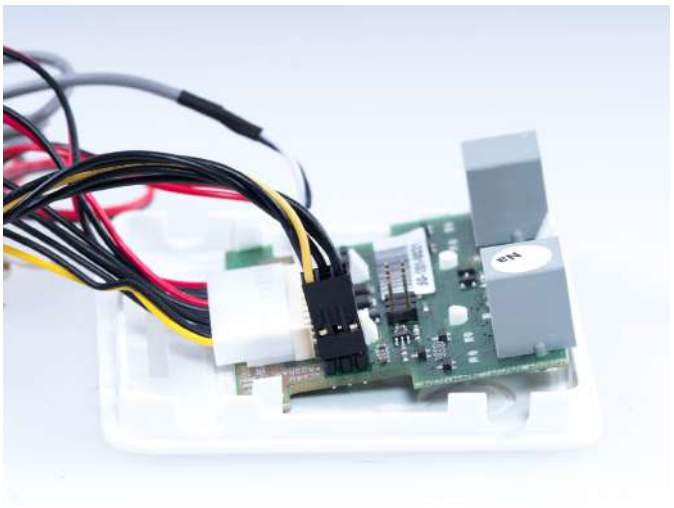
Warning

- Disconnect LiftIP from the power supply while connecting the IO extender (DC 10–30 V or PoE).
- Make sure that all the pins are inserted in the 6-pin connector correctly while connecting the IO extender.
- Keep the correct connector wiring (yellow wire - see the figure below).
- Wrong wiring may lead to a module damage.
- **Put the IO module in the attached insulation tube and tighten with cable ties** before installation to protect the circuits against short-circuit with other conductive objects!

Connection via Voice Alarm Station

You can also connect the IO extender via a Voice Alarm Station (VAS). Insert the VAS in the Extender connector (refer to Subs. 2.7 of the VAS manual).

Connect the IO extender to the VAS switch. Put the connector on the Alarm IN/Program jumper (see the figure below).



Warning

- Disconnect LiftIP from the power supply while connecting the IO extender (DC 10–30 V or PoE).
- Make sure that all the pins are inserted in the connector correctly while connecting the IO extender.
- Keep the correct connector wiring (yellow wire - see the figure below).
- Wrong wiring may lead to a module damage.

Technical Parameters

Input	
Input type	contact controlled, galvanically non-isolated

Warning

- Never connect any voltage sources to the input. You can only connect the N/O contact that is not connected to any other circuit.

Outputs	
Maximum load	60 V / 500 mA
Insulation strength	500 V

Outputs	
Output type	open at relax, galvanically isolated, can switch both voltage polarities

3. Configuration

In this section, we describe the **2N® LiftIP** configuration.

Here is what you can find in this section:

- 3.1 LiftIP Programming
- 3.2 Programming Function Overview
- 3.4 Used Ports
- 3.3 IP Camera Configuration

3.1 LiftIP Programming

Before You Start Programming

- Make sure that your phone supports tone dialling (some key phones and PBXs may have problems). By default, **2N® LiftIP** receives DTMF via RFC-2833 or in-band detector (set in-band in parameter 1108 via the Service Tool only).
- Complete all the values to be modified into a pre-prepared form, which provides a clear table of basic functions.
- If your **2N® LiftIP** is not brand new, make sure that you have the correct service password and, if you are not completely sure of your **2N® LiftIP** configuration, execute full initialisation (Warning: The service password will also be initialised!).
- There are two ways how to program **2N® LiftIP**: remotely via a phone (using the phone number) or via the Service Tool (using the IP address).

Access to Programming Mode

You can only enter the programming mode during an incoming call (to the LiftIP number).

Enter the programming mode via the voice menu (press 9 for administration; press 1 to enter the programming menu).

You will be asked to enter the service password in the following format: **service password** (remember to enter an asterisk behind the password).

If the password is correct, LiftIP announces: "**You have entered the programming mode, dial the service or parameter number.**"

The default password is 12345 and you are recommended to change the password to protect your device against unauthorised persons.

> **Note**
>
> - The default password is 12345 and you are recommended to change the password to protect your device against unauthorised persons.

- While entering the password, keep a timeout of 60 seconds (or any other value between 10 and 120) for each character to avoid **LiftIP** hang-up.

Programming Procedure

Having entered the programming mode, you can change any programmable value(s) in any order. Proceed as follows: enter the parameter (service) number and value. Use an asterisk as a separator or Enter. In general, the function has the following format:

parameter number * **value** *

The parameter number has three digits (see the table). After you enter the number and an asterisk,
2N® LiftIP reports the number, current value and potential range of the parameter to be programmed. After you enter the value and another asterisk, **2N® LiftIP** announces: “New value stored”, or “Invalid value, new value not stored” if the value is beyond the allowed range.

2N® LiftIP reads the parameter number and new value for checking purposes.

Caution

- A drawback of some phones is that they go “deaf” for a fraction of a second whenever you press a button (send DTMF). In that case, you cannot hear the whole text and are recommended to use another phone.

Programming Error

- If you mistype a digit while entering a function/value and find it before clicking the asterisk, press # to cancel the whole number and enter a new one.
- If **2N® LiftIP** rejects a parameter number or value, you can go on programming – re-enter the whole function number although you only typed a wrong value.
- If you have programmed and saved a wrong value, re-enter a correct value.

Programming End

- If you are calling **2N® LiftIP** via a phone number, hang up to quit programming.
- Press # to return to the preceding menu.

Tip

- If you are not quite sure of how **2N® LiftIP** will behave after programming, save the filled-in form for later check.

Programming via Service Tool

This is the easiest programming method. Use the application to get connected to the **2N® LiftIP** IP address.

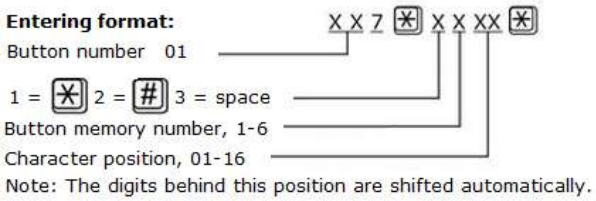
Refer to S. 5. Service Tool for Service Tool programming details.

3.2 Programming Function Overview

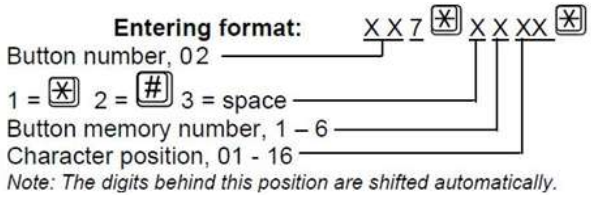
The tables below include all the programming functions.

Table of Parameters

Par. No.	Parameter name	Range of values	Default value	Note
011	ALARM button memory 1	up to 30 digits: 0–9	empty	Enter *, # and "**p**" for a 3-second pause via the Service Tool or using parameter 017. Direct SIP (calling without Proxy server) • enter the IP address and port (for Service Tool version 2.2.0 and higher) (e.g. 192.168.1.100:6655) • enter "**pp**" before the IP address and use * instead of "**.**" for earlier Service Tool versions. Enter # and the port number behind the IP address if necessary (pp192*168*1*100#6655)
012	ALARM button memory 2	up to 30 digits: 0–9	empty	
013	ALARM button memory 3	up to 30 digits: 0–9	empty	
014	ALARM button memory 4	up to 30 digits: 0–9	empty	
015	ALARM button memory 5	up to 30 digits: 0–9	empty	

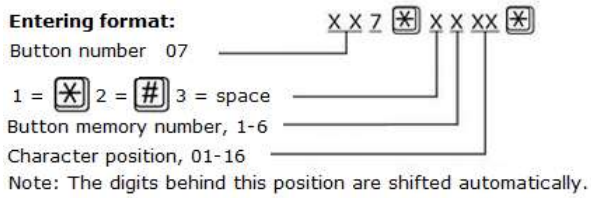
Par. No.	Parameter name	Range of values	Default value	Note
016	ALARM button memory 6	up to 30 digits: 0–9	empty	
017	Enter special character into alarm call memory			
018	Count of automatic dialling cycles for ALARM	0–9	3	If 0 is set, only the first number in the memory is called regardless of the count of stored numbers.

Par. No.	Parameter name	Range of values	Default value	Note
111 – 116	Set 1 - Alarm call memory 1–6 confirmation mode (set 1)	1–9	1	1 = with DTMF confirmation (1) 2 = with pick-up confirmation (for GSM/ UMTS/VoIP only) 3 = CPC Antenna 4 = CPC Kone 5 = P100 6 = DTMF auto detection (CPC Antenna/ P100) 7 = CPC Antenna 2N ext 8 = CPC Kone 2N ext 9 = P100 2N ext The 2N ext protocol transmits identification including the shaft number and audio unit position (for **2N Lift8** communicator display). Unless a troublefree DTMF transmission is secured, specify the protocol to be used (3 or 5) rather than set 6 for CPC Antenna/ P100 auto detection.

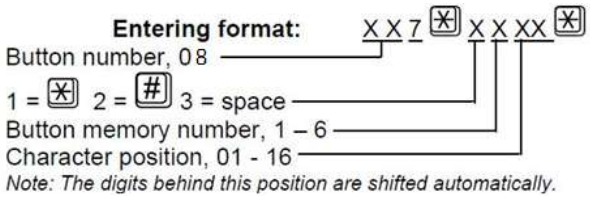
Par. No.	Parameter name	Range of values	Default value	Note
021	Set 2 – ALARM 2 button memory 1	up to 30 digits: 0–9		Entering characters *, # and **'p'** for a 1-second pause while programming is possible via a PC (use the **2N® Service Tool**). If the memory set 2 for **Alarm 2** is completely empty, no fall to the first memory set for **ALARM** occurs. The Alarm 2 button is on the IO extender.
022	Set 2 – ALARM 2 button memory 2	up to 30 digits: 0–9		
023	Set 2 – ALARM 2 button memory 3	up to 30 digits: 0–9		
024	Set 2 – ALARM 2 button memory 4	up to 30 digits: 0–9		
025	Set 2 – ALARM 2 button memory 5	up to 30 digits: 0–9		
026	Set 2 – ALARM 2 button memory 6	up to 30 digits: 0–9		
027	Insert specific character in ALARM 2 memory set 2			

Par. No.	Parameter name	Range of values	Default value	Note
028	Set 2 – count of automatic dialling cycles for ALARM	0–9		If 0 is configured, only the first number in the memory is called regardless of the count of saved numbers.

Par. No.	Parameter name	Range of values	Default value	Note
121 – 126	Set 2 – number 1-6 confirmation mode	1–6	1	1 = with confirmation DTMF (1), 2 = confirmation of picking up (supported only for GSM/UMTS/VoIP), 3 = CPC Antenna, 4= CPC KONE, 5 = P100, 6 = autodetection DTMF protocol (CPC Antenna/P100), If there is no guarantee of problem-free transfer of DTMF, do not set 6 for autodetection CPC Antenna/P100, but precisely specify the protocol to be used (3 or 5).
071	Check call memory 1	up to 30 digits: 0–9	empty	Enter , and "**p**"' for a 1-second pause while programming via a PC (use the Service Tool). Caution: Remember to set the check call number that routes the call to the **2N® Lift8 server**. With the fall to sets 011–016, the call may not be confirmed properly.
072	Check call memory 2	up to 30 digits: 0–9	empty	
073	Check call memory 3	up to 30 digits: 0–9	empty	
074	Check call memory 4	up to 30 digits: 0–9	empty	
075	Check call memory 5	up to 30 digits: 0–9	empty	
076	Check call memory 6	up to 30 digits: 0–9	empty	

Par. No.	Parameter name	Range of values	Default value	Note
077	Enter special character into check call memory			
078	Count of automatic dialling cycles for check calls	0–9	3	If 0 is set, only the first number in the memory is called regardless of the count of stored numbers.
171 – 176	Check call memory 1–6 confirmation mode	1–6	1	1 = with DTMF confirmation (1) 2 = with pick-up confirmation (for GSM/ UMTS/VoIP only) 3 = CPC Antenna 4 = CPC Kone 5 = P100 6 = DTMF auto detection (CPC Antenna/ P100) Unless a troublefree DTMF transmission is secured, specify the protocol to be used (3 or 5) rather than set 6 for CPC Antenna/ P100 auto detection.

Par. No.	Parameter name	Range of values	Default value	Note
081	Operational call memory 1	up to 30 digits: 0–9	empty	Enter , and “**p**“' for a 1-second pause while programming via a PC (use the Service Tool). Caution: Remember to set the operational call number that routes the call to the **2N® Lift8 server**. With the fall to sets 011–016, the call may not be confirmed properly.

Par. No.	Parameter name	Range of values	Default value	Note
082	Operational call memory 2	up to 30 digits: 0–9	empty	
083	Operational call memory 3	up to 30 digits: 0–9	empty	
084	Operational call memory 4	up to 30 digits: 0–9	empty	
085	Operational call memory 5	up to 30 digits: 0–9	empty	
086	Operational call memory 6	up to 30 digits: 0–9	empty	
087	Enter special character into Operational call memory	 *Note: The digits behind this position are shifted automatically.*		
088	Count of automatic dialling cycles for Operational call	0–9	3	

Par. No.	Parameter name	Range of values	Default value	Note
181 – 186	Operational call memory 1–6 confirmation mode	3–6	5	3 = CPC Antenna 4 = CPC Kone 5 = P100 6 = DTMF auto detection (CPC Antenna/ P100) 7 = CPC Antenna 2N Ext, 8 = CPC KONE 2N Ext, 9 = P100 2N Ext In version 2.4.0 and higher it is used for announcing new events (button repaired, audio repaired).
800	Time setting	hhmm		Read the current time; you can edit a new time value. *
801	Date settings	RRMMDD		Read the current date; you can edit a new date value. *
810	Next checking call timeout	hhmmss		The voice menu reads the value in the hours/minutes/seconds (hhhmmss) format. The value defines the next checking call timeout.
811	Manual checking call activation			Click * for confirmation after dialling the service. The checking call is set up the moment programming is completed.
890	CU restart			Re-enter the valid service password. *
898	Cancel work configuration			Cancel the changes made during this configuration call except for the date and time changes! Use an asterisk for confirmation. *

Par. No.	Parameter name	Range of values	Default value	Note
899	Full initialisation (including the service password!)			Enter the valid service password to avoid unintentional deletion in case of function number mistyping). * (Parameters 1100–1110 are not deleted during full initialisation).
912	Maximum call duration	15–990 s	120 s	Use the call extending command (DTMF 4 or *) to extend a call.
913	Login timeout	10–990 s	60 s	Set the maximum period of time for the control centre to answer the call and send confirmation, otherwise L1 hangs up and dials the next number. Counted from the end of dialling.
914	Delayed call	0–100 s	0 s	Applied only if the CANCEL input is connected.
961	Inter-digit timeout	5–120 s	10 s	During password entering
962	Minimum ALARM pressing time in cabin	100–9999 ms	5000 ms	Applies to the ALARM button and button 2.
963	Minimum button pressing time to trigger forced/test alarm	0–30 s	0 s	Set the minimum time in seconds for which the alarm button needs to be pressed to activate the forced/test alarm. This alarm bypasses the cancel contact status. 0 = disabled

Par. No.	Parameter name	Range of values	Default value	Note
965	Privacy mode	0–24 hours	0	Private mode allows muting of the microphone on the car unit **2N® LiftIP**. Possible setting of this parameter when the rescue mode is used are: 0 = Two-way audio is enabled when the rescue mode is active. 1–24 = Two-way audio is enabled when the rescue mode is active and during a time window after a successful alarm call. After this time, the microphone on the unit is muted. 25 = Two-way audio is always enabled.
973	Language for numeric announcements	0–1	1	0 = user recorded messages 1 = voice menu language The user recorded digits are played if parameters 975–979 or 971 are set to 11, 12 or 13.
974	Intercom Id	up to 16 digits: 0–9	empty	Lift identification if there is a foreigner in the lift.

Par. No.	Parameter name	Range of values	Default value	Note
975	Cabin announcement sequence (Alarm)	up to 10 announcements in succession	empty	Start announcements in multiple languages in a given order. The sequences can include such numeric data as lift number, etc. List of announcements: 01 = user message 1 02 = user message 2 03 = user message 3 04 = user message 4 05 = user message 5 06 = user message 6 07 = user message 7 08 = user message 8 09 = user message 9 10 = user message 10 11 = product number 12 = identification code (reads parameter 974 value) 14 = pause (2 s) 15 = (confirmation tone) **Caution** User messages **#1** through **#10** are recorded into the Central Unit via the Service Tools.

Par. No.	Parameter name	Range of values	Default value	Note
976	Message sequence for the control centre (before confirmation with 1)	up to 10 announcements in succession	empty	
977	Check call sequence	up to 10 announcements in succession	empty	
978	Message sequence after connection confirmation	up to 10 announcements in succession	empty	
979	Message sequence for the control centre after pressing 3 after call confirmation	up to 10 announcements in succession	empty	
971	Sequence for call end	up to 10 announcements in succession	empty	

Par. No.	Parameter name	Range of values	Default value	Note
981	Check call mode	0–6	0	0 = disabled 1 = enabled, first call in 3 minutes and then as set in parameter 983 2 = enabled, first call in 2 hours and then as set in parameter 983 3 = enabled, call as set in parameter 983 4 = enabled, call on the nearest day set in parameter 986 5 = enabled, first call in 3 minutes and then as set in parameter 986 6 = enabled, first call in 3 minutes and then as set by the server during the call
982	Check call interval	hhmmhhmm	00002359	Set announcements for lower traffic (lower tariff) time, generated at random in the set time interval.
983	Check call period	0–100 days	3 days	0 = disabled (setting of parameter 981 to 0 has the same effect). The value is applied if parameter 981 is set to 1–6.
986	Days of week for check calls	mtwtfss	0000000	Values for Mon, Tue, Wed, Thu, Fri, Sat, Sun: 0 = do not call 1 = call Example: 1000100 = the check call will be made on Mondays and Fridays.

Par. No.	Parameter name	Range of values	Default value	Note
987	LED signalling according to EN 81-28	0–1	1	Yellow LED permanently on during an Alarm Call. Yellow and green LED flashing alternately after an unsuccessful checking call.
990	Enable operational calls at events	xxxxxxx	0000000	The value sets whether or not the operational call shall be triggered at events. Each digit enables (1) or disables (0) calls at actions in the following order: Rescue end, Button stuck, Button unstuck, Audio error, Audio fixed. Do not use in combination with event scripts!
991	Service password	up to 16 digits: 0–9	12345	Change the default programming password for access to the programming mode via a voice menu and for full initialisation.
992	Rescue password	up to 16 digits: 0–9	empty	Set the rescue process terminating password.
993	Enable automatic audio unit test	0–1	0	0 = disabled 1 = carry out an audio test of the audio units after the check call.
1100	Enable DHCP client	0–1	1	The DHCP server assigns the following to the devices via DHCP: IP address, network mask, default gateway and the address of the DNS server.** 0 = disabled 1 = enabled
1101	IP address		empty	IP address assigned to the Ethernet interface (VoIP module). **

Par. No.	Parameter name	Range of values	Default value	Note
1102	Subnet mask		empty	Gives the subnet bit mask. **
1103	Default gateway		empty	Sets the IP address of the router or PC via which communication is made outside the internal network. **
1104	DNS server		empty	Represents the IP address of the DNS server. **
1105	SIP server		empty	Represents the IP address for login to the counterparty (PBX, operator). **
1106	User	up to 64 characters	empty	Represents the user name for login to the counterparty (PBX, operator). **
1107	Password	up to 32 characters	empty	Represents the password for login to the counterparty (PBX, operator). **
1108	Enable in-band DTMF detector	0–1	0	If you enable an in-band DTMF detector, all others DTMF detectors will be disabled.**
1109	SIP server port	1–65535	5060	Represents the PBX (operator) port via which the SIP Proxy communicates with the terminals connected. **
1110	Registration validity	0–3600 s	0 s	0 = registration validity not sent (assigned by the counterparty)**
1111	Authentication name		empty	Set the name used for authentication.
1112	Display name		empty	Set the name displayed on the peers device. Use #A to generate the calling unit address, #S to generate the calling unit shaft.
1113	Domain		empty	If the domain is not set, the registrar is used instead.

Par. No.	Parameter name	Range of values	Default value	Note
1114	Outgoing proxy		empty	Outgoing proxy address. The registrar address is used, if not set.
1115	Outgoing proxy port	1-65535	5060	Outgoing proxy port. The registrar port is used, if the outgoing proxy is not set.
1120	RTSP server		empty	IP camera RTSP address (H.264) (e.g. AXIS rtsp://192.168.1.100/onvif-media/media.amp)
1121	Username		empty	IP camera login user name
1122	Password		empty	IP camera login password
1150	Time zone	-12–12	1	Set the time zone (UTC) in which **2N® LiftIP** is installed.
1151	Synchronisation period	60–86400 s	3600 s	Set how often 2N® LiftIP shall synchronise with the SNTP server. **
1160	SNTP on	0–1	0	Enable SNTP synchronisation. ** 0 = disabled 1 = enabled
1161	SNTP server 1 address		212.51.144.44	**
1162	SNTP server 2 address		81.95.103.173	**
1230	Client enabled	0–1	0	Data client enable (refer to the **2N® Lift8** manual, Subs. 7.1 Control Panel) **
1231	Server IP address		empty	**2N® Lift8** server IP address **

Par. No.	Parameter name	Range of values	Default value	Note
1232	Server port	1–65535	7008	Represents the port via which the data client communicates. **

Par. No.	Parameter name	Range of values	Default value	Note
1234	Password			Make sure that the password matches the intercom password in the Control Panel. **

* This parameter can only be set via the voice menu (incoming call to **2N® LiftIP**).

** This parameter can only be set via the Service Tool.

> **Note**
>
> - Independent of power supply, the used memory is capable of keeping data for 10 years at least unless **2N® LiftIP** is damaged electrically.

3.4 Used Ports

Služba	Port	Protokol	Směr	Nastavitelné	Nastavení
RTP	9 000			ANO	
DHCP	68	UDP	In/Out	NE	
DNS	53	TCP/UDP	In/Out	NE	
2N® Service Tool	7 007				

3.3 IP Camera Configuration

From version 2.4 up, **2N® LiftIP** enables video to be transmitted from a properly configured camera during alarm calls. From the lift cabin, for example. Use parameters 1120–1122 for activation. The video signal is transmitted via the H.264 codec. The call is set up as an audio call first with a video option and, after confirmed by the counterparty, RTP gets reconfigured and video is retransmitted from the defined camera.

Make sure that such relevant video parameters as Payload type and Packetisation mode are set correctly for all the networks elements, i.e. camera, intercom, end terminal and SIP Proxy if necessary, to make the function work properly. The device only supports Packetisation mode 1!

Video stream settings:

- 1120 – enter the stream RTSP address from the selected IP camera (e.g. rtsp://10.0.25.215/onvif-media/media.amp).
- 1121 – set the user name for camera RTSP transmission authentication.

- 1122 – set the password for camera RTSP transmission authentication.

Some cameras do not allow video to be played until the user is authenticated; refer to parameters 1121 and 1122. You need not complete these parameters if you are equipped with a camera that enables stream without authentication.

Caution

- Make sure that the IP camera supports the H.264 codec.
- Make sure that the video call receiving phone supports the H.264 codec too.
- Make sure that the PBX supports the H.264 codec when calling via a SIP Proxy.

Tip

- Video calls have been tested with AXIS cameras (M1054, M3004).

4. Function and Use

This section describes the basic and advanced functions of the **2N® LiftIP** product.

Here is what you can find in this section:

- 4.1 Function Description
- 4.2 Control Centre Instructions
- 4.3 Call Confirmation Types
- 4.4 Audio Unit Audio Test
- 4.5 ALARM Button Test
- 4.6 Rescue Process Activation/End
- 4.7 CPC and P100 Protocols

4.1 Function Description

Purpose of Section

The purpose of this subsection is to facilitate troubleshooting. If the system does not work correctly and a well-trained technician can monitor its activities as instructed herein, discrepancies can be found easily. The technician can describe the discrepancy and substantially accelerate troubleshooting. This approach often reveals that the system works correctly but the user's expectations were rather different.

Outgoing Call

Press the ALARM button on the audio unit to start the process (use the CANCEL input to delay or block the call, refer to parameter 914). **2N® LiftIP** sets up a call with the control centre (see Automatic Dialling for details). **2N® LiftIP** plays "Wait please, connection is being made" to the person in the lift and "Press 1 for confirmation" to the control centre (if DTMF 1 confirmation is enabled). Be sure to confirm the call manually or automatically. The call is time limited ("Attention, the call is ending"), but can be extended. Refer to Control Centre Instructions for DTMF control details.

Check Call

A check call is an automatically made outgoing call (typically once in 3 days) whose purpose is to check the function of the **2N® LiftIP** system. Unlike common outgoing calls, check calls use different announcements ("Check call") and different phone number sets (refer to Subs. 3.2 Table of Parameters). Typically, check calls are received automatically if the control centre is equipped with the **2N Lift8** software. All you need to operate the program is a standard PC with a VoIP account.

⚠ Caution

- If the lift ID is also evaluated during the check call transmission, enter parameter 974 (for the CPC and P100 protocols).
- If the **check call** memory set is completely empty, the first **ALARM** memory set is used.

Warning

- If you use CPC or P100, remember to set the check call number that routes the call to the **2N® Lift8 server**. With the fall to sets 011–016, the call may not be confirmed and evaluated properly.

Caution

- A check call can be activated manually via parameter 811. The regular check call timing is not affected.

Operational Call

The operational call is an automatic call trigged by an event (Button stuck, Rescue end, Audio error). Set the operational call via the Service Tool Configuration – Events menu. Refer to Subs. 5.3 for details.

Operational calls can be set up via the CPC/P100 protocol only (OK operational calls via CPC 2N ext/P100 2N ext only).

Warning

- Remember to set the check call number that routes the call to the **2N® Lift8 server**. With the fall to sets 011–016, the call may not be confirmed and evaluated properly.

Tip

- For operational calls, select the CPC Antenna 2N ext, CPC KONE 2N ext and P100 2N ext protocols to enable OK status transmissions too (Button fixed, Audio fixed). The protocols that lack 2N Ext cannot be used for operational call setups.

Incoming Call

The control centre can also call the **2N® LiftIP** number. **2N® LiftIP** automatically answers every incoming call, identifies itself and lets you select another function via a voice menu (DISA). You can call an audio unit or enter the programming menu, for example. Like outgoing calls, incoming calls are time limited and equally controlled (extended, terminated).

Incoming calls provide the person trapped in the lift with necessary information (about rescue, e.g.) and check remotely whether **2N® LiftIP** is connected and works properly.

Welcome, this is communicator .....
Press 0 for connection with the audio unit
Press 9 for administration
• **Press 1 to enter the programming menu**
• **Press 2 to terminate the rescue process**
• **Press 3 for information on this communicator**
• **Pres # to return to the main menu**
Press # to terminate the call

Automatic Check Call Answering

A control centre with a PC equipped with the **2N Lift8** server answers and processes check calls automatically. Configure the server via the **2N Lift8** Control Panel.

Caution

- If the check call number is not completed (071–076), the call is set up to the numbers in memories 011–016. We recommend you to set the check call receiving number. If CPC/P100 were used and the call were directed to **2N® Lift8 Communicator**, the call would not be evaluated correctly.
- The operational call can only be set up via CPC or P100. If the number is not completed in memories 081–086, the call falls to the alarm numbers if the CPC/P100 confirmation code is used. **2N® Lift8 Communicator** cannot evaluate such calls.

Warning

- If the check call number is not completed, the call falls to the alarm numbers but may not be confirmed and evaluated correctly.
- If the operational call number is not completed, the call going to **2N® Lift8 Communicator** will be evaluated as an alarm call. Thus, be sure to set the number that routes the call to the **2N® Lift8 server** for proper evaluation and display in the **2N® Lift8 Control Panel.**

Tip

- Make sure that the alarm call number and check and operational call numbers are different.

Useless Startup Protection

As the only purpose of **2N® LiftIP** is to call help in case of emergency, any call made when the door is open is considered useless. Hence, connect the door contact if available to the **2N® LiftIP** CANCEL input and program a connection establishing delay for **2N® LiftIP** after ALARM pressing. In this case, if the ALARM button is pressed by mistake, the lift arrives in the next floor and the door opens thus cancelling the call. Or, you can set the minimum button pressing time to prevent unintentional ALARM pressing.

Call End (Outgoing/Incoming)

The call end (line hang-up) occurs whenever any of the below listed situations happens:

- the counterparty (control centre) hangs up;
- the maximum call time expires – **2N® LiftIP** plays “Attention, the call is ending" 10 seconds before expiration for you to extend the call if necessary.

- the * or 5 character is received;
- the time limit expires during programming.

4.2 Control Centre Instructions

DTMF Control during Call

Tone dialling can be used for **2N® LiftIP** control during calls as shown in the table below if Automatic dialling with confirmation is enabled. Commands 1 to 5 are arranged conveniently for typical use.

DTMF character	Function description
? Unknown Attachment	**Confirm** to **2N® LiftIP** that the call was successful. **2N® LiftIP** mutes the currently played announcement and sends its confirmation signal; the call goes on until the call time limit is exhausted and any of the following commands can be used.
3	**Play** information on the communicator (parameter 979).
4	**Extend the call** – extend the call by 120 s (parameter 912). Can be used repeatedly.
5 or #	**Terminate the call**.

The above table applies to Loud automatic dialling with confirmation.

List of 2N® LiftIP Announcements

Announcement	Meaning
“Please wait for connection”	The announcement is played to the lift user when the call is being set up (before confirmation).
“This is an emergency call, to confirm connection press 1”	The announcement is played to the control centre before call confirmation.
“Connection confirmed”	The announcement is played after call confirmation.
“This is communicator with ....”	The announcement is played only if the control centre presses DTMF 3 after call confirmation. The communicator sends information on its product number or Id if available (parameter 974).
“Attention, the call will end the soon, to extended the call press 4"	The announcement signals during an outgoing/ incoming call that the maximum call duration shall expire in 10 seconds.
“End of call”	The announcement is sent before hang-up.
“This is a checking call, to confirm connection press 1”	The announcement is sent to the control centre only (if DTMF 1 confirmation is enabled).
The rescue process has been completed.	Emergency signalling end confirmation

2N® LiftIP Identification

When the alarm call is confirmed, the control centre can press DTMF 3 to get the communicator serial number. The communicator Id is played if parameter 974 is completed. Relevant information can be obtained during an incoming call too (Press 9 for administration – Press 3 for information on this communicator).

4.3 Call Confirmation Types

These settings apply to the alarm, check and error reporting calls.

1. With DTMF Confirmation

You can store up to 6 phone numbers including redialling attempts for control centre calls. **2N® LiftIP** then tries to call the numbers one by one. **2N® LiftIP** uses DTMF as the most reliable confirmation method. The control centre presses button ? Unknown Attachment on its phone (in the tone dialling mode) during manual call answering. If the called number is busy or unanswered within a timeout or unconfirmed, **2N® LiftIP** dials the next number in the sequence until it exhausts the preset count of attempts for all the numbers stored. Check calls are made equally, yet a separate set of six numbers can be used.

Evaluation of Dialling with Confirmation Situations

Situation	2N® LiftIP activity
Call termination by the counterparty (Busy, Number not found, etc.)	Dials the next number immediately.
Call	Waits for a timeout (see parameter 913).
Ringing	Waits for a timeout (see parameter 913).
DTMF character 5 or #	Hangs up immediately and dials the next number.
DTMF character ? Unknown Attachment	Confirms the connection (“Connection confirmed"), mutes the announcement played and the call takes the maximum preset time (Maximum call time).
? Unknown Attachment 2 3 4 5	These digits are interpreted as control characters (refer to Subs. 4.2 DTMF Control during Call).

2. Confirmation by Off-Hook

This mode is useful where no trained personnel are available as the called person does not have to press any button. The two modes share a set of numbers, count of cycles and responses to dialling situations. The difference is that the no-confirmation mode recognises the ringing tone and if the tone ends before the preset count of rings, it means that the called user is off-hook

and this is considered a successful connection. The announcer **cannot** be controlled with buttons ? Unknown Attachment to 5 .

Evaluation of Loud Automatic Dialling without Confirmation Situations

Situation	2N® LiftIP activity
Call termination by the counterparty (Busy, Number not found, etc.)	Dials the next number immediately.
Call	Waits for a preset time (login timeout), then hangs up and dials the next number.
Ringing	Waits for a preset time (login timeout), then hangs up and dials the next number.

Warning

- Make sure before using this mode that no VoiceMail box, fax machine or any other device that could answer the call before the preset rings is installed on any of the numbers to be called to avoid automatic dialling termination.

3. and 4. CPC (Antenna and KONE)

Used wherever the counterparty is equipped with the required SW. When the line is answered, a DTMF string is sent and the lift is identified. The call is either switched to voice communication (alarm call) or confirmed automatically and terminated (check call).

5. P100

Used wherever the counterparty is equipped with the required SW. When the line is answered, a DTMF character is sent and the lift is identified. The call is either switched to voice communication (alarm call) or confirmed automatically and terminated (check call).

6. DTMF Protocol Auto Detection (CPC/P100)

When the DTMF string is sent, the lift identifies the protocol and responds accordingly.

Warning

- If, for example, the call is routed via GSM, **2N® LiftIP** may not detect the DTMF characters and identify the protocol.
- If this happens, we recommend you to change the CPC or P100 settings (3 or 5).

7., 8., 9. CPC (Antenna and KONE), P100 2N ext (for alarm calls only)

The protocols work as described in items 3 and 4 for CPC and item 5 for P100. The only difference is that the audio unit type is transmitted too. Used for alarm calls to the communicator only.

4.4 Audio Unit Audio Test

Use parameter 993 to enable the audio unit test after a check call. If the audio unit is OK, the next check call is made. If an error is detected during the audio test, the next check call is not made.

Note

- An error is detected if the audio test fails three times.
- The test is performed three times in 1-hour intervals.

Event after Audio Error

This event informs of an audio test failure. Set the event via the Service Tool Events – Audio error menu. Whenever the audio test is considered unsuccessful, the event is executed (an operational call is set up).

- Operational call – the call is set up to the number set in pars 081–088 (Operational call) and transmitted via CPC Antenna, CPC KONE or P100.

Warning

- The event is performed whenever the audio test fails three times.

From version 2.4.0 up, an event can be executed if the audio test is OK. The event related to an audio error (operational call) can be executed. Set the parameters via the Service Tool again (Configuration – Events – Stuck button).

Operational calls are possible with this event only if CPC Antenna/KONE and P100 2N Ext are set in parameters 181-186. Make sure that the settings match the Control Panel values. Be sure to set 2N Ext in the Control Panel for CPC Antenna 2N Ext. CPC KONE or P100 will do for the other protocols (CPC KONE 2N Ext, P100 2N Ext).

Parameter 990

From version 2.5.0 up, you can set operational calls (Audio error, Audio fixed) via parameter 990. Refer to Subs. 3.2 (Table of Parameters) for details.

Caution

- If set via parameter 990 and the Event menu (script), the operational call will be set up twice.

4.5 ALARM Button Test

This function informs you that the lift cabin button has is stuck.

Set the count of seconds for the button to be considered stuck in parameter 969 (ALARM button test). If this happens, the event defined via the Service Tool (Events – Jammed button) will be executed.

2N® LiftIP supports operational calls only.

- Operational call – the call is set up to the number set in parameters 081–088 (operational call) and transmitted via CPC Antenna, CPC KONE or P100.

From version 2.4.0 up, an event can be executed if the button has been repaired. The event related to a stuck button (operational call) can be executed. Set the parameters via the Service Tool again (Configuration – Events – Stuck button).

Operational calls are possible with this event only if CPC Antenna/KONE and P100 2N Ext are set in parameters 181–186. Make sure that the settings match the Control Panel values. Be sure to set 2N Ext in the Control Panel for CPC Antenna 2N Ext. CPC KONE or P100 will do for the other protocols (CPC KONE 2N Ext, P100 2N Ext).

Caution

- A rather long interval is recommended for parameter 969 to avoid unintentional generation of events.
- Recommende value: 300 s.

Parameter 990

From version 2.5.0 up, you can set operational calls (Audio error, Audio fixed) via parameter 990. Refer to Subs. 3.2 (Table of Parameters) for details.

Caution

- If set via parameter 990 and the Event menu (script), the operational call will be set up twice.

4.6 Rescue Process Activation/End

Rescue Process Activation

Set parameter 992 (rescue password) to activate the rescue process. If an alarm call is set up, the yellow LED keeps shining on the audio unit after the call end to indicate the rescue process activation.

Rescue Process End

Call the CU (**9** for administration – **2** for rescue end – enter password – press *****) to deactivate the rescue process.

The audio unit announces "Rescue process ended" when the rescue process is completed.

Event after Rescue End

An event can be made when the rescue process has been ended. **2N® LiftIP** supports operational calls only.

- Operational call – the call is set up to the number set in parameters 081–088 (operational call) and transmitted via CPC Antenna, CPC KONE or P100.

Set the parameters via the Service Tool (Events – Button stuck).

Parameter 990

From version 2.5.0 up, you can set operational calls (Audio error, Audio fixed) via parameter 990. Refer to Subs. 3.2 (Table of Parameters) for details.

Caution

- If set via parameter 990 and the Event menu (script), the operational call will be set up twice.

4.7 CPC and P100 Protocols

CPC

There are two CPC protocols: KONE and Antenna.

The data message consists of:

Command - Call type - DATA - ID (974)

CPC KONE 2N Ext				
Call type	**Command**	**Call type**	**Data**	**ID (974)**
Alarm	04	10	0000000000000	parameter 974
Alarm 2	04	10	0000000000000	parameter 974
Checking call	04	21	0000000000000	parameter 974
Rescue process end	04	84	0000000000000	parameter 974
Button stuck	04	90	0000000000000	parameter 974
Button repaired	04	90	0000000000001	parameter 974
Replace battery	04	31	1510070000000	parameter 974
Battery replaced	04	31	1510070000001	parameter 974
Audio error	04	91	0000000000000	parameter 974
Audio repaired	04	91	0000000000001	parameter 974

Example

This is only a part of the data message, excluding the beginning, checksum and end.

- 04900000000000000187654321 - Button repaired, identification number (parameter 974) 87654321

Caution

- The Button repaired/Audio repaired information is only transmitted via the 2N Ext protocol.
- If the 2N Ext mode is not set, the operational call cannot be established.

CPC Antenna 2N Ext				
Call type	**Command**	**Call type**	**Data**	**ID (974)**
Alarm	04	27	00000	parameter 974
Alarm 2	04	27	00000	parameter 974
Checking call	04	26	00000	parameter 974

CPC Antenna 2N Ext				
Call type	**Command**	**Call type**	**Data**	**ID (974)**
Rescue process ended	04	84	00000	parameter 974
Button stuck	04	90	00000	parameter 974
Button repaired	04	90	00001	parameter 974
Replace battery	04	17	00000	parameter 974
Battery replaced	04	17	00001	parameter 974
Audio error	04	91	00000	parameter 974
Audio repaired	04	91	00001	parameter 974

Example

This only a part of the data message, excluding the beginning, checksum and end.

- 04910000087654321 - Audio error, identification number (parameter 974) 87654321

Caution

- The Button repaired/Audio repaired information is only transmitted via the 2N Ext protocol.
- If the 2N Ext mode is not set, the operational call cannot be established.

P100

The data message consists of:

Call type - ID (974) - DATA

P100			
Call type	**Call type**	**ID (974)**	**DATA**
Alarm	1	parameter 974	
Alarm 2	1	parameter 974	
Checking call	3	parameter 974	
Rescue process ended	2	parameter 974	500
Button stuck	2	parameter 974	800
Button repaired	2	parameter 974	801
Replace battery	2	parameter 974	100
Battery replaced	2	parameter 974	101
Audio error	2	parameter 974	200
Audio repaired	2	parameter 974	201

Example

This is only a part of the data message, excluding the beginning, checksum and end.

- 287654321500 - Rescue process ended, identification number (parameter 974) 87654321

Caution

- The Button repaired/Audio repaired information is only transmitted via the 2N Ext protocol.
- If the 2N Ext mode is not set, the operational call cannot be established.

5. Service Tool

Here is what you can find in this section:

- 5.1 Installation and Login
- 5.2 Introduction to Application
- 5.3 Use

Refer to the 2N TELEKOMUNIKACE official websites, **2N® LiftIP** download section, for the latest application versions.

5.1 Installation and Login

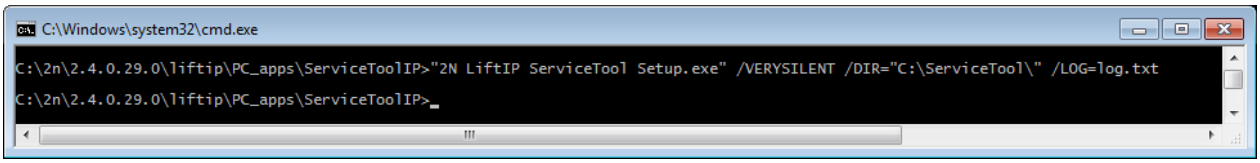
After the installation is launched, the installation program will scan your PC for another **2N® LiftIP Service Tool** version and ask you to uninstall the currently available version if identical with the new one. Use the system control panel Add or Remove programs to uninstall the existing product version for reinstallation or reconfiguration. If the versions are not identical, the original version will be uninstalled and a new application version will be installed. Then you will also be asked whether the configuration files should be retained or the application with an empty database should be installed.

Now the **2N® LiftIP Service Tool Setup Wizard** has been launched. Follow the wizard instructions. Select the **2N® LiftIP Service Tool** installation location: **C:\Program Files (x86)\2N TELEKOMUNIKACE\2N LiftIP** is used by default. Now the application will ask you to enable transmission of system data and software use surveys to help the 2N TELEKOMUNIKACE a.s. company improve the software quality, availability and performance. No confidential data shall be sent. You can participate in this effort voluntarily and cancel sending statistic data any time. Confirm or decline this cooperation and click Next to continue.

Now the wizard is ready to install the **2N® LiftIP Service Tool**. Confirm the user account administration notification to the Windows system if necessary. Another Start item and a desktop shortcut icon will be added automatically.

Alternatively, use the command line for installation: select the installer file and define the manner and location parameters. See below for command explanation.

Command	Description
/VERYSILENT	Installation runs on the background, no installer is open to the user.
/DIR="C:\..."	Set the installation location.
/LOG=file_name.txt	Create an installation course log to be displayed in the installer directory.



Application Installation Command

Caution

- Make sure that the command line is started by admin. If it is started by a user, the editor authenticating window will pop up.

Note

- The **2N® LiftIP Service Tool** installation requires **500 MB** of free disk space at least.

Now the **2N® LiftIP Service Tool** is ready for use. Click the shortcut item on the desktop (see the figure below) or select the Start item to start the application.

Icon of **2N® LiftIP Service Tool**

After the application launch, the splashscreen gets displayed to inform you of the application manufacturer and current version. After the launch, you will see the basic screen and **Configuration / Parameters** menu. Here an offline table of parameters can be prepared for you to export the data. Click **Connect device** to get connected to the CU and move to the **Connect to device** menu. A login window will be displayed where you enter the IP address if available. At the same time, set the communication port if changed and enter the valid password. Click Connect to get connected to

2N® LiftIP and read the configuration. Select Remember password to save the password to be able to establish immediate connection to the device whenever you open the application. To use the **2N® LiftIP Service Tool** for multiple unit administration, click on extended settings. The **Connection list** will be displayed where you can create and name connections. In this case, do not use the default connection for connecting of new and unknown units. Create new records into the structure for permanent connections.

Application Window

When you connect a new **2N® LiftIP** to the network and do not know its IP address, use a network scanner. The scanner sends a request to the network and connected unit through routed networks. The response is displayed in a table. Double click the respective table row to get connected to the device. The device offers you to check the access data for match. All the found objects are displayed in the table. The new, unlisted ones are marked with a green plus.

Scanner

Click with the right mouse button to display more options. Click **Connect** to connect to the selected unit. The configuration option helps you set the network parameters and access password for the selected unit via a proprietary protocol. The next option allows you to add a

device to the list as a new connection. And the last item refreshes the table, i.e. sends a new request to the network to detect the currently connected units.

Tip

- The list of available COM ports only displays the ports to which the **2N® LiftIP** programming add-on is connected.

Warning

- If the Incompatible .NET version message is displayed upon the wizard launch, download the current .NETFX4.0 redistribution from the 2N TELEKOMUNIKACE websites or use the link here.
- The minimum OS requirements are **Windows 8/8.1, Windows 7, Windows Vista**.

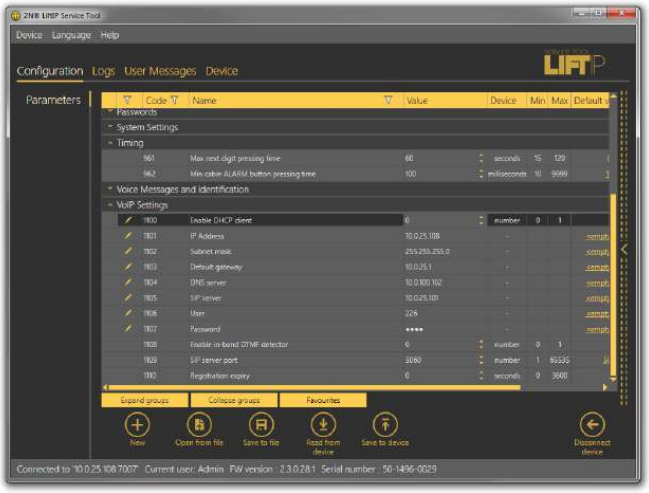
Note

- **Recommended hardware requirements**

OS	Microsoft Windows 8/8.1 CZ, Microsoft Windows 7 SP1 CZ, Microsoft Windows Vista SP2 CZ
Other	**Sound card** (User sound record)

5.2 Introduction to Application

In this subsection, we will show you the application layout and menus as well as basic controls. The application is divided into three menu levels. The first screen upon start includes **Configuration / Parameters / Basic** (see the figure below), which displays all of the three menu levels. The horizontal Main menu (**Configuration**) helps you select whether to configure **2N® LiftIP,** upgrade firmware or record new voice menus. The vertical menus (**Parameters**) help you select the area to be administered. The third menu level, if meaningful, gets displayed horizontally to the right and includes a list of parameter setting forms.



Window of **2N® LiftIP Service Tool**

The main menu contains three pop-up menus. The **Device** menu helps you connect to or disconnect from 2N® LiftIP and edit sending of statistic data on the application use. You can also download a diagnostic package if the **2N® LiftIP Service Tool** is connected to the intercom. Just select the package location on your hard drive and the package will be generated automatically. The package includes all relevant information on the device operation and should be attached to your troubleshooting requests. Use the last option to quit the program. Select the language mutation in the **Language** menu: CZ and EN are available so far. The **Help** menu provides a link to the latest manual version and information on the supplier. You will always be warned before logout or quit against potential data loss.

You will also be warned against data loss before loading a new configuration and overwriting the current set of parameters. Confirm your intention to execute the actions to avoid unintentional loss of unsaved parameters.

Note

- No language change will be executed until the application is restarted.

The Status line displays the following information, from the left: **Connected to** includes the name of the port to which you are currently connected corresponding with your PC COM port. **FW version** specifies the current **2N® LiftIP** audio unit FW version and **Serial number** gives the **2N® LiftIP** audio unit serial number. The logout button is situated in the right-hand bottom corner. The other controls in the lower part may be different in different menus. Let us describe all the buttons that are available in the application.

Basic Controls

	New helps you create a new table of parameters. The existing table will be replaced after a warning.
	Open from file helps you read the table of parameters from a disk file.
	Save to file helps you save the current table of parameters into a disk file.
	Connect device switches the user into the Connect to device menu.
	Back returns you to the offline configuration menu.
	Connect connects the user to the port with the programming add-on.

	Read from device downloads the current settings.
	Save to device helps you save new parameters into the memory.
	Delete voice message in device helps you delete a message saved in the device memory.
	Disconnect device helps you log out from a device.
	Upgrade starts FW uploading to **2N® LiftIP.**

5.3 Use

Upon the application launch, you get to the **Configuration** main menu and then to the **Parameters / Basic** menu, where you can find almost all of the **2N® LiftIP** settings. You are in the offline configuration, which you can modify, prepare for download to an audio unit or save into a file for later download to a **2N® LiftIP** audio unit. The offline mode helps you view the settings. The user has only access to the **Configuration** menu. The other menus are meaningful only if the audio unit is connected. The meaning and description of the parameters and controls are the same as in the online mode (i.e. with the unit connected); see below for details. Follow the CU login instructions in Subs. 5.1. Now let us explain what the menus are used for.

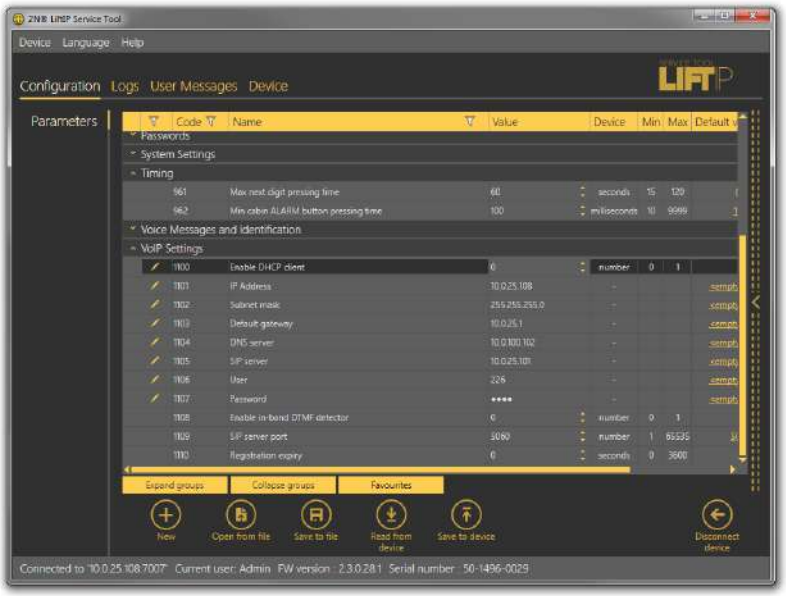
Application Language Change

The currently used language abbreviation is shown on a grey bar in the application upper corner. Put the mouse cursor on the abbreviation to open the menu of all supported languages. Before changing the language decide whether to apply the change immediately making the application restart automatically and having to relog in, or apply the change after quitting the application and relogging in.

Configuration

Parameters

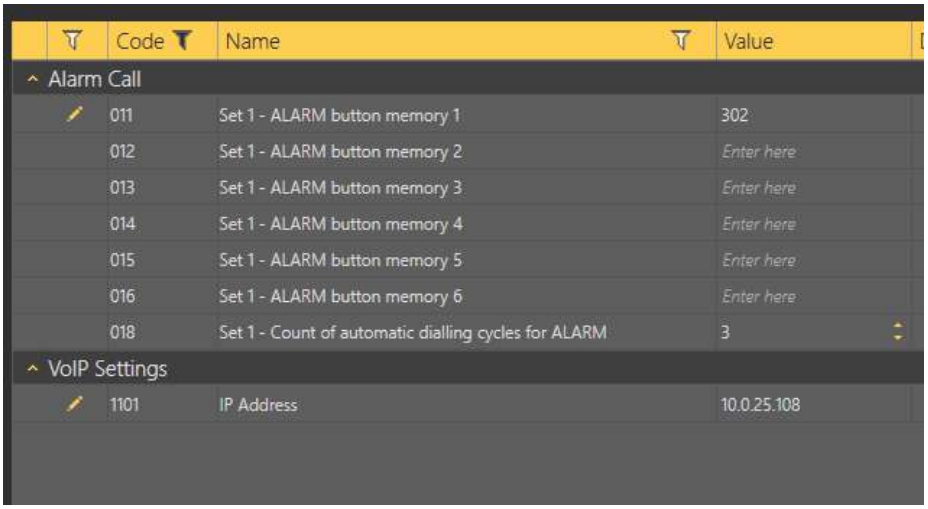
Having logged in to the **2N® LiftIP** CU as described in the preceding subsection, you get into the Configuration main menu. The Parameters / Basic menu **opens to display** the table of all the **2N® LiftIP** parameters including their codes. Refer to Subs. 3.2 for the list of parameters and their meanings. All the parameters are arranged in associated groups for convenience. Moreover, each table row is equipped with a hint, which describes the parameter purpose and setting options. The table includes the following items: Code matches the parameter number in the voice menu, **Name** displays the parameter name, Value shows the currently set parameter value and **Unit** specifies the parameter unit (if no unit is specified in this column, the value is just a number). **Maximum** and **Minimum** define the permitted range of the values to be set. Default value displays the factory value of the parameter, which also appears after the factory reset. Click this value to add it to the **Value** column.



Configuration / Parameters Menu

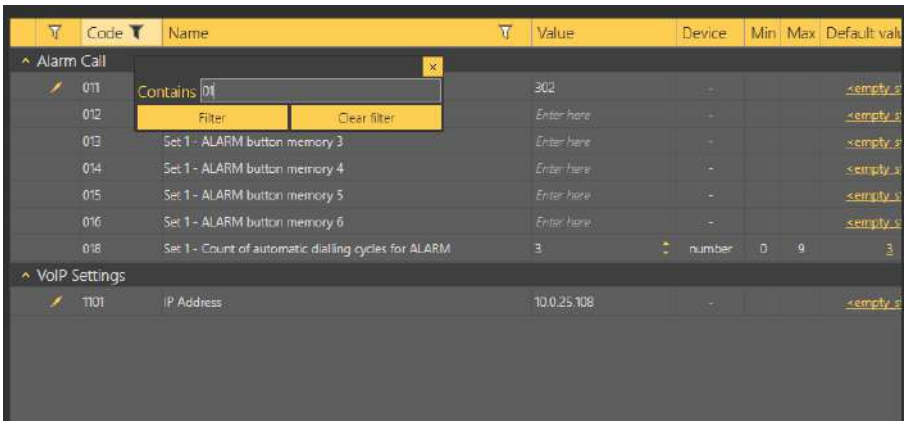
The menu also includes the **Expand groups** / **Collapse groups** buttons for you to expand the sections and display all the required parameters quickly. Click the **Favorites** next to the Collapse groups button to display your favourite items in the table. Click on the empty star symbol behind a parameter in the Favorites column to select a new favourite item. Similarly, click on a filled-in star symbol to unselect a favourite item. Group expanding/collapsing and filtration are also useful for viewing favourite items. A yellow-to-orange colour change of the **Favorites** button means that the favourite items are only active. Click **New set** to overwrite the current settings with default values. Click **Save to file** to back up data into your PC disk. Push **Open from file** to read the back-up data. The **Read from device** button helps you read the

current set of parameters from the **Central Unit**. Finally, click **Save configuration to device** to save the changes into the audio unit memory. Filtration is a convenient searching tool. Set the filter for each column separately and combine the filters to find the required data as quickly as possible. Click the funnel symbol in the selected column to activate the filter. Activation is indicated by a colour change of the funnel symbol; see the figure below.



Left – **Inactive Filter**, Right – **Active Filter**

Each column with the funnel symbol includes its own filter settings; see the figure below. The **Contains** function finds the searched string in all the column items and returns all the occurrences. Enter a text into the string field and click **Filter** to activate the filter and display all the searched items in the column. Use another filter in another column to make your search more precise and efficient. Having completed filtering, click **Delete filter** in the used columns or use the Alt+R keyboard shortcut to delete all the active filters. If you do not delete the setting, the filtration settings will keep active even upon the **2N® LiftIP** logout and you would obtain filtration results again instead of complete information in your next search.



Filtration Setting Result

Tip

- Use the context menu opened by clicking anywhere in the table or the **Alt+R** keyboard shortcut to delete the set filters.

The pencil symbol is displayed whenever a default parameter is changed to highlight the parameters that have been changed in the configuration.

Tip

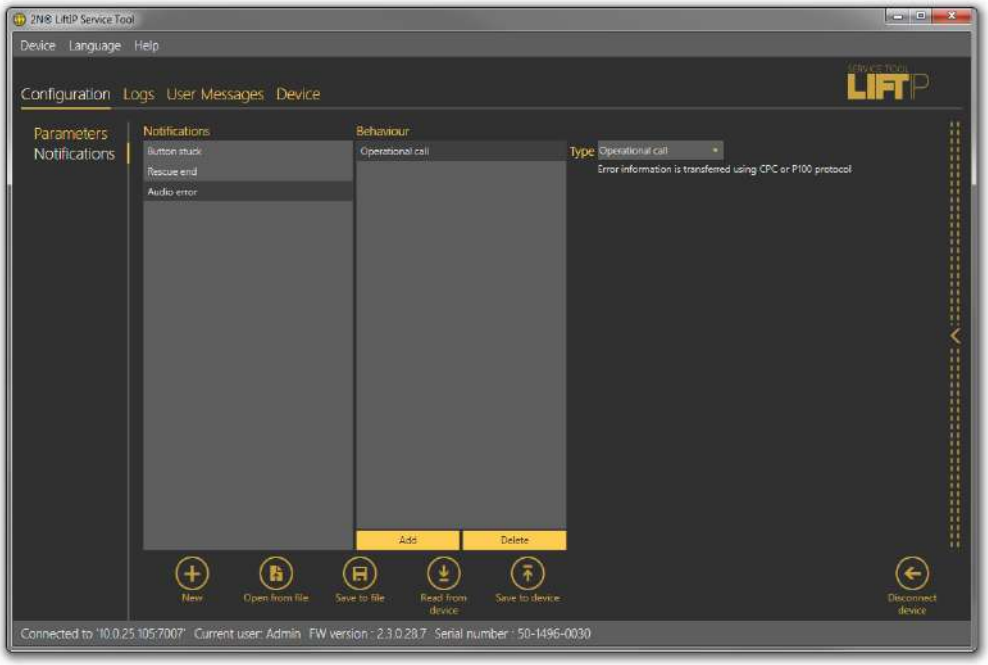
- Each table row is equipped with a hint including parameter description for convenience.

Notifications

You can set the **2N® LiftIP** behaviour in the Events menu in case an event is detected. These events are mostly system and predefined. The user just chooses what is to happen when the situation occurs. Four events are defined at present.

Jammed button – make the setting in parameter 969 (ALARM button test). Refer to Subs. 4.5 for details.

- Rescue end – an event is executed after the rescue process is completed. Refer to Subs. 4.6 for details.
- Audio error – an event is executed after three unsuccessful audio tests.



Events Menu

Once the event is detected, an **operational call** can be made to the number defined in the operational call set, see parameters 081–086. The error information is then transmitted via CPC or P100. Click Upload to device to save the set actions.

Caution

- Make sure that the CPC/P100 communication is set properly in parameters 181–186 to make operational calls work.

Logs

The Logs section helps you view the diagnostic reports included in the log files. No logs are displayed upon the application launch. Download the current logs from a file or the audio unit upon login.

Logs – Basic

The Logs – Basic menu includes a table with necessary data. Use the checkboxes below the table to select the table columns. Select the parameters to display the required information: display/hide the timestamp, log level and log group. Click Auto refresh to enable automatic screen update in selected time intervals. Press Read from device to read the current logs from the CU connected. The following items are displayed in the table: Timestamp, which defines the date/time in which the event was captured, and Level and Source, which define the log type and source respectively. Message includes the information itself. The State parameter above the table specifies how many logs (rows) have been read and the log start/end time.

Logs Menu

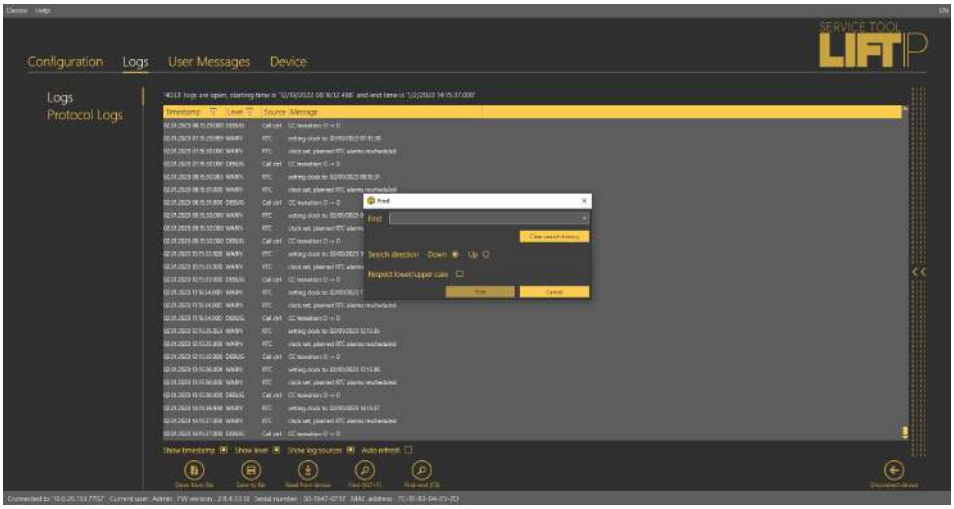
Save the captured log for later analysis in the left-hand bottom part. Click **Find** to find a message in the log. Enter the string to be searched in the dialogue window. Click **Filter** to find

the first occurrence and **Find next** to find the next occurrence. Use **Advanced settings** to enable/disable message types and assign colours for easier log displaying and other advanced options. See below for details.

Tip

- The logs should only be analysed by duly trained persons or your Technical Support department.

Log Search

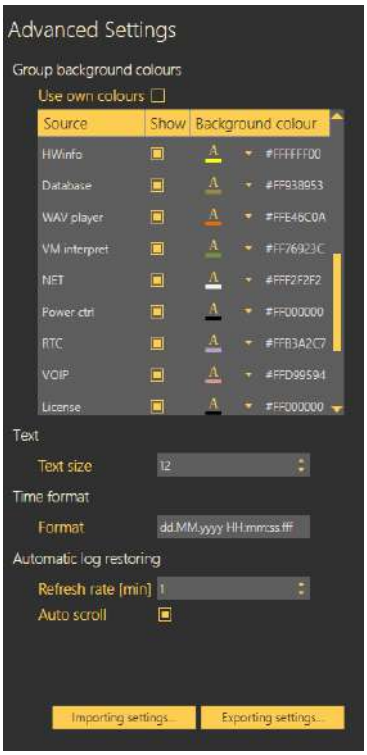


Find Function

Press the Alt+ F combination to search logs using the Find function in **2N® Lift8 Service Tool**. Click Clear search history to delete all the words that remain in the Find field. Use Respect lower/ upper case for facilitation.

Logs – Advanced Settings

Logs – Advanced settings is displayed to the right in a hideable form. The Group background colours table helps you set specific background colours for the selected messages. Select the **Use specific colours** checkbox to activate the user background colour settings for the log groups located below. The change will occur immediately after check-off. Text helps you modify the text size. Moreover, you can configure the Time format: either use the system date/time format or define a format of your own (dd.MM.yyyy HH.mm.ss.fff). Not all values have to be completed, you can also arrange them as you wish respecting the general Custom Date and Time Format Strings rules (see here for details, e.g.). The **Text** section helps you adjust the font size to be displayed. Auto refresh logs is the last option. Set the Refresh rate in minutes a tick off Autoscroll to display the latest log row all the time above the main table as mentioned above.

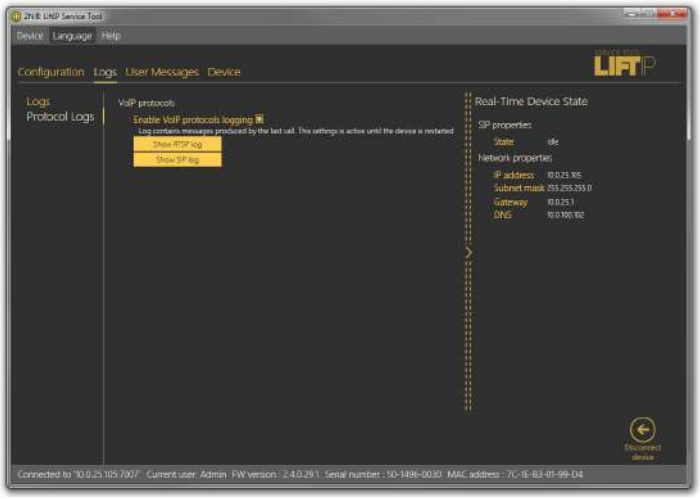


Advanced Settings

Save configuration and **Upload configuration** help you save and load your advanced settings onto your PC disk for later use respectively.

Logs – Protocol Logs

Enable VoIP protocol logs in this submenu to make the device record SIP and RTSP messages and click the respective button to display them as texts. As the log space is limited, do not keep logging enabled for a long time to avoid diagnostic data loss.



Protocol Logs

The checkbox remains selected until the device is restarted or manually disconnected. This prevents unnecessary memory overload. When the function is activated, the files are deleted automatically.

User Messages

User Messages helps you replace the default system announcements with user messages. Load these messages from a file or, in the correct format, via the **2N® LiftIP Service Tool.** Use the microphone connected to your PC to record the messages.

Messages

The Messages menu includes a list of **User messages**, which can be replaced with own records. Having entered the menu, you will find no item. Choose one of the following three methods how to fill in the menu: click **New** to display an empty list and add your own messages, or press **Read from device** to download the current message used in the **2N® LiftIP** audio unit connected, or push **Load from directory** to load a message set saved on your PC disk. Select the folder with the message and confirm your selection to load the selected set into the application.

User Messages – Messages Menu

The message list includes the message duration and two action buttons: Import message from file and Delete. If a message is not recorded, its total time is 0:00. The total time is displayed for each message recorded. Click on the import button to open a file viewer on the disk to replace the selected message with a new, properly formatted one. If you just select a message, a message player will become accessible to the right for you to play the message. Standard player functions are available too. Press **Play** to play the message. To record new messages, select the input source. When the microphone icon shines red, start recording a new message, thus deleting the old one.

Note

- The maximum duration of the records is 8 minutes.
- The correct format for a message to be added is .WAV. No other files can be recorded.
- A message cannot be recorded until the input device is selected in the recording settings.

The menu is faded during message recording. The player displays the name, total time and current state of the selected message, thus signalling active recording, playing or recording stop. Click the **Stop** icon to stop recording, Click **Play** to check the recorded or imported messages. If the message volume level is too low, adjust the input device volume. If the volume is still very low, try to record the message using another device. Having completed message editing, click **Load to device** to load the message set into the **2N® LiftIP** device connected. Click

Save to directory to save the current set onto your PC disk. Select a message and click the Trash icon to delete the message.

Caution

- The output volume value in the application does not affect the master volume of the record to be saved into the audio unit. Thus, if the recorded volume is too low, record the message once again and louder.

Tip

- Use high-quality microphones and properly noise-insulated rooms with good acoustic properties for recording to avoid noise and interference in your records.

Recording Settings

Find the Recording settings to the left. Select one of the available input devices in **Select source**: integrated or external microphone or line input. **Mic level** defines the microphone input drive level. **Mic gain** defines the input gain. The total memory capacity for a message to be saved into **2N® LiftIP** is 30 seconds. The time left for message editing is displayed in the **Time left** parameter.

Note

- If the microphone input is overdriven during recording, turn down the mic input gain. If the record is too silent, turn up the mic input.
- In case the application gain setting is not sufficient, use system controllers or an external amplifier.

Device

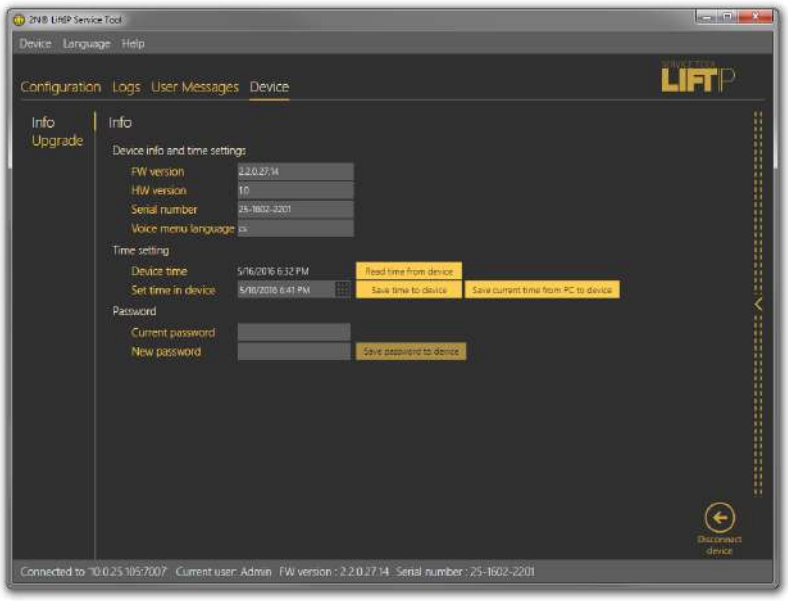
The Device menu provides information on the **2N® LiftIP** audio unit connected: basic parameters and firmware, bootloader and voice menu upgrade option.

Info

The **Info** menu provides basic information on the state of the device connected: audio unit FW version, serial number, voice menu language and version. The **Time in device** parameter displays the current time read from the **2N® LiftIP** audio unit. This parameter is not read online and has to be updated using the **Read from device** parameter. **Set time in device** helps you

record a time setting of your own. Click on the calendar to set the date/time in hours manually. This value can be overwritten and different time can be set for a different time zone. Click **Confirm** to confirm the new setting. Click **Save current time from PC to device** to synchronise the audio unit time with your PC time value and load the new setting into the audio unit automatically.

The Password section helps you change the administrator password for the audio unit connected. Enter the existing password into the **Current password** and the new password into the New password. Click **Save password to device** to confirm and save the new setting.



Device / Info Menu

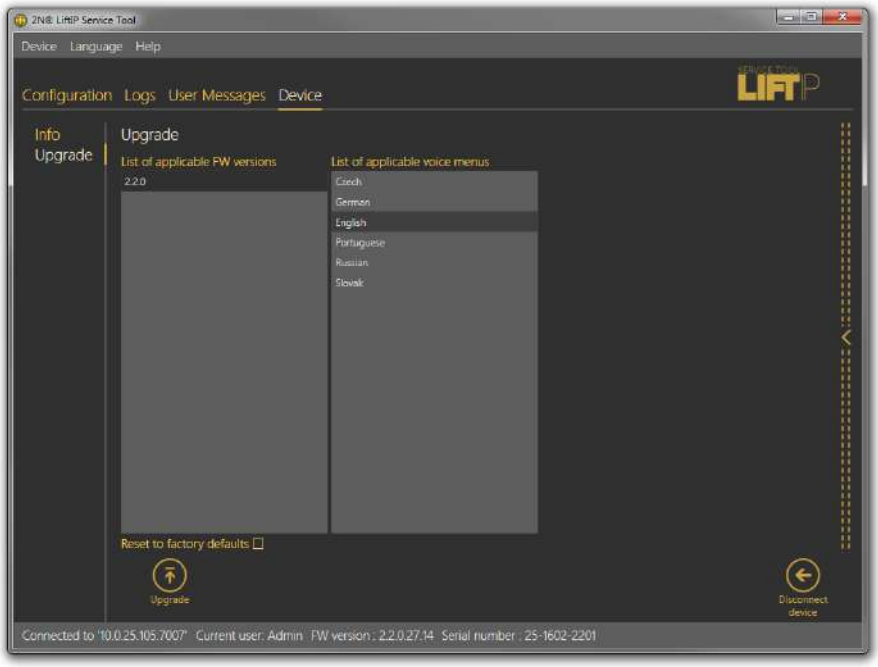
Note

- As time is not backed up in **2N® LiftIP**, any power outage leads to a time setting loss. Time will be restored automatically when the audio unit is connected to a properly set NTP server. Therefore, make sure that time is set correctly.
- Remember to change the password in the **2N® LiftIP Service Tool** configuration too for future connections.

Upgrade

The **Upgrade** menu helps you upgrade the audio unit firmware, bootloader and voice menu. Select the file to be loaded in the **File name** section. The program automatically reads the type from the file header and displays it in the File type: firmware, bootloader or voice menu. Click

Select to select a file in the directory to be loaded to the audio unit and press **Upgrade** to make the **2N® LiftIP Service Tool** load the new FW, bootloader or voice menu into the audio unit.



Device / Upgrade Menu

Select **Reset to factory defaults** to delete all user edited changes and restart the audio unit with the factory default values. Select this option and click Upgrade to reset factory default values upon upgrade. This action will only be performed together with new FW, bootloader or voice menu loading into the audio unit. To reset the default values only, use the **Configuration** menu.

Caution

- Having upgraded FW, bootloader or voice menu, you will be notified of the audio unit restart. The restart will be made automatically and the application will be disconnected. Reconnection will not be possible until the audio unit completes upgrade and restarts.
- If you select **Reset to factory defaults**, parameters 1100 ~ 1110 (VOIP settings) will not be deleted for security reasons.

6. Technical Parameters

Electric Parameters

- **Supply voltage:** 10–30 V DC (keep polarity) or 48 V PoE 802.3af
- **Consumption:** up to 6 W

ALARM and CANCEL voltage range

- **Inputs:** 5–48 V DC (keep polarity)

Audio Parameters

- **Speaker:** integrated 16 Ω / 0.25 W
  - Option to increase the output power to 1 W by connecting a speaker with 4 Ω impedance
- **Microphone:** integrated, option to connect an external electret microphone
- **Voice switching:** full duplex audio processor
- **Induction loop output:** 0.5 V RMS, output impedance 75 Ω, short-circuit resistant output
- **Codec G.711** (approx. 90 kbit/s)

Connection of External Indicators

- **Voltage:** 12–24 V DC, external power supply
- **Maximum current:** 200 mA

Other Parameters

- **Dimensions:** (W) 65 x (H) 130 x (D) 25 mm
- **Working temperature range:** -20 to +50 °C

7. Supplementary Information

This section provides supplementary information on the **2N® LiftIP** product.

Here is what you can find in this section:

- 7.1 Troubleshooting
- 7.2 List of Terms and Abbreviations
- 7.3 Directives, Laws and Regulations
- 7.4 General Instructions and Cautions

7.1 Troubleshooting

For the most frequently asked questions refer to faq.2n.cz.

Have you forgotten your service password? Contact our Technical Support and communicate your **2N® LiftIP** serial number.

7.2 List of Terms and Abbreviations

- Incoming call – call in the control centre – **2N® LiftIP** direction
- Outgoing call – call in the **2N® LiftIP** – control centre direction
- Check(ing) call – automatically activated call in the **2N® LiftIP** – control centre direction
- Control centre – workplace receiving alarm/check calls and failure reports. There can also be separate workplaces for various call types or just the staff mobile telephones.
- L8 – **2N® Lift8** system, the software can control the check/alarm calls and fully administer the **2N® LiftIP** intercoms and other similar devices if necessary
- PBX – private branch exchange (equipped a Proxy server)
- VoIP – technology allowing for transmission of digitalised voice in UDP/TCP/IP packets via a PC network. Used for making calls via the Internet or any other data connection.

7.3 Directives, Laws and Regulations

2N® LiftIP conforms to the following directives and regulations:

- 2014/35/EU for electrical equipment designed for use within certain voltage limits
- 2014/30/EU for electromagnetic compatibility
- 2014/33/EU for lifts and safety components for lifts
- 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment
- 2012/19/EU on waste electrical and electronic equipment

7.4 General Instructions and Cautions

Please read this User Manual carefully before using the product. Follow all instructions and recommendations included herein.

Any use of the product that is in contradiction with the instructions provided herein may result in malfunction, damage or destruction of the product.

The manufacturer shall not be liable and responsible for any damage incurred as a result of a use of the product other than that included herein, namely undue application and disobedience of the recommendations and warnings in contradiction herewith.

Any use or connection of the product other than those included herein shall be considered undue and the manufacturer shall not be liable for any consequences arisen as a result of such misconduct.

Moreover, the manufacturer shall not be liable for any damage or destruction of the product incurred as a result of misplacement, incompetent installation and/or undue operation and use of the product in contradiction herewith.

The manufacturer assumes no responsibility for any malfunction, damage or destruction of the product caused by incompetent replacement of parts or due to the use of reproduction parts or components.

The manufacturer shall not be liable and responsible for any loss or damage incurred as a result of a natural disaster or any other unfavourable natural condition.

The manufacturer shall not be held liable for any damage of the product arising during the shipping thereof.

The manufacturer shall not make any warrant with regard to data loss or damage.

The manufacturer shall not be liable and responsible for any direct or indirect damage incurred as a result of a use of the product in contradiction herewith or a failure of the product due to a use in contradiction herewith.

All applicable legal regulations concerning the product installation and use as well as provisions of technical standards on electric installations have to be obeyed. The manufacturer shall not be liable and responsible for damage or destruction of the product or damage incurred by the consumer in case the product is used and handled contrary to the said regulations and provisions.

The consumer shall, at its own expense, obtain software protection of the product. The manufacturer shall not be held liable and responsible for any damage incurred as a result of the use of deficient or substandard security software.

The consumer shall, without delay, change the access password for the product after installation. The manufacturer shall not be held liable or responsible for any damage incurred by the consumer in connection with the use of the original password.

The manufacturer also assumes no responsibility for additional costs incurred by the consumer as a result of making calls using a line with an increased tariff.

Electric Waste and Used Battery Pack Handling

Do not place used electric devices and battery packs into municipal waste containers. An undue disposal thereof might impair the environment!

Deliver your expired electric appliances and battery packs removed from them to dedicated dumpsites or containers or give them back to the dealer or manufacturer for environmental-friendly disposal. The dealer or manufacturer shall take the product back free of charge and without requiring another purchase. Make sure that the devices to be disposed of are complete.

Do not throw battery packs into fire. Battery packs may not be taken into parts or short-circuited either.