2N® Lift8

Communicator for lifts

User manual

Firmware 1.5.2
Version 1.5.2

www.2n.cz

The 2N TELEKOMUNIKACE a.s. is a Czech manufacturer and supplier of telecommunications equipment.

The product family developed by 2N TELEKOMUNIKACE a.s. includes GSM gateways, private branch exchanges (PBX), and door and lift communicators. 2N TELEKOMUNIKACE a.s. has been ranked among the Czech top companies for years and represented a symbol of stability and prosperity on the telecommunications market for almost two decades. At present, we export our products into over 120 countries worldwide and have exclusive distributors on all continents.

2N TELEKOMUNIKACE a.s. administers the FAQ database to help you quickly find information and to answer your questions about 2N products and services. On www.faq.2n.cz you can find information regarding products adjustment and instructions for optimum use and procedures „What to do if...".

2N TELEKOMUNIKACE a.s. hereby declares that the 2N® Lift8 product complies with all basic requirements and other relevant provisions of the 1999/5/EC directive. For the full wording of the Declaration of Conformity see the CD-ROM (if enclosed) or our website at www.2n.cz.

The 2N TELEKOMUNIKACE a.s. is the holder of the ISO 9001:2009 certificate. All development, production and distribution processes of the company are managed by this standard and guarantee a high quality, technical level and professional aspect of all our products.

Content

1. Product Introduction

In this section, we introduce the **2N® Lift8** 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

Basic Features

- Up to 8-lift connectivity
- Lift cabin, shaft and machine room voice audio units
- Optimum acoustic properties
- Rechargeable built-in backup battery
- Easy control and configuration – voice response system
- Check Call function
- Lift blocking during connection failure
- Internal communication – Triphony
- Telephone/PC-based configuration (via USB or Internet)
- USB interface
- User message recording option
- Local control centre (Intercom)
- Fireman function

Basic Description

2N® Lift8 (**L8**) is a communication system with a function similar to an intercom. The system voice audio units are linked to a common bus (pair of wires), connected to a splitter. The splitter is always connected to a central unit (CU), which controls the system operation and provides connection with the control centre. It is possible to connect up to 40 audio units to the bus. The **CU** contains an internal splitter.

Each splitter is uniquely identified: by lift number 1 to 8. The audio units are connected to the splitters and located on the shaft bottom, in the cabin interior, on the cabin roof and in the machine room. The machine room audio unit can be shared by multiple lifts.

The **CU** contains an easily replaceable backup battery pack (lead rechargeable battery). The **CU** is responsible for battery charging and status monitoring. It indicates the charging state, signal strength, telephone line state, bus state core state via five colour LEDs. It is also equipped with a USB interface for comfortable configuration, voice message recording and software upgrade.

The **CU** can be connected via: GSM, UMTS, PSTN or VoIP.

System Diagram

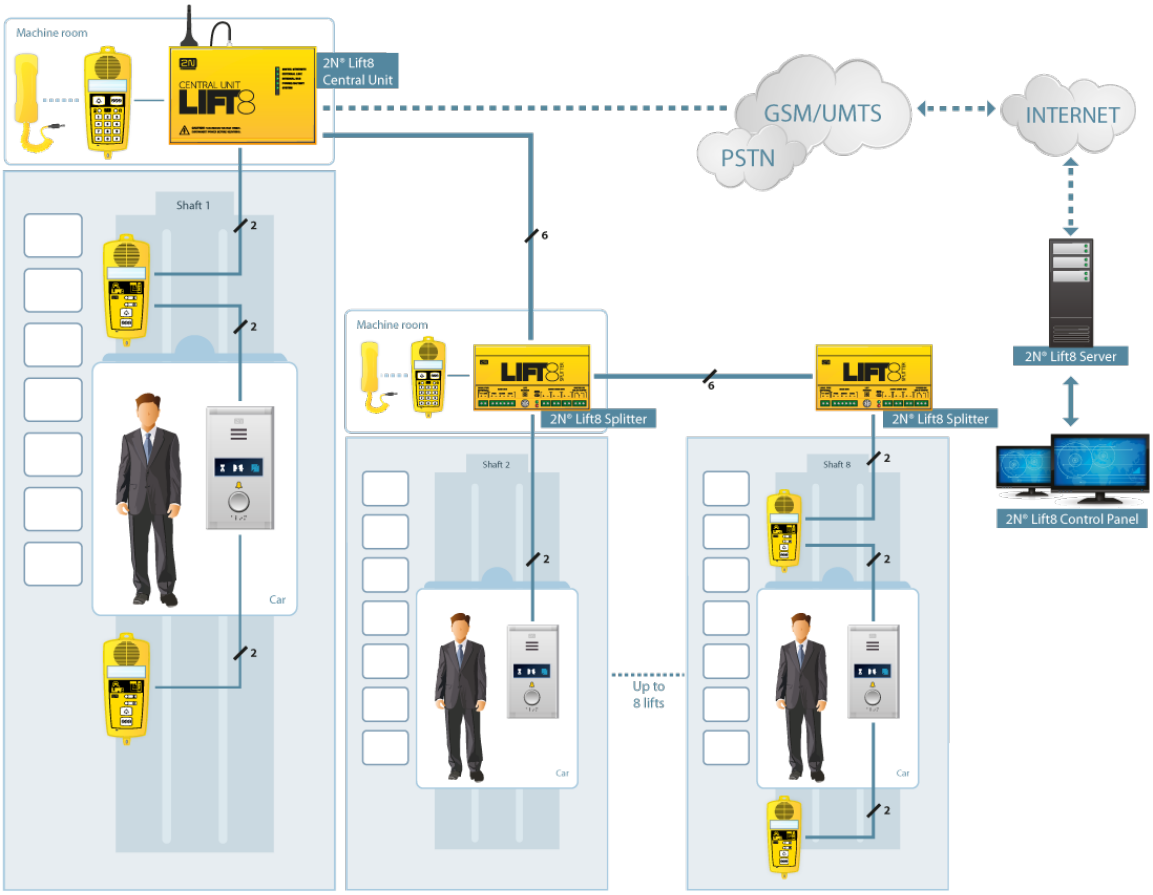
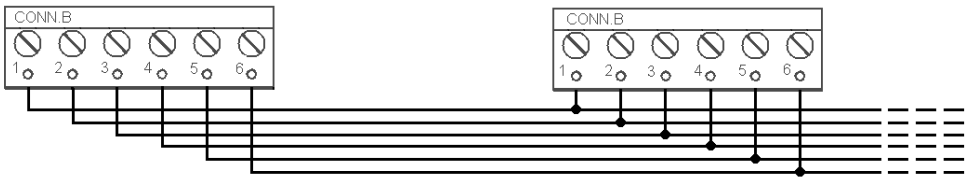
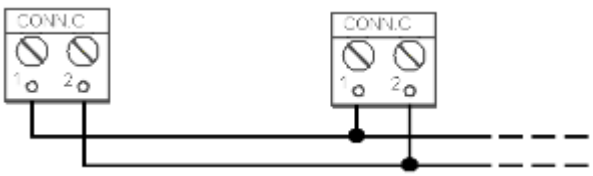


Figure: Example of **2N® Lift8 Central Unit**, Splitter and audio unit Connection

Main bus



Audio unit bus



1.2 Components and Associated Products

2N® Lift8 System Components

> **Notification**
>
> - The components of the **2N® Lift8** system cannot be used outside this system.
> - The audio units cannot be connected to a telephone line **without the CU!**
> - When shared by multiple shafts, the audio units cannot be connected without the **CU** and splitters.

918600 2N® Lift8 Central Unit

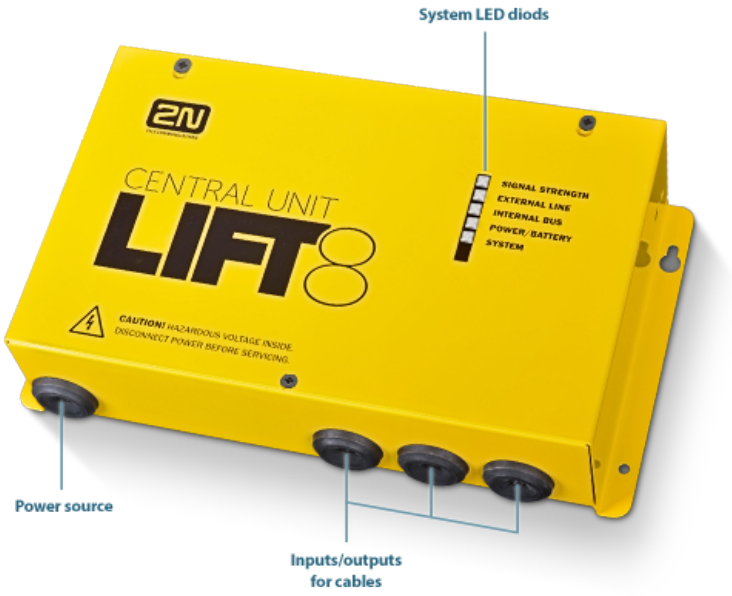


Figure: 2N® Lift8 Central Unit

For connection of up to 8 lifts to a GSM/UMTS/PSTN line. Including a power EURO cable and rechargeable battery. USB interface for configuration.

918620E 2N® Lift8 Splitter

Figure: 2N® Lift8 Splitter

For **CU** – lift audio unit interconnection

918610E 2N® Lift8 audio unit – Cabin Universal

(Normal version)

Figure: 2N® Lift8 audio unit – Cabin Universal

Audio unit electronics for lift cabin buiiding in. Including speaker and microphone (HandsFree). Connection terminals for all prescribed elements and door opening signal input (optional).

918610EX 2N® Lift8 audio unit – Cabin Universal – Cable Version

(Contains LED, microphone and speaker connected to cables)

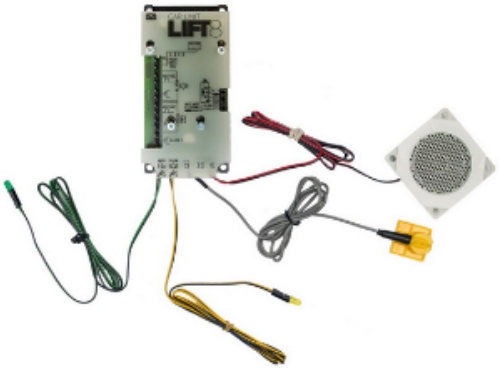


Figure: 2N® Lift8 audio unit – Cabin Universal – Cable Version

918611E 2N® Lift8 audio unit – Machine Room/Control Centre

Figure: 2N® Lift8 audio unit – Machine Room/Control Centre

Audio unit for the machine room/control centre. Contains receiver (optional) and keypad for easy control. Makes it possible to communicate with other system audio units and configure the **CU** without a PC. Equipped with an external siren connector. Can be shared by multiple lifts (shafts). Robust yellow cover.

918612E 2N® Lift8 audio unit – Shaft

Figure: 2N® Lift8 audio unit – Shaft

Audio unit for cabin roof and shaft or cabin bottom. Robust yellow cover. HandsFree mode, Alarm button and Triphony, LED indicators. Not intended for use in the cabin.

918620E 2N® Lift8 I/O Module

Figure: 2N® Lift8 I/O Module

Contains logical inputs and switch relays.

918650E 2N® Lift8 GSM Module

Figure: 2N® Lift8 GSM Module

For central unit connection via a mobile network. Optional data connection for remote system configuration.

918651E 2N® Lift8 UMTS Module

Figure: 2N® Lift8 UMTS Module

For central unit connection via a mobile network. Optional data connection for remote system configuration.

918652E 2N® Lift8 PSTN Module

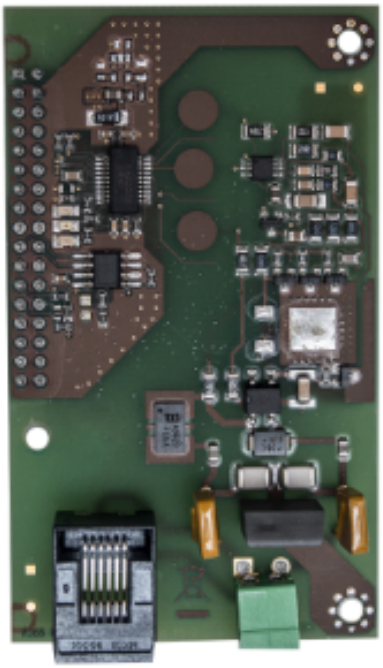


Figure: 2N® Lift8 PSTN Module

For central unit connection via an analogue line.

918653E 2N® Lift8 VoIP Module

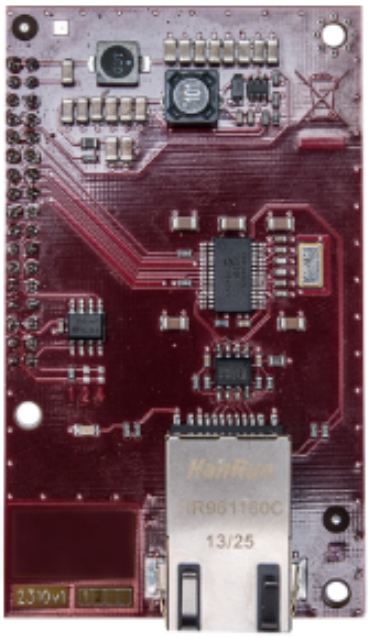


Figure: 2N® Lift8 VoIP Module

For central unit connection via a VoIP line.

Cooperating 2N® Applications

918700E 2N® Lift8 Service Tool

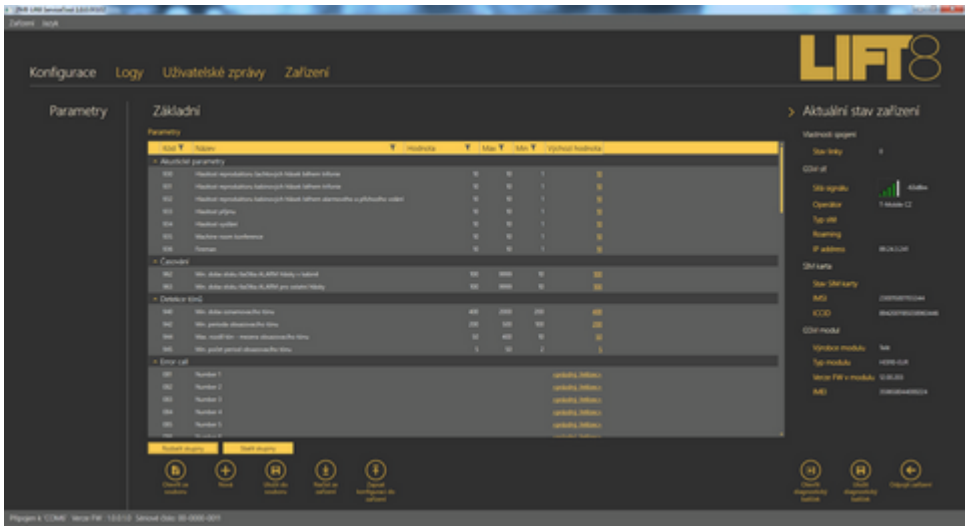


Figure: 2N® Lift8 Service Tool

The **2N® Lift8 Service Tool** application is intended for remote supervision and configuration of the **2N® Lift8** communicators.

918700E 2N® Lift8 Control Panel

Figure: 2N® Lift8 Control Panel

The **2N® Lift8 Control Panel** application is intended for administration of users, lifts

and authorisations.

918700E 2N® Lift8 Communicator

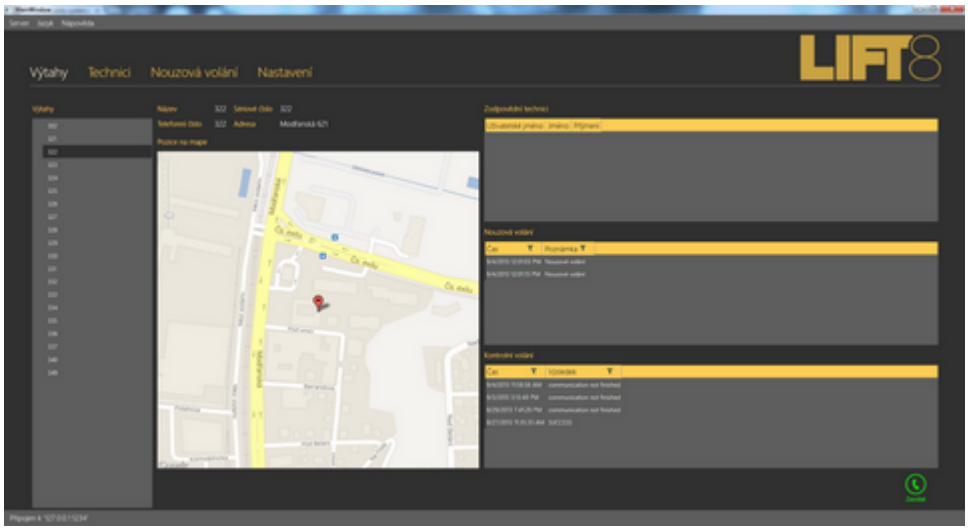


Figure: 2N® Lift8 Communicator

The **2N® Lift8 Communicator** application is intended for receiving alarm calls by the dispatcher.

918700E 2N® Lift8 Server

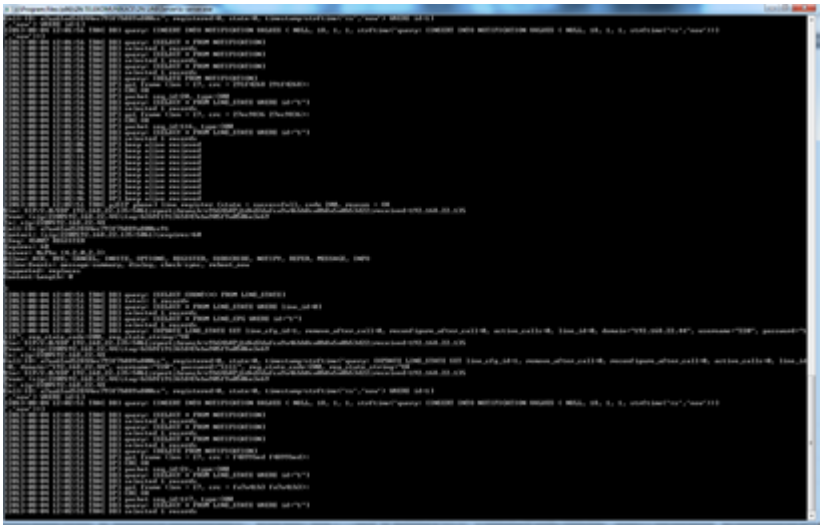


Figure: 2N® Lift8 Server

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

Associated 2N® Products

918655E 2N® Lift8 External Pictograms Driver

Figure: 2N® Lift8 External Pictograms Driver

Transforms the **2N® Lift8** cabin LED outputs into universal pilot lamps.

1.3 Upgrade

The table below sums up the User Manual upgrade changes made so far.

Manual version	Description of changes
1.0.0	Firmware 1.0.0 ▪ Basic version
1.5.0	Firmware 1.5.0 ▪ VoIP parameters added ▪ Internal splitter four-lift configuration option (up to four cabin units can be connected to one internal splitter with lift 1–4 identification) ▪ Intercom function

1.4 Terms and Symbols Used

Symbols Used

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.

Future Functions, New Features

The grey-marked text in this document designates the functions and features that are under preparation or development at present.

2. Description and Installation

The section is divided according to system components into the following subsections:

- 2.1 PSTN/GSM/UMTS/VoIP Central Unit
- 2.2 Splitter
- 2.3 Audio Unit – Cabin Universal
- 2.4 Audio Unit – Machine Room
- 2.5 Audio Unit – Shaft
- 2.6 PSTN Module
- 2.7 GSM/UMTS Module
- 2.8 VoIP Module

Each subsection includes:

- Description of Components
- Before You Start
- Fitting
- Electrical Wiring

2.1 PSTN/GSM/UMTS/VoIP Central Unit

Description

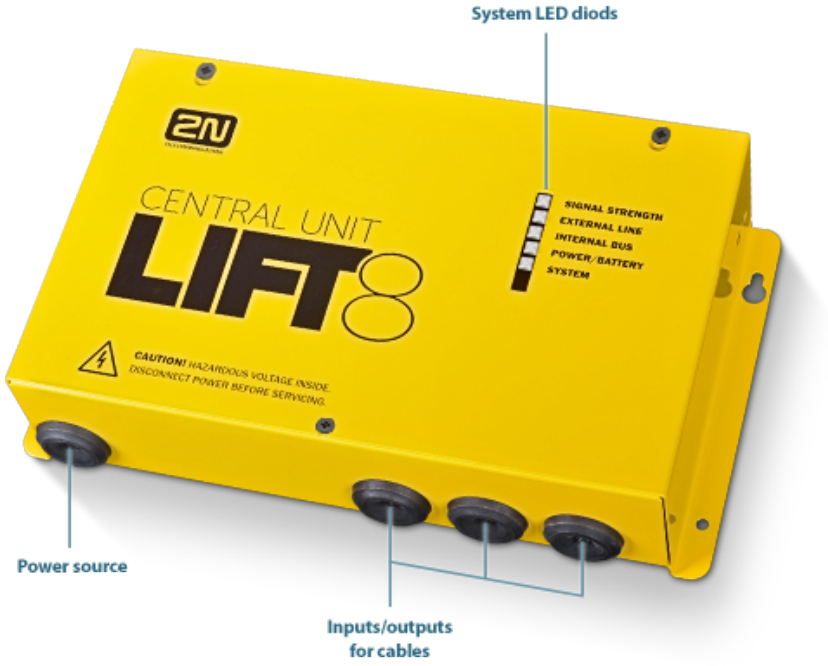


Figure: Central Unit

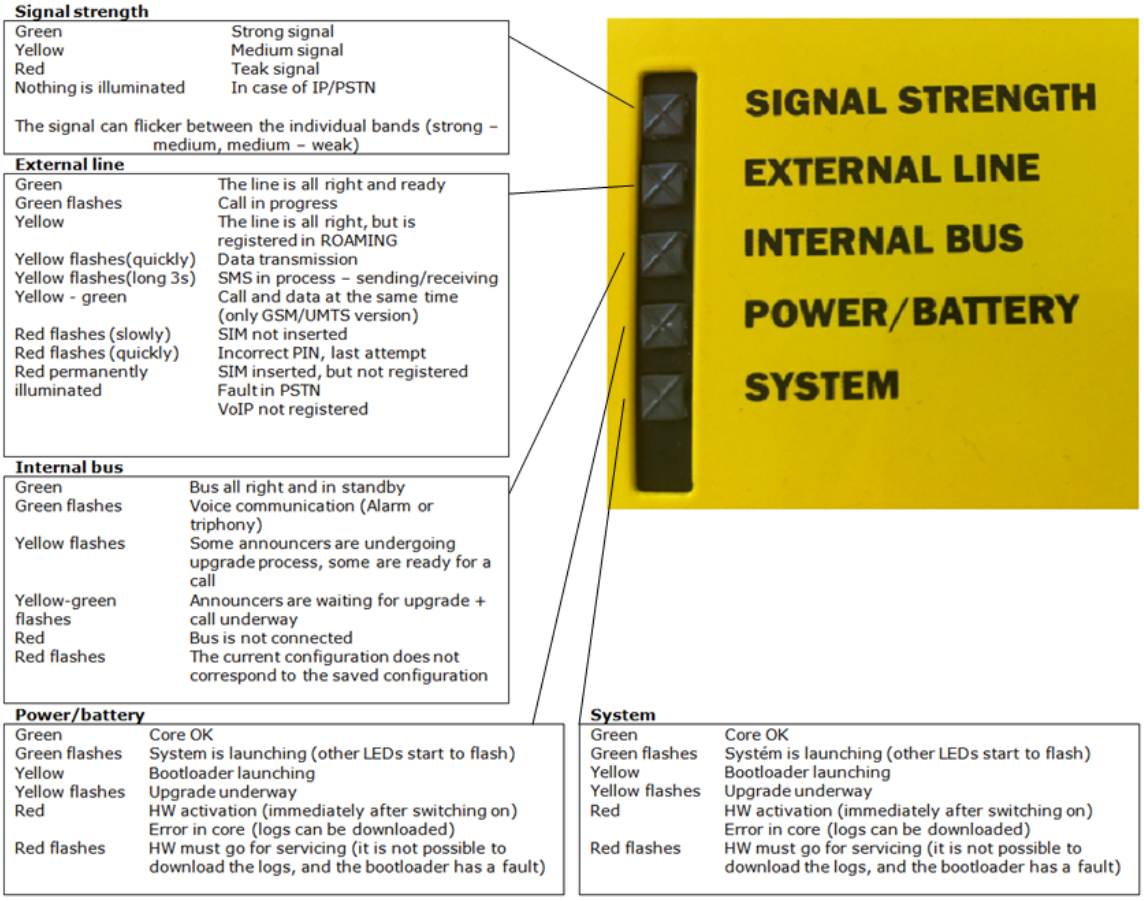


Figure: Central Unit Indication Elements

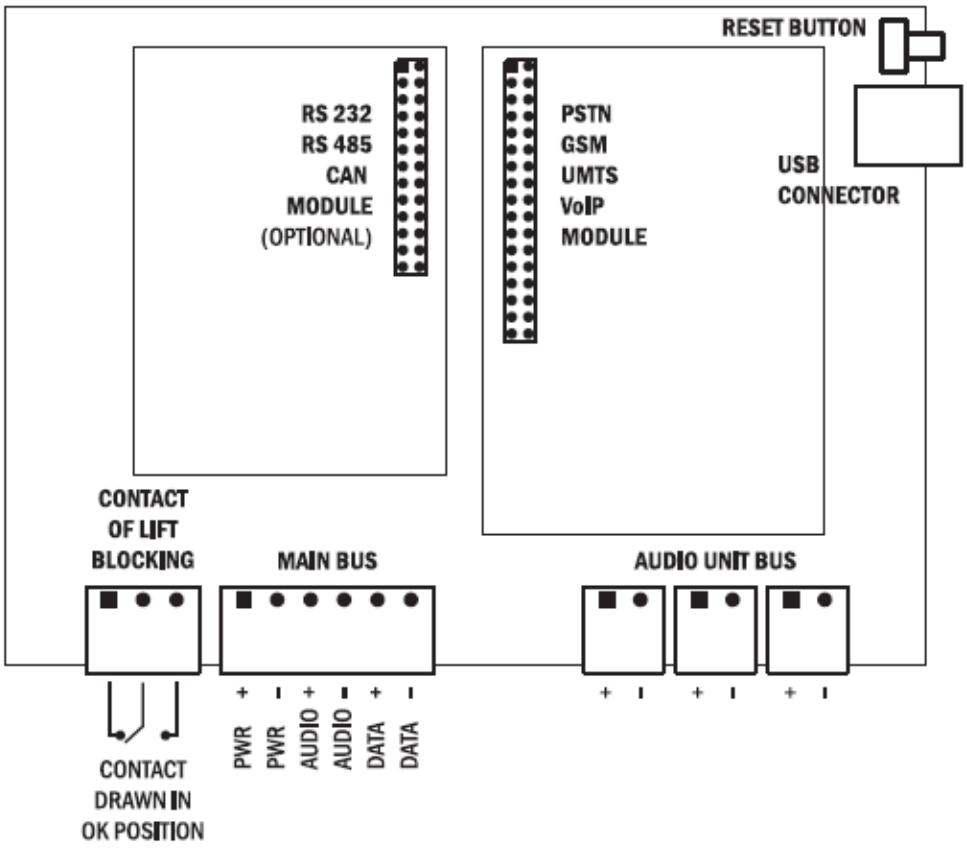


Figure: Central Unit Connectors

Lift blocking contact	Main bus	Audio unit bus
A … NC relay contact for lift blocking (normally closed)	1 … main bus supply +	7 … voice Audio Unit bus +
B … C relay contact for lift blocking	2 … main bus supply -	8 … voice Audio Unit bus -
C … NO relay contact for lift blocking (normally open)	3 … main bus audio +	
	4 … main bus audio -	
	5 … main bus data +	
	6 … main bus data -	

There are a USB connector and reset button to the right of the **CU** (see the figure below):

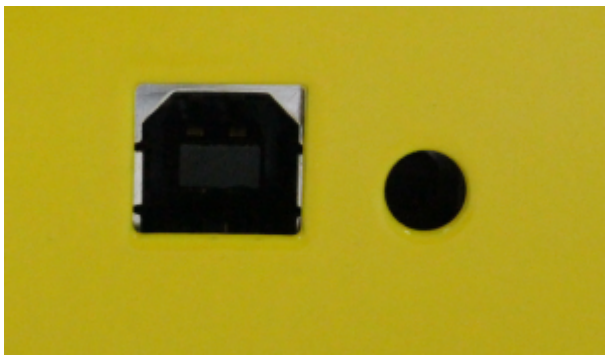


Figure: USB Connector and Reset Button

Reset button function

- **Reset equipment** – press the button quickly.
- **Restore factory values** – press and hold the button until all the LEDs turn red. Then release the button and wait until the SYSTEM LED flashes yellow. Now press the button quickly to delete all the user settings.
- **Zero backup rechargeable battery life counter** – press and hold the button until all the LEDs turn red. Then release the button and wait until the POWER/BATTERY LED flashes yellow. Now press the button quickly. Perform this function after replacing the backup rechargeable batteries with new ones only!
- **Check system completeness** – press and hold the button until all the LEDs turn red. Then release the button and wait until the INTERNAL BUS LED flashes yellow. Now press the button quickly to make the system supervise all the installed equipment (splitters, Audio Units etc.) for proper connection and function.
- **Delete central unit software completely** – press and hold the button until all the LEDs turn red. Then release the button and wait until the SYSTEM LED flashes red. Now press the button quickly. CAUTION: after performing this function you can only restore the normal function of the device using a PC!

USB Port Connection

Recommendation

- Do not keep your PC connected for a long time unless necessary to reduce the computer damage due voltage surge from the telephone line during storms, for example.

Warning

- **Do not open the CU** during the warranty period.
- Open the **CU** only to replace **the rechargeable batteries** after the warranty period.

Before You Start

CU installation conditions

- The **Central Unit** (hereinafter referred to as **CU**) is not intended for outdoor use.
- Do not install the **CU** onto vibration-producing machines.
- Install the **CU** vertically to allow air flow for cooling purposes (never cover the **CU** with any cloth or install it in another closed box).
- You may install the **CU** into the lift switchboard unless the temperature exceeds the acceptable limit. Remember that a higher ambient temperature reduces the life of backup rechargeable batteries in the **CU**.
- It is recommended that the **CU** should be operated in the upright position with the cable openings at the bottom. Such mounting position ensures the lowest temperatures and thus the longest life of the rechargeable batteries. Horizontal mounting is also possible. The upright position with the cable openings at the top (upside down) is forbidden!
- After mounting the **CU** check that the equipment is firmly fixed in place and cannot come loose and drop down into the shaft.

Product Completeness Check

Check whether the product package is complete before installation:

- 1 central unit
- 1 main bus terminal
- 4 bus connection terminals
- 4 wall plugs
- 4 wall plug screws
- 8 cable ties
- 1 battery connecting cables
- 1 brief manual
- 1 warranty sheet
- drilling template

CU Mounting

It is recommended to install the **CU** in a room that is secured against unauthorised persons, such as the lift machine room, switching station etc. On an easily accessible place there is a risk of telephone line misuse or SIM card misappropriation .

The **CU** is mounted on a wall with the included wall plugs and screws.

CU Electrical Installation

Putting in operation

1. Keep the **CU** disconnected from the mains.
2. Loosen the three screws on the upper cover of the **CU.**
3. Move the upper cover of the **CU** in such a way that you can remove it.
4. When removing the cover, proceed with caution, be careful about the earth wire connecting the cover with the **CU** bottom part. Do not disconnect the wire unless there is a reason to do so!
5. Using the slide-on terminals supplied with the device, connect the Audio Units, splitters (if there are 2 and more lift shafts) and other components of the system with the **CU.** Adhere to polarity!
6. Install a PSTN, GSM or UMTS module unless installed on the **CU**. Abide by the instructions given in the Instructions for Use of the given module (refer to Subs. 2.7 or 2.8).
7. Connect an analogue telephone line to the PSTN module if used (use a telephone connector or the terminal board on the module). Do not forget to connect an antenna to the GSM/UMTS module is used and insert a SIM card!
8. Connect the rechargeable battery jumper link (see the next subsection – Rechargeable Battery State Check) to activate the rechargeable battery function.
9. Replace the upper cover on the **CU** and tighten the cover fitting screws. Doing so make sure that the earthing wire is connected to the cover!
10. Connect the **CU** power cable to a 230V socket.

Caution

- If you connect one lift shaft only, it is not necessary to connect the splitters. Use the splitters only if you want to connect 2 or more lift shafts.

Power supply

- The **CU** is powered by 100–240V mains power.

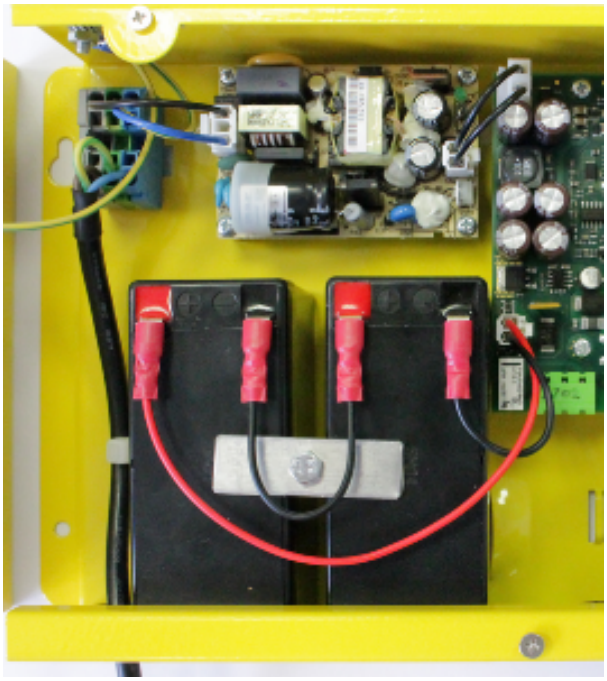
Warning

- Never connect an AC source or unstabilised DC source to avoid **CU** damage.

Rechargeable Battery Connection and State Check

Procedure:

1. Keep the **CU** disconnected from the mains.
2. Loosen the three screws on the upper cover of the **CU.**
3. Move the upper cover of the **CU** in such a way that you can remove it.
4. When removing the cover, proceed with caution, be careful about the earth wire connecting the cover with the **CU** bottom part. Do not disconnect the wire unless there is a reason to do so!
5. Interconnect the rechargeable batteries and connect them with the motherboard using a FASTON cable (see the figure below). Mind the polarity.



6. Replace the upper cover on the **CU** and tighten the cover fitting screws. Doing so make sure that the earthing wire is connected to the cover!
7. Connect the **CU** power cable to a 230V socket.

After plugging the **CU** into the socket the LED (Power/battery) should start to flash (charging). The **CU** charges the rechargeable batteries until fully charged. After some time the flashing green LED (charging) should change to a permanently illuminated green LED (battery charged).

Warning

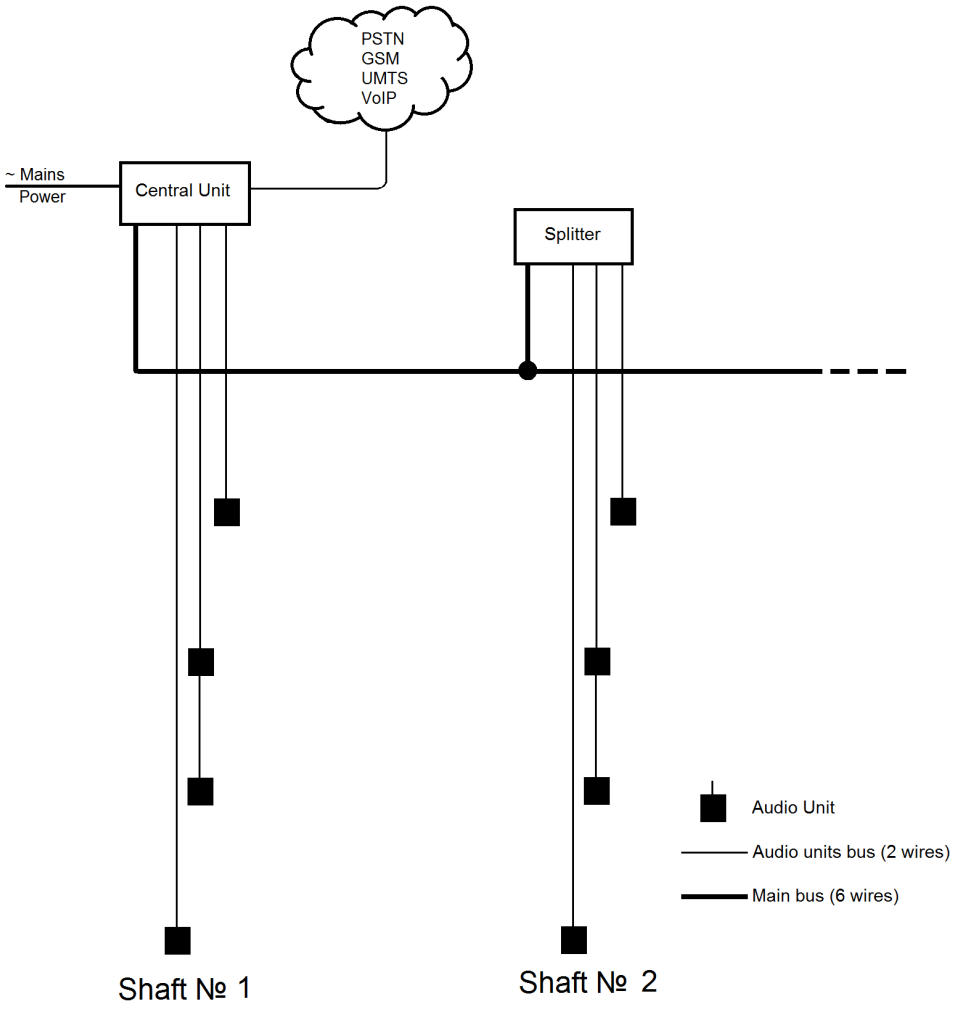
- Adhere to the polarity of the rechargeable batteries! When the polarity of the batteries is reversed, there is a danger of fire or explosion or damage to the **CU** electronics.

Rechargeable Batteries

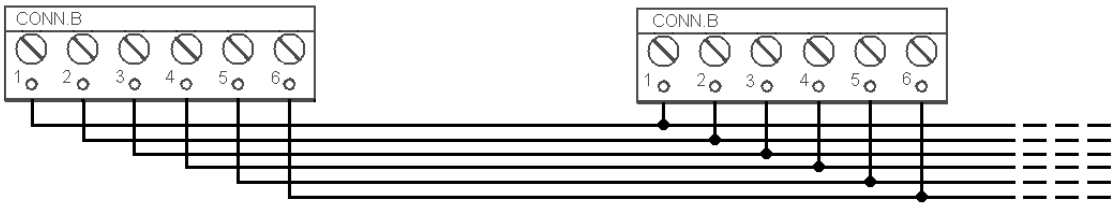
Caution

- If backup rechargeable batteries are used for the **2N® Lift8** power supply, the required backup of up to 1 h is guaranteed only if up to 20 audio units are connected in the system.
- The required 1h backup is not guaranteed if more than 20 audio units are installed.

Splitter – CU Bus Connection



Interconnect the **CU** and splitter using a 6-wire main bus (power + - , audio + - , data + -). Mind the polarity.



Main bus
1 … Main bus power +
2 … Main bus power -
3 … Main bus audio +
4 … Main bus audio -
5 … Main bus data +
6 … Main bus data -

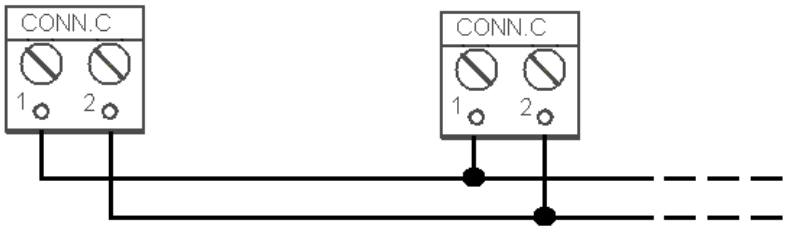
Caution

- 6-wire
  - Use unshielded wires of the cross-section of 0.75 mm^2.
  - The maximum total cable length is 30 m with the cross-section of 0.75mm^2.
  - For higher lengths, enlarge the supply pair cross-section: PWR (60m–1.5mm^2 , or 100m–2.5mm^2).

Audio Units – Splitter (CU) Bus Connection

(the **CU** is used if one lift shaft is connected)

Interconnect the splitter (**CU**) and Audio Units using a two-wire bus. Mind the polarity.



Audio unit bus
1 … Bus for Audio Units +
2 … Bus for Audio Units -

Caution

- 2-wire
  - Use unshielded wires of the cross-section of 0.75 mm^2.
  - The maximum total length per shaft is 600 m.
  - With multi-strand cables, always use a pair of wires which match each other.
  - With a tow cable, consider the cable length too.
  - With special cables (to the cabin), use the neighbouring wires and make sure that the nearest surrounding wires do not radiate interference (power wire, video signal etc.).

Tip

- Do not lead the bus close to power cables, especially in long-distance sections.
- Branch the bus to shorten the total length of sections.

Safety

- The bus is electrically isolated from the telephone line circuits according to the EN60950 standard requirements and its low voltage cannot cause any electrical accident.

CU Connection to Telephone Network

You can connect the **CU** to any of the following telephone networks:

- PSTN
- PBX
- GSM
- UMTS
- VoIP

PSTN

2N® Lift8 works in a broad band regardless of polarity and line parameters (refer to Technical Parameters). Connect it using the enclosed cable with an RJ–12 terminal. It is the most reliable and simplest connection. The disadvantage is the operating cost (fixed fee).

Caution

- Only one **CU** may be connected to one telephone line and no other end telephone equipment may be connected to the line including a product through which the telephone line goes (so-called priority connection – electronic burglar alarm, e.g.).
- No dual or party lines may be used.
- No telephone "multiplugs" (adaptors), even the smart ones, may be used.
- Never connect **2N® Lift8** to an ISDN line.

Telephone line requirements:

- The line must not be a dual or party one.
- The telephone socket and its wiring are usually the network provider's property and may not be tampered with.

Other recommendations:

- Notify the telephone network provider of your **2N® Lift8** installation and submit certification upon request.
- Your follow-up wiring must comply with the relevant safety regulations.
- You are recommended to secure your cabling against pirate connection (with a telephone lock, e.g.).

Connection via PBX (Private Branch Exchange)

This is the least-cost solution where a PBX and an unused PBX line are available.

PBX line requirements:

- The PBX to be used must work reliably even in the case of power outage. Large PBXs are mostly equipped with a back-up power supply, smaller PBXs usually use PSTN line redirection in the event of power failure. Consult the problem with the technician responsible for your PBX. An error during power outage may result in **2N® Lift8** calling an undesired station.
- Relevant call access rights have to be assigned to the PBX line to be used (use a standard telephone set to check whether the line can make outgoing calls to all the required numbers).
- While programming, enter the necessary PSTN code (typically a zero), or (preferably) make the PBX not require a prefix (so-called automatic connection to the provider's telephone line).
- To make the control room – lift calls, you have to know the extension number and how to get through to it (dial-in, DISA, operator).
- The control room – lift connection may not depend on the operator's presence; no call forwarding to a fax/answering machine in the night mode is allowed, etc.

Other recommendations:

- Make an agreement with the PBX owner regarding operating costs (**2N® Lift8** outgoing calls are billed at the owner's expense with the exception of free calls via "green lines").

Tip

- If there is permanent manning in your building (security staff, receptionist), train the personnel how to rescue people and program **2N® Lift8** to call this service.

GSM

This is used in particular where no PSTN line is available.

Recommendation

- In places with a poor signal quality find an appropriate place or use a special (directional) antenna.
- Protect the SIM card from theft.
- If a prepaid SIM card is used, make sure that the credit is monitored and topped up in time.

UMTS

This is used in particular where no PSTN line is available. If **2N® Lift8** is connected via UMTS, the system can be configured remotely using the **2N® Lift8 Service Tool** appli cation.

Recommendation

- In places with a poor signal quality find an appropriate place or use a special (directional) antenna.
- Protect the SIM card from theft.
- If a prepaid SIM card is used, make sure that the credit is monitored and topped up in time.

Operation without SIM card or PSTN line

- **2N® Lift8** can be used as an intercom without an inserted SIM card or connected PSTN line during the lift fitting time. In this case do not enable the lift blocking function until the telephone line is connected.

VoIP

VoIP is the cheapest solution where a reliable Internet connection is available.

2.2 Splitter

Description

The splitter helps connect the **CU** with the lift Audio Units. It is connected with the **CU** via six wires (power, audio, data). The Audio Units (audio units) are connected to the splitter using a two-wire bus. The splitter also contains a make/break contact for the lift blocking function. There can be up to 7 splitters (according to the count of lift shafts).

Each splitter must be configured for a different address (lift shaft number) for the system to work. The addresses are 2–8 (lift 2–8). Lift 1 is the **CU**.

The splitters are connected in series, i.e. one after another (never in parallel), to avoid system instability. A termination resistor (jumper) is mounted on the last splitter (furthest from the **CU**).

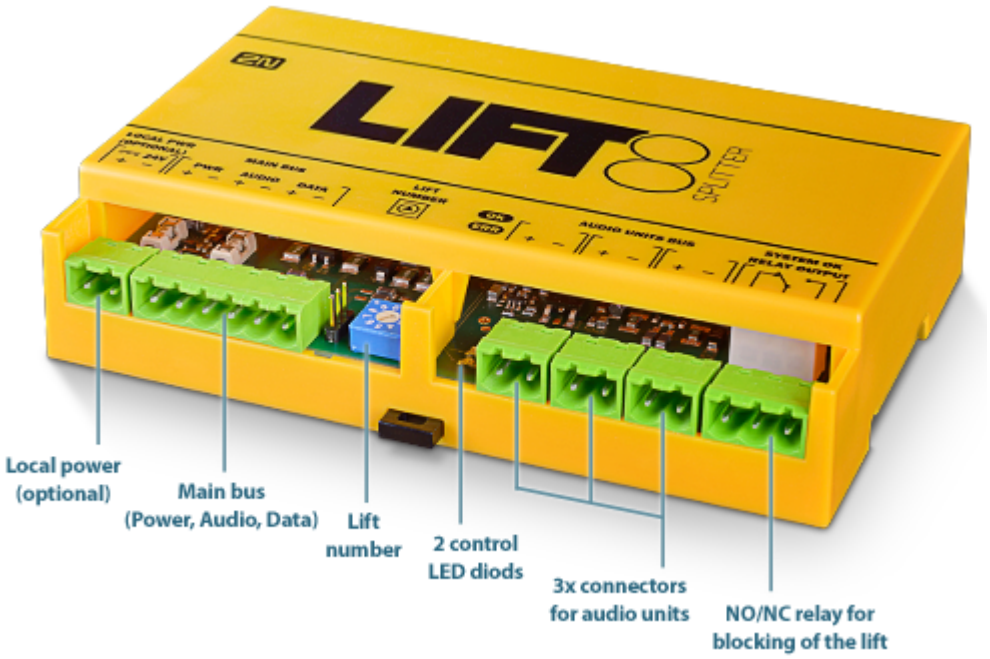


Figure: 2N® Lift8 Splitter

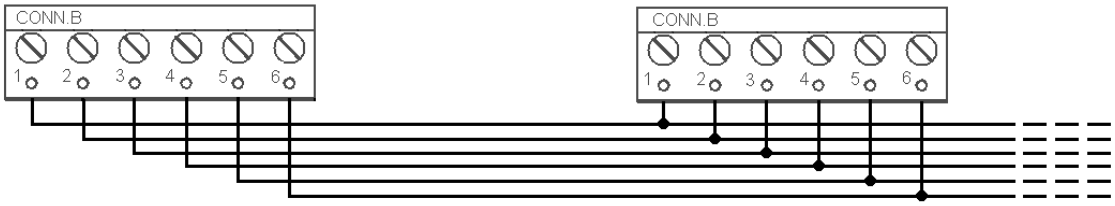
Caution

- Local power supply is not supported yet.

Electrical Installation

Main Bus Connection

Remove the push-in terminal board from the main bus connector and connect six wires from the **CU** maintaining the polarity (power + -, audio + -, data + -). See the printed figure on the splitter cover.



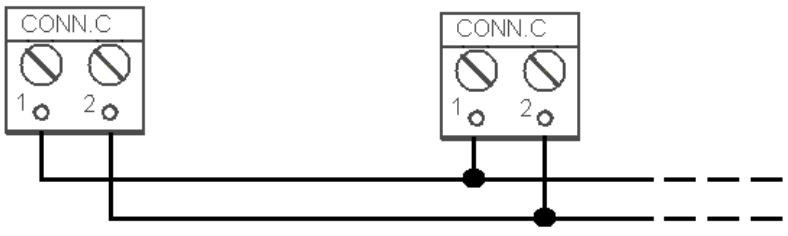
Main bus
1 … Main bus power +
2 … Main bus power -
3 … Main bus audio +
4 … Main bus audio -
5 … Main bus data +
6 … Main bus data -

Warning

- Maintain the connection polarity to avoid a **2N® Lift8** error.

Bus Connection between Audio Units and Splitter

Interconnect the splitter and Audio Units using a two-wire bus. Mind the polarity.



Audio unit bus
1 … Bus for Audio Units +
2 … Bus for Audio Units -

Address Configuration

Configure the splitter address for the given lift using a 10-position switch 0–9 (see the figure).

Configure lift 2–8 as 2–8 (set the switch to position 5 for lift 5, e.g.).

Audio Unit Connection

Connect up to 5 Audio Units to each splitter. As the splitter has only 3 audio unit terminals, connect 1–2 Audio Units in parallel. Remove the slide-on terminals from the audio unit connectors and connect the twin-wire. Adhere to polarity to avoid the Audio Unit error. Refer to the schemes printed on the splitter and Audio Unit for the connection polarity.

Requirements

- Connect up to 2 Audio Units to one terminal.
- With multi-strand cables, always use a pair of wires which match each other. In standard UTP cables the paired wires are twisted around each other.
- With special cables (to the cabin), use the neighbouring wires and make sure that the nearest surrounding wires do not radiate interference (power wire, video signal etc.).

Recommendation

- Do not run the bus near power wires, especially long sections.
- Branch the bus to shorten the total length of sections.

Warning

- The bus is electrically isolated from the telephone line circuits according to the EN60950 standard requirements and its low voltage cannot cause any electrical accident.

Lift Blocking Function Connection

Lift blocking is enabled by the contact breaking (opening) when there is a telephone line (PSTN, GSM, UMTS) fault or if the **2N® Lift8** rechargeable batteries are almost flat. Connect the contact to the relevant input of the control electronics of the lift/group of lifts. The control electronics must ensure that, after the contact opening, the lifts in operation go down to the nearest station and the doors open.

Caution

- This function may be mandatory depending on the regulations applicable for the given country and time of installation.

Termination Resistance

Caution

- There is one more pin between the main bus connector and lift number configuration, which helps you configure the termination resistance on the last splitter connected (the furthest from the **CU**).
- The termination resistance jumper is disabled by default.

2.3 Audio Unit – Cabin Universal

Description

The user does not come into a direct contact with this product. The control and indication elements depend on the specific installation. The functions of the indication elements correspond to the applicable standards

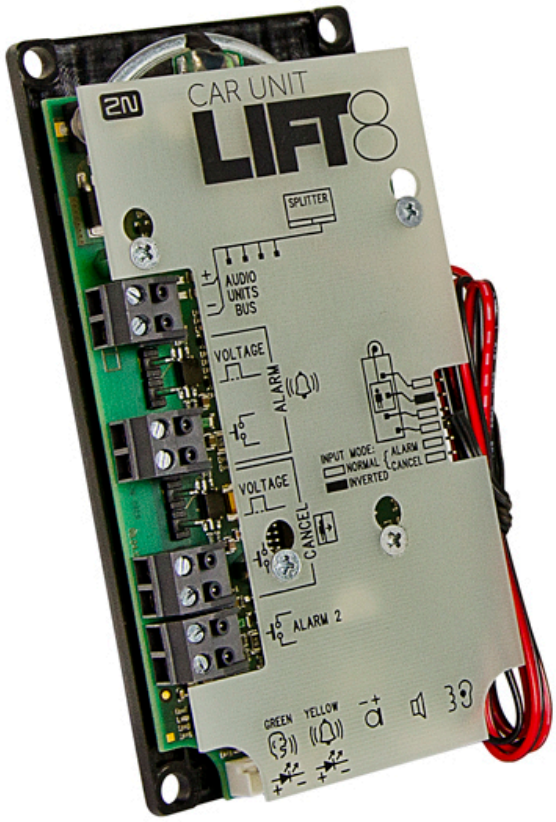


Figure: Audio Unit – Cabin Universal

Before You Start

Installation Conditions

- The panel has to be installation-ready, including speaker perforation.
- The panel has to be equipped with the following obligatory elements:
  - ALARM button;
  - illuminated pictogram "Request received";
  - illuminated pictogram "Connection made".
- The above mentioned elements have been located as required by the applicable regulations.
- There must be free space of at least 65×130×20 mm behind the panel.

Product Completeness Check

Check the product for completeness before installation.

The cabin Audio Unit package contains (assembled):

- 1 electronics board
- 4 terminals slid onto the board; see the photo
- 1 jumper slid onto the board; see the cover printing
- 1 mounting panel
- 1 speaker connected directly or by cable
- 1 microphone connected directly or by cable
- 1 cover with printing
- 5 tightening straps

Mounting

Electronics Mounting

This Audio Unit is intended for mounting behind the lift control panel. Typically, the panel is ready for installation as shown in the drawing below:

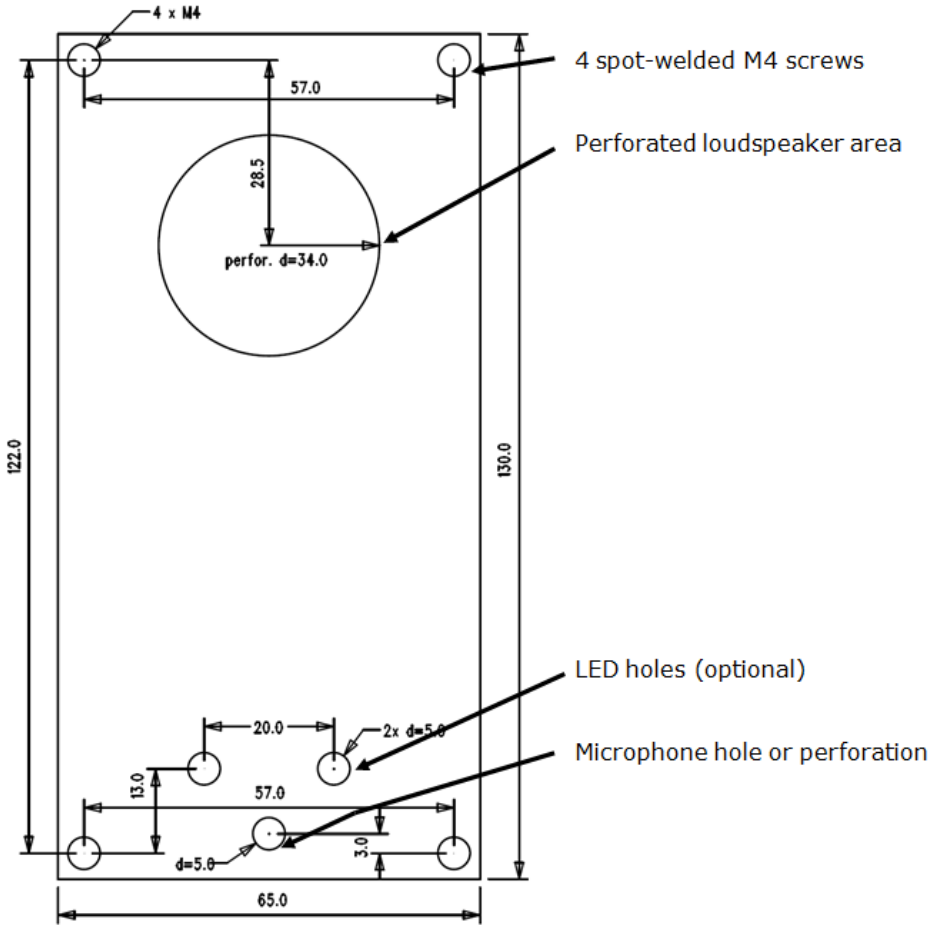


Figure: Mounting Hole Dimensions for Audio Unit – Cabin Universal

To mount the Audio Unit, you need 4 electrically spot welded **M3** or **M4** screws, a sufficiently perforated speaker area and a microphone hole. In emergency, you can fix the Audio Unit on a perfectly degreased surface with a high-quality double-sided foam self-adhesive tape.

Safety

- **Leave no gap** between the lift control panel and the Audio Unit surface to avoid acoustic speaker fault and acoustic speaker-microphone feedback.
- **Do not use** this type of Audio Unit in a position other than mounted on a sufficiently large board. The acoustic properties of an uninstalled Audio Unit cannot be guaranteed.

Separate Microphone Mounting

If the microphone is supplied separately with a cable on a 25×25 mm large board with self-adhesive foil, just glue it directly behind any hole in the panel (one hole must have the minimum diameter of 5 mm, a group of smaller holes must have the same total area). Be sure to degrease and clean the surface carefully before!

Requirements

- **The minimum distance between the loudspeaker and microphone centres is 90 mm.** A lower distance may lead to acoustic feedback. A greater distance (within the available 1m cable) does not matter.
- The microphone must be stuck on so that it does not pick up (even in part!) the acoustic pressure from the space behind the control panel. Such sensing might result in acoustic feedback since the speaker strongly radiates sound into the cavity.

Separate Speaker Mounting

The speaker is equipped with a cable and can be separated from the electronics (simply pulled out) within the reach of the cables delivered (1m). This option is useful where there is not enough space for the whole electronic equipment. Fit the speaker according to the instructions below:

- While gluing the speaker choose such procedures or adhesives that prevent membrane damage by adhesives and volatile substances or heat.
- We recommend you to keep the speaker sealed to eliminate vibrations and provide electrical insulation.

Frequently Asked Questions about Speaker

- Is it possible to use a common speaker for the communicator and floor Audio Unit?
  No, it is not possible.
- May I use a speaker of my own?
  Yes, but make sure that the impedance is 64 Ω. By doing this you assume responsibility for sufficient volume and frequency range.
- May I place the speaker on the cabin ceiling?
  This placement is not recommended.
- May I use a longer cable to the speaker?
  For the speaker yes, but we do not recommend it for the microphone.

Electrical Installation

Description of Terminals, Connectors and Jumpers

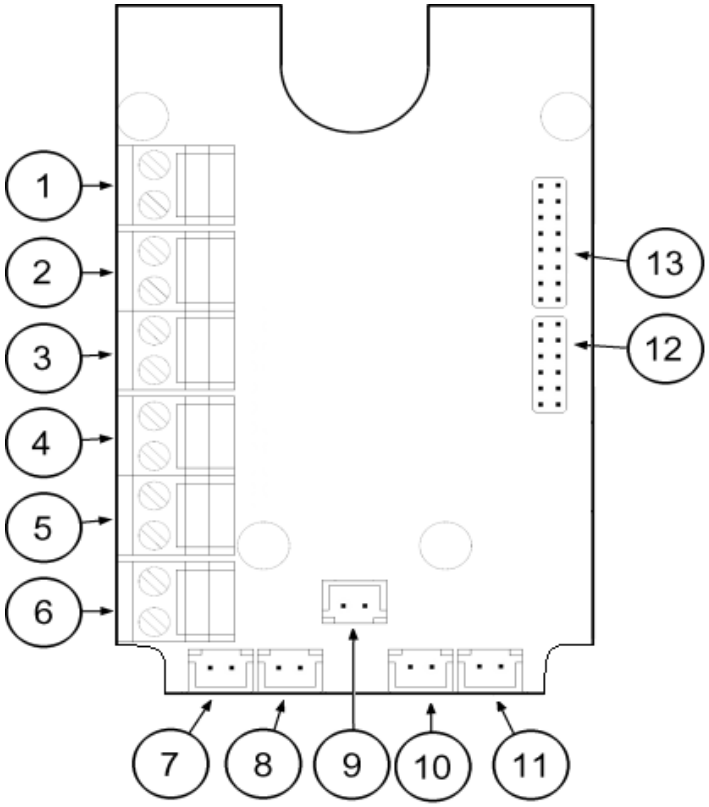


Figure: Terminals, Connectors and Jumpers on Audio Unit – Cabin Universal Board

Terminals		Connectors	
1	Audio unit bus	**7**	"Connection made" LED
2	ALARM, voltage activation	**8**	"Request received" LED
3	ALARM, contact activation	**9**	microphone connector (optionally)
4	CANCEL, voltage activation	**10**	induction loop connector
5	CANCEL, contact activation	**11**	speaker connector
6	Alarm 2 (set 2)	13	servicing connector
Configuration jumpers		**Two LED signal lamps (other side)**	
12	Audio Unit position	**1.** (yellow)	Request received
12	ALARM and CANCEL negation	**2.** (green)	Connection confirmed

Note

- If external LEDs are connected to connectors 7 and 8, LED indicators 1 and 2 will not be shining.

Audio Unit Location Configuration

The Audio Unit is set as a cabin Audio Unit by default and so it is not necessary to change the configuration. To use the Audio Unit in a room other than the lift cabin, proceed as follows.

Procedure

1. Reconfigure the jumper on configuration jumper 12.
2. If there is poor access to the pins, you can remove the elecronics cover. Slightly loosen the four screws and shift the cover downwards. Now you can remove the cover.
3. The first 4 pins serve for setting the Audio Unit location (1 – cabin ceiling, 2 – cabin, default, 3 – under the cabin, 4 – shaft bottom).
4. Configure the required changes as printed on the electronics cover.
5. If you have removed the cover, put it back in the original position and tighten the screw.

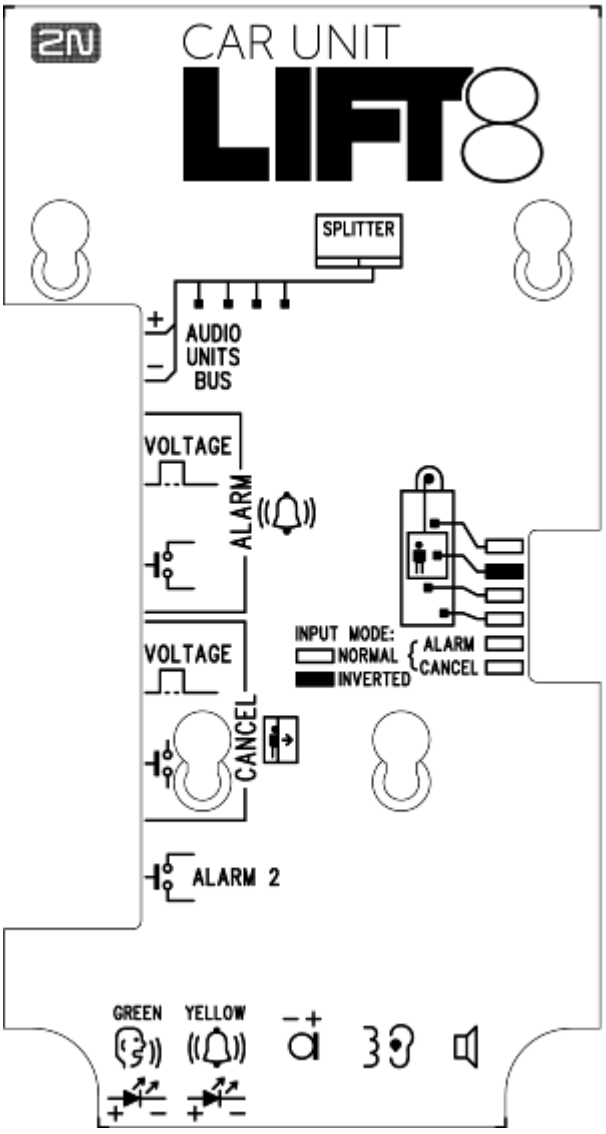


Figure: Address Configuration for Audio Unit – Cabin Universal

Note

- Make sure that two audio units do not have an identical address to avoid system error.
- The position-setting jumpers are employed exceptionally, e.g. where a certain audio unit type is used in a position other than normally intended.
- To recover the initial address setting, follow the drawing on the cover.

Bus Connection

Polarity must be maintained.

Warning

- Connection to different, e.g. higher-voltage, cables leads to damage or destruction of the Audio Unit.
- Maintain polarity while connecting the Audio Unit to avoid Audio Unit error.

Caution

- The Audio Unit is powered via a 2-wire bus. Disconnection of these wires results in the Audio Unit switch-off.
- Avoid the Audio Unit address duplicity.

ALARM Button Connection

Requirements

- The ALARM button design (colour, symbol, keypad surface, mechanical operation) and location have to meet the requirements of the particular installation.

Button control

Requirements

- The ALARM button has to be equipped with a make or break (NO/NC) contact that is not connected with any other circuit.
- None of the ALARM button terminals may be connected electrically with any other electrical circuit and no voltage source other than the NO/NC contact may be connected to them.
- If one of the ALARM contacts is connected to another circuit, an appropriate isolation strength according to the applicable standards has to be ensured between the contacts.

Procedure

1. Leave the ALARM terminal in the lower position (3).
2. If you use a make contact, leave the jumper as it is (5th pin on jumper 12) – ALARM without jumper fitted (factory setting).
3. If you use a break contact, fit the jumper (5th pin on jumper 12) – ALARM inverted – jumper fitted.

Voltage control

Requirements

- DC 12 to 48V voltage
- The voltage signal must be active even during a power failure.

Procedure

1. Move the ALARM terminal two pins up into position (2).
2. For activation by voltage connection, leave the jumper as it is (5th pin on jumper 12) – ALARM without jumper fitted (factory setting).
3. For activation by voltage disconnection, fit the jumper (5th pin on jumper 12) – ALARM inverted – jumper fitted.

Warning

- Ignoring the instructions above may lead to product damage.

CANCEL Input Connection (Door Contact, Optional)

This input helps cancel a rescue request if the lift is fully functional. When the ALARM button is pressed, the system waits for a pre-programmed period of time, which is a little longer than the maximum lift running time. If the lift is functional, it arrives in the required station within this timeout and opens the door. In that case, the rescue request is cancelled. If the door does not open, the request is accepted.

Find out before installation whether the door opening signal is available in the lift cabin.

Requirements

- If the lift has a double door, the signal must be active only if both the door sets are open, i.e., if it is really possible to leave the cabin.
- The door position signal has to work even in the case of power outage.

Contact control

Requirements

- None of the contact outlets terminals may be connected electrically with any other electrical circuit and no voltage source other than the NO/NC contact may be connected to the CANCEL terminals.

Procedure

1. Leave the CANCEL terminal in the lower position (5).
2. f you use a make contact, leave the jumper as it is (6th pin on jumper 12) – CANCEL without jumper fitted (factory setting).
3. If you use a break contact, fit the jumper (6th pin on jumper 12) – CANCEL inverted – jumper fitted.

Voltage control

Requirements

- DC 12 to 48V voltage

Procedure

1. Move the CANCEL terminal two pins up into position (4).
2. For activation by voltage connection, leave the jumper as it is (6th pin on jumper 12) – CANCEL without jumper fitted (factory setting).
3. For activation by voltage disconnection, fit the jumper (6th pin on jumper 12) – CANCEL inverted – jumper fitted.

Warning

- Ignoring the instructions above may lead to product damage.
- The CANCEL function only works when the cabin Audio Unit is set to the cabin position (default).

Caution

- Remember to program delayed calling to make the CANCEL connection work successfully.
- Refer to the electronics cover for the ALARM and CANCEL configuration scheme.

LED Indicator Connection

The current LED technology makes it possible to achieve a relatively good light intensity with a small current. If the lift indicators are illuminated with a sufficiently efficient LED requiring a current of approx. 5 mA (with diode loss of about 2 V), no power supply is needed. See the figure below for the connection.

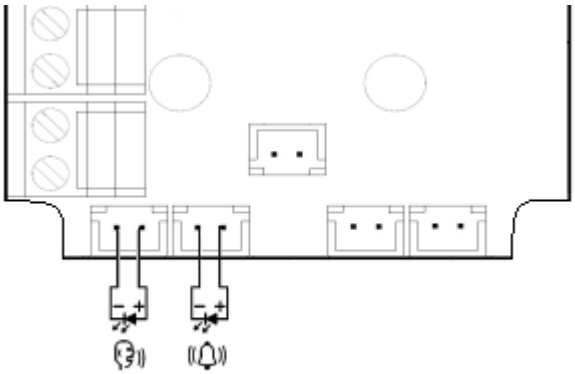


Figure: Alternative LED Connection for Audio Unit – Cabin Universal

Note

- The cables required for this configuration are not part of the standard delivery but are available upon agreement.
- In this configuration, the auxiliary indicators on the PCB are not illuminated.

Induction Loop Connection

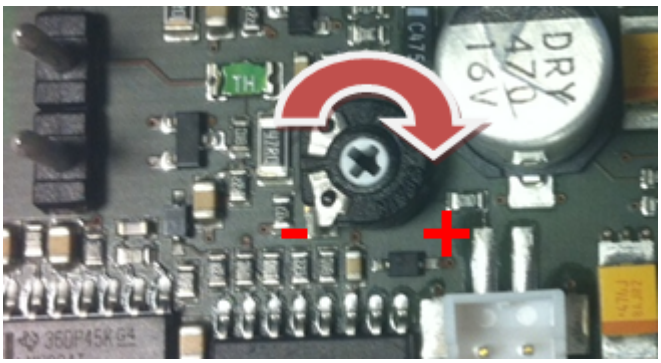
The regulations that apply to communicator installations may require a mandatory loop for persons with defective hearing in the lift cabin. In that case, connect the loop to connector (10) with any polarity. The loop including a 1m long cable can be part of your delivery if agreed so.

Requirements

- The induction loop has to be placed behind a non-metal, non-magnetic cover in the control panel as the magnetic field of the induction loop cannot go through a metal control panel.
- The induction loop has to be labelled with an appropriate symbol (ear) placed according to the applicable standards.

Volume Configuration

Slightly loosen the four screws and shift the cover downwards. Now you can remove the cover. Use the trimmer located in the bottom part of the electronics to set the required volume level (see the figure below).



Caution

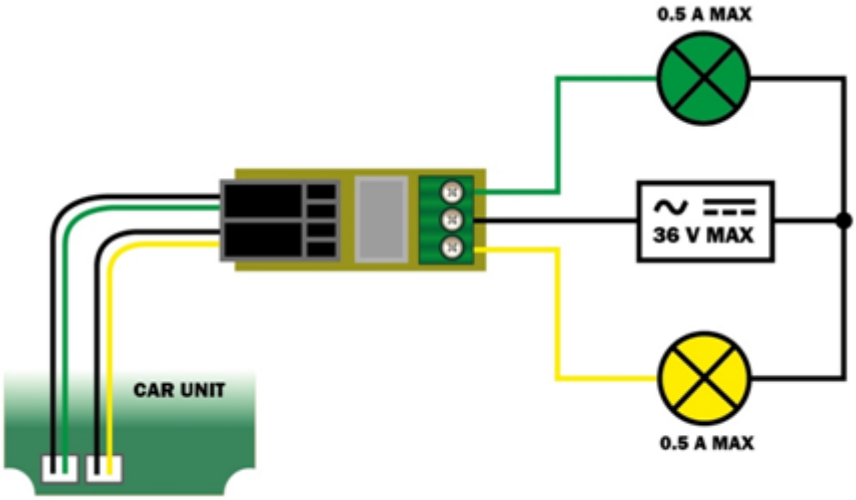
- Use the trimmer to set the best acoustic properties eliminating feedback.

External Pictogram Driver

Description

The device transforms the **2N® Lift8** Car Unit LED outputs into a universal pilot lamp, whose outputs are capable of driving two lamps rated at the maximum of 36 Volts, 0.5 Amps. The outputs are galvanically isolated from the Car Unit. Since the lamp outputs are polarity independent, both AC and DC power supplies can be used for powering the lamps. To protect the Car Unit and Pictogram Driver against damage caused by shorts, **always use the included isolating tube when installing the device!**

Wiring diagram



Caution

- The manufacturer, 2N TELEKOMUNIKACE a.s., hereby declares that the **2N® Lift8** External Pictogram Driver is in compliance with the essential requirements and other relevant provisions of the 1999/5/EC Directive. The Declaration of Conformity is attached to the basic module of **2N® Lift8** and also available at www.2n.cz.

2.4 Audio Unit – Machine Room

Description

The machine room Audio Unit is intended for installation in the machine room or as an intercom solution located in the reception. It has some **distinctive** compared with the other types:

- The Audio Unit is equipped with a keypad.
- The keypad helps you select various functions and **program the system.**
- You can connect a handset to the Audio Unit for better acoustic properties in a noisy environment.
- You can connect an external siren to the Audio Unit for incoming call signalling.
- You can configure the machine room Audio Unit to be shared by multiple lifts.

Operation

1. This type of Audio Unit is operated by qualified people (lift maintenance staff, e.g.).
2. Push the TRIPHONY button to activate voice communication with the other Audio Units of the same lift. Push and hold the button for over 2 seconds to activate communication with another lift (to display a voice menu and select the required lift number).
3. Push the ALARM button to call the control centre, for example. The Audio Unit calls the numbers configured in the ALARM memory – set 2 (021–026). The ALARM button illumination (not required by default) helps you find and activate the Audio Unit easily in the dark.
4. When you press the ALARM or TRIPHONY button, the function is called up

immediately. Speak HandsFree or use a handset for better acoustic properties.

5. Press  for more than 2 s to display the voice menu.

Caution

- If no number is specified in the ALARM memory – set 2 (021–026), the Audio Unit dials the numbers defined in the ALARM memory – set 1 (011–016).
- Push the ALARM button to call the control room or machine room Audio Unit configured as an intercom.
- The ALARM and TRIPHONY buttons shine even at relax.

Before You Start

Requirements

- Connect a handset supplied by the manufacturer to the Audio Unit to avoid handset operation error.

Product Completeness Check

Check the product for completeness before installation.

- 1 Audio Unit
- 1 handset
- 2 wall plugs
- 2 wall plug screws
- 7–8 jumpers for common machine room configuration

Mounting

The Audio Unit is typically mounted on a wall using the wall plugs and screws included in the delivery.

Electrical Installation

Description of Connectors

There are 3 connectors to the right under the cover:

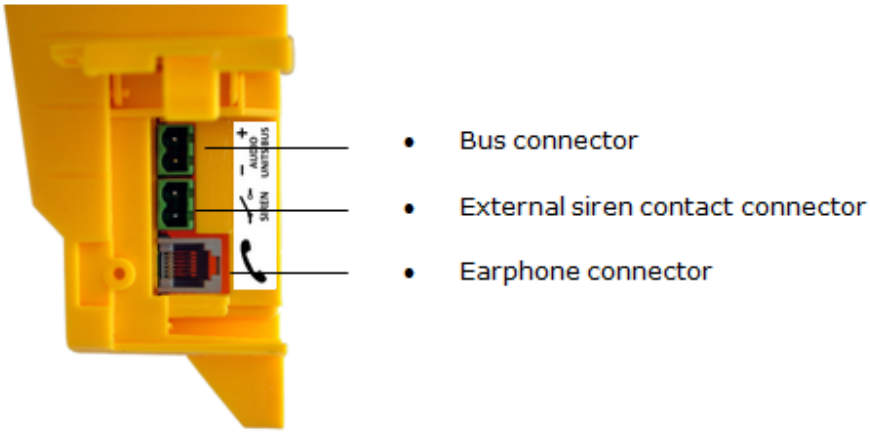


Figure: Machine Room Audio Unit Connectors

Address Configuration

There is a group of jumpers under the transparent front cover. Do not use any of them if the machine room is only intended for the given lift. The Audio Unit identifies itself as the machine room for the given lift.

If the machine room is to be shared by multiple lifts, configure the corresponding pins 1–8 for the lifts to share the machine room (numbered 1–8 from left to right 1–8).

Note

- This Audio Unit is always configured as the machine room and cannot have a different location.

Group of 8 jumpers for address configuration: If the machine room is shared by multiple lifts, use one Audio Unit and configure several addresses using the included jumpers. **The other Audio Unit types do not have this possibility!**

Note

- Having set more addresses for the Audio Unit, press the TRIPHONY button to activate communication of the lift Audio Units with the lowest of the configured addresses.

Caution

- Avoid the Audio Unit address duplicity.

Bus Connection

Open the side door. Pull out the terminal from the connector, connect the wires and replace the terminal. Maintain the polarity.

Warning

- Connection to different, e.g. higher-voltage, cables leads to damage or destruction of the Audio Unit.
- Maintain polarity while connecting the Audio Unit to avoid Audio Unit error .

Caution

- The Audio Unit is powered via a 2-wire bus. Disconnection of these wires results in the Audio Unit switch-off.

Handset Connection

Order an additional handset for your Audio Unit. The handset is delivered including a cable with telephone end pieces.

Caution

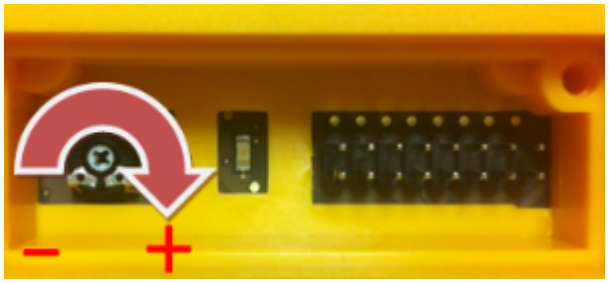
- If the handset is not connected, the Audio Unit works in the HandsFree mode.
- A handset of a type other than that supplied by the manufacturer may not work.

Testing

Connect a handset and push and hold for over 2 s  to display the voice menu for the function test. If the handset does not work, the voice menu will be played from the Audio Unit speaker.

Volume Configuration

Open the protective door on the Audio Unit and adjust the volume using the trimmer.



Caution

- Use the trimmer to set the best acoustic properties eliminating feedback.
- Volume configuration only works in the HandsFree mode.

2.5 Audio Unit – Shaft

Description

This Audio Unit is designed for installation on the lift shaft bottom or lift cabin roof, or wherever it is necessary to communicate (during lift maintenance, e.g.). The Audio Unit is enclosed in a robust yellow cover. It is not intended for outdoor use but perfectly tolerates the conditions in lift shafts: is resistant against fall of small objects, dripping oil, etc. The ALARM button activates the control centre connection, the TRIPHONY bottom enables conference connection with the other Audio Units of one and the same lift. The Audio Unit contains a built-in microphone and a speaker. A handset can be connected for better acoustic properties. Thanks to its size and robustness, the Audio Unit has a very good, strong sound.

Operation

1. This type of Audio Unit is operated by qualified people (lift maintenance staff, e.g.).
2. Push the TRIPHONY button to activate voice communication with the other Audio Units of the same lift.
3. Push the ALARM button, for example, when someone falls down the shaft.
4. The Audio Unit calls the numbers configured in the ALARM memory – set 2 (021–026).
5. The ALARM button illumination (not required by default) helps you find and activate the Audio Unit easily in the dark.

Caution

- If no number is specified in the ALARM memory – set 2 (021–026), the Audio Unit dials the numbers defined in the ALARM memory – set 1 (011–016).
- Push the ALARM button to call the control room or machine room Audio Unit configured as an intercom.
- The ALARM and TRIPHONY buttons shine even at relax.

Before You Start

Product Completeness Check

Check the product for completeness before installation.

- 1 Audio Unit
- 2 wall plugs
- 2 wall plug screws

Requirements

- This type of Audio Unit has no specific requirements.

Mounting

The Audio Unit is typically mounted on a wall using the supplied wall plugs and screws. There is a drilling template in the product package.

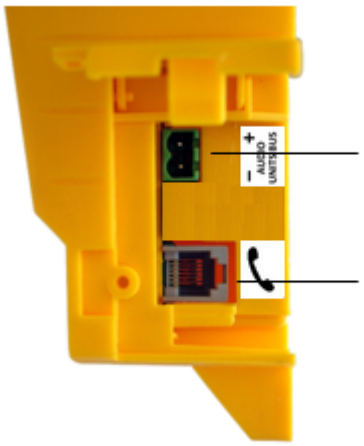
Caution

- The Audio Unit is not intended for outdoor installations.

Electrical Installation

Connectors

The Audio Unit has one connector for bus connection. The second RJ–11 connector is used for handset connection. Both the connectors are under the side doors.



- Bus connector
- Earphone connector

Audio Unit Location Configuration

Audio Unit location means configuration of jumpers (see the cover print). You do not have to change the jumper configuration if you are installing the Audio Unit at the shaft bottom. Otherwise, proceed as follows:

Procedure

1. Loosen the screws on the jumper-protecting door and open the door.
2. Configure the required change according to the printed figure below the door (this Audio Unit **cannot** be configured as common for multiple).
3. Close the door and tighten the screw.

Caution

- Avoid the Audio Unit address duplicity.

Bus Connection

Loosen the screws to the right and open the connector cover. There is just one connector under the cover: a bus connector. Pull out the terminal from the connector, connect the wires and replace the terminal. Make sure that the polarity is maintained.

Warning

- Connection to different, e.g. higher-voltage, cables leads to damage or destruction of the Audio Unit.
- Maintain polarity while connecting the Audio Unit to avoid Audio Unit error .

Caution

- The Audio Unit is powered via a 2-wire bus. Disconnection of these wires results in the Audio Unit switch-off.

Handset Connection

Use the handset supplied with the Audio Unit and the included cable with telephone terminals.

Caution

- If the handset is not connected, the Audio Unit works in the HandsFree mode.
- A handset other than that supplied by the manufacturer may not work.

Volume Configuration

Open the protective door on the Audio Unit and adjust the volume using the trimmer.

Caution

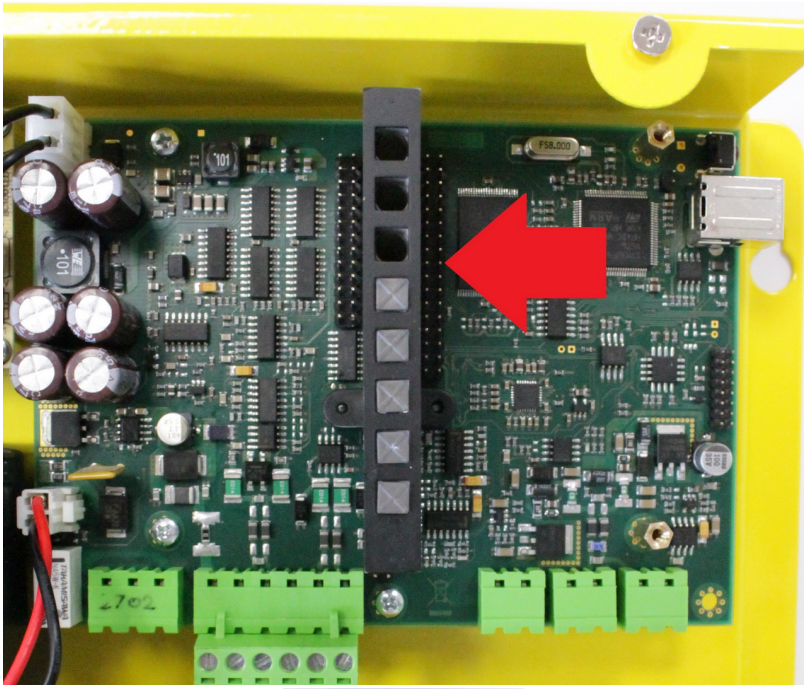
- Use the trimmer to set the best acoustic properties eliminating feedback.
- Volume configuration only works in the HandsFree mode.

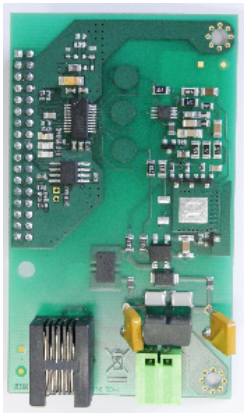
2.6 PSTN Module

Description of Connection

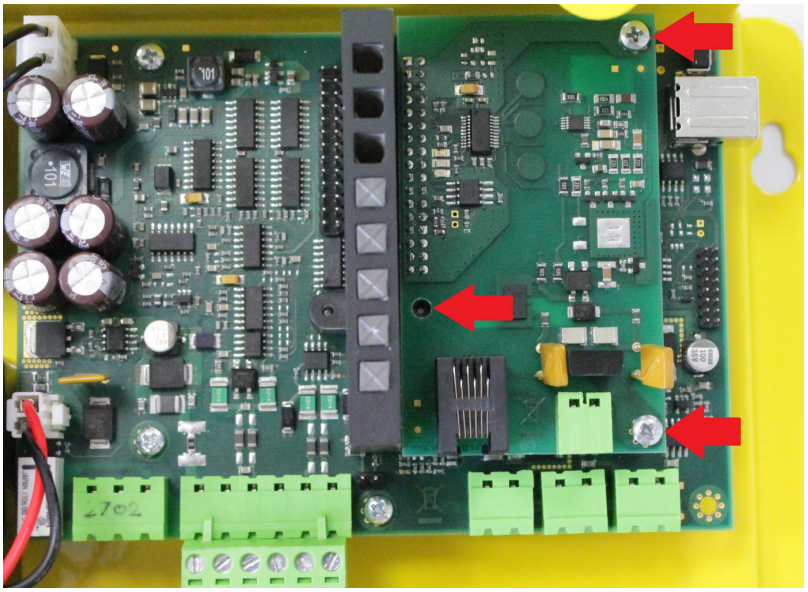
The module should be part of the Central Unit (hereinafter referred to as **CU**). If the **CU** does not contain the PSTN module, proceed as follows:

1. Keep the **CU** disconnected from the mains.
2. Loosen the three screws on the upper cover of the **CU**.
3. Move the upper cover of the **CU** in such a way that you can remove it.
4. When removing the cover, proceed with caution, be careful about the earth wire connecting the cover with the **CU** bottom part. Do not disconnect the wire unless there is a reason to do so!
5. Connect the module to the connector on the motherboard (see the figure below).





6. Be careful while putting the module on the pins. Make sure that you have connected all the pins to the module connector.
7. Having fitted the pins into the connector correctly, you can fix the module using 2 bolts and 1 screw.



8. Now connect the PSTN line. There are 2 options:

- using the RJ–11 connector;
- using a slide-on terminal board.

Warning

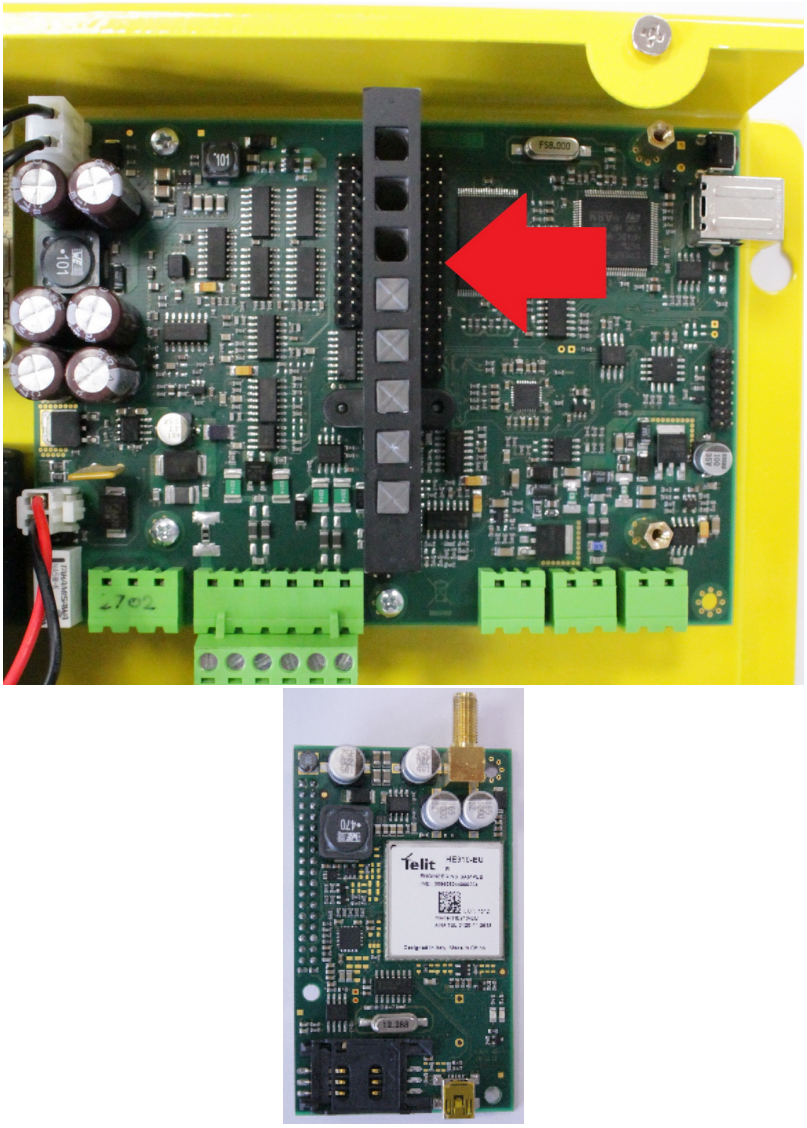
- While fitting the module, make sure that all the pins are fitted correctly into the connector to avoid module damage.

2.7 GSM/UMTS Module

Description of Connection

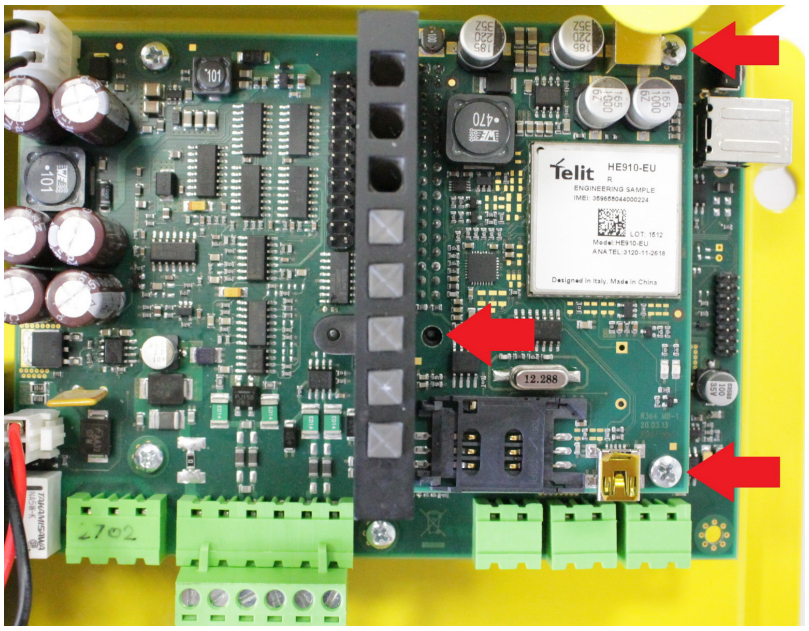
The module should be part of the Central Unit (hereinafter referred to as **CU**). If the **CU** does not contain the PSTN module, proceed as follows:

1. Keep the **CU** disconnected from the mains.
2. Loosen the three screws on the upper cover of the **CU**.
3. Move the upper cover of the **CU** in such a way that you can remove it.
4. When removing the cover, proceed with caution, be careful about the earth wire connecting the cover with the **CU** bottom part. Do not disconnect the wire unless there is a reason to do so!
5. Connect the module to the connector on the motherboard (see the figure below).



6. Be careful while putting the module on the pins. Make sure that you have connected all the pins to the module connector.
7. While fitting the module mind the antenna connector. Make sure that it is pushed through the **CU** cover hole.

8. Having fitted the pins into the connector correctly, you can fix the module using 2 bolts and 1 screw.



9. Now insert the SIM card and connect the antenna.

Warning

- While fitting the module, make sure that all the pins are fitted correctly into the connector to avoid module damage.

Caution

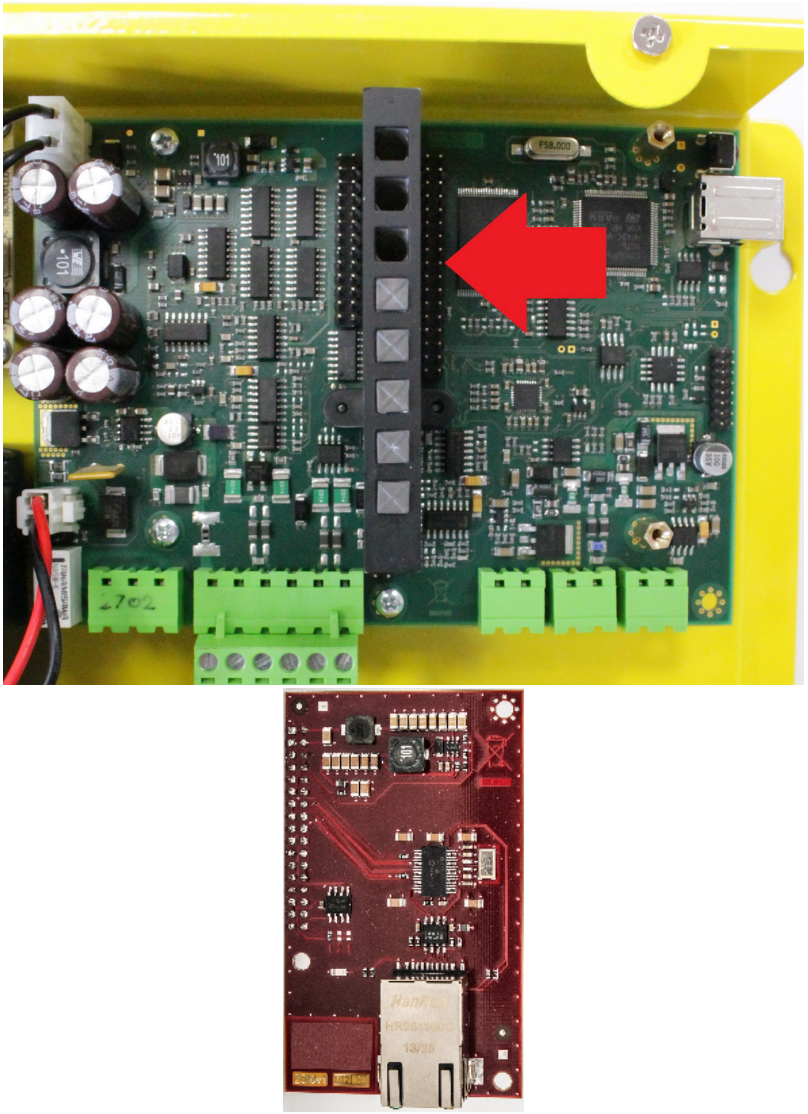
- In places with a poor signal quality find an appropriate place or use a special (directional) antenna.
- Should you have DTMF transmission problems, set parameter 710 to 1 (for GSM modules only).

2.8 VoIP Module

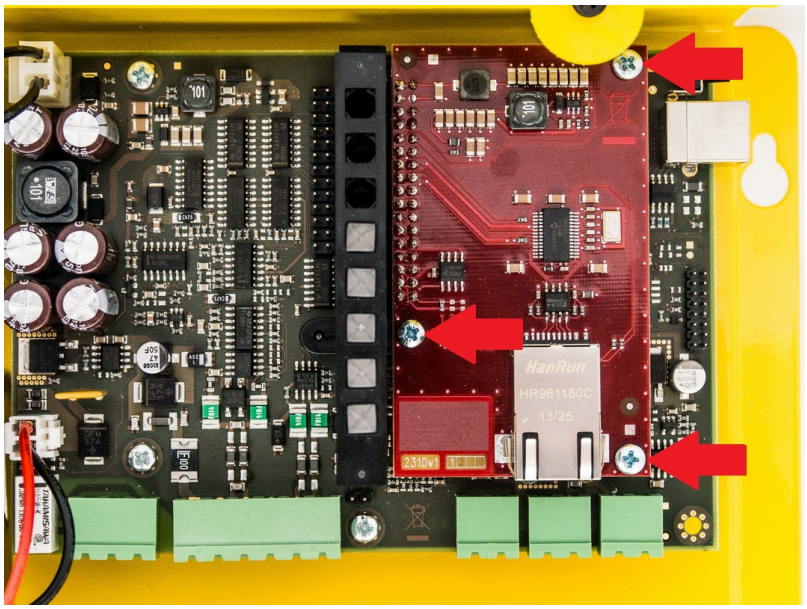
Description of Connection

The module should be part of the Central Unit (hereinafter referred to as **CU**). If the **CU** does not contain the PSTN module, proceed as follows:

1. Keep the **CU** disconnected from the mains.
2. Loosen the three screws on the upper cover of the **CU**.
3. Move the upper cover of the **CU** in such a way that you can remove it.
4. When removing the cover, proceed with caution, be careful about the earth wire connecting the cover with the **CU** bottom part. Do not disconnect the wire unless there is a reason to do so!
5. Connect the module to the connector on the motherboard (see the figure below).



6. Be careful while putting the module on the pins. Make sure that you have connected all the pins to the module connector.
7. Having fitted the pins into the connector correctly, you can fix the module using 2 bolts and 1 screw.



8. Now connect the VoIP line via the RJ–45 connector.

Warning

- While fitting the module, make sure that all the pins are fitted correctly into the connector to avoid module damage.s

3. System Configuration

The system is supplied pre-configured.

This section describes the **2N® Lift8** configuration. There are three ways how to progr am **2N® Lift8**.

3.1 Programming

The advantage of the **2N® Lift8** (hereinafter referred to as **L8**) system is that it is programmed via the **CU** where all the parameters are stored. Hence, you do not have to reconfigure anything to replace an Audio Unit and you can program just one **CU** in multiple lift systems, for example. The memory is independent of the **CU** power.

Before You Start

- Fill in all the values to be changed in the prepared form with a clear table of basic functions.
- If the **L8** is not brand new, make sure that you have the correct servicing password, and if you are not completely sure of your **L8** configuration, execute full initialisation (Warning: The servicing password is also initialised!).
- **L8** can be programmed in 3 ways: remotely via a telephone (telephone number), using the machine room Audio Unit and/or using the service tool program (connection via USB/IP address).
- Make sure that your telephone supports tone dialling (key phones may cause problems in some PBXs).

Caution

- Warning: The servicing password is also initialised!

Access to Programming Mode

You can enter the programming mode during an incoming call (calling the **L8** number) or using the machine room Audio Unit (press * for over 2 seconds).
Use the voice menu (press 9 for administration and 1 for access to the programming).

Upon request, enter the servicing password as follows: **servicing password** * (do not forget to put an asterisk after the password).
If the password is correct, **L8** announces: **"You have entered the programming menu, select a parameter".**
The factory password is 12345 but you are recommended to enter a different password to protect your device against unauthorised persons.

Note

- The factory password is 12345 but you are recommended to enter a different password to protect your device against unauthorised persons.
- While entering the password, keep a limit of 60 seconds (or any other value configured in the range between 10 and 1000 seconds) for each character to avoid **L8** hang-up.

Programming Procedure

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

function number * **value** *

The function number has three digits (see the table). After you enter the function number and an asterisk, **L8** reports the number or name, current value and potential range of the parameter to be programmed. After you enter the value and another asterisk, **L8** reports "New value stored", or "Invalid value, new value not stored" if the value is beyond the allowed range.

L8 reads out the parameter number and the newly configured value for checking purposes.

Warning

- A drawback of some telephone sets is that, after you press a button, i.e. send a DTMF signal, they go "deaf" for a fraction of a second. In that case, you cannot hear the whole text and are recommended to use another telephone.

Programming Error

- If you make a mistake during entering (the function number or value) and have not entered an asterisk yet, you can cancel the whole number by pressing # and re-enter the number.
- If **L8** rejects the parameter number or value you have entered, go on programming but re-enter the function number even if only the value was wrong.
- If you have programmed and stored a value other than the required one, you can re-enter the value of course.

Programming End

- If you are calling **L8** via a telephone number, hang up to terminate programming.
- If you are programming via the machine room Audio Unit, press and hold over 2 s # to terminate programming and put the Audio Unit in the standby mode.
- If you only want to go one menu back, press #.

Tip

- If you are not quite sure of how **L8** will behave after programming, save the filled-in form for later check.

Troubleshooting

L8 fails to respond correctly to DTMF commands, e.g. the programming mode cannot be entered.

Today, voice transmission is prevailingly digital, using variable compression algorithms. Therefore, the DTMF signal to be transmitted is often distorted. Moreover, it may, in some cases, be transmitted through the so-called command channel, whose delay may differ from that of the speech channel.

Caution

- Experience shows that, especially recently, it is practically impossible to recover the DTMF signal in GSM networks!

In such cases, try some other equipment (a digital PBX, e.g.) or the machine room telephone set. If the machine room or PSTN programming attempts fail too, you have probably entered an invalid password.

Programming via Service Tool

Refer to the **2N® Service Tool** section (Section 5) for details.

3.2 Table of Parameters (FW 1.5.2)

Table of Parameters:

Parameter No	Parameter name	Range of values	Default value	Note
011	Set 1 – ALARM button memory 1	up to 16 digits: 0–9	empty	Entering characters * , # a „**p**" to insert a 1 second pause when programming is possible via a PC (use the Service Tool).
012	Set 1 – ALARM button memory 2	up to 16 digits: 0–9	empty	
013	Set 1 – ALARM button memory 3	up to 16 digits: 0–9	empty	
014	Set 1 – ALARM button memory 4	up to 16 digits: 0–9	empty	
015	Set 1 – ALARM button memory 5	up to 16 digits: 0–9	empty	
016	Set 1 – ALARM button memory 6	up to 16 digits: 0–9	empty	
017	Insert specific character in ALARM memory set 1	**Entering format:** XX7*XXXX* Button number, 01 — 1 = * 2 = # 3 = space — Button memory number, 1 – 6 — Character position, 01 - 16 *Note: The digits behind this position are shifted automatically.*		
018	Set 1 – count of automatic dialling cycles for ALARM	0–9	3	If 0 is configured, only the first number in the memory is called regardless of the count of saved numbers.

111–116	Set 1 – confirmation mode for number 1–6	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).
021	Set 2 – ALARM button memory 1	up to 16 digits: 0–9		Entering characters * , # a „**p**" to insert a 1 second pause when programming is possible via a PC (use the Service Tool). If the set 2 of **alarm** memo ries is completely empty, use the set 1 of **ALARM** me mories.
022	Set 2 – ALARM button memory 2	up to 16 digits: 0–9		
023	Set 2 – ALARM button memory 3	up to 16 digits: 0–9		
024	Set 2 – ALARM button memory 4	up to 16 digits: 0–9		
025	Set 2 – ALARM button memory 5	up to 16 digits: 0–9		
026	Set 2 – ALARM button memory 6	up to 16 digits: 0–9		
027	Insert specific character in ALARM memory set 2	**Entering format:** XX7*XXXX* Button number, 02 1 = * 2 = # 3 = space Button memory number, 1 – 6 Character position, 01 - 16 *Note: The digits behind this position are shifted automatically.*		

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.
121–126	Set 2 – confirmation mode for number 1–6	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	Checking call memory 1	up to 16 digits: 0–9	empty	Entering characters * , # a „**p**" to insert a 1 second pause when programming is possible via a PC (use the Service Tool). If the set of checking **call** memories is completely empty, use the set of **ALARM** memories.
072	Checking call memory 2	up to 16 digits: 0–9	empty	
073	Checking call memory 3	up to 16 digits: 0–9	empty	
074	Checking call memory 4	up to 16 digits: 0–9	empty	
075	Checking call memory 5	up to 16 digits: 0–9	empty	
076	Checking call memory 6	up to 16 digits: 0–9	empty	
077	Insert a character in checking call memory	**Entering format:** XX7*XXXX* Button number, 07 1 = * 2 = # 3 = space Button memory number, 1 – 6 Character position, 01 - 16 *Note: The digits behind this position are shifted automatically.*		
078	Count of automatic dialling cycles for checking call	0–9	3	

171–176	Confirmation mode for checking call memory 1–6	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).
081	Error call memory 1	up to 16 digits: 0–9	empty	Entering characters * , # a „**p**" to insert a 1 second pause when programming is possible via a PC (use the Service Tool).
082	Error call memory 2	up to 16 digits: 0–9	empty	
083	Error call memory 3	up to 16 digits: 0–9	empty	
084	Error call memory 4	up to 16 digits: 0–9	empty	
085	Error call memory 5	up to 16 digits: 0–9	empty	
086	Error call memory 6	up to 16 digits: 0–9	empty	
087	Insert specific character in fault reporting memory	**Entering format:** X X 7 * X X XX * Button number, 08 1 = * 2 = # 3 = space Button memory number, 1 – 6 Character position, 01 - 16 *Note: The digits behind this position are shifted automatically.*		
088	Count of automatic dialling cycles for ERROR	0–9	3	

181–186	Confirmation mode for number 1–6	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).
700	SIM PIN	up to 16 digits: 0–9	0000	
710	DTMF transfer enhanced mode enabled	0–1	0	0 = disabled, 1 = enabled If there is a DTMF transfer problem in the GSM network, enable this parameter.
909	Time for tone detection after hang-up	1000–9999 ms	5000 ms	**L8** waits for the constant or dialling tone. If none is detected, there is a fault on the line (PSTN only).
911	Count of rings before incoming call pick-up	1–9	2	Define the moment of line pick-up during ringing (if there is an incoming call from PSTN).
912	Max. call time	0–1000 s	120 s	The call can be extended by a call-extending command (parameter 924). 0=disabled (never-ending call).
913	Login time limit	10–1000 s	60 s	Maximum period during which the control centre staff must answer the call and send confirmation, otherwise **L8** hangs up and proceeds to dialling the next number. Counted from the end of dialling.
914	Delayed call	0–1000 s	0 s	Used only with connected CANCEL input on the cabin Audio Unit.
915	Max. TRIPHONY time	10–9999 s	7200 s	Maximum TRIPHONY period after which TRIPHONY is terminated automatically.

917	Hang-up time between calls	500–9999 ms	5000 ms	For PSTN lines only.
918	Max. telephone line test time	1–20s	5 s	
940	Min. dialtone period	200–2000 ms	400 ms	The tone must be longer than a half-period of the busy tone!
941	Min. constant tone time	200–9999 ms	2000 ms	If the tone lasts longer, **L8** hangs up.
942	Min. busy tone period	100–500 ms	200 ms	These parameters control the busy tone detection.
944	Max. tone – gap difference	10–400 ms	50 ms	
945	Min. busy tone period count	2–50	5	
948	Min. ringback tone time	50–2000 ms	200 ms	The ringtone time is the length of the section just before the long gap.
949	Min. long space time of ring-back tone	100–5000 ms	2500 ms	The longest gap in the ringing period must be in the interval between parameters 949 and 950.
950	Max. long space time of ringback tone	500–9999 ms	5500 ms	The longest gap in the ringing period must be in an interval between parameters 949 and 950.
951	Min. ringing signal time	50–2000 ms	200 ms	Incoming call detection: The ringtone time is the sum of sections between which there is no long gap. The longest gap in the ringing period must be in the interval between parameters 952 and 953. **CAUTION!** Parameters 951–953 (default values) work for incoming ringing.
952	Min. long space time of ringing signal	100–5000 ms	1000 ms	
953	Max. long space time of ringing signal	500–9999 ms	6000 ms	
961	Max. next digit pressing time	15–120 s	60 s	Counted from the transition to a new state (NOT after the end of announcement).
962	Min. cabin ALARM button pressing time	10–9999 ms	100 ms	A low value is recommended for comfortable product testing.
968	Machine room alerting time (siren)	1–60 s	1 s	

969	Intercom alerting time	1–60 s	1 s	
973	Language for numeric messages	0–1	1	0 = user recorded 1 = voice menu language
974	Lift identification number	up to 16 digits: 0–9	empty	Provide lift identification for foreigners, for example. If not filled in, the serial number is used.
975	Local (cabin) message sequence (Alarm)	up to 10 announcements in sequence		Start announcements in more languages in a defined sequence, including the identification number, etc. Message list: 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 = Serial number 12 = Lift identification number (par. 974) 13 = Lift shaft number (1–8) 14 = Pause (2 s) 15 = Confirmation tone **Cautions:** User messages **1** to **10** are recorded into the **CU** with the aid of the **2N® Service Tool**.
976	Control centre (outgoing) message sequence (before confirmation by 1)	up to 10 announcements in sequence		
977	Checking call message sequence	up to 10 announcements in sequence		
978	Call confirmation message sequence	up to 10 announcements in sequence		
979	Control centre (outgoing) message sequence by pressing 3 after call confirmation	up to 10 announcements in sequence		
971	Call end sequence	up to 10 announcements in sequence		

981	Checking call	0–5	0	0 = disabled 1 = enabled, the first call in 3 minutes and then as set in parameter 983 2 = enabled, the first call in 2 hours and then as set in parameter 983 3 = enabled, as set in parameter 983 4 = enabled, the call on the nearest day set in parameter 986 5 =enabled, the first call in 3 minutes and then as set in parameter 983
982	Checking call interval	hhmmhhmm	00002359	Set announcements into lower traffic (lower tariff) time, generated at random in the time interval.
983	Checking call period	0–100 days	3 days	0 = disabled (0 in parameter 981 has the same effect), the value is applied if parameter 981 is set to 1–6.
986	Weekdays for checking call	MTWTFSS	0000000	Values for Mon, Tue, Wed, Thu, Fri, Sat, Sun: 0 = do not call 1 = call Example: 1000100 = the checking call will be made on Mondays and Fridays.
991	Servicing password	up to 16 digits: 0–9	12345	Change the default servicing password for access to programming via the voice menu and for full initialisation.
992	Rescue password	up to 16 digits: 0–9	empty	Set the rescue terminating password.
994	Enable 4-lift version	0–1	0	0 = standard connection, 1 = connect up to 4 cabin Audio Units to the **CU** internal splitter as lifts 1–4 (refer to Subs. 4.5 for details).
995	Enable outgoing machine room call	0–1	0	0 = disabled, 1 = enabled (if the parameter is enabled, the machine room Audio Unit can be used for outgoing public network calls).

800	Set time	hhmm		Read the current time setting and configure a new one if necessary. *
801	Set date	RRMMDD		Read the current date setting and configure a new one if necessary. *
898	Cancel working configuration			Cancel all the changes performed during this configuration call except for the date/time setting – confirm this by an asterisk. *
899	Complete initialisation (including servicing password!)			Re-enter the valid servicing password to protect the system against unintentional deletion during incorrect function number entering. *
1001	Enable data	0–1	0	Permit the use of the GSM/UMTS module connection to the provider's data network. **
1002	APN			Configure the mobile provider's access APN server. **
1003	Login			Configure the username for authentication in the provider's APN server. **
1004	Password			Configure the authorisation password in the provider's APN server. **
1100	Enable DHCP client	0–1	1	The DHCP server assigns PCs in particular the IP address, net mask, gateway and DNS server address via the DHCP. 0 = disabled 1 = enabled
1101	IP Address			IP address defined for the Ethernet interface (VoIP module). **
1102	Netmask			Set the subnet bit mask. **
1103	Default gateway			Set the IP address of the router/PC via which communication outside the internal net is made. **
1104	DNS server			Set the DNS server IP address. **

1105	SIP server			Set the IP address for connection to the counterparty (PBX, operator). **
1106	User			Set the user name for connection to the counterparty (PBX, operator). **
1107	Password			Set the password for connection to the counterparty (PBX, operator). **
1108	Enable in-band DTMF detector	0–1	0	
1109	SIP server port	1–65535	5060	Set the PBX (operator) port via which the SIP Proxy communicates with the terminals connected. **

* This parameter can only be configured via the voice menu (incoming call to **L8**, or via the Audio Unit machine room).

** This parameter can only be configured via the **2N® Service Tool**.

Caution

- Parameters 1003 and 1004 are used for username and password configuration for verification at the provider's. Most providers do not use any verification. If the your provider requires verification, it must give you the necessary access data.

Configuration by Computer

Install the **2N® Service Tool** to configure **L8** connected to a PC via the USB or via the Internet using the **L8** IP address (UMTS version only). You can also upgrade of the firmware.
Install and launch the **2N® Service Tool** from the included CD for more details. Find the current **2N® Service Tool** version at www.2n.cz/Lift8 .

How to Record Announcement

From PC

Apply the **2N® Service Tool** to record user announcements and numerals to **2N® Lift8.** Refer to Subs. 5.3, **2N® Service Tool** – Use for details.

4. Function and Use

In this section there is a description of the basic and expanded functions of the product.

Here is what you can find in this section:

4.1 User Instructions

Cabin

The cabin Audio Unit is intended for an untrained user. Nevertheless, the instructions can be placed in the lift cabin, e.g., to help the people trapped in the lift communicate with the control centre.

Meaning of pictograms (icons):

- The yellow Wait icon is illuminated while connection with the control centre is being set up.
- The green icon lights up when connection has been set up and confirmed by the control centre.
- The green icon lights up whenever TRIPHONY is in progress.
- The blue icon does not shine, but marks the place where a signal is radiated during the call for people with defective hearing equipped with hearing aids.

Shaft, Cabin Roof

- Press the ALARM button to call the control centre using the ALARM 2 numbers (parameters 021–026). If the parameter is not filled in, it calls the ALARM numbers (parameters 011–016) like the cabin.
- Pressing the TRIPHONY button to call the other Audio Units in the same lift (shaft).
- Hold the TRIPHONY button (for approximately 2 s) to retrieve the voice menu to call the other shafts via TRIPHONY.
- Re-press the TRIPHONY button to terminate this connection.
- The ALARM button is illuminated in the standby mode.
- The ALARM button flashes when a calling is being set up.
- The TRIPHONY button is not illuminated in the standby mode.
- The TRIPHONY button flashes and the green LED indicator is illuminated if TRIPHONY is active between the lifts.
- The yellow LED indicator is illuminated if connection is being made with the control centre.
- The green LED indicator is illuminated if connection has been made and confirmed by the control centre.

Machine Room

Everything that refers to the shaft Audio Unit applies here too. Press  (for longer than 2 s) to display the **machine room voicemenu**. You can use the HandsFree mode or connect a handset to achieve better acoustic properties.

Having entered the voice menu, you can select the following functions using the Audio Unit keypad.

Press 0 to dial the public telephone network
Select the lift X number to dial the lift
▪ Press 1 to dial the lift cabin
▪ Press 2 to dial the cabin roof
▪ Press 3 to dial the lift cabin bottom
▪ Press 4 to dial the shaft bottom
▪ Press 5 to dial the machine room
▪ Press # to return to the main menu
Press 9 for administration
▪ Press 1 to enter the programming menu
▪ Press 2 to terminate the rescue process
▪ Press 3 to listen to your communicator info
1. Press to return to the main menu
Press # to end the call

Note

- The **9** selection serves primarily for the **L8** configuration – refer to the Configuration section.

4.2 Control Centre Instructions

ALARM Call

1. Press the ALARM button on any Audio Unit to make **L8** call the control centre (refer to Automatic Dialling for details).
2. A received call is either confirmed as configured (parameters 111–116 > Confirmation mode for memory 1–6 ALARM call – set 1). By default, confirmation of DTMF 1 is set in **L8**.
3. If the control centre is equipped with the **2N® Communicator** application, you can configure automatic sending of DTMF 1 after call pick-up.
4. The call is time limited (press button 4 upon warning announcement "Caution, the call is ending" to extend the call).
5. You are recommended to end the by pressing 5 or #.

Control Room-to-Lift Calling

The control centre can also call back to the communicator. The **CU** automatically receives every incoming call, identifies itself and, via a voice menu (DISA), offers you another function to get through to the required Audio Unit. Incoming calls are time limited as outgoing calls and are processed in the same way (extension, termination).

Incoming Call Voice Menu

Welcome, this is a 2N® Lift 8 communicator
Press 0 for connection with the last-calling Audio Unit
Enter the lift number X to dial another Audio Unit
▪ Press 1 to dial the lift cabin
▪ Press 2 to dial the cabin roof
▪ Press 3 to dial the lift bottom
▪ Press 4 to dial the shaft bottom
▪ Press 5 to dial the machine room
▪ Press # to return to the main menu
Press 9 for administration
▪ Press 1 to enter the programming menu
▪ Press 2 to terminate the rescue process
▪ Press 3 to listen to your communicator info
▪ Press # to return to the main menu
Press # to end the call

The menu above makes it possible to call the selected Audio Unit.

Caution

- Press # to go one level back in the voice menu.
- You can also terminate a call using #, but only on the highest voice menu level: Press 0 for connection with the last-calling Audio Unit, Enter the lift number X for connection with another Audio Unit, Press 9 for administration, information or rescue process, and Press # to end the call.

Calling to lift which was the last to call Alarm

- Having entered the voice menu, press 0 to call the lift was the last to dial the Alarm function.
- This function operates only if you are calling to **L8** via a PSTN, GSM, UMTS or VoIP network.

Note

- The **9** selection serves primarily for the **L8** configuration – refer to the Configuration section.

Tone Dialling Control during Call – Long Command List

Where automatic dialling with confirmation is used, it is possible to use tone dialling for **L8** control during the call according to the table below. For simplification, commands 1 to 5 are arranged in the sequence they are usually used in.

DTMF symbol	Description of function
1	Only where automatic dialling repetition is enabled (with confirmation DTMF 1). This symbol is used to **confirm** a successful call to **L8**. **L8** mutes the played-back announcement and, optionally, sends the identification code (DTMF). The call goes on until the timeout end and any of the following commands may be used.
3	Repeated voice module **playback** for one replaying of the announcement.
4	**Call extension.** The call is extended as defined in parameter 912 (120 seconds by default) upon this command. Can be used repeatedly.
5 or #	**Call termination** (does not work until the call is confirmed).

This table applies to the Automatic voice dialling with confirmation mode.

Warning

- Rarely, **L8** may not identify the above listed commands reliably during message playing or voice communication. This is due to the essential principle of the telephone line function where DTMF signalling is mixed with the call and thus may be masked by certain speech tones or noise. This, however, is not a defect of the product.

4.3 Function Description (for Advanced Users)

Purpose of Section

The purpose of this section is to help technicians solve problems if any. If the system fails to work properly and a well-trained technician, who monitors its operation step by step according to the description included herein, gets to a point where the description and reality are in contradiction, he or she describes the contradiction, thus facilitating troubleshooting. This procedure often reveals that the system works properly but the user had a different idea of how to use it.

Outgoing Call

The process starts whenever the ALARM button is pressed on any Audio Unit (in the lift cabin Audio Units, the CANCEL input may delay or block calling, refer to parameter 914). After the ALARM button is pressed, **L8** establishes connection with the control office (refer to Automatic Dialling for details). **L8** plays the following announcements "Wait pleased, connection is being made" to the person in the lift and "Press 1 for confirmation" to the control centre (if DTMF 1 confirmation is used). The received call has to be confirmed manually or automatically. The call is time-limited ("Caution, the call is ending", but can be extended.

Refer to the Control Centre Instructions subsection for details for DTMF control during the call.

Caution

- Icon
  - The ALARM buttons on the shart and machine room Audio Units are always illuminated in the standby mode.

Outgoing Machine Room Calls

You can call any Audio Unit of the same **L8** from the machine room (i.e. from the machine room Audio Unit, Part No. 918611E), activate functions and configure the **L8** parameters. Press and hold for over 2 s  to activate the machine room voice menu. Press the TRIPHONY button to enter the machine room voice menu get through to the other Audio Units of the same lift and set up triphony with the other shafts.

Machine Room Voice Menu

Press 0 to dial the public telephone network
Press the lift number X to dial the lift
▪ Press 1 to dial the lift cabin
▪ Press 2 to dial the cabin roof
▪ Press 3 to dial the lift bottom
▪ Press 4 to dial the shaft bottom
▪ Press 5 to dial the machine room
▪ Press # to return to the main menu
Press 9 for administration
▪ Press 2 to enter the programming menu
▪ Press 2 to terminate the rescue process
▪ Press 3 to listen to your communicator info
▪ Press # to return to the main menu
Press # to end the call

Caution

- Press **#** to go one level back in the voice menu.
- Press and hold **#** (for longer than 2 s) or move to the top menu and press # to quit the voice menu.

Triphony

Triphony provides interconnection of Audio Units within one shaft. Press the TRIPHONY button in the machine room to set up triphony with another shaft.

This mode features a different setting of the automatic HandsFree mode: the microphones of active Audio Units are less sensitive than those operating in the ALARM mode.

Triphony termination options

- re-pressing of the TRIPHONY button
- expiry of the time limit
- incoming call/ALARM – processed preferentially

Checking Call

A checking call is an outgoing call made automatically (usually every 3 days). The purpose is to check the correct function of the system. This call is usually processed automatically in the control centre.

A checking call can be sent to the control centre via PSTN, GSM, UMTS or VoIP. Set the values in parameters 071–076 and 981 (refer to Subs. 3.2, Table of Parameters).

Incoming Call

The control centre can also call back to the communicator. The **CU** automatically receives every incoming call, identifies itself and, via a voice menu (DISA), offers you another function to get through to the required Audio Unit. Incoming calls are time limited as outgoing calls and are processed in the same way (extension, termination).

Press 0 in the voice menu for connection with the last-calling Audio Unit.

Incoming Call Voice Menu

Welcome, this is a 2N Lift 8 communicator
Press 0 to dial the last-calling Audio Unit
Enter the lift number X to dial another Audio Unit
▪ Press 1 to dial the lift cabin
▪ Press 2 to dial the cabin roof
▪ Press 3 to dial the lift bottom
▪ Press 4 to dial the shaft bottom
▪ Press 5 to dial the machine room
▪ Press # to return to the main menu
Press 9 for administration
▪ Press 1 to enter the programming menu
▪ Press 2 to terminate the rescue process
▪ Press 3 to listen to your communicator info
▪ Press # to return to the main menu
Press # to end the call

Call Sequencing

If another request arises during communication, the calls are ordered according to priorities: Fireman has the highest priority, followed by Alarm. These calls suspend any lower-priority call. Calls with identical priorities are queued and processed one after another. Having done that, **L8** recovers the suspended activity if possible.

Ongoing: new event	Incoming call	Programming	Checking call	ALARM	Triphony	Fireman
Incoming call	na	ns	na	na/ns	S	ns
Checking call time	q	q	na	q	q	q
Entering voice menu from machine room Audio Unit	ns	ns	ns	ns	ns	ns*
TRIPHONY button press	ns	ns	ns	ns	ns	ns
ALARM button press	S	S	q	q	S	q
Fireman function	S	S	S	S	S	na

Explanations:

- na = not applicable
- ns = not served (ns* for machine room configured as the control centre: the Fireman call is entered whenever the phone is answered)
- q = put in queue
- S = suspends ongoing activity

Automatic Checking Call Answering

A control centre with a PC workplace with the **2N® Lift8** server receives calls automatically as configured. Configure the server using the **2N® Lift8 Control Panel**.

Overview of Announcements

Announcement (English)	Meaning of announcement
Caution, the call is ending	Approaching call end announcement.
We are afraid the call has to be suspended	The call is interrupted by a requirement with higher priority.
Please wait	Wait until the call is put through.
Communicator number…is calling	Identification (if configured). In the future, In the future, user recorded messages including the lift address, e.g., will be played.
Checking call	Checking call differentiation.
Rescue performed	Confirmation of the end of emergency signalling.
Other Audio Units waiting for connection	Warning that a state of emergency has been activated in the other lifts.

Call End (Outgoing/Incoming)

A call is terminated (line hang-up occurs) if any of the following cases happens:

- The busy or continuous tone has been detected*) (call end on PBXs).
- The timeout for call confirmation expired (see parameter 913 setting).
- The configured maximum call time has been exceeded (parameter 912). 10 seconds before the expiry, **L8** plays "Caution, the call is ending" for you to extend the call with 

.
- The 

or 

symbol has been received.
- The time limit has expired during programming.
- A higher-priority call request has arrived.

4.4 Call Confirmation Types

The settings included in this subsection apply to alarm calls (sets 1,2), check calls and trouble reports.

1. With DTMF Confirmation

Up to 6 telephone numbers plus the count of repetitions can be stored for control centre dialling. **L8** then tries to call all the numbers stored. Tone dialling (DTMF) is the most reliable service for confirmation of successful calls. Having received a call manually, the control centre officer has to press the 1 button on its tone-dialling phone. If the called line is busy or unanswered within a timeout, or the call is not confirmed, **L8** dials the next number in the sequence until it exhausts all the pre-set attempts. The procedure is the same for check calls or failure reports but a separate group of six numbers can be used.

Evaluation of Situations in Dialling with Confirmation

Situation	L8 activity
No dialtone on the line (PSTN line only)	**L8** hangs up.
Busy tone after dialling end	**L8** hangs up and dials the next number.
Call or silence (after dialling end)	**L8** waits for the defined time (parameter 913).
Ringing tone	**L8** waits for the defined time (parameter 913).
Continuous tone (on PBX line, e.g.)	**L8** hangs up and dials the next number.
DTMF char 5 or #	**L8** hangs up immediately and dials the next number.
DTMF char 1	**L8** confirms receipt ("Connection confirmed") and mutes the currently played announcement. The call goes on for the maximum call time as configured.
1 2 3 4 5	These digits are interpreted as control characters (refer to Subs. 4.2, Tone Dialling Control during Call).

Note

- The PSTN connection quality is not so high as to identify the above mentioned situations reliably in all cases. Moreover, excessive noise in the lift cabin may decelerate automatic dialling (due to inability to recognise the busy tone, e.g.). In general, DTMF is the most reliable type of signalling and so is used for confirmation. Thus, the connection is established (yet for a shorter time than usual) even in extreme cases, e.g. when **L8** cannot identify the DTMF.

2. Automatic Redialling of Multiple Numbers without Confirmation (GSM/UMTS/VoIP Only)

This mode is useful where no trained personnel for automatic dialling with confirmation are available. The called party does not have to press any button. The two modes share a set of numbers and count of cycles, respond identically to the busy tone, etc. The only difference is that the confirmation-less mode detects the ringing tone and recognises that the called party is off-hook (i.e. answers the call) when the ringing tone terminates before the timeout end.

The message speaker **cannot** be controlled using buttons 1 to 5.

Evaluation of Situations in Voice Dialling without Confirmation

Situation	L8 activity
Busy tone	**L8** hangs up in approx. 2 seconds and dials the next number.
Call/silence	**L8** waits for the defined time (answering timeout), then hangs-up and dials the next number.
Ringing tone	**L8** waits for the defined time (answering timeout), then hangs-up and dials the next number.

Warning

- Make sure in this mode that no VoiceMail box, FAX or any other equipment are assigned to the numbers to be dialled that might answer the call before the pre-programmed timeout end and thus terminate automatic dialling.

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), as the case may be.

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), as the case may be.

6. DTMF Protocol AutoDetection (CPC/P100)

Having received a DTMF string, the lift recognises the protocol used and responds accordingly.

Warning

- **L8** may have troubles detecting DTMF characters and recognising the protocol in places with a poor signal quality.
- If such troubles occur, we recommend you to change the CPC/P100 (3/4) settings.

4.5 Lift Blocking Function

Lift Blocking

Blocking procedure

The contact closes/opens whenever an alarm call cannot be set up. Connect the contact to the appropriate controller input of the lift/group of lifts. The control electronics shall ensure that, upon contact opening, the lifts that are in operation arrive in the nearest station and open the door.

Every **CU** and every splitter are equipped with the lift blocking contact. Refer to Subs. 2.1, PSTN/GSM/UMTS/VoIP Central Unit – Lift Blocking Contact Connector.

The lift blocking function will be enabled if:

- no number is defined in the ALARM memory – the lift gets blocked immediately.
- a number to a non-existent machine room (intercom) is defined – the lift gets blocked in 2 minutes.
- a PSTN number is defined but no module is inserted – the lift gets blocked immediately.
- the external line (PSTN, VoIP) is not functional – the lift gets blocked in 15 minutes.
- no SIM (GSM/UMTS) is inserted – the lift gets blocked in 15 minutes.
- the capacity of the device feeding battery so low that the internal buses (Audio Units) get disconnected – the lift gets blocked when the internal bus gets disconnected.
- **L8** is off – the lift gets blocked immediately.

The lift blocking function will be disabled if:

- the line works for 1 minute at least (PSTN, VoIP).
- a power supply is connected to recharge the battery.

> ⚠ **Caution**
>
> - This function may be mandatory if the applicable regulations valid for the country and time of installation require so.

4.6 Four-Lift Version

4-Cabin Connection to Internal Splitter

Modify parameter 994 to allow up to 4 cabin Audio Units to be connected to the **CU** inte rnal splitter as lifts 1–4. You can connect the machine room Audio Unit in this mode.

- Set parameter 994 to 1.
- Connect up to 4 cabin Audio Units.
- Set each cabin Audio Unit to a different type (cabin roof, cabin, cabin bottom, shaft bottom) using the adjustable pins (see the Audio Unit cover printing).
- Connect the machine room Audio Unit to the **CU** internal splitter if necessary.

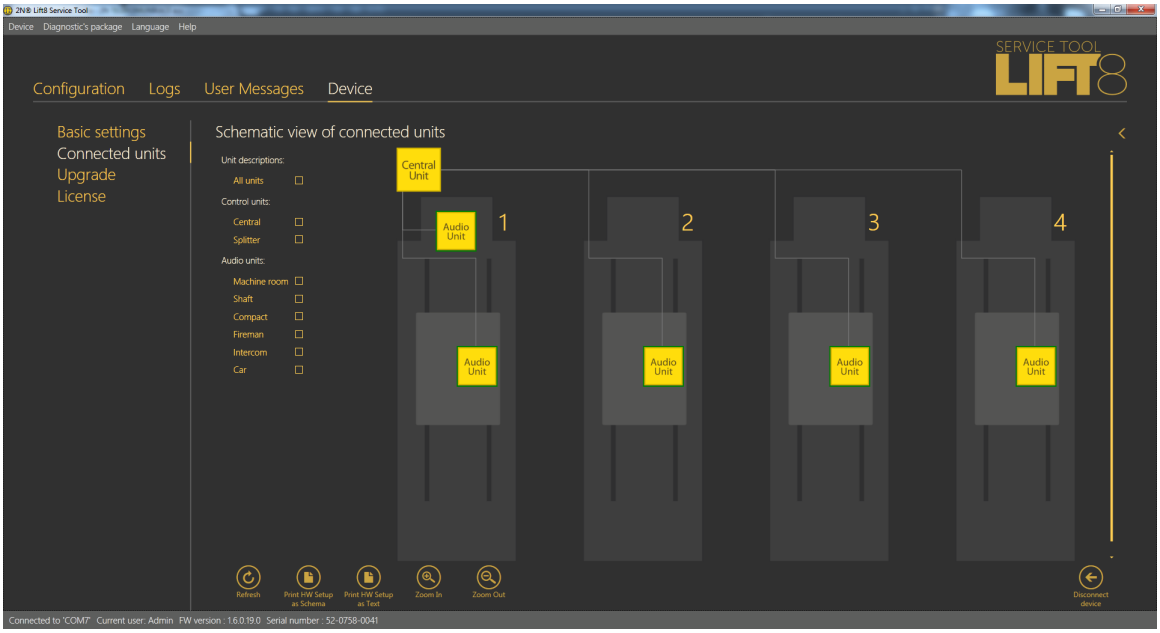


Figure: Zobrazení 4 kabinových jednotek na interním splittru

Warning

- Make sure that each Audio Unit is assigned a different type (cabin roof, cabin, cabin bottom, shaft bottom).

Note

- You can use a shaft Audio Unit instead of the cabin one.

Normal 8-Lift Connection

If you set parameter 994 to 0, you can connect up to 8 lift shafts and up to 5 Audio Units to each shaft (machine room, cabin roof, cabin, cabin bottom, shaft bottom).

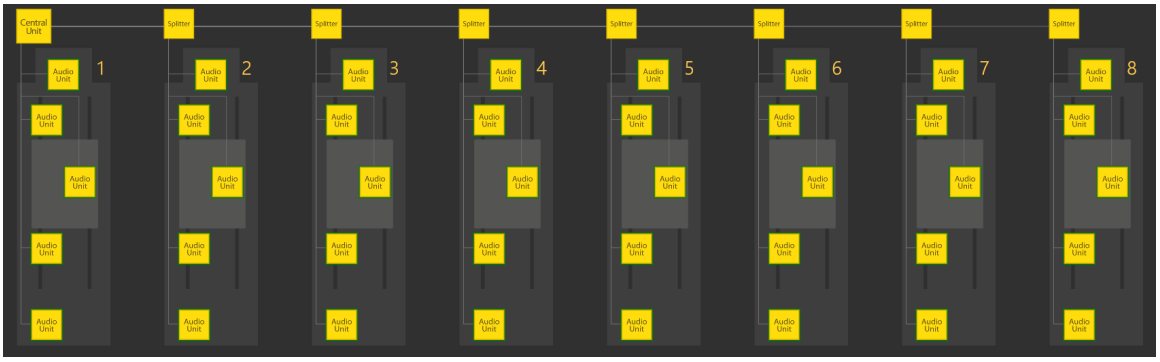


Figure: 8-Lift Configuration

4.7 Intercom Function

ALARM – Intercom Calls

1. Press the  ALARM button on any Audio Unit (except for the machine room Audio Unit set as the control centre) to start the process. Upon the press, **L8** calls the pre-set machine room – control centre Audio Unit.
2. Press  or  (for longer than 2 s) to answer an incoming call.
3. When the call is answered by the operator, the **L8** system announcement will be played.Then, voice connection with the calling Audio Unit is activated.
   a. Press 1 on the machine room Audio Unit keypad to confirm the received call manually. If Confirmation by pick-up (011–016=2) is configured, it is unnecessary to confirm the call with DTMF1 (refer to Tone Dialling Control during Call – Long Command List for details).
4. The call is time-limited (by the "Caution, the call is ending" message), but can be prolonged using button 4.
5. Press  , 5 or # to terminate the call.

Caution

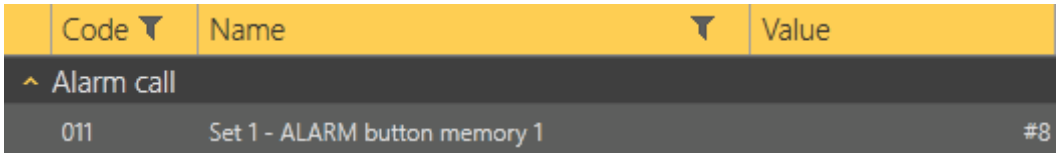
- You cannot set up an alarm call to another control centre from the machine room Audio Unit that is configured as the control centre. The call is made to the Audio Unit that is the last to activate the alarm call. If no alarm call was activated on any Audio Unit, the machine room Audio Unit will not call any unit.
- Press  on the control centre Audio Unit to set up a call to the Audio Unit that is the last to activate the ALARM function. Such a call is processed as TRIPHONY and can be terminated by pressing the TRIPHONY  button on any of the two Audio Units or pressing and holding the  button for longer than 2 s on the machine Audio Unit.
- If a call is set up to a non-existent machine room Audio Unit, the Alarm function will not be activated (valid for settings #9, #0). If more numbers than one are pre-programmed, the non-existent Audio Unit is skipped.

Number Setting for Machine Room – Control Centre Calls

Enter **#** before the shaft number to set the machine room number.
For example, 011 – #8 means that a call to the machine room Audio Unit in the shaft of lift 8 is set in ALARM button memory 1.

Setting options:

1. Service Tool – enter # and the shaft number into parameters 011–016.



2. Enter the programming mode via the voice menu (incoming call or machine room Audio Unit) and set the shaft number to the ALARM memory (011–016). Then choose parameter 017 (refer to the Table of Parameters) and add the required character (#) to one of the ALARM memories.

Caution

- Configure the alarm-intercom connection for calls to the machine room Audio Unit of any shaft (1–8).
- Identically, configure the machine room – control centre connection for ALARM set 2.
- **Make sure that the control centre Audio Unit is of the machine room type.**
- You can use confirmation mode 1 or 2 for calling to a machine room Audio Unit. With the other options (3–6), the call is processed as if 1 was selected.

Note

- It is possible to combine calling to the machine room (control centre) Audio Unit with calling via the PSTN, GSM, UMTS and VoIP networks (depending on the module used).
- To set up a check call to a machine room Audio Unit, you can set the number as described in the Alarm – Intercom subsection above.

5. Service Tool

Here is what you can find in this section:

Refer to the **2N® Lift8** product pages at www.2n.cz, download section, for the latest FW version. You can use this link from the online manual.

5.1 Installation and Login

After the installation is launched, the installation program will scan your PC for another **2N® Lift8 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 removed and the whole application with a new, empty database should be installed.

Now the **2N® Lift8 Service Tool Setup Wizard** has been launched. Follow the wizard instructions. Select the **2N® Lift8 Service Tool** installation location: **C:\Program Files (x86)\2N TELEKOMUNIKACE\2N Lift8** is used by default.

Also select whether the application should be installed for the currently logged-in user or all the PC users. Now the wizard is ready to install the **2N® Lift8 Service Tool**. Confirm user account administration notification to the Windows system if necessary. Another Start item and the application shortcut icon will be added automatically

Tip

- The wizard will install the USB port driver if unavailable to identify the Central Unit connected.

Note

- The **2N® Lift8 Service Tool** installation requires **500 MB** of free disk space at least.

Now the **2N® Lift8 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.

Figure: 2N® Lift8 Service Tool Icon

After the application launch, the splashscreen gets displayed to inform you of the application manufacturer and current version. After the launch, you will be in the basic screen and Configuration / Parameters menu. Here an offline table of parameters can be prepared for you to export the data or view the diagnostic packages. Click Connect device to connect the **CU** in the Connect to device menu. Select the login mode: TCP or USB. TCP is selected by default. If you choose the Advanced settings, the list of all available connections to the **2N® Lift8 Central Unit** will be displayed to the left in a clearly arranged tree structure. If you have installed the application for the first time, the default connection will be created automatically. This connection cannot be removed. Set the correct connection parameters to connect the **CU**: simply enter the name and **CU** public network IP address, fill in the DSN name if available and complete the **CU** listening port, whose default value is 7007. Ask your network administrator to

verify the setting. Enter the username and password for the **CU** login; see the figure. Now select the server connection and click Connect or double-click the selected server with the left button to log in to the **2N® Lift8 Central Unit**.

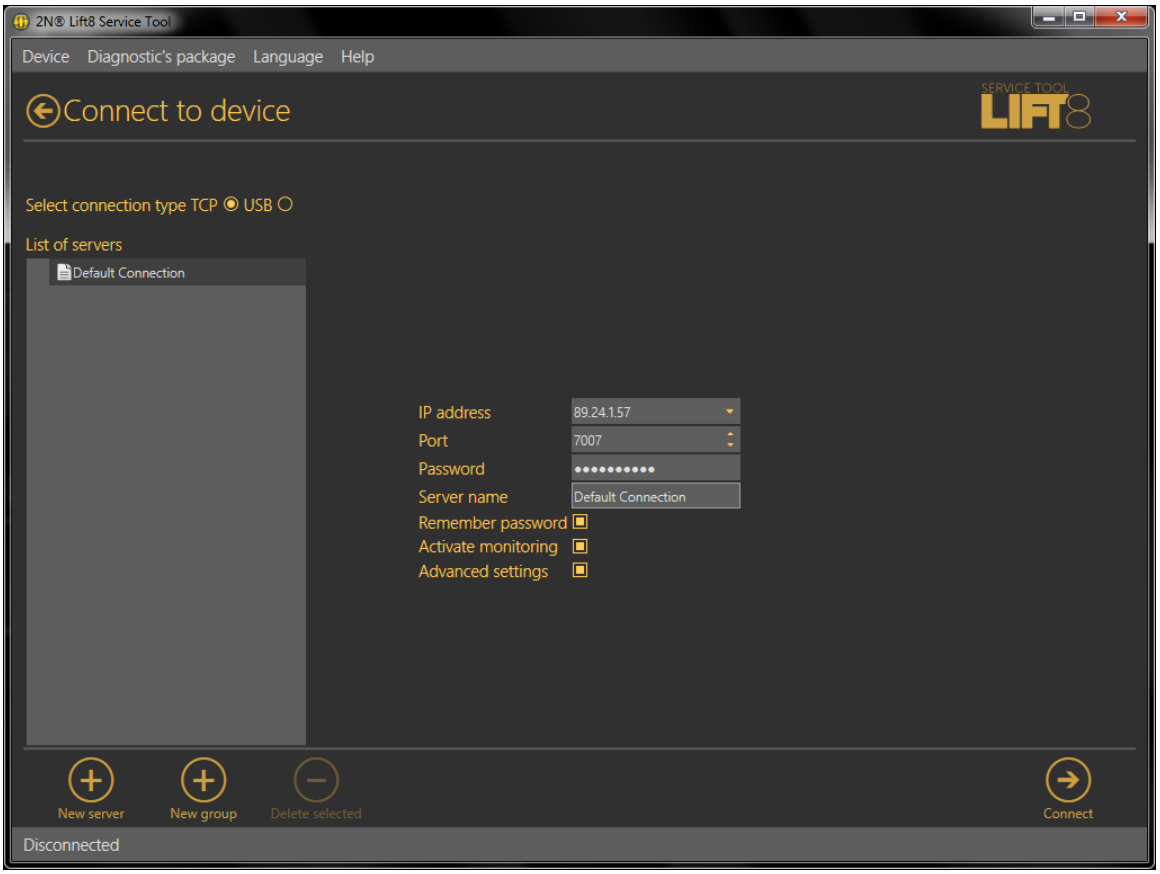


Figure: Application Window

Click New server and New group to create a tree structure of your own. Log in to the **CU** to save the settings. Select a connection and press Delete selected to remove a connection.

If you use a USB cable for **CU** connection, select the USB connection type. The screen will change and the login name and password will only be visible. Enter the correct values. Refer to the text below for the default values. Now connect the **CU** and click Connect. The **2N® Lift8 Service Tool** automatically finds the connected **CU** on the PC and starts downloading parameters and logs. Having completing the download, the **2N® Lift8 Service Tool** is ready for work.

Warning

- Make sure that the USB port driver for the **2N® Lift8 Central Unit** has been installed properly on the PC to avoid identification and login failures.
- If a problem with non-compatible version of .NET occurs during installation, you should download the new .NETFX4.0 version from www.2n.cz. You can use this link from the online manual.
- Minimum operating system requirements: **Windows Vista, 7, 8**.

Caution

- Default values for **CU** connection:
  - **TCP**
    - Username: **Admin**
    - Password: **2n**
    - Port: **7007**
  - **USB**
    - Username: **Admin**
    - Password: **2n**

5.2 Introduction to Application

In this subsection, we will show you the application menu layout and basic controls. The application is divided into three menu levels. The first screen upon start includes Configuration / Parameter/ Basic (see the figure below), which displays all of the three menu levels. The horizontal Main menu (Configuration and Logs) helps you select whether to configure the **2N® Lift8** system or supervise the history of logged events. The vertical menus (Parameters) help you select the area to be administered. The third menu level, if meaningful, gets displayed horizontally in the right-hand upper corner and includes a list of parameter setting forms.

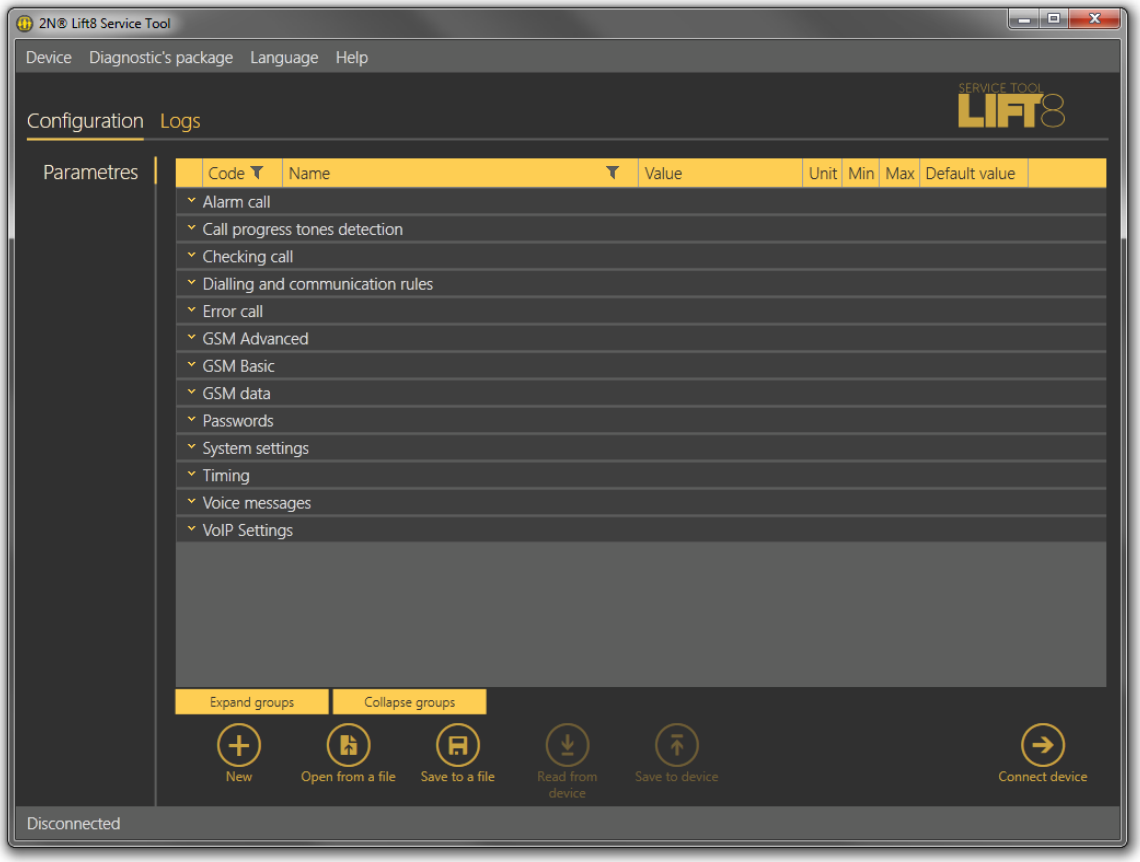


Figure: 2N® Lift8 Service Tool Window

The Main menu contains three pop-up menus. The Device menu helps you connect to or disconnect from the **CU**. The Diagnostic pack menu helps you open a diagnostic package from a file on the disk and save it. Select the language mutation in the Language menu: CZ and EN are available so far. You will always be warned before logout or termination against data loss.

> **Note**
>
> - The language change will not be executed until the application restart.

The Status line displays connection information. From the left: 'Connected to' includes the name of the server to which you are currently connected, 'COM port' specifies your

PC COM port if you use a USB cable for connection, 'Current user' displays the currently logged in user, 'FW version' specifies the current CU FW version and 'Serial number' gives the CU serial number.

Upon login to the **CU**, the Current device state is presented to the right throughout the application. Use the arrow in the left-hand upper corner to hide/show the window anytime. Refer to the figure below for details. The data are grouped according to meanings. The first section provides such connection parameters as Line status (relax/active call), GSM network with information on the currently used GSM / UMTS network, a clearly arranged Signal intensity scale including a value in dBm, SIM provider's name and Network type (UMTS / GSM). Roaming specifies whether the SIM is in its home network or in the roaming mode.

Figure: Maximum Application Display with Current Device State

The SIM card section specifies the SIM card state and IMSI and ICCID identifiers. The GSM module section displays the GSM/UMTS module information: module manufacturer, module type, current module FW version and module IMEI. The Accumulator section provides details on the rechargeable batteries connected. The first parameter of the State section describes the current device state: 'Mains supply, no batteries' means that the **CU** is powered from the mains and contains no batteries, for example. The Voltage parameter measures and displays the current battery pack voltage in mV. A very low voltage value (hundreds of mV) signals that the battery pack is not connected. The Capacity parameter specifies the accumulator charging rate in %. The Current parameter measures the current flowing through the accumulators: the current is charging when the accumulators are being charged and discharging when the **CU** has been disconnected from the power supply and fed from batteries. Remaining time defines the time in which the accumulators shall be fully charged (100%).

If your **CU** is equipped with a VoIP module, the Real-time device state section displays the relevant parameters; see the figure below. The section informs you of the line state and type, IP module parameters, IP address or address obtained from the DHC server,

network mask, default gateway and DNS server. Finally, like with the GSM / UMTS module, you can see the current battery and charger states. If you use a PSTN module, the line state and battery charging state will only be displayed.

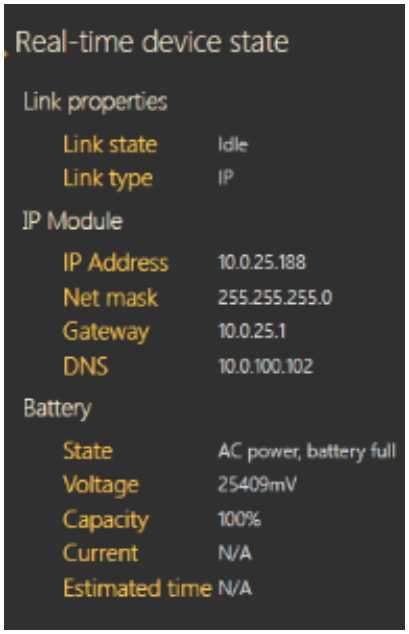


Figure: Real-Time Device State for VoIP Module

Caution

- The Real-time device state only the Link properties and Battery. The other parts are displayed automatically depending on the HW connected.

The lower part of the application includes the Logout button (to the right) and other important controls, which may be different in different menus. The table below describes all the buttons available in the application.

Basic Controls

 New	**New** helps you create a new table of parameters. The existing table will be replaced after a warning.
 Open from a file	**Open from file** helps you read the table of parameters from a disk file.
 Save to a file	**Save to file** helps you save the current table of parameters into a disk file.
 Connect device	**Connect device** switches the user into the 'Connect to device' menu.
 New group	**New group** helps you create a new **CU** connection group in the Connect to device screen.
 New server	**New server** helps you create a new **CU** connection in the Connect to device screen.
 Delete selected	**Delete selected** deletes the currently selected objects from the list in the Connect to device screen.
	**Back** is only available in the Connect to device menu and helps you return to the Configuration / Parameters menu if you do not want to get connected to any **CU**.
 Connect	**Connect** logs in the user to the configured **CU**.
 Disconnect device	**Disconnect device** logs out the currently logged-in user from the **CU**.
 Find (CTRL+F)	**Find (CTRL+F)** enables search in the log. Set the string (word) to be searched in the window.

 Find next (F3)	**Find next** helps you find another occurrence of the set string (word).
 Read from device	**Read from device** downloads the current logs from the **CU**.
 Save to device	**Save to device** helps you save new parameters into the **CU** memory.
 New set	**New set** helps you create a new set of user voice messages.
 From device	**From device** helps you download user messages from the **CU**.
 To device	**To device** helps you upload new user messages into the **CU** memory.
 Load from directory	**Load from directory** helps you load the list of user messages from a directory to a disk.
 Save to directory	**Save to directory** saves the list of user messages into a selected folder onto a disk.
 Print HW Setup as Schema	**Print HW setup – diagram** helps you print out the current **2N® Lift8** HW settings as an image.
 Print HW Setup as Text	**Print HW setup – text** helps you print out the current **2N® Lift8** HW settings as a text.

	**Upgrade** starts FW uploading to the **CU**.
	**Refresh** updates the list of connected communicators and the **CU** bus.
	**Zoom in** helps you get a close-up view of the diagram displayed.
	**Zoom out** helps you see more of the diagram displayed at a reduced size.
	**Delete** helps you delete the user-recorded voice message from the set. When all the parameters have been saved, the voice message will be deleted from the **CU** too.
	**Open from file and save to device** opens a file viewer for you to select the licence file for your **CU**. This file will be downloaded to the **CU** upon confirmation.

5.3 Use

Upon the application launch, you get to the Configuration main menu and then the Parameters – Basic menu, where you can find almost all the **2N® Lift8 Central Unit** s ettings. You are in the offline configuration, which you can modify, save into a file and prepare for download into the **CU** any time later. The offline mode helps you view the **CU** settings, logs and diagnostic packages. You have access to the Configuration and Logs menus. The other menus are meaningful only if the **CU** is connected. The meaning and description of the parameters and controls are the same as in the online mode (i.e. with the **CU** connected); see below for details. Follow the **CU** login instructions in Subs. 5.1. Now let us explain what the menus are used for.

Configuration

Parameters

Having logged in to the **CU** as described in the preceding subsection, you get into the main configuration menu. The Parameters – Basic menu includes the table of all the **2N ® Lift8** 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 corresponds to the parameter number in the **CU** 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.

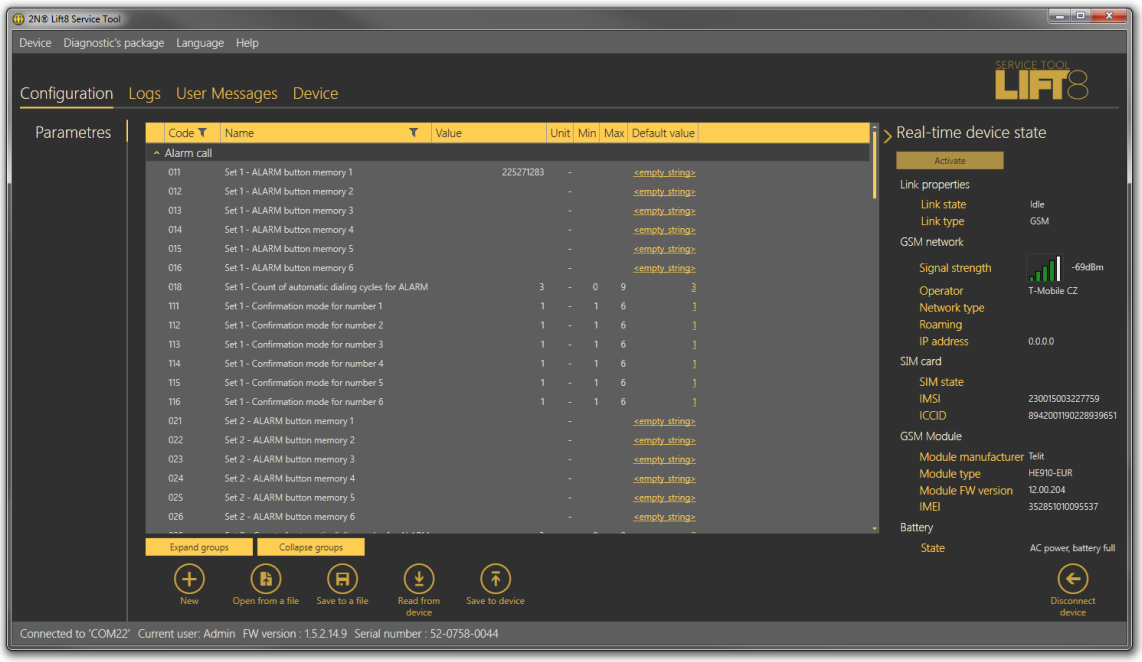


Figure: Parameters – Basic Menu

The Extract/Collapse groups buttons help you quickly expand all the sections and

display all the parameters. Press the New set button to overwrite the current setting with the default values. Click Save into file to back up your data on a 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 **CU**. Having completed the settings, click Save to device to save the changes into the **CU** 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.

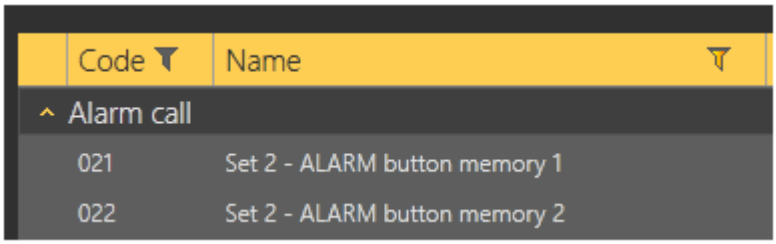


Figure: Left – Inactive Filter, Right – Active Filter

Each column with the funnel symbol includes 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 find all the searched items in the column. Use another filter to make your search more precise and efficient. Having completed filtering, click Delete filter in the used columns to delete all the active filters. If you did not delete the setting, the filtration settings would keep active even upon the **CU** logout and you would obtain filtration results instead of complete information in your next search.

Tip

- You can also click anywhere in the table with your right mouse button to display the context menu and delete the active filters.

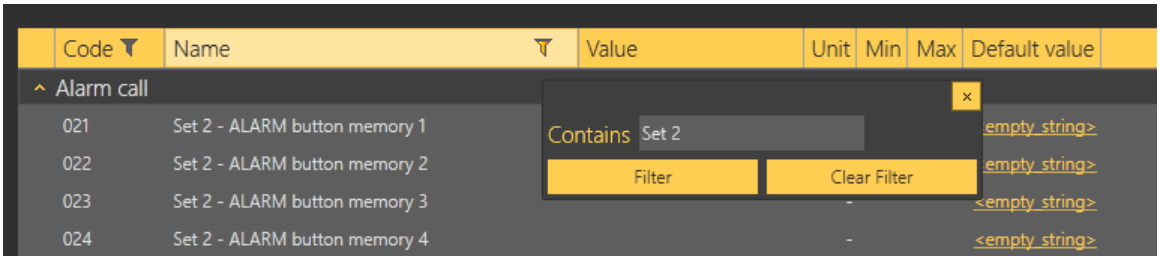


Figure: Filtration Setting Result

Tip

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

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 **CU** upon login.

Logs – Basic

The 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.

Figure: 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.

Logs – Advanced Settings

The advanced log settings are located in a hideable form to the right. Levels is the first table of the menu, which displays all the log levels. Use the checkbox next to the level name to enable/disable displaying of the log in the list. Log background colour setting is the next section. Select Use specific colours to enable/disable user background colour setting for the log groups included below. The change will be executed immediately after selection. Use Time filter to find the required logs without going through the whole log file: just enter the log start/end date/time. Use the checkbox at Use time filter to activate filtering. Moreover, you can choose the date/time arrangement: either use the default system date/time arrangement or set a format of your own (keeping all the required data: dd.MM.yyyy HH.mm.ss.fff). Use Fonts and text to adjust the font size. Auto refresh is the last item of the advanced settings: set Refresh rate in seconds and select Auto scroll to view the last (most recent) log row all the time.

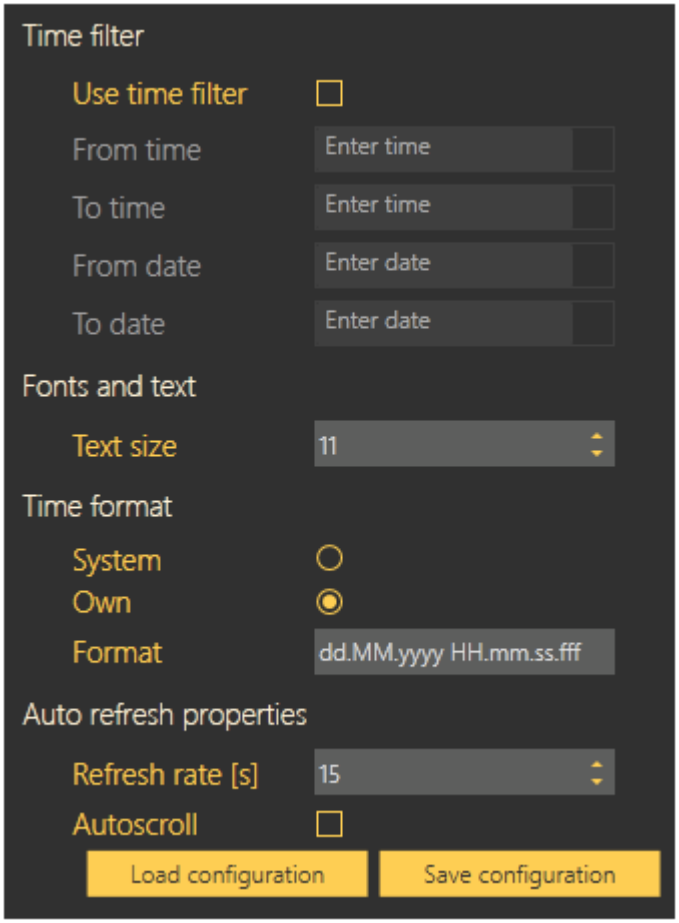


Figure: Advanced Settings Menu

The last two buttons help you load and save your configuration onto your PC disk for later use.

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® Lift8 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 set to display an empty list and fill in your own messages, press From device to download the current set of messages used in the **CU**, or push Load from directory to load a message set saved on your PC. Select the folder with the message set and confirm your selection to load the selected set into the application.

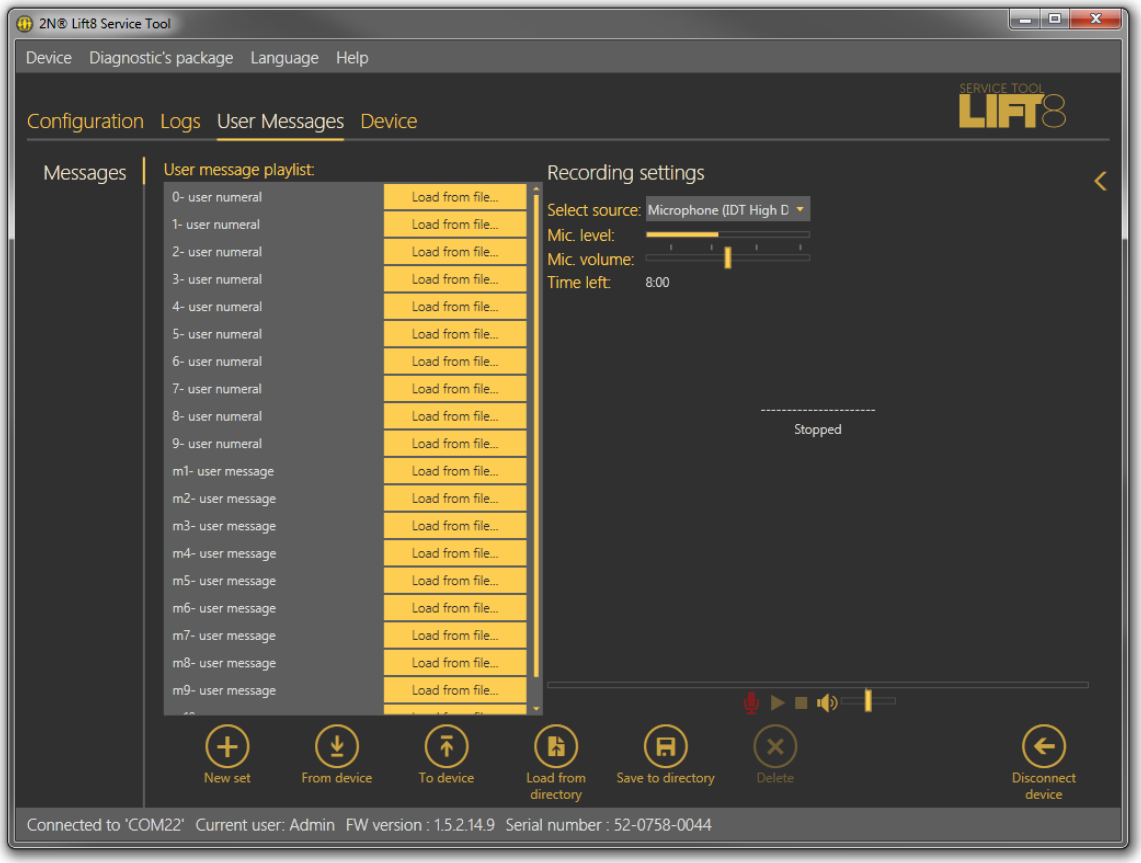


Figure: User Messages – Messages Menu

There is a button next to each message in the list. If no message is recorded, Load from file is displayed in the row. If there a message, the total message length is displayed. Click this button to open the disk file browser and replace the message with a new properly formatted message easily. If you just select the message, the message player will get displayed in the middle of the screen, which plays messages and provides standard player functions. Select the message to be played in the message list to play the message via the message player. When the microphone icon is shining, switch on recording. This deletes the current message and starts recording a new one.

Note

- 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 microphone icon is dim and the name, total length and current state (active recording, playing or recording stop) of the message to be recorded are displayed in the player during the message recording process. Click the Stop icon to terminate recording. Press Play to check the currently recorded or imported message. In case the message volume is too low, adjust the output volume value. Having completed message editing, click To device to load the message set into the **CU** connected. Or, click Save to directory to save the set onto your PC disk.

Caution

- The output volume value in the application does not affect the master volume of the record to be saved into the **CU**. 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 all the messages to be saved into the **CU** is 8 minutes. 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 the system controllers or an external amplifier.
- When the maximum message time (8 minutes) is exhausted, no more messages can be added. Thus, optimise the message time to record all of your messages.

Device

The Device menu provides information on the **2N® Lift8 Central Unit** connected: basic parameters and text/graphic diagram of available Audio Units and splitters. In addition, you can upgrade the **CU** here too.

Basic Settings

The Basic settings menu provides basic information on the state of the device connected: **CU** FW version, serial number, voice menu language and time. The Time in device parameter displays the current time read from the **CU**. 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 **CU** time with your PC time value and load the new setting into the **CU**.

The Password section helps you change the administrator password for the **CU** connect ed. 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.

Note

- Remember to change the password in the **2N® Lift8 Service Tool** configuration too for future connections.

Connected Units

The Connected units menu provides a graphic diagram of all the units connected to **2N ® Lift8.** The following controls are available: Refresh to update the display, Press HW setting (diagram/text) to print out the diagram/text of all the Audio Units and splitters connected to the given CU. The diagram displays the units like in the application and the text provides the same information as the diagram in the XML format. Click these buttons to export the diagram/text to the printer. Zoom in and Zoom out help you get a closer (more detailed) and more distant view (whole structure) of the diagram/text respectively.

Diagram of Connected Units

The diagram displays graphically all the devices connected to the selected **CU**: buses, shafts and Audio Units. Tick off the checkboxes in the Unit description to display details on the Audio Units and select the Audio Unit type as shown in the figure below. The brief description to the left of the Audio Unit includes the Audio Unit serial number, type and current state.

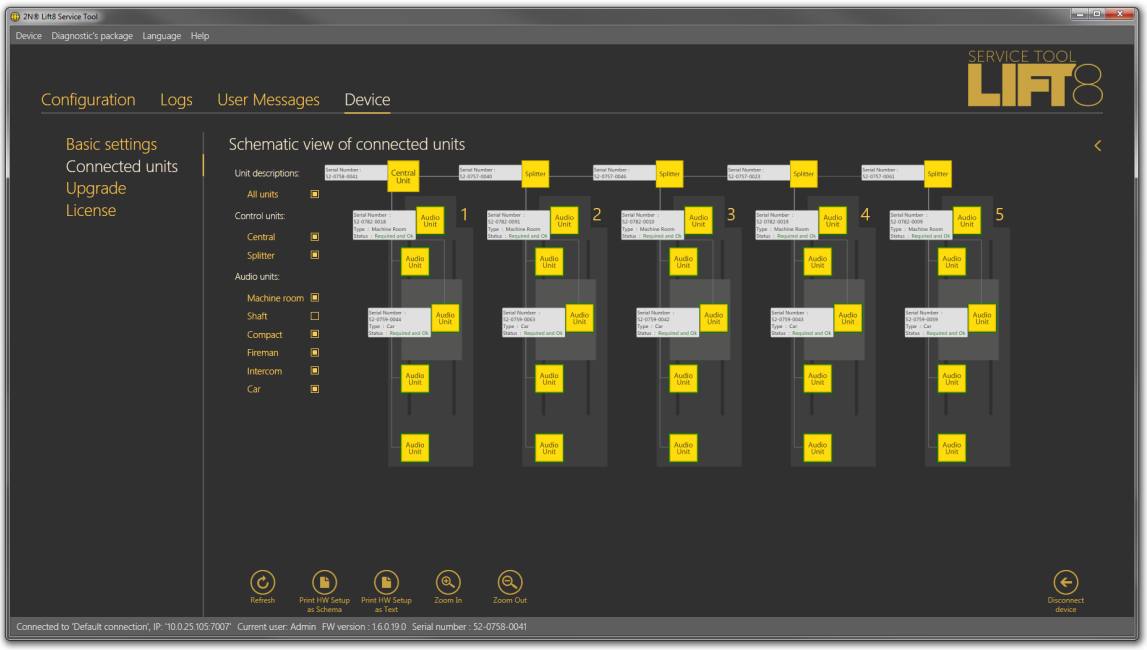


Figure: Devices – Connected Units – Schematic View of Connected Units Menu

Upgrade

The Upgrade menu helps you upgrade the **CU** firmware via two menus: List of applicable parameters and List of applicable voice menus. Click on the appropriate name to select the FW version and voice menu type to be loaded to the **CU**. Having selected the items, click Upgrade to make the **2N® Lift8 Service Tool** load the new FW and voice menu into the **CU**.

> **Caution**
>
> - Having upgraded the FW you will be notified of the **CU** restart. After confirmation, the restart will be made and the application will be disconnected. Reconnection will not be possible until the system upgrades the Audio Units and restarts. This process may take a few minutes in extensive systems.

Licences

The Licences menu is used for adding licence files. The licences to be added to the **CU** are only applicable in the UMTS/GSM module versions. The licence enables/disables the network (provider) to which the device shall log in. Enter the IMSI code into the licence: particularly the MCC and MNC to define the country and provider permitted for the **CU**. Enter a greater portion of the IMSI code to specify the SIM cards to be used in one network. You can add up to 10 IMSI codes to the licence. Contact your **2N® Lift8** supplier or the manufacturer's Technical Support department (**sales@2n.cz**) for the licence file.

Having acquired the licence file, click Open from file and Load to device to open a file browser with the licence location and click Confirm. The program will notify you of the

licence change and necessary device restart. Confirm your selection. Re-log in and check the licence. The Allowed IMSI item will display the IMSI codes permitted by the new licence.

Caution

- Any attempt to load licences for another serial number into the **CU** will be rejected.
- If you fail to log in to a GSM/UMTS network, it is possible that the licence permits a different IMSI range, which does not match the currently inserted SIM card. This state is indicated as follows: the GSM/UMTS module has a sufficiently strong signal, but the EXT. line LED is shining red. Insert the correct SIM card or change the licence file.
- The licence features only apply to the **CU**s equipped with a GSM/UMTS module.
- There is no limitation as to the other PSTN/VoIP communication interfaces even if the licence is added to the **CU**.
- If your **CU** does not include any licence file, its function is not limited and the inserted SIM card can log in to the provider's network, yet with some limitations (roaming, e.g.).

6. Server

Here is what you can find in this section:

Refer to the **2N® Lift8** product pages at www.2n.cz, download section, for the latest FW version. You can use this link from the online manual.

6.1 Installation and Licensing

The **2N® Lift8 Server** is an application necessary for a correct operation of the **2N® Lift8 Central Unit**, **2N® Lift8 Control Panel** and **2N® Lift8 Communicator.** Its purpose is to mediate communication between these devices and user interfaces.

Caution

- Be sure to install the **2N® Lift8 Server** on a PC with Internet connection or in a LAN which includes a SIP Proxy to make check and alarm calls properly. While configuring the system, you can select the RTP ports to be redirected to your LAN via NAT.

Installation

After the application is launched, the installation program will scan your PC for another **2N® Lift8 Server** version and ask you whether or not to uninstall the currently available version if any. If you deny, the installation wizard will be terminated. If you agree, the original version will be uninstalled. Then you will be asked whether the configuration files should be removed too. If you select no, the existing configuration will be retained and the application will only be updated. Now the **2N® Lift8 Server Setup Wizard** has been launched. Follow the wizard instructions. Select the **2N® Lift8 Server** installation location: **C:\Program Files (x86)\2N TELEKOMUNIKACE\2N Lift8\Server** is used by default.

The default port for communication with other applications is 7008 and can be changed if necessary. Make sure that the port is accessible from the LAN (see the Note above) and correctly set in all the applications. Now the wizard is ready to install your **2N® Lift8 Server**. It displays an overview of the settings. Check them carefully as you will not be able to modify them after installation unless you re-install the application! If you detect an error, press Back to return to the error window. If all the parameters are OK, click Install to install the **2N® Lift8 Server**. The **2N® Lift8 Server** service will be launched automatically after installation. If, for any reason, the automatic launch failed, start the service manually. Now your **2N® Lift8 Server** is ready for use.

Note

- The **2N® Lift8 Server** installation requires **250 MB** of free disk space at least.
- Further **2N® Lift8 Server** setting modifications can be done via the **2N® Lift8 Control Panel**.

Warning

- If a problem with non-compatible version of .NET occurs during installation, you should download new version of .NETFX4.0 from www.2n.cz. From online manual you can use this link.
- Minimum operating system requirements: **Windows Vista, 7, 8**

Licensing

All the **2N® Lift8 Server functions** are subject to licence. Upon your first PC installation of the application, you will get a trial licence for 800-hour operation and 50-user and 50-lift (CU) connection.

Caution

- Every **2N® Lift8 Server** restart increments the hour counter by 1.

The **2N® Lift8 Licence Tool** is installed together with the server. Having launched the application, you can see the installed server version, ID and status and other server service data as well as the currently installed licence and the count of exhausted licence hours. See the figure below.

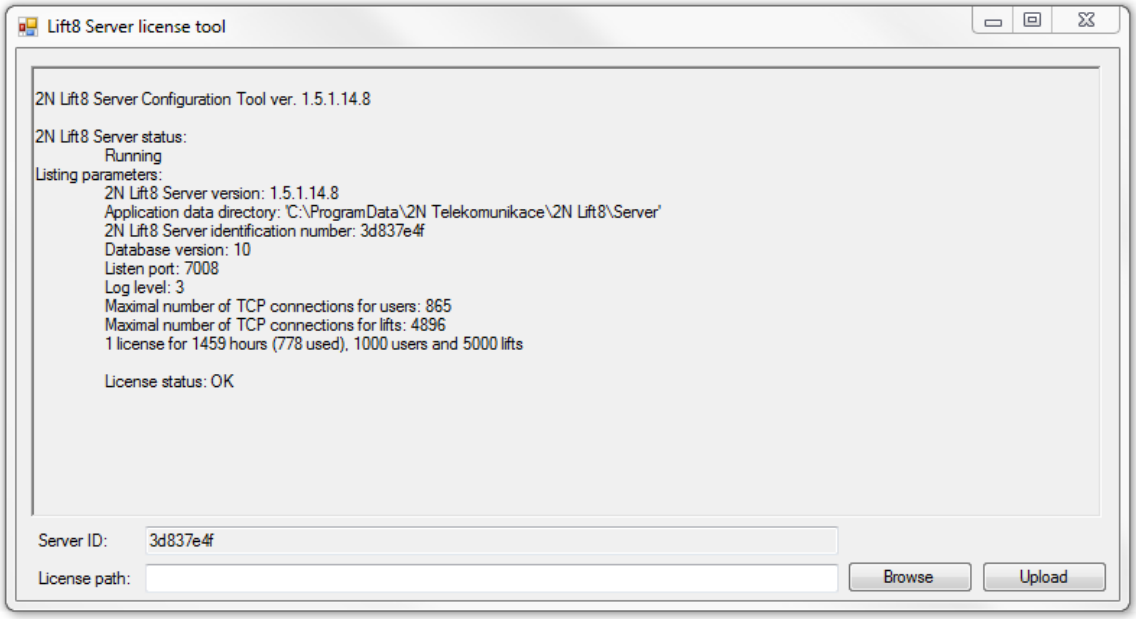


Figure: 2N® Lift8 Licence Tool

A unique server ID is generated during installation and displayed in the Server ID parameter. The identifier is selected upon launch and you just copy it to use it. Send this code together with your licence requirements to sale@2n.cz to get an extended licence.

Having received the licence file, start the **2N® Lift8 Licence Tool** and enter the path to this file into the Licence path parameter. Click Upload to add the licence to the server directory and restart the server to update the licence data. The licence status will change into OK. The last row, Listing parameters, will display such licensed server parameters as the count of users or terminals. Now set the licensed values for use via the MaxLifts and MaxUsers parameters in the l8-config program. Refer to the next subsection for details.

Caution

- Set the MaxLifts and MaxUser TCP connections manually to make a licence with a higher count of these connection work properly.

Warning

- Make sure while using the application that the server ID has not changed. This identifier is also generated from the MAC address of the primary network card. If you install or start the VPN software, the primary network card will change and the server ID will change too. As a result, the existing licence will become invalid and you will not be able to log in to the server!

6.2 Use

The **2N® Lift8 Server** application updates a lift database where all the lift check and alarm calls are recorded. The database also includes a list of authorised users, which, depending on their user roles, can connect to the server, change configuration settings and/or process incoming alarm calls via the **2N® Lift8 Control Panel** and **2N® Lift8 Communicator**.

The **2N® Lift8 Server** integrates a SIP station which can be assigned up to 8 independent accounts and process up to 32 parallel calls. A proprietary protocol communicating on TCP/UDP port 7008 is used for the server – application communication. Port 7008 is set by default during installation and can be changed. The **2N® Lift8 Server** also includes a storage manager, which helps you map a storage of any size for building plans and firmware for central unit upgrades. The application also keeps a database of and evaluates check calls. The lift that fails to meet the set limits will be marked in the database. Refer to Section 7, **2N® Lift8 Control Panel**, for setting details.

Caution

- **Important!** A default user with administrator login is created during the **2N® Lift8 Server** installation to get connected to the server and configure the other users. The default user uses the following login data:
- **Name: Admin**
- **Password: 2n**
- The default listening port of the server is **7008**.

The terminal application l8_config.exe is used for server administration and launched in the command row that controls the **2N® Lift8 Server**. Use this program to set all the server parameters, stop/start the server and export/import the server database.

Caution

- Database export/import can only be executed securely using this program.
- Copying of database files 'config.db' between the servers is not recommended as data may get lost during this operation.

Tip

- The application is launched in the command row. The common path to the program in all WINDOWS XP, Vista and 7 versions is as follows:
- **c:\Program Files\2N TELEKOMUNIKACE\2N Lift8\Server\l8_config.exe**

If l8_config.exe is launched without any parameter, the program will write out all available information on the server as follows:

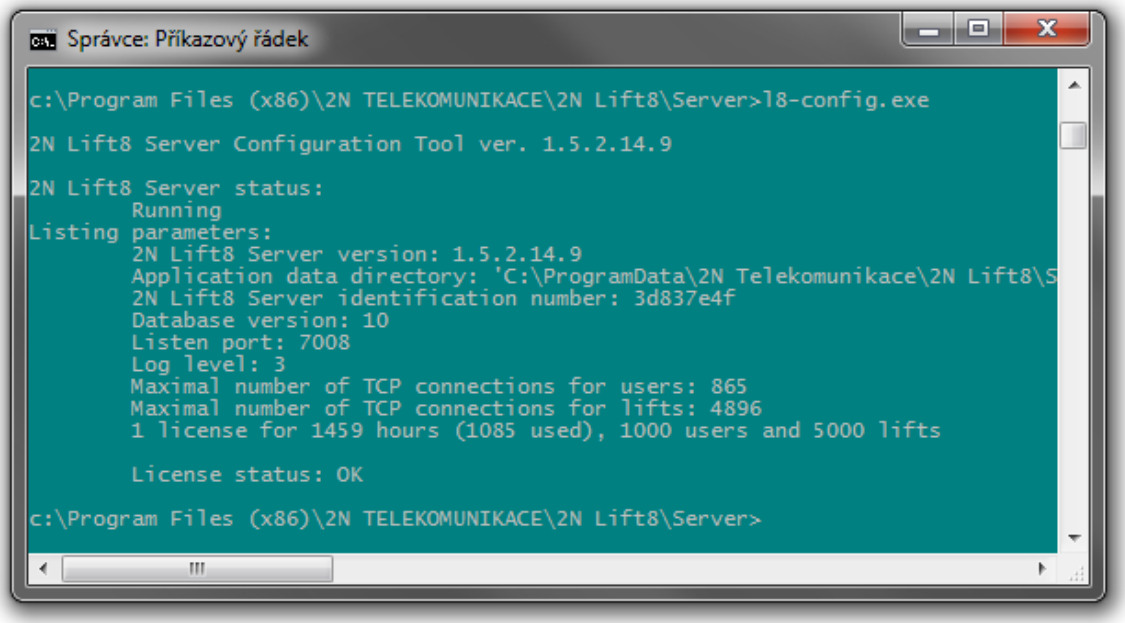


Figure: l8_config.exe

Database Export/Import

You can export the database under normal operational conditions. When the program is launched, a copy of the current database is made for the exporting purpose to avoid database overwriting and modifications during export. Start the l8_config program with the –cExportDatabase parameter with the following command to execute export:

```
C:\Program Files\2N TELEKOMUNIKACE\2N Lift8\Server\l8_config.exe
–cExportDatabase
```

The program creates a new file, db–20120221095921–export.xml, for example. The number in the filename specifies the current export date and time in the YYYYMMDDhhmmss format.

Being saved into a user data folder, the database may be different in different systems.

Note

- Typical location for WINDOWS XP: **C:\Documents and Settings\All Users\Application data\2NTELEKOMUNIKACE\2N Lift8\Server\db–20120221095921–export.xml**.
- Typical location for WINDOWS Vista and 7: **C:\ProgramData\2NTELEKOMUNIKACE\2N Lift8\Server\db–20130221095921–export.xml**.

Database import may only be executed when the server is stopped. If the server is running, the program identifies any importing attempt as an error. Enter the following command to stop the server:

```
C:\Program Files\2N TELEKOMUNIKACE\ 2N Lift8\Server\l8_config.exe –cStopServer
```

Then enter the –cImportDatabase parameter and the file path to import the database:

```
C:\Program Files\2N TELEKOMUNIKACE\ 2N Lift8\Server\l8_config.exe
–cImportDatabase "C:\ProgramData\2N TELEKOMUNIKACE\ 2N
Lift8\Server\db–20130221095921–export.xml"
```

Now all the database tables start being exported sequentially. Every successful table import is confirmed.

Caution

- The path to the exported database file must always be given in inverted commas. If no path is found, the current database will be deleted and replaced with a new, empty one.

Note

- If the database includes a high number of users and terminals, the table import will take a few minutes.

Restart the server after every successful database import using the following command:

```
C:\Program Files\2N TELEKOMUNIKACE\ 2N Lift8\Server\l8_config.exe –cStartServer
```

Setting Options

The l8_config program provides numerous server settings; see the long list below.

Tip

- The parameters are set as program parameters: program name<space>program parameter.

General Commands

```
–l
```

- writes out all the parameters.

```
--help or –h
```

- displays Help.

```
--version or -V
```

- writes out the program version.

```
-d
```

- sets the server data directory.

Parameter Get Commands

```
–gListenPort
```

- writes out the server listening port.

Parameter Set Commands

```
-sListenPort
```

- sets the server listening port.

```
-sLogLevel
```

- sets the server logging level (1–5).

```
-sMaxUser
```

- sets the maximum count of users to be connected to the server at the same time. The maximum count is based on the licence.

```
-sMaxLift
```

- sets the maximum count of lifts to be connected to the server at the same time. The maximum count is based on the licence.

```
-sResetAdmin
```

- resets the Admin password to default '2n'.

Server Commands

```
-cStartServer
```

- starts the l8 server.

```
-cStopServer
```

- stops the l8 server.

```
-cRestartServer
```

- restarts the l8 server.

```
-cExportDatabase
```

- exports the database to an XML file.

```
-cImportDatabase
```

- imports the database from an XML file. Make sure that the server has been stopped to avoid operation failure.

7. Control Panel

2N® Lift8 Control Panel is an application is used for easy lift administration and, thanks to the administrator approach, user and user group administration. Users can be assigned access rights to new lift settings and administration. The application displays the check and alarm call databases and helps you set the SIP lines to process the lift check calls and create storages for building plans and central unit firmware.

Here is what you can find in this section:

Refer to the **2N® Lift8** product pages at www.2n.cz, download section, for the latest FW version. You can use this link from the online manual.

7.1 Installation and Login

After the application is launched, the installation program will scan your PC for another **2N® Lift8 Control Panel** 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 removed or the whole application with a new, empty database should be installed.

Now the **2N® Lift8 Control Panel Setup Wizard** has been launched. Follow the wizard instructions. Select the **2N® Lift8 Control Panel** installation location: **C:\Program Files (x86)\2N TELEKOMUNIKACE\2N Lift8** is used by default.

Select whether the application should be installed for the currently logged-in user or all the PC users. The wizard is ready to install the **2N® Lift8 Control Panel**. Confirm user account administration notification to the Windows system if necessary. Another Start item and the application shortcut icon will be added automatically.

Note

- The **2N® Lift8 Control Panel** installation requires **650 MB** of free disk space at least.

Now the **2N® Lift8 Control Panel** is ready for use. Click on the shortcut item on the desktop (see the figure below) or select the Start item to start the application.

Figure: 2N® Lift8 Control Panel Icon

After the application is launched, a splashscreen gets displayed informing you of the application manufacturer and current version. Start it to display the basic login screen and Log in to server menu. The last used connection is displayed for quick access. Select the Show advanced settings checkbox to display the list of all available connections to the **2N® Lift8 Servers** in a clear tree structure to the left. If you have installed the application for the first time, the default connection will be created automatically. This connection cannot be removed. If you use one and the same PC for your **2N® Lift8 Control Panel** and server, you can make use of these pre-settings and click the Connect icon. The **2N® Lift8 Control Panel** will log in to the local server. You need not use the pre-set values but can create a connection of your own using the New server and New group buttons. Create a tree structure of your own and save the settings by login to the server. Select a connection and push Delete selected to remove a connection. It is easy to set the connection: all you have to do is enter the connection name and insert the local loop address 127.0.0.1 or the localhost text (only if the server is running locally) in the server address. Enter the IP address of the LAN or public network server to get connected to another server. Use the DNS server if available. Enter the listening port selected during the **2N® Lift8 Server** installation into the Port parameter. The default port value is 7008. Contact your LAN administrator to verify the settings. Refer to the figure below for possible settings.

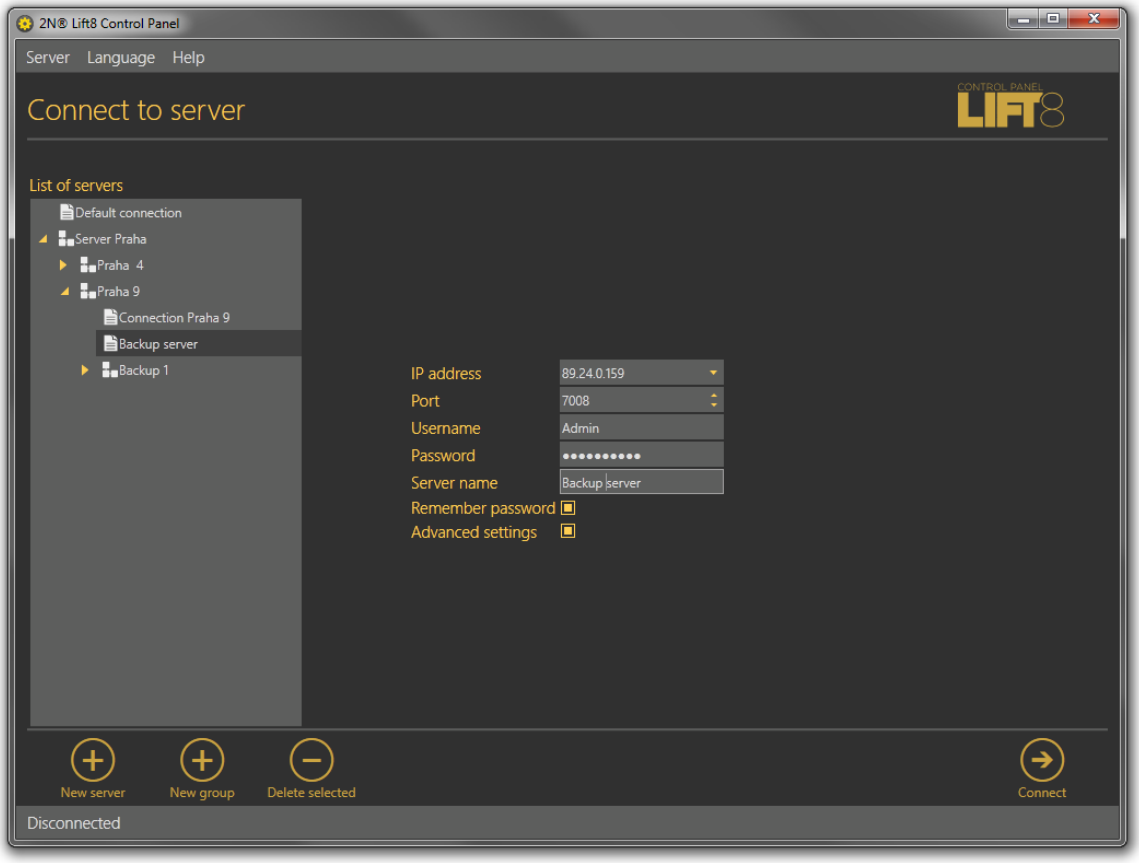


Figure: Server Connection Screen

Now select the server connection and press Connect or double-click the selected server with the left button. The application will execute login to the **2N® Lift8 Server**.

Tip

- Server login may take some time if you have an extensive database as the application has to download all the current tables. Be patient please and wait for completion.

Caution

- **Important!** A default user with administrator login is created during the **2N® Lift8 Server** installation to get connected to the server and configure the other users. The default user uses the following login data:
- **Name: Admin**
- **Password: 2n**
- **Port: 7008**

Warning

- If a problem with non-compatible version of .NET occurs during installation, you should download new version of .NETFX4.0 from www.2n.cz. From online manual you can use this link.
- Minimum operating system requirements: **Windows Vista, 7, 8**

7.2 Introduction to Application

In this subsection, we will show you the application menu layout and basic controls. The application is divided into three menu levels. The first screen upon start includes Configuration / Lifts; see the figure below, which displays the first menu levels. The horizontal Main menu helps you select whether to configure the **2N® Lift8** system or supervise the history of check and alarm calls. The vertical menus help you select the area to be administered. The third menu level, if meaningful, gets displayed horizontally behind the lift/user list in the right-hand upper corner and includes a list of user/lift card forms that have to be completed or display a list of call for the given lift.

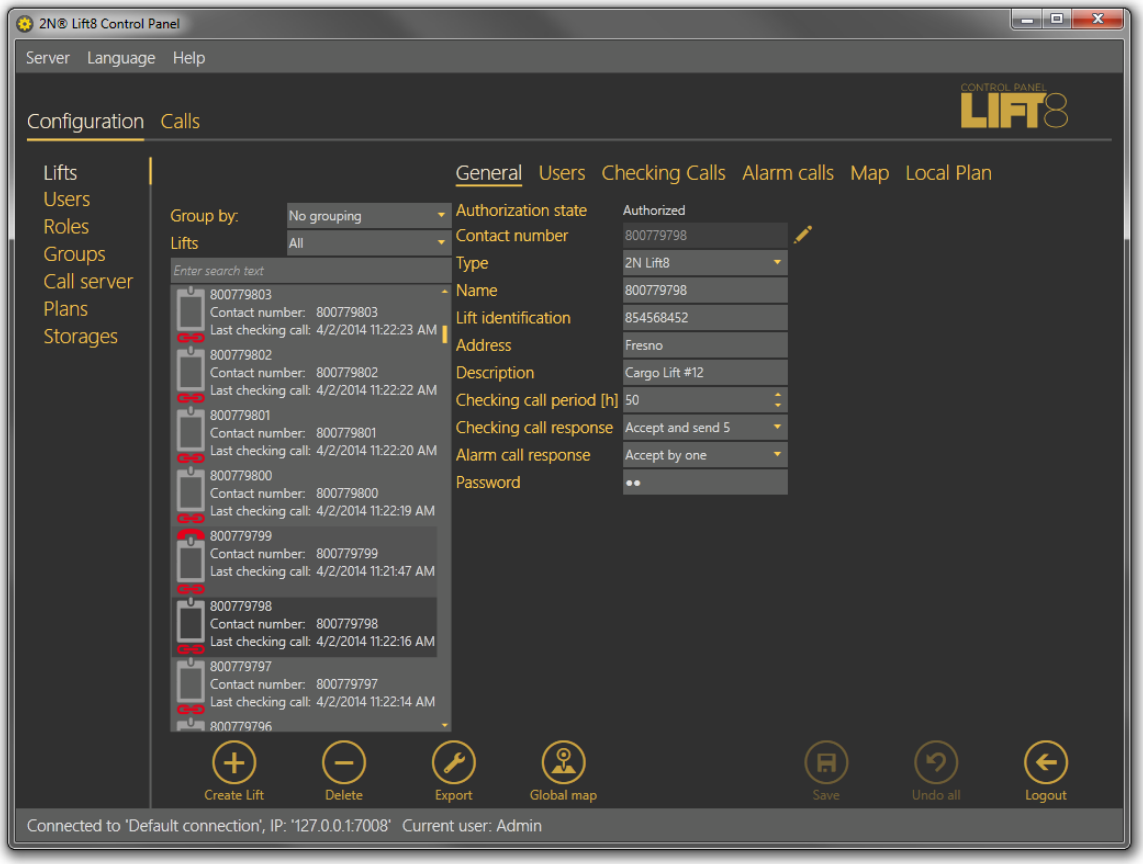


Figure: 2N® Lift8 Control Panel Window

The Main menu contains three pop-up menus. The Server menu helps you disconnect from the server or terminate the application. You will always be warned before logout or termination against data loss. Select the language mutation in the Language menu: CZ and EN are available so far. The Help menu provides information on the product manufacturer and version.

Note

- The language change will not be executed until the application restart.

The Status line displays connection information. From the left: 'Connected to' includes the name of the server to which you are currently connected, 'IP' specifies the IP address of the server to which you are currently connected and the server listening port, and 'Current user' displays the currently logged in user.

Find the Logout button in the right-hand bottom corner and various important control buttons in the lower part of the application. The table below describes all the buttons available in the application.

Basic Controls

 New server	**New server** helps you create a new connection in the login screen.
 New group	**New group** helps you create a new server connection group in the login screen.
 Delete selected	**Delete selected** deletes the currently selected objects from the list in the login screen.
 Connect	**Connect** is used for user login to the selected server.
 Logout	**Logout** is used for user logout.
 Save	**Save** is a common button for saving new objects into the database. The button has three states: inactive – all changes are saved, flashing – changes have been made in the database and should be saved, and red – changes cannot be saved as the validator disapproved some of the parameters (marked with a distinct red frame).
 Undo all	**Undo** helps undo all changes made since the last saving.
 Create Lift	**Create lift card** helps you add a lift card to the database by adding a central unit.

	**Remove** helps you remove objects from configuration.
	**Global map** displays all the lifts whose addresses are set on the map.
	**Create role** adds a user role to the server configuration.
	**Create user card** adds a user in the Configuration/Users menu.
	**Create group** helps you create a new group of users/lifts depending on which menu view is currently switched on.
	**Add plan** helps you add a building plan to the selected storage.
	**Remove plan** helps you remove the selected plan.
	**Change plan** updates the plan stored by storing a new map under the same name.
	**Download plan** helps you save the selected plan to a local disk.

	**Export** helps you export the table in the currently displayed menu.

7.3 Use

Configuration

Upon login, you get to the Configuration main menu where you can find almost all the **2N® Lift8** settings. The user may access the menus allowed by its role. The Administrator can administer the whole system without limitations: divide users into groups, assign the user roles, assign the users lifts to be configured and monitored, set the Call server for lift check calls and configure the storages for buildings plans. Now let us explain what the menus are used for.

Lifts

The **Lifts** menu includes a database of the lifts defined on the server. The lift list to the left includes all the available lifts. Click Group by to arrange the lifts according to the contact number, database ID or type of authorisation (Authorised, Unauthorised and Unknown). Or, you can arrange the lifts according to their functions. Click Lifts to display either all the lifts or just functional/non-functional lifts. You can use the search function to find the required lift: enter the lift name (or a sequence of characters) into the search row. The function requires no confirmation and starts searching the database the moment you enter the first character. Add more characters to refine the filter until you find the required lift.

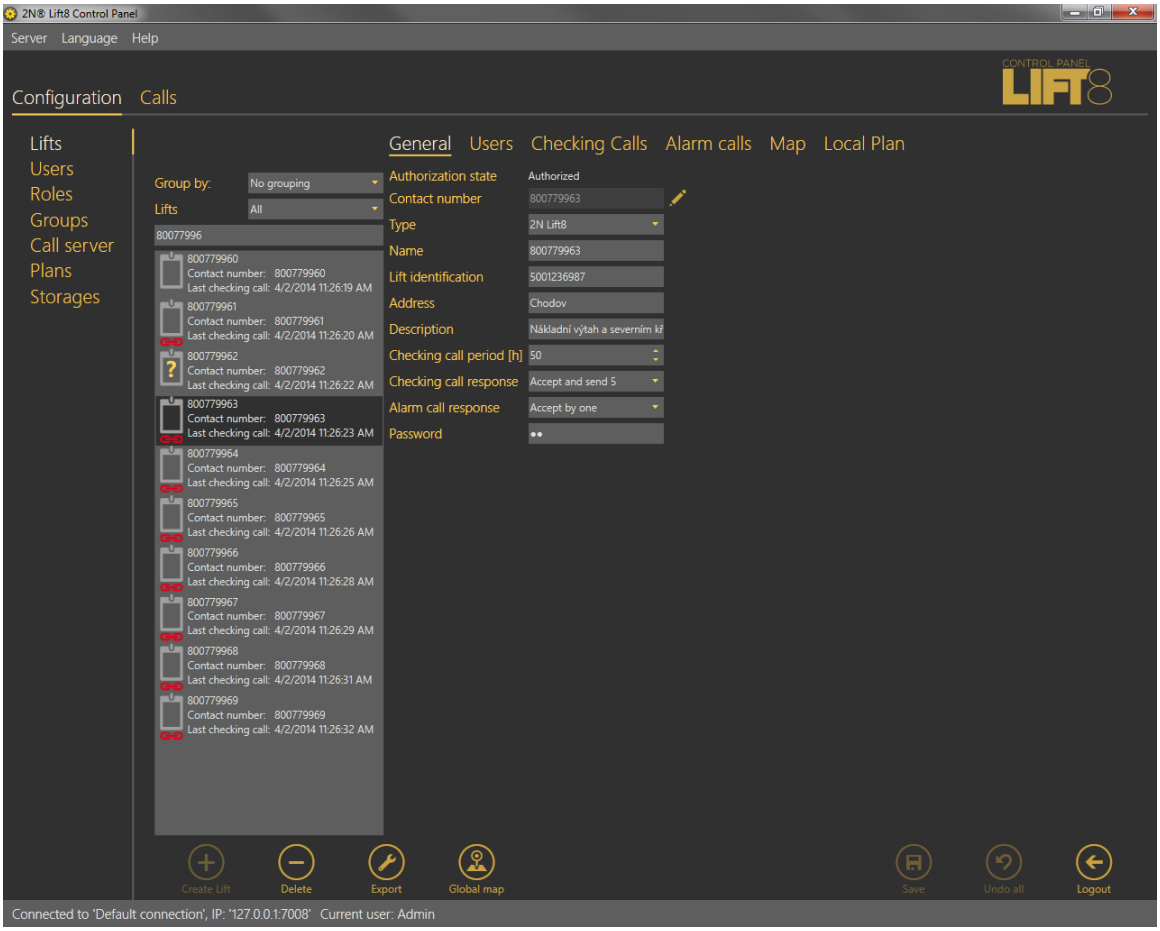
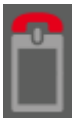
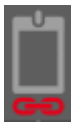


Figure: Lifts Menu

The list in the figure above includes some information on the lift. The icon at each lift indicates the lift cabin and can have several functions and meanings, which can be combined (see the table below).

	The red handset above the icon indicates that the lift has not made a check call within the timeout and has been marked as non-functional. This symbol will disappear when the lift makes a correct check call.
	The yellow question mark inside the icon indicates that the lift was created by a check call and has not been confirmed by the Administrator as a real lift. Refer to the Lift Creation subsection below for details.
	A functional lift: **2N® SingleTalk**, **2N® LiftNet** or Unknown, probably supplied by another manufacturer and able to communicate with the **2N® Lift8 Server** via CPC / P100.
	A functional **2N® Lift8** lift. The red chain below the icon indicates the state of the **2N® Server** – **Central Unit** tunnel connection. This function is under development and so the symbol is always red.

Tip

- The **2N® Lift8 Server** is able to work with the third party equipment via the standard communication protocols (CPC and P100) instead of proprietary protocols. Set the type to Unknown to communicate with such equipment.

Lift Creation

Add a lift to the database as follows:

The first way is to install a **CU** and configure it to call the number that the server uses for check calls. When the **CU** makes the first check call to the server, a new lift card is created and basic information on the lift is included: the telephone number used for the check call is filled in as the Name. The so-created lift is marked as unauthorised to eliminate unintentional calls (telemarketing, e.g.). To authorise this lift, use the Basic tab for this lift in the **2N® Control Panel**, which informs you that a new record has been created by a call from number x and asks you whether you want to keep it in the database or delete it. Press Preserve to add the lift to the database or Remove to delete the lift from the database if unintentional (telemarketing, error).

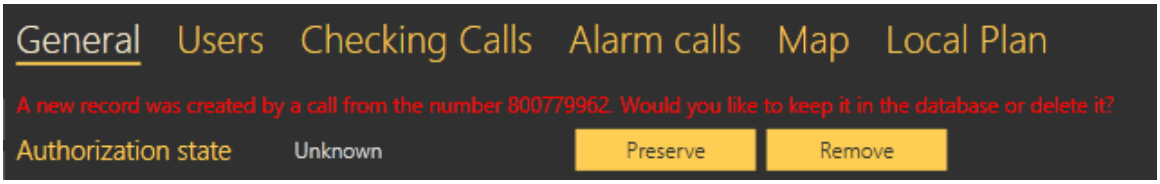


Figure: Authorisation of Lift Created by Check Call

Complete more lift card parameters for authorisation. See below for details (Lifts).

Note

- If the device that makes the first check call supports the CPC/P100 protocol, set the protocols in the configuration manually for check/alarm calls. It is because the server always processes calls from an unknown number by sending DTMF 5 and hang-up.

The other lift adding method is to create a lift card in the database. Click on Create lift card to open a window in which you can set the contact number for lifts with one and the same phone number. Click on the combo box to add another lift to a contact number included in the database.

Note

- Multiple lift functionality under one contact number is important where lifts are connected to a gateway or PBX which identifies itself as a single external number.
- If you assign multiple lifts to one number, the evaluation logic will start counting how many check calls have been received. The system waits until the defined count of lifts call have arrived and then marks the whole set of lifts under one contact number as functional. If one of the lifts fails to call in the set interval, all the lifts are marked as non-functional.

Confirm the number dialling to get into the General menu. Complete and save all necessary data as described in the Lifts subsection below. As this lift has not made a check call yet, it will be considered non-functional. Install it and make the first check call to make the lift ready for use.

Caution

- The lift that fails to make a check call within the timeout will be marked as non-functional and remain so until the next correct check call. A non-functional lift is visible to the technician for check.

Tip

- **Name** and **Telephone number** are mandatory parameters for a new lift. Complete these values to validate and save the lift card. No more parameters are necessary for the function. **However, you are strongly advised to complete the whole lift card correctly** to facilitate lift search and dispatchers' and rescuers' work.

Each created lift is added to the end of the table. Select a lift for editing and configuration. You can use multiselect to change (delete, export) parameters for a higher number of lifts: either hold Ctrl to select the objects or hold Shift to select the first and last objects thus selecting all the objects between them. All the changes or exports made over the selected lifts will apply to all of them.

Lifts

Select a lift to open an extensive menu level with lift identification forms, check call evaluations, maps and local plans of the building where the lift is installed. Let us describe each of the forms.

General

Set the standard lift parameters in the General menu. The first row signals the Authorisation state of the selected lift. All the lifts added manually to the database or created automatically yet confirmed as real lifts are authorised. Contact number is the number for **CU** identification and **2N® Lift8** check calls: enter either a SIM card in the **CU**, number of the PSTN line to the **CU** or number of the PBX/gateway behind which the **CU** is located. Type defines the type of device: **2N® LiftNet**, **2N® SingleTalk**, **2N® Lift8** or **Unknown**. Refer to the lift creating subsection above for details. Name helps you define the lift name. Set a name equal to the contact number for an automatically created lift. Lift identification is primarily used by the CPC a P100 protocols for counterparty authorisation. As identification is not set automatically during creation, complete the value to make the two protocols work properly. In the case of check call rejection/confirmation with a DTMF character, this parameter is not checked. Enter the address of the building in which the CU is located into the Address field to display this information on the map used by a technician for repairs or dispatcher for rescue team navigation. Fill in brief information on the lift to be installed in the Description item: location, purpose, specific settings and so on.

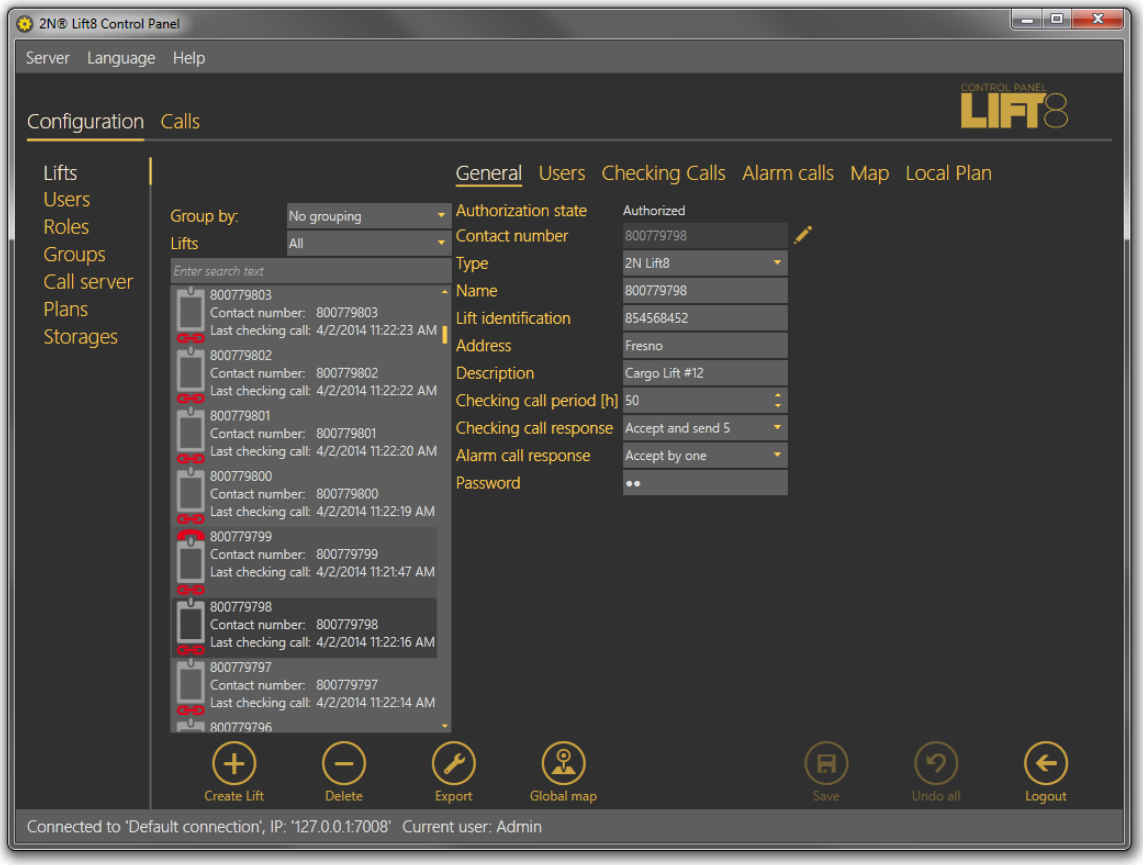


Figure: Lifts – General Menu

The Check call period specifies the check call timeout. The lift can call the **2N® Lift8 Server** any time within this timeout, but having exceeded this value, it will be marked as defective. The non-functional status will be removed when another check or alarm call arrives in the server from this lift. The default value of this parameter is 72 hours. The Alarm call response specifies the type of alarm call processing: **Normal call**, **Confirm with 1, CPC Antenna, CPC KONE** and **P100.** Similarly, the Check call response specifies the type of check call processing: **Reject**, **Accept and send 5**,

Confirm with 1 and 5, **CPC Antenna, CPC KONE** and **P100**. The default Password is 2n. Click Save to confirm the settings.

Users

The Users menu provides a list of all users with the right to view/administer the lift. The list never includes the default Administrator, which is authorised to administer all the lifts, users and roles. Select a user from the list of available users and click Add to add a user to the list. Click Delete to remove a user from the list. Click Save to confirm the settings.

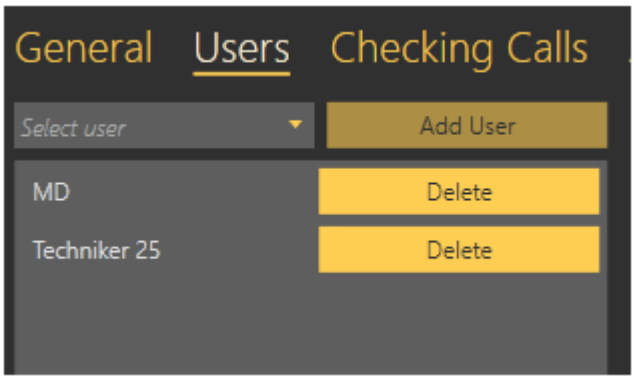


Figure: Lifts – Users Menu

Checking Calls

The Check(ing) calls menu includes a table of all the check calls received by the **2N® Lift8 Server** from lift addition until now. Click the filter button at each column to use filtration for call history search. Refer to the Calls subsection for details. The table provides the following information: check call date/time, **CU** phone number, serial number if CPC/P100 was successfully used and check call result. See the figure below.

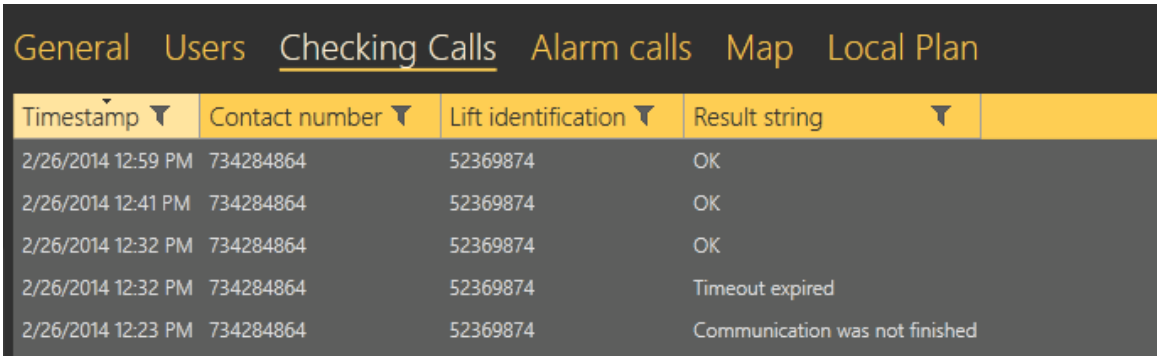


Figure: Lifts – Checking Calls Menu

Alarm Calls

The Alarm calls menu includes a table of all the alarm calls received by the **2N® Lift8 Server** from lift addition until now. Click the filter button at each column to use filtration for call history search. Refer to the Calls subsection for details. The table provides the following information: alarm call date/time, **CU** phone number, serial

number if CPC/P100 was successfully used, shaft number, Audio Unit position and lift and alarm-processing agent/dispatcher names. The last table column Note shows the note entered by the dispatcher during the alarm call.

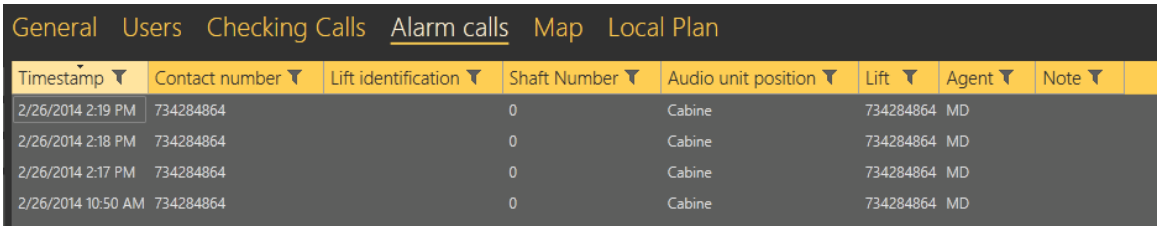


Figure: Lifts – Alarm Calls Menu

Map

If you filled in the lift address in the General menu, the Map menu will display the lift map position. Use the slider in the left-hand upper corner to zoom in and out. The lift address is also displayed below the map. If the address is incorrect, change it here. The change will appear in the General menu too. Click Check address to set a new address and press Save to add the address to the database.

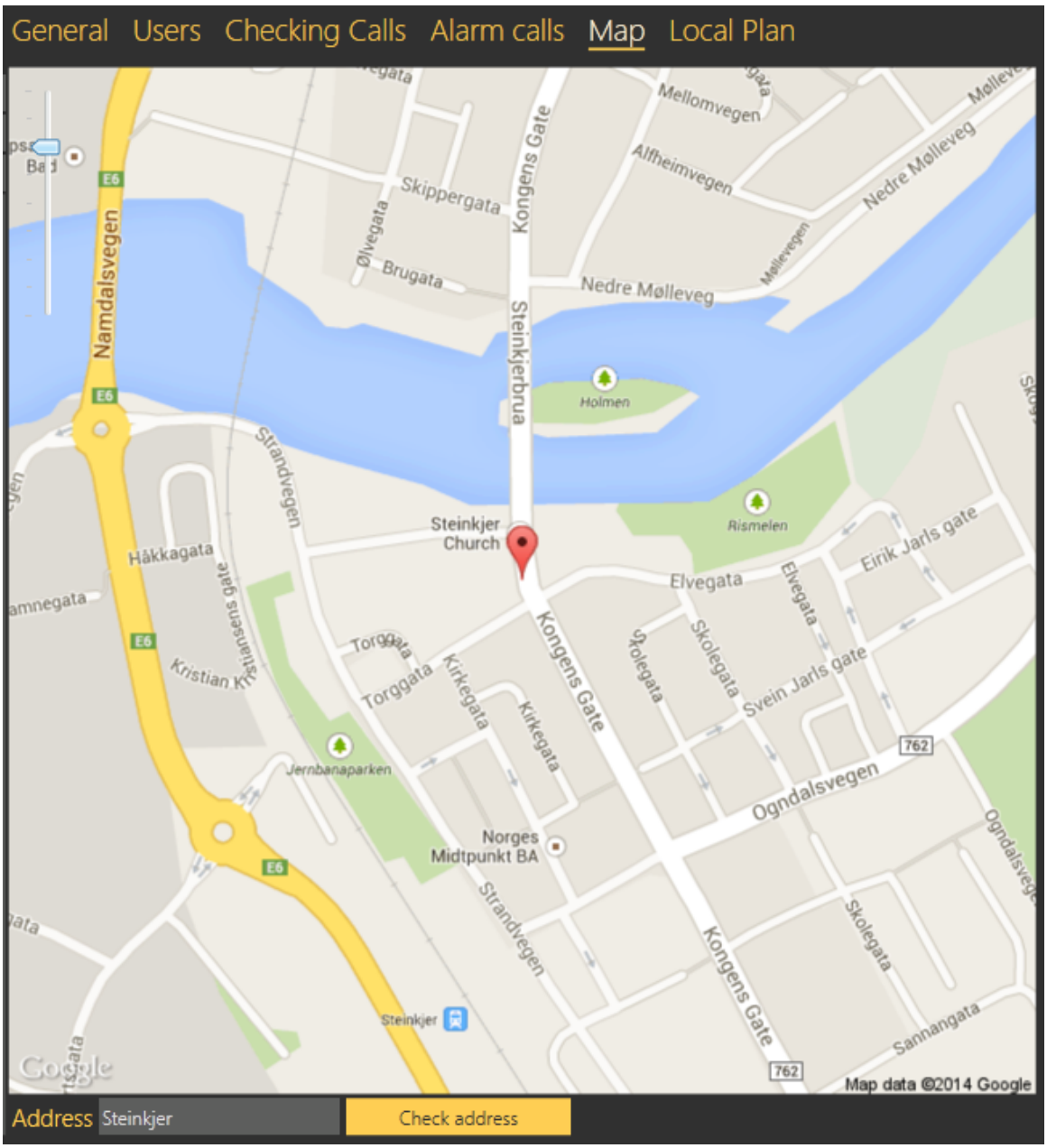


Figure: Lifts – Map Menu

Local Plan

If you have set a storage, added a plan and set the plan in the General menu, the plan will appear in the Local plan menu. Use the sliders to find the lift location and move the lift onto the map with the left button. See the default lift position in the new plan in the left-hand upper corner. The plan also displays other lifts in the building including colour states: orange indicates the lift that is being configured, green means another functional lift and red denotes a defective lift that failed to make a check call within the timeout. A phone number is displayed for each lift too. Select an option in the Available plans to change the lift plan. Click Save to confirm the settings.

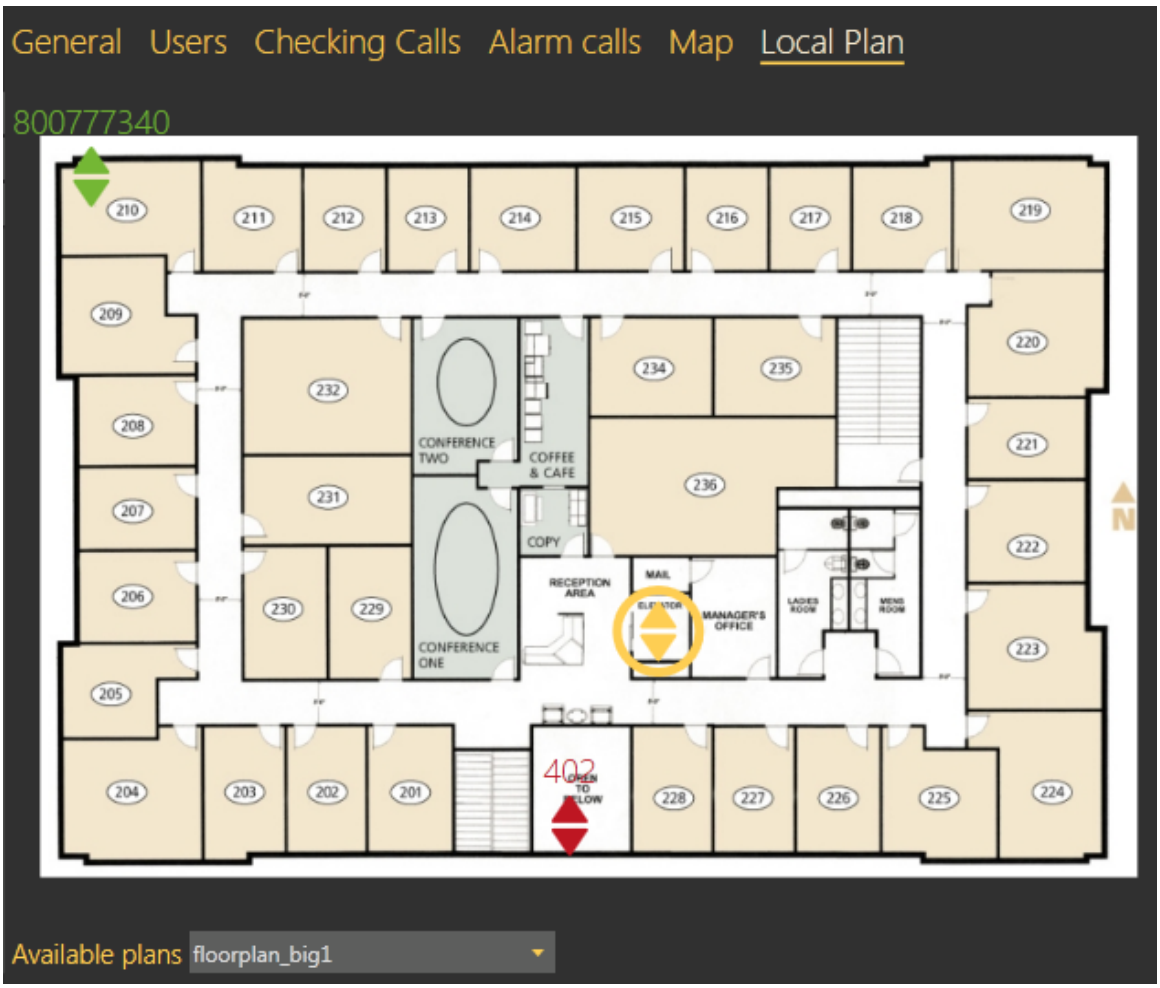


Figure: Lifts – Local Plan Menu

The Lifts menu is the only menu to display the Global map button. Press this button to activate a map over the whole third menu level. The map in centred to the currently selected lift by default. Select another lift to centre the map onto another object. The Global map displays a clear overview of all the lifts set worldwide. Colours help differentiate the functional lifts (green) and non-functional lifts due to a check call failure (red). Zoom the map in/out. See the figure below for a map view. Re-click the Global map button to quit the global map menu.

Figure: Global Map

Export

The table export function is available in the Lifts – Users – Calls menu. To enable the function, click Export or use the context menu displayed with the right mouse button above the selected object or objects if multiselect is used in the Lifts – Users menu. In the Calls menu, the export function is only available in the context menu and exports all the table for which export was activated. In the Lifts – Users menu, you can only export selected objects via the context menu and if you want to export all the objects, click Export. Having pressed this button, you have additional checkbox options: select the items to be exported and click Export in the form to confirm the selection. If you choose export of assigned users, a list of the users assigned to the selected object will be added to each table row. The same applies to the assigned lifts. Now choose a location on your disc and click Save to save the exported data. See the figure below for the exporting forms from the two menus.

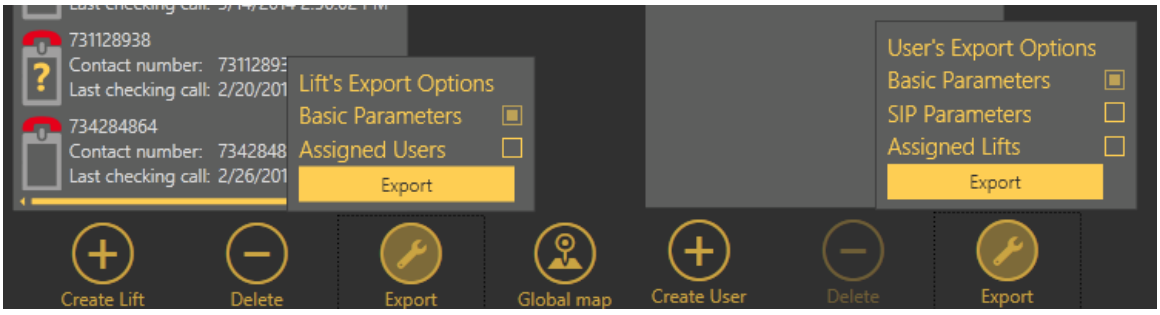


Figure: Lift and User Table Export

Users

The Users menu displays the whole database of the users defined on the server. The main common part of the menu provides the lift database searching function: enter the user name (or a sequence of characters) into the search row. The function requires no confirmation and starts searching the database the moment you enter the first character. Add more characters to refine the filter until you find the required lift. Click Create user card to add a user to the end of the table. Click Delete to remove a user. You can use multiselect to delete or select a higher number of users: either hold Ctrl to select the objects or hold Shift to select the first and last objects thus selecting all the objects between them. All the changes made over the selected objects will apply to all of them. Select a user to open an extensive (third) menu level with three forms. Let us describe each of the forms.

General

The Users – General menu helps you set personal information on the user: login username and password for the **2N® Lift8** applications.

Note

- The username and password are the only mandatory parameters of this menu. **However, you are strongly advised to complete the whole lift card correctly!**

The next parameters include Firstname and Surname, user function/job Description, Contact number, Email, Company and Role. The following options are available: Administrator, Technician, Own role (see below for setting). New users are created as Dispatchers by default. Click Save to add the parameters to the database.

Figure: Users – General Menu

Lifts

The Lifts menu provides a list of the lifts that can be administered and monitored by the user. You can view the check call results and set some of the lift parameters depending on your role setting. Select a lift from the list and click Add lift to add a lift. Click Delete to remove a lift. Click Save to confirm the settings.

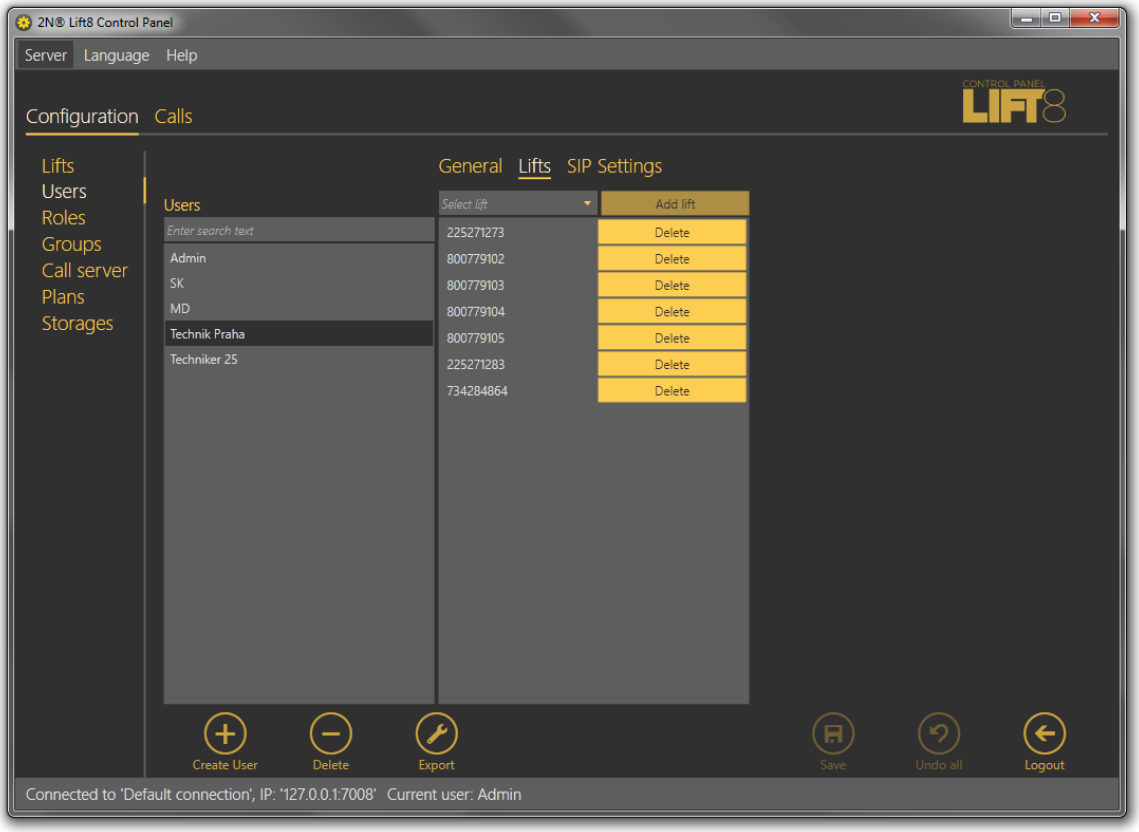


Figure: Users – Lifts Menu

SIP Settings

Every user (Technician/Dispatcher) must be assigned a SIP line, i.e. an account registered with a SIP provider or the PBX used for login via the **2N® Lift8 Communicator**. When you log in to the application, your line will be registered and you can process the calls coming to your line depending on the **2N® Lift8** configuratio n. An incoming alarm call will probably dial the dispatcher's account number. The dispatcher can then contact the technician if necessary. Refer to S.8, **2N® Lift8 Communicator**, for details on these functions. Set the following SIP line parameters: Domain, Username and SIP account Password. Domain is the address of the server to which the SIP client will log in. Enter the SIP Proxy server IP address or domain name. Port 5060 is used by default. If your provider uses a different port, add this port to the Domain parameter behind a colon as shown in the figure below. Click Save to confirm the settings.

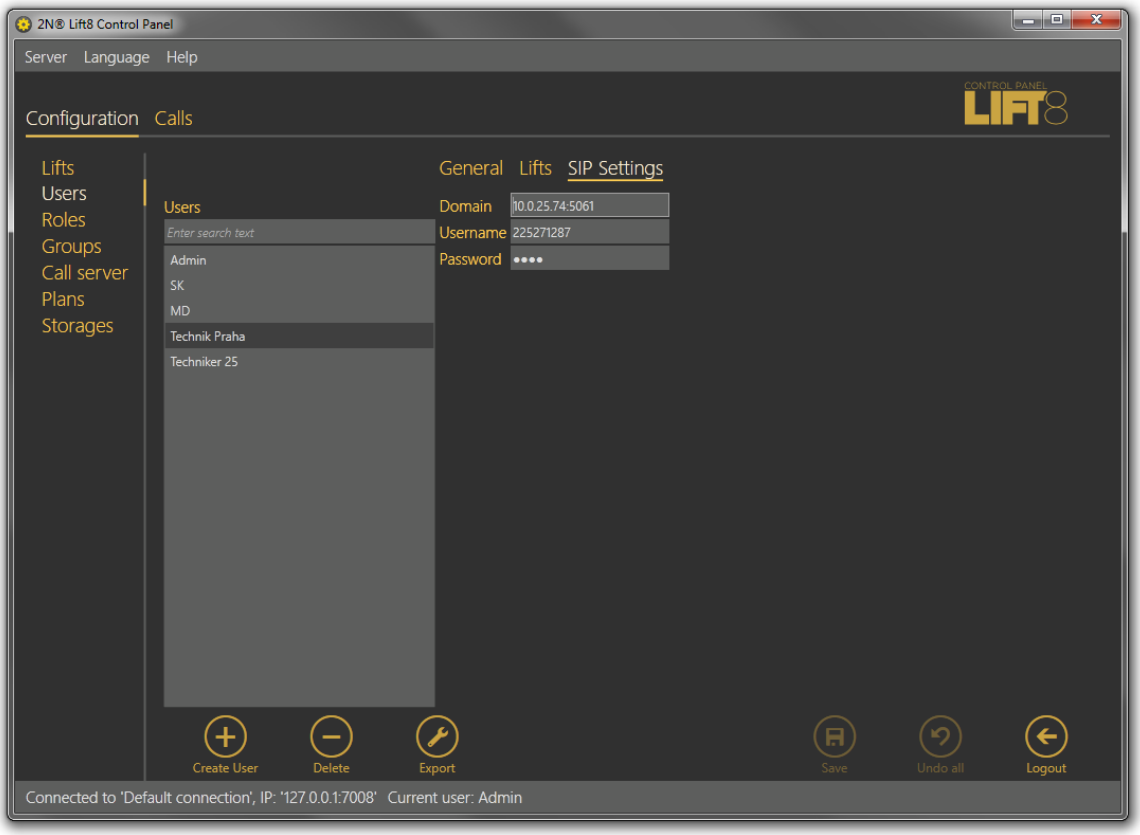


Figure: Users – SIP Settings Menu

Caution

- Make sure that the SIP line is configured correctly to register your SIP line and log in to the **2N® Lift8 Communicator** application.
- Contact your network administrator for the SIP line settings.

Roles

The Roles menu specifies the user login types. The roles define the user rights in the **2N® Lift8** system. Three roles are available by default: Administrator, Technician and Dispatcher. These roles cannot be removed or edited. Click Create role to create a new role and assign access to the functions. See the table below for function details. Click Delete to remove a role. If a role disables a user to view or configure a menu, the menu will not be displayed to the user.

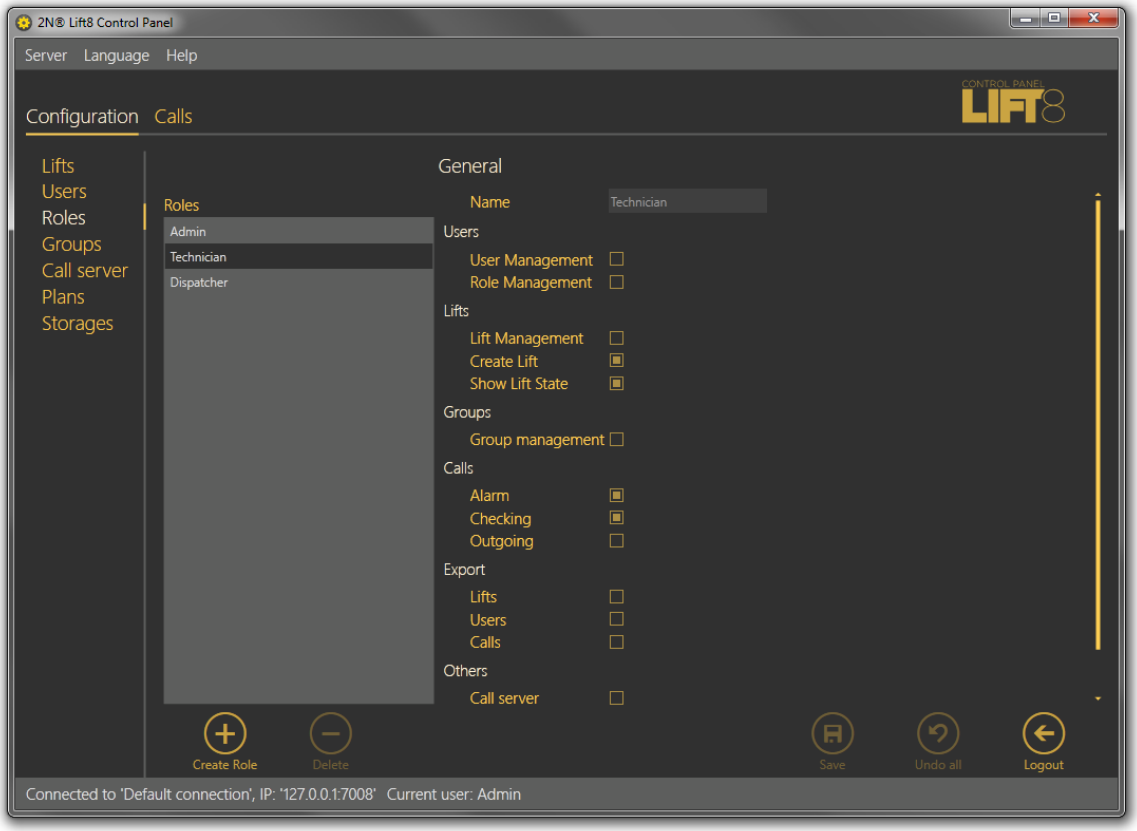


Figure: Roles Menu

Caution

- If you are editing (updating) rights for an existing role, the users concerned will be logged out when the new parameters have been saved. You will be informed of this by a dialogue window with confirmation.

Parameter name	Meaning
Users	
User administration	Helps create, delete and edit all users.
Role administration	Helps create, delete and administer user roles.
Lifts	
Lift administration	Helps administer lift databases.
Lift creation	Helps create a new lift.
Lift function display	Activates functional/non-functional lift display.
Groups	
Group administration	Helps create, delete and edit user and lift groups.
Calls	
Alarm	Displays the lift alarm call database.
Check	Displays the lift check call database.
Outgoing	Displays the dispatcher outgoing call database.
Export	
Lift export	Helps export the lift table.
User export	Helps export the user table.
Call export	Helps export the call table.
Others	
Call Server	Makes Call Server settings accessible to the user.
Plans	Makes plan list and settings accessible to the user.
Storages	Makes server storage creation accessible to the user.

Groups

The Groups menu helps you define groups of users and lifts to facilitate configuration of a high number of objects. This means that you can assign all parameters to a lift group in a building simply by one setting and add more lifts to the group. Similarly, a user group helps you divide the users into smaller groups according to their roles or jobs, for example. This is the only purpose of the groups. Now let us describe what you can configure in the Groups menu. There is a list of all objects to the left. Click Groups for to display the lifts or users. Click Create group to create a new group and add it to the end of the list. Click Delete to remove a group. Click Save to confirm the settings.

Lift Groups

Having selected a group, you will see a list of all groups configured in the table. You can use the searching function to find a group: enter the group name (or a sequence of characters) into the search row. The function requires no confirmation and starts searching the database the moment you enter the first character. Add more characters to refine the filter until you find the required group. Click on the group to open further settings; see the figure below.

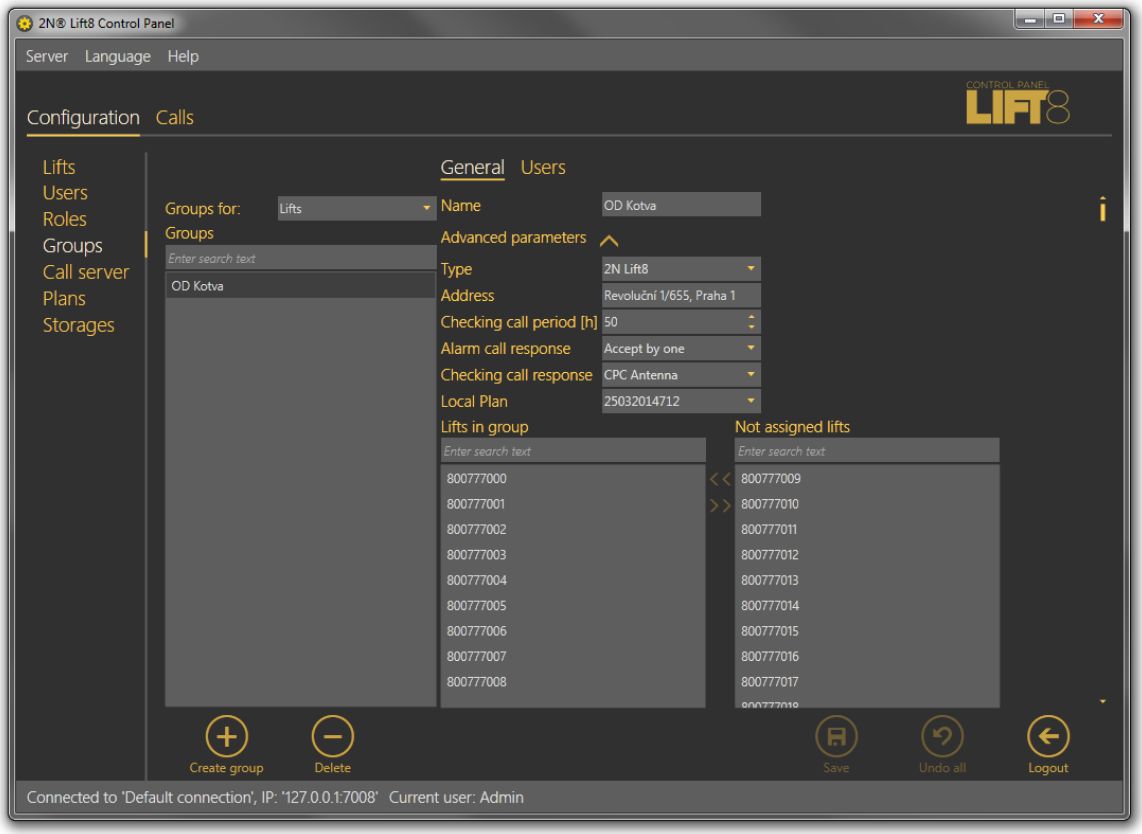


Figure: Groups – Lifts Menu

General

In the Groups – General menu, you can change the group name in the Name parameter and assign lifts to the group. You can see a list of all lifts not assigned to the group to the right and a list of all lifts in the group to the left. You can use the searching function like in the group list. Select a lift and click the appropriate arrow to move the lift to/from a group. You can use multiselect for selection. Furthermore, the menu provides an extended setting, which helps you assign all parameters at once to the given lift group. Define the Type of device: **2N® LiftNet**, **2N® SingleTalk**, **2N® Lift8** or **Unknown**; refer to the lift creating subsection above for details. Enter the Address of the building where the **CU** is installed. This information will then be displayed on the map for the technician's or dispatcher's needs. The Check call period defines the check call timeout. The lift can call the **2N® Lift8 Server** any time within this timeout, but having exceeded this value, the lift will be marked as defective. The non-functional status will be removed when another check or alarm call arrives in the server from this lift. The default value of this parameter is 72 hours. The Alarm call response specifies the type of alarm call processing: **Normal call**, **Confirm with 1, CPC Antenna, CPC KONE** and **P100.** Similarly, the Check call response specifies the type of check call processing: **Reject**, **Accept and send 5**, **Confirm with 1 a 5**, **CPC Antenna, CPC KONE** and **P100.** Plan is the last parameter for you to choose a map of the building. Click Save to confirm the settings

Tip

- Advanced settings are not required. You can configure all or no parameters at your discretion.
- The advanced parameter list is empty by default. If a parameter is identically set for all the lifts, the parameter value will be displayed. If not, the field will remain empty.

Users

You can assign responsible technicians and dispatchers to the selected group to view and operate the lifts in the group. Do this in the Users menu like in the Lifts – Users menu.

User Groups

Refer to the lift group settings while configuring the user groups. Just click Group for to select the user group view. Having selected a group, you will see a list of all the user groups. Role is the only parameter to be configured for the users. Select a role from the list and click Save to assign the role to all the users in the group. Now assign the lifts to be administered to this group of users in the Lifts menu.

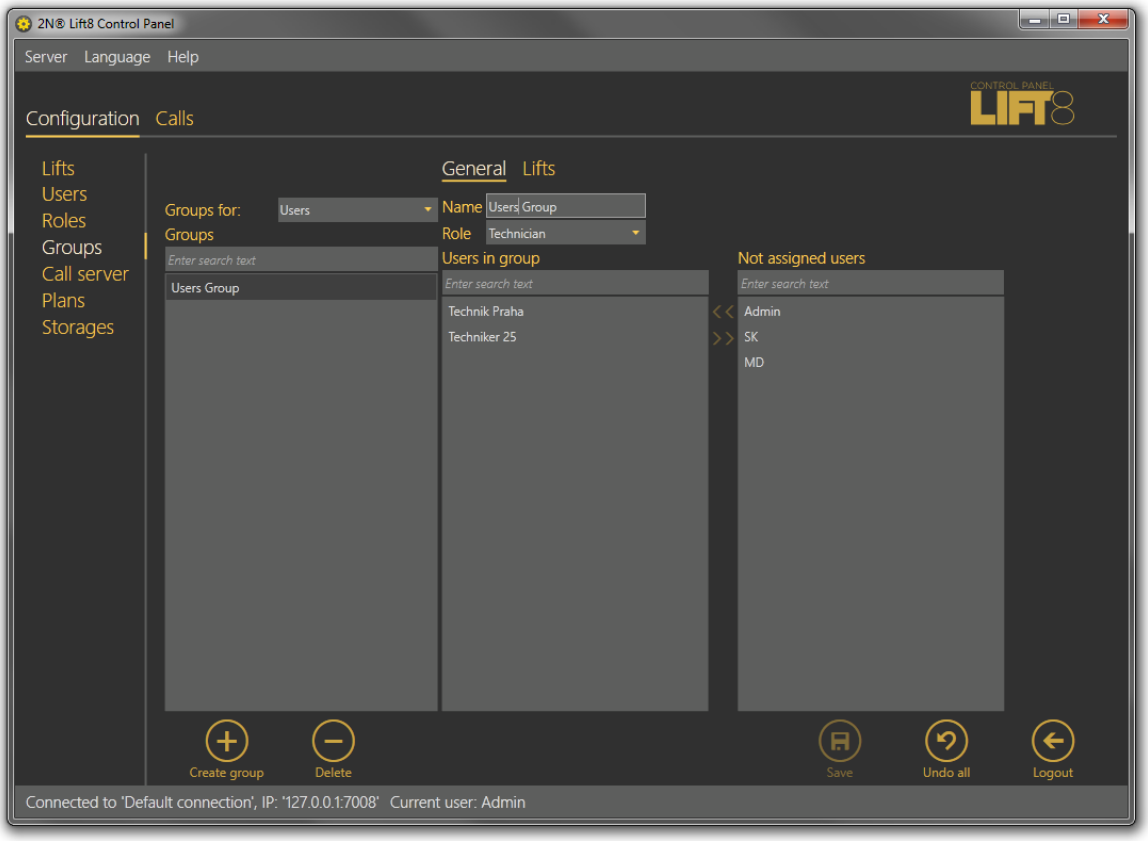


Figure: Groups – Users Menu

Call Server

The Call server helps you configure the SIP lines for the **CU** check calls. Enter the SIP line parameters correctly for a successful SIP Proxy server registration. Make sure that the lines and servers are configured correctly to make the Call server work properly. If you use VoIP, obtain the SIP line settings from your VoIP provider. If you have a SIP Proxy server of your own, contact your network administrator for correct settings.

Caution

- Set the SIP lines in the **2N® Lift8 Server!** Use the settings of the PC on which the server is installed instead of your PC settings. Your PC settings will be applied only if the server runs locally.

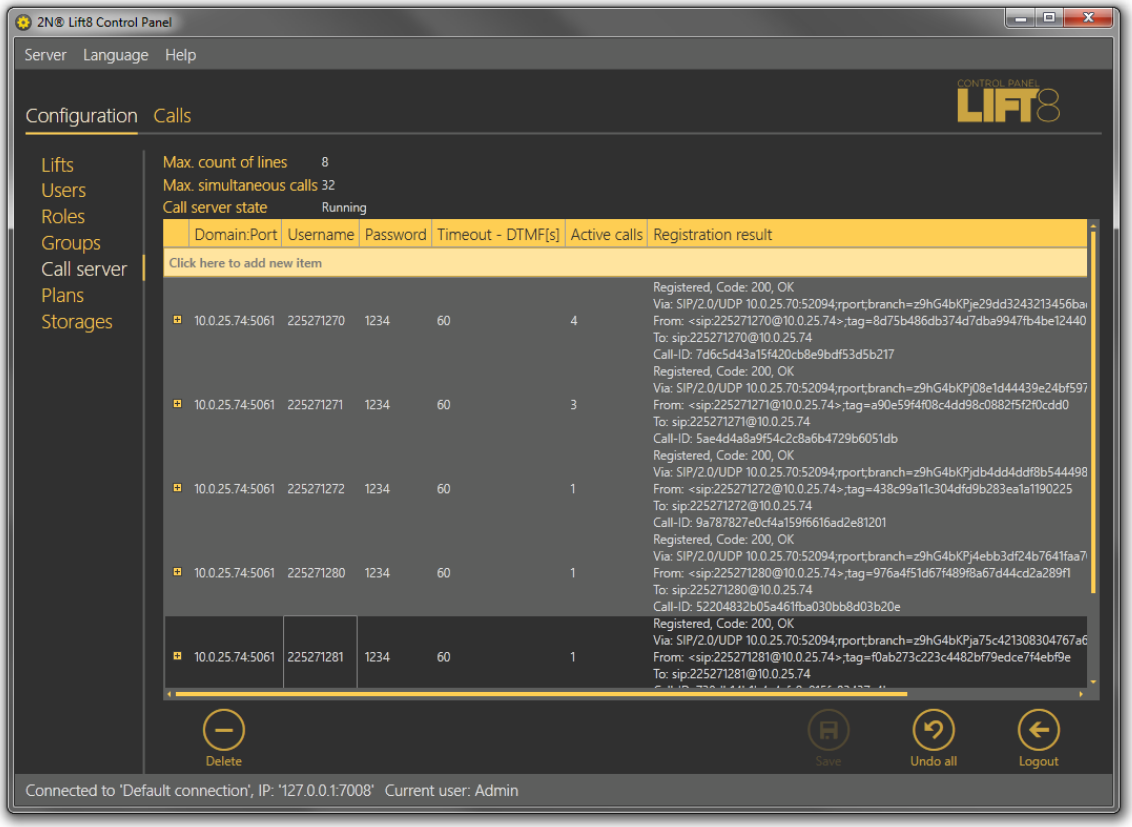


Figure: Call Server Menu

The Max count of lines parameter specifies how many SIP lines can be configured. Having reached this limit, you will not be able to add more lines and will be notified of this by the validator. Max simultaneous calls defines the maximum count of check calls that can be processed simultaneously by the server. If more calls than as defined in the parameter arrives in the server at one moment, all the excess calls will be rejected. Call server state signals the current state of the server: Starting, Running, Waiting for reconfiguration and Error.

Caution

- If in a state other than **Running**, the Call Server rejects all calls coming to it, i.e. does not receive or process any check calls.

Click on the first table row ('Click here to add new item') to add a SIP line. The table columns will get displayed and the row will be validated. When all the required items have been set, the validator approves them and the row is unselected. Now the Save button becomes active for you to confirm the settings, Non-validated parameters cannot be saved.

Note

- Enter the **Domain** and **Username** at least to validate a SIP line.

Enter the SIP Proxy address into the Domain:Port parameter. The Port parameter is not mandatory. If you enter the SIP Proxy address only, registration port 5060 will be used. To configure a different port, enter the port number behind a colon. Enter the username and password for authentication towards the SIP Proxy into the Username and Password fields respectively. The Timeout – DTMF is set in seconds and its default value is 60. If no DTMF dialling arrives within this timeout, the call will be terminated. Active calls signals the current count of active calls via the given SIP line. The registration result displays the result of the SIP Proxy registration. If unsuccessful, the registration packet will be resent. This parameter is updated every 30 s. Click Enter to confirm the settings and add the new row to the end of the table. Now click Save to confirm the settings. A registration packet will be sent immediately to the server. If everything is OK, the Registration result will display a message with the 'Registered, Code: 200, OK' header. Select a row and click Delete to remove a row from the table. The selected SIP line will be removed from the database. Click Save to confirm the settings.

Tip

- Contact your network administrator or VoIP provider for correct SIP line settings.
- Just click Delete to remove the currently configured line.
- If registration fails, you will find the error code (SIP error message) in the Registration result. If your registration data are correct, contact your network administrator.

Plans

The Plans menu helps you manage plans of the buildings in which the lifts are installed. Assign the plans to the selected lift and mark the lift position in the Lifts menu. This information will then be displayed to the **2N® Lift8 Communicator** operators.

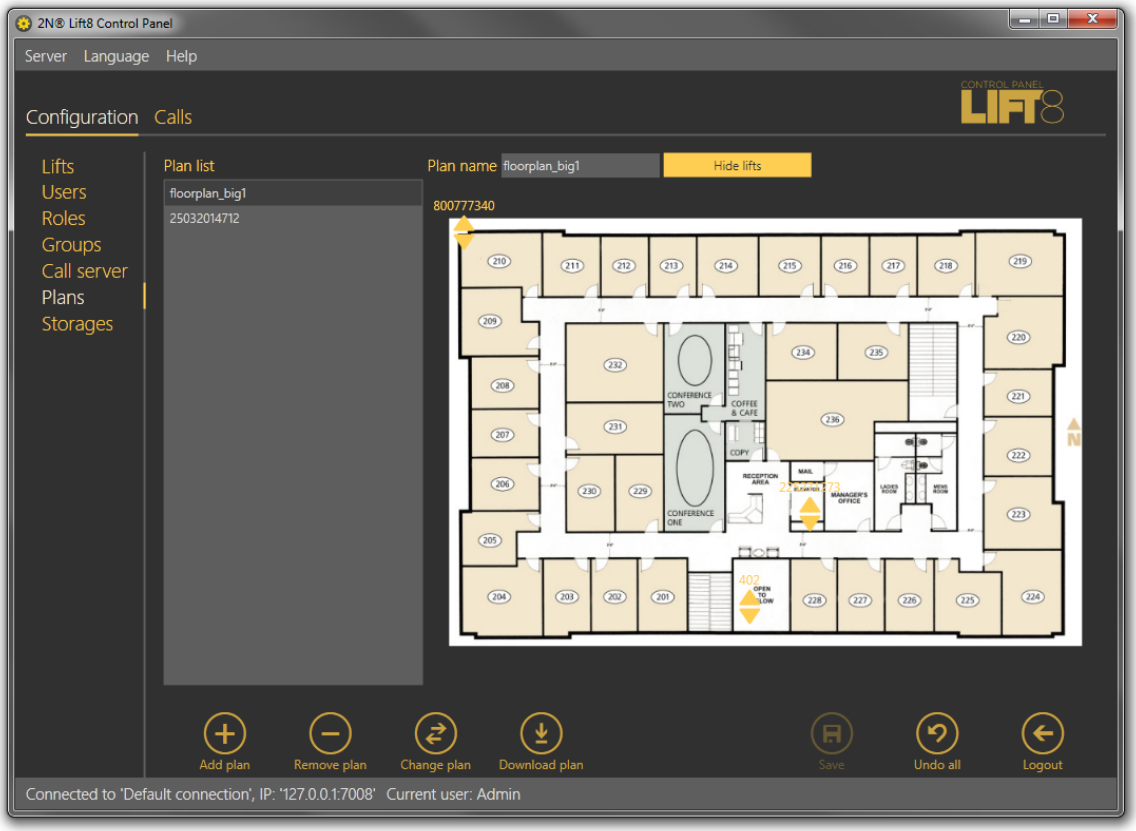


Figure: Plans Menu

Click Add plan to open a file browser and select the file to be added. Refer to the right part of the screen for the figure to be imported. Click Save to confirm the new plan.

Tip

- All the saved plans are stored in the **2N® Lift8 Server** and accessible to all the logged-in users.

Caution

- If, contrary to the figure, information is displayed instead of the plan list, check the plan storage on the server. If the storage is not configured, set its parameters in the Storage menu.
- If the Storage menu is unavailable, enhance the user rights.

Note

- Insert figures in the PNG, JPG or BMP format.
- The file browser is configured for PNG by default. If you cannot see the figures in the folder, change the file format (typically, in the right-hand upper corner next to the file name).

Click on the plan to display the preview. Click Show lifts next to the Plan name to view all the configured lifts as a lift symbol plus the phone number; see the figure above.

Click Remove plan to delete a plan. Click Change plan to update a plan while keeping the plan name and the current lift structure. Select Download plan to save the plan without the lift positions onto a local disk.

Tip

- Plan changing is useful when you need to update a plan after reconstruction and interior changes while keeping the existing lift structure in the building.

Storage

The Storage menu helps you configure all the storages necessary for the operation of the **2N® Lift8** system services. You can map the storage folders on a local disc, network discs and such additional memories as USB discs and memory cards.

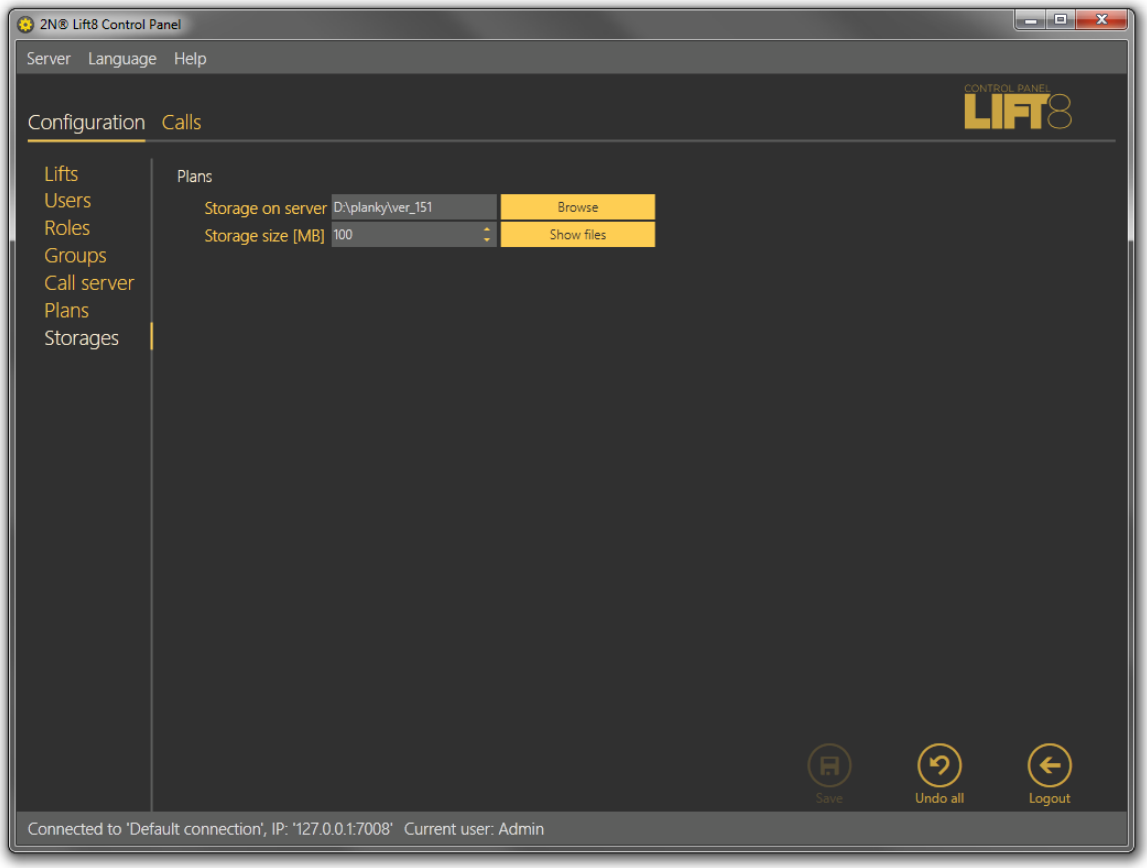


Figure: Storage Menu

You can map the path for plans: click Browse at the given storage to select the path to the folder to be used for storage. You can also create a new folder in the path selecting window. Now set the maximum Storage size (data space) within the whole logic storage (disc C, e.g.). Click Save for confirmation. From now on the storage will be active and used for data storing. Click Show files to view the files and plans stored on the disc. Their names correspond with the server database key. You can also see the file size and delete any file in this window.

Tip

- The file name is encoded to eliminate building identification for security reasons.
- Press F2 to rename a new folder.

Caution

- When the storage is full, no new plans can be added. Delete the old plans or set a higher storage capacity.
- Firmware administration is under development and not supported. at present.

Calls

Calls is the other part of the main menu. This menu contains tables with check and alarm calls of all the lifts and dispatcher and technician outgoing calls. The call history starts with the first server installation and the whole call database is always read, which facilitates call search. You can also use filtration to find the required call. Set a filter for each column and combine the filters to find the required data as soon 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.

Click/re-click a column to arrange the values in the ascending/descending order.

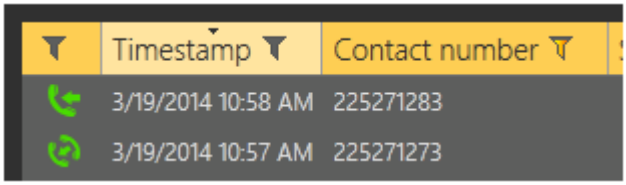


Figure: Left – Inactive Filter, Right – Active Filter

Each column with the funnel symbol includes 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 find all the searched items in the column. Use another filter to make your search more precise and efficient. Having completed filtering, click Delete filter in the used columns to delete all the active filters. If you did not delete the setting, the filtration settings would keep active even upon the **CU** logout and you would obtain filtration results instead of complete information in your next search.

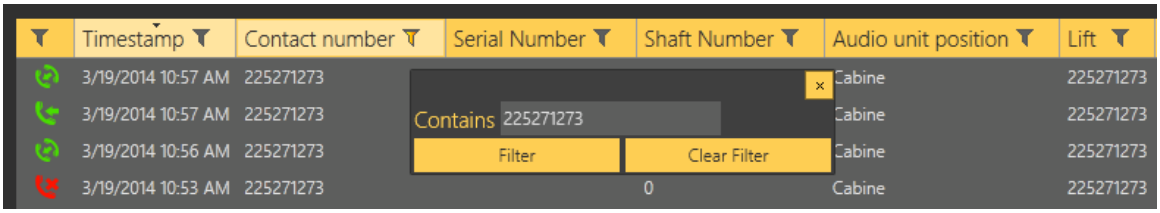


Figure: Filtration Setting Result

The Calls menu is the only menu to include the Paste screen button. Push the button to

open the call history table in a new window. This allows you to view the call list on one monitor and configure other lift and user parameters on the other; see the figure below.

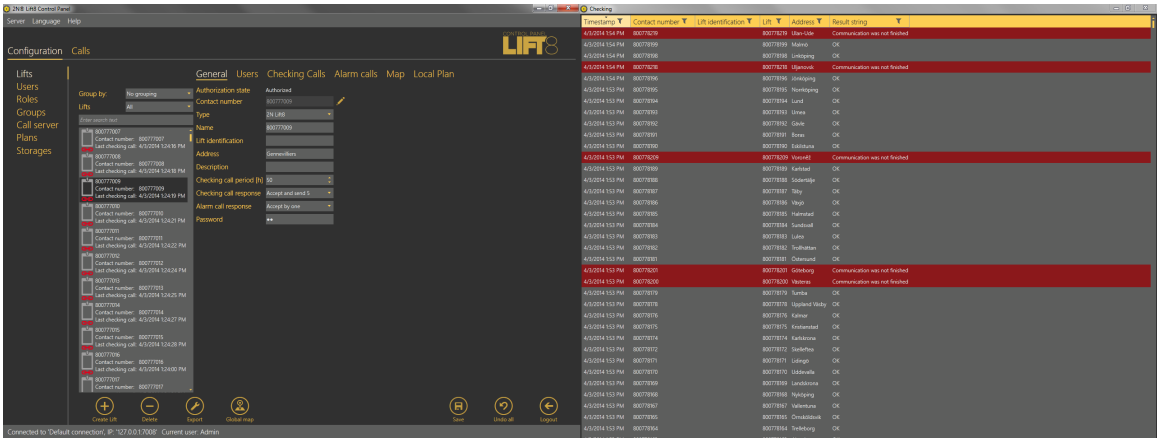


Figure: Pasted Screen View

Alarm Calls

The Alarm calls menu provides a table of all the alarm calls from all configured lifts received by the **2N® Lift8 Server** from lift addition until now. Click the filter button at each column to use filtration for call history search. See above for details. The table provides the following information: call state, call date/time, **CU** phone number, serial number if CPC/P100 was successfully used, shaft number, Audio Unit position, lift name and address and alarm-processing agent/dispatcher name. The last table column Note shows the note entered by the dispatcher during the alarm call. The first column or icon defines the alarm call state. Let us explain this function using the filtration settings where you can choose the call state to be displayed.

Figure: Call State Filtration

From left to right: The first icon symbols a processed incoming alarm call. The second icon indicates a missed call, which occurs whenever the dispatcher fails, for any reasons, to answer an incoming call in time and ringing was terminated. The third icon symbols an outgoing call to upon a missed call, which occurs whenever the dispatcher fails, for any reason, to answer an incoming call in time and ringing is terminated. The dispatcher is notified and calls the lift (Audio Unit) that initiated the alarm call. Such a call is then considered a correctly processed alarm call. The last icon signals that the confirmed alarm call has been transferred to another dispatcher or a technician.

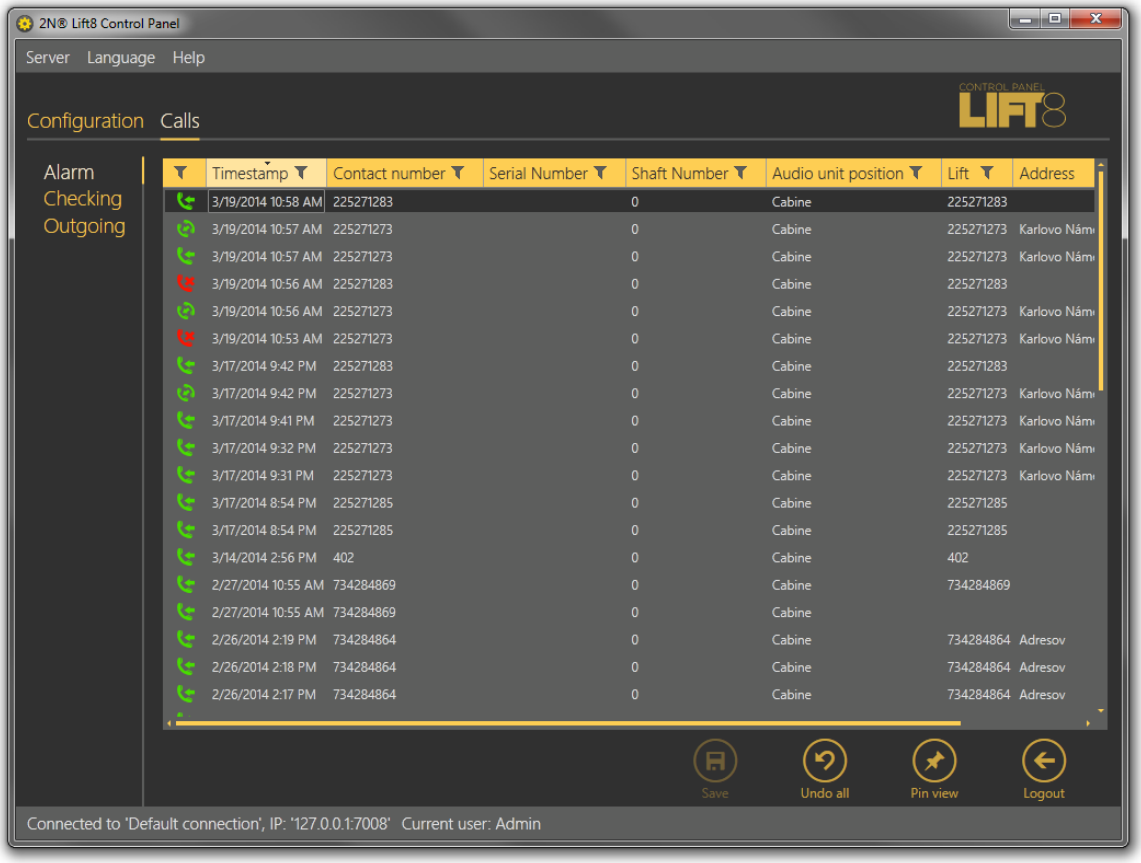


Figure: Calls – Alarm Menu

Checking Calls

The Check(ing) calls menu provides a table of all the check calls from all configured lifts received by the **2N® Lift8 Server** from lift addition until now. Click the filter button at each column to use filtration for call history search. See above for details. The table provides the following information: call date/time, **CU** phone number, serial number if CPC/P100 was successfully used, lift name and check call result. See the figure below.

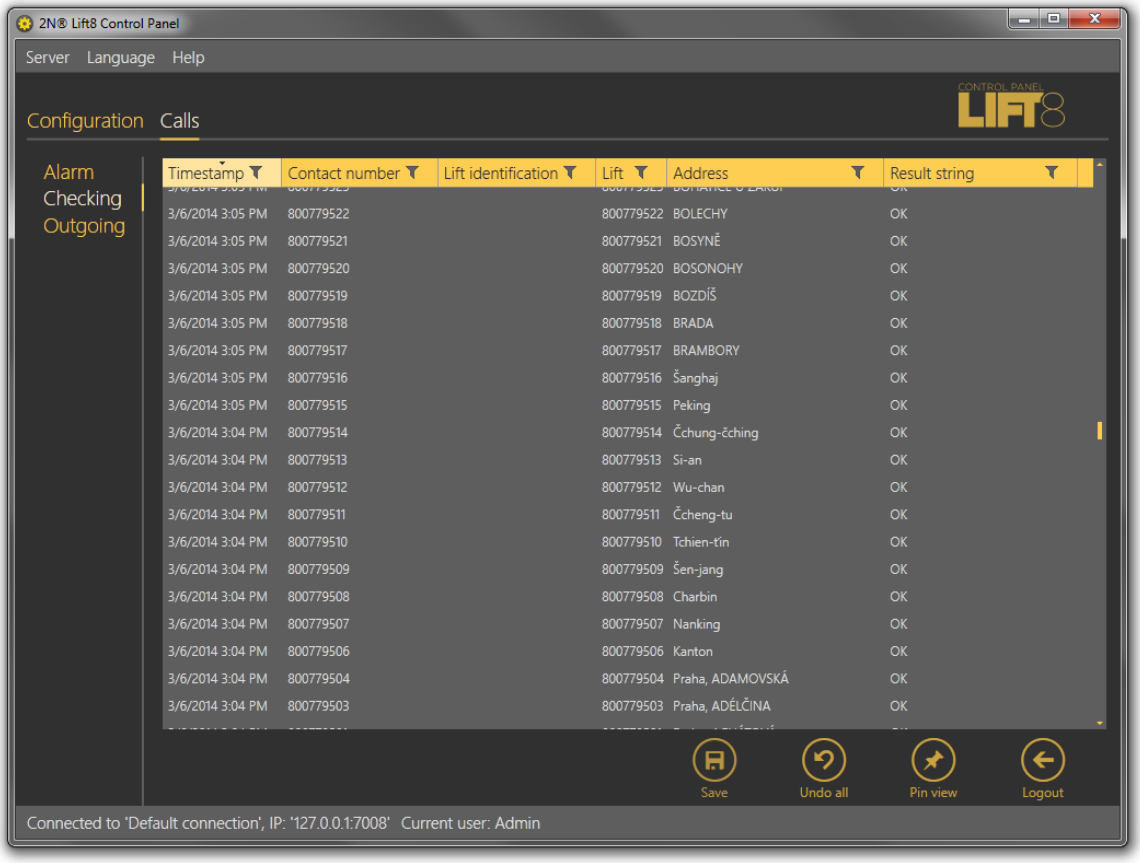


Figure: Calls – Checking Calls Menu

Outgoing Calls

The Outgoing calls menu provides a table of all the outgoing calls from all users (Technicians and Dispatchers) received by the **2N® Lift8 Server** if made via the **2N® Lift8 Communicator**. Click the filter button at each column to use filtration for call history search. See above for details. The table provides the following information: call date/time, called phone number, calling user (agent) name and note if added by the user during the call.

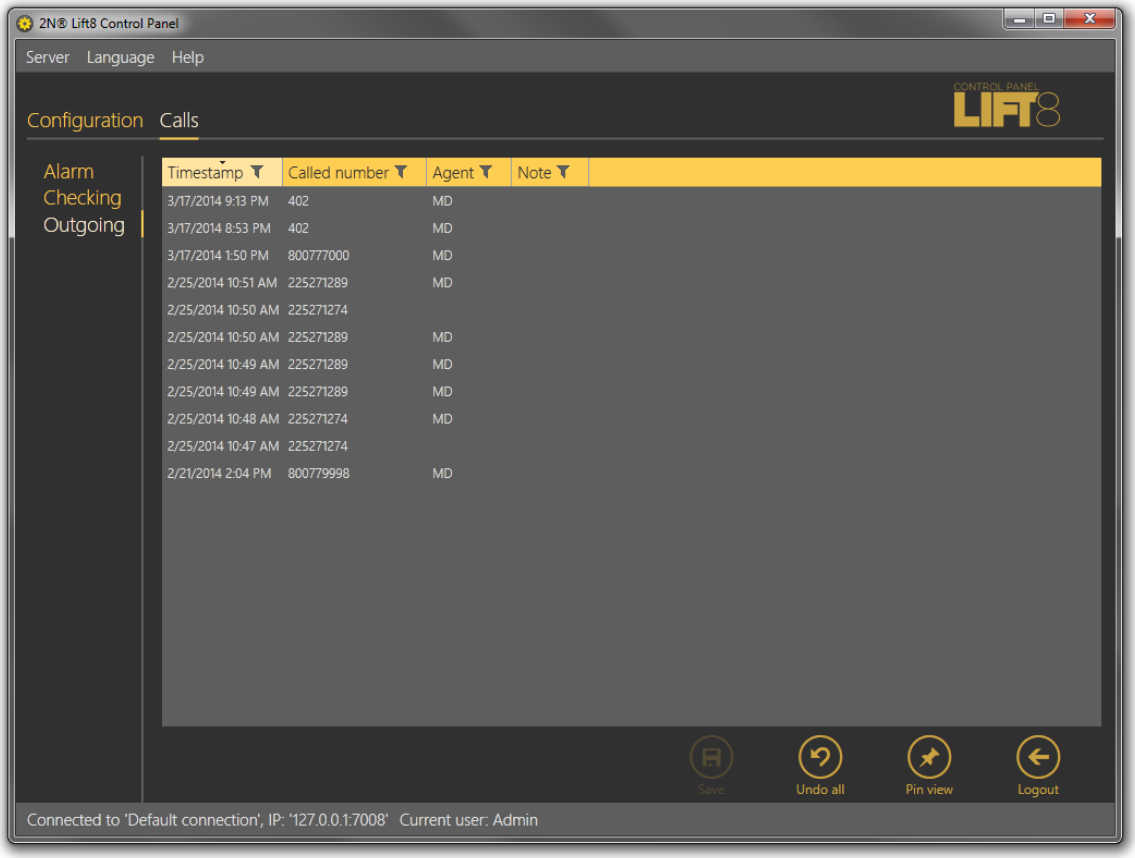


Figure: Calls – Outgoing Calls Menu

8. Communicator

Here is what you can find in this section:

Refer to the **2N® Lift8** product pages at www.2n.cz, download section, for the latest FW version. You can use this link from the online manual.

8.1 Installation and Login

After the application is launched, the installation program will scan your PC for another **2N® Lift8 Communicator** 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 removed or the whole application with a new, empty database should be installed.

Now the **2N® Lift8 Communicator Setup Wizard** has been launched. Follow the wizard instructions. Select the **2N® Lift8 Control Panel** installation location: **C:\Program Files (x86)\2N TELEKOMUNIKACE\2N Lift8** is used by default.

Select whether the application should be installed for the currently logged-in user or all the PC users. The wizard is ready to install the **2N® Lift8 Communicator**. Confirm user account administration notification to the Windows system if necessary. Another Start item and the application shortcut icon will be added automatically.

Note

- The **2N® Lift8 Communicator** installation requires **150 MB** of free disk space at least.

Now the **2N® Lift8 Communicator** is ready for use. Click on the shortcut item on the desktop (see the figure below) or select the Start item to start the application.

Figure: 2N® Lift8 Communicator Icon

After the application is launched, a splashscreen gets displayed informing you of the application manufacturer and current version. Start it to display the basic login screen and Log in to server menu. There is a **2N® Lift8 Server** login form in the centre of the application, which remembers the last logged-in user. If you are the first user of the application, enter your login data as communicated to you by your **2N® Lift8** administrator. It is easy to set the connection: enter the server IP address if you establish connection to a LAN or public network server. Use the DNS server if available. Enter the listening port selected during the **2N® Lift8 Server** installation into the Port parameter. The default port value is 7008. Ensure that the data via this port pass the firewall and NAT in your LAN. Contact your LAN administrator to verify the settings. Select Remember password to save the currently saved password for next launch. Refer to the figure below for possible settings.

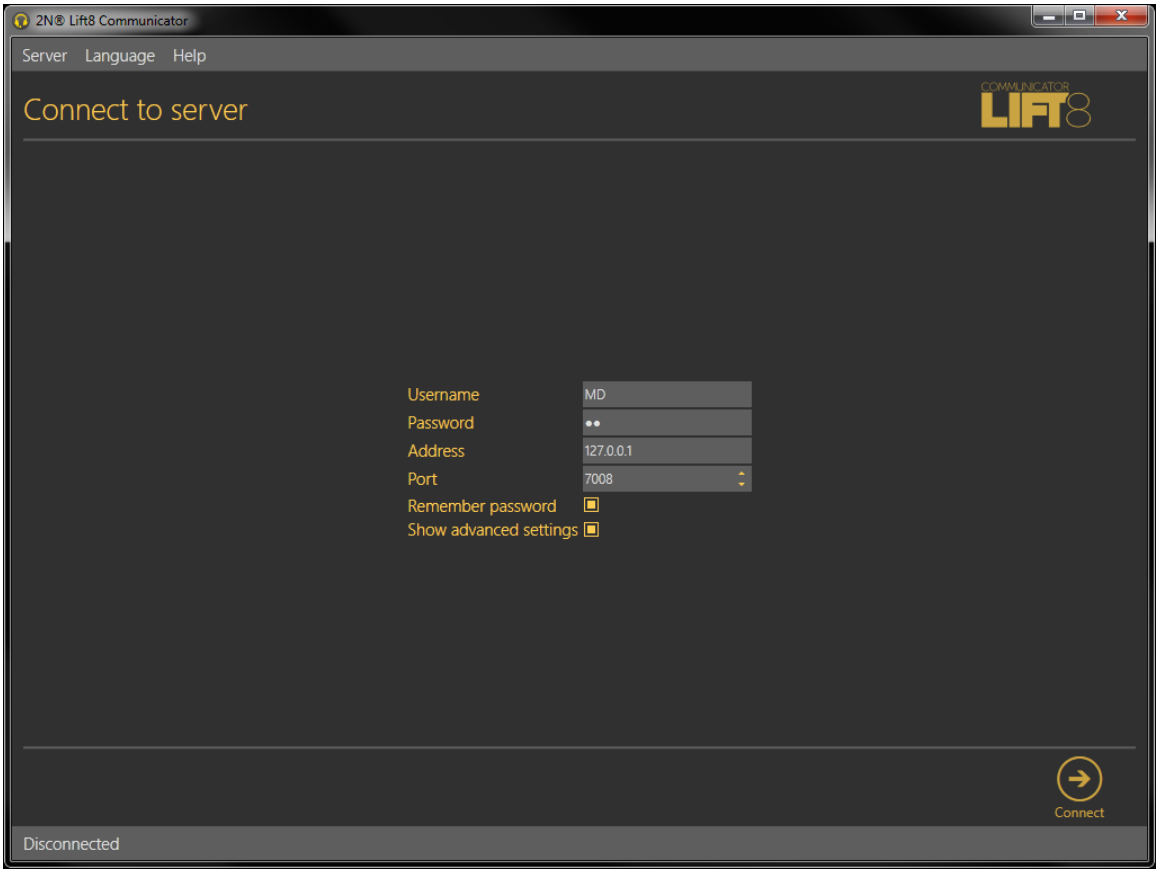


Figure: Login Screen

Now click Connect to selected server to log in to the **2N® Lift8 Server**.

Tip

- Server login may take some time if you have an extensive database as the application has to download all the current tables. Be patient please and wait for completion.

Caution

- The **2N® Lift8 Communicator** provides different access rights to information and menus to users with different roles. It means that a dispatcher may access different information than a technician, for example.
- The default port settings after server installation is as follows:
  - **Port: 7008**

Warning

- If a problem with non-compatible version of .NET occurs during installation, you should download new version of .NETFX4.0 from www.2n.cz. From online manual you can use this link.
- Minimum operating system requirements: **Windows Vista, 7, 8**

8.2 Introduction to Application

In this subsection, we will show you the application menu layout and basic controls. Unlike the **2N® Lift8 Service Tool** and **2N® Lift8 Control Panel**, the application has just one menu level. The first screen upon start includes the Lifts menu, which provides an overview of all the lifts assigned to the logged-in user. The horizontal Main menu helps you select whether to view the assigned lifts or supervise the history of alarm calls. You can also display the database of the **2N® Lift8** users including their phone numbers.

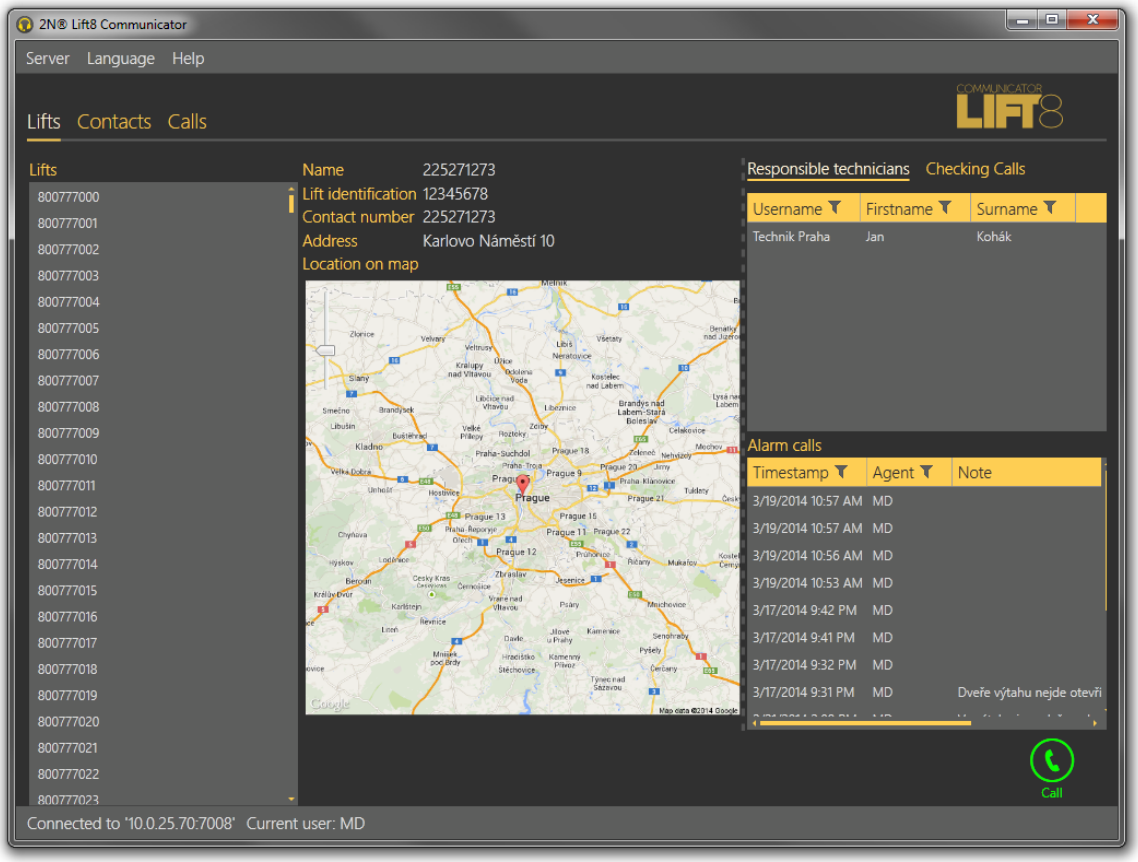


Figure: 2N® Lift8 Communicator Window

The Main menu contains three pop-up menus. The Server menu helps you disconnect from the server or terminate the application. You will always be warned before logout or termination against data loss. Select the language mutation in the Language menu: CZ and EN are available so far. The Help menu provides information on the product manufacturer and version.

Note

- The language change will not be executed until the application restart.

The Status line displays connection information. From the left: 'Connected to' includes the name of the server to which you are currently connected and the server listening port behind a colon. 'Current user' displays the currently logged-in user.

Find the calling control buttons in the right-hand bottom corner, which may be different

in different menus. The table below describes all the buttons available in the application.

Basic Controls

	**Connect** is used for user login to the selected server.
	**Call** is used for calling the currently selected lift or user.
	**Transfer** helps transfer a confirmed call to another system user, responsible technician, for example.
	**Hang up** helps you terminate an active call or reject an incoming call during ringing.
	**Save** helps you return from the Incoming/Outgoing call window after call hangup and termination and save modified notes.
	**Pick up** helps you answer an incoming call.
	**Keypad** is used for call control via DTMF. When pressed, each button sends the assigned DTMF character into the call. This function helps you confirm calls or program the CU.

8.3 Use

The **2N® Lift8 Communicator** application is used by dispatchers and technicians for lift and **CU** communication. Every user with a login and SIP line created in the **2N® Lift8 Control Panel** may log in to the application. If the user SIP line is not registered, the user will not be able to log in.

Caution

- Telephoning is the main function of the application. If the user SIP line cannot be registered, the user will not be able to log in. In that case, ask your system administrator to check the SIP line settings in the **2N® Lift8 Control Panel** or **SIP Proxy,** your LAN settings and your PC firewall if necessary.

Note

- Every user may process any incoming call to its line but make outgoing calls only to the lift/technician numbers included in the database.

Application at Relax

When the user logs in the application is at relax and in the case of an incoming/outgoing call it gets into one of the other two states. You return to this window whenever you terminate the call with the Save button.

Lifts

The left section of the Lifts menu provides a list of all the lifts that are assigned for administration to the currently logged-in Dispatcher or Technician by the Administrator. Click on the lift name to display more information: Name, Lift identification, Contact number and Address if available. If the address is completed, the lift Location on map is displayed too. Use the slider in the left-hand upper corner of the map to zoom in/out. Click Call to call any lift on the list. You will be forwarded to the Outgoing call window.

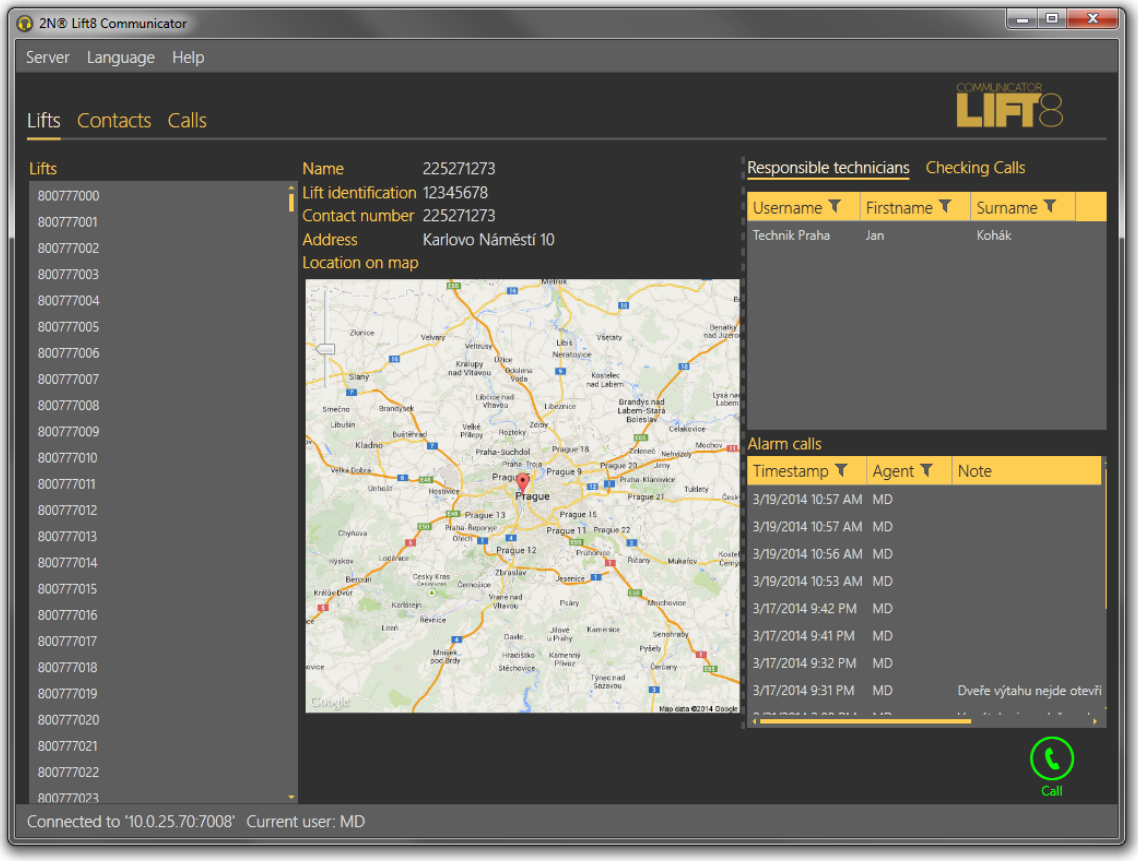


Figure: Lifts Menu

There are three tables to the right. Two of them are directly visible, the third has to be switched on by clicking the Checking call heading. You can use filtration in all the tables; refer to the Check Calls subsection below. The Responsible technicians table displays the technicians responsible for the lift administration and helps quickly select and send the appropriate technician.

Caution

- For the purpose hereof, Technician means the **2N® Lift8** user that is assigned the Technician user role. The other users (Admin, Operator or Own role) are not displayed in this table.

The Alarm calls table displays a list of alarm calls from the given lift including the call date/time (Timestamp), call-processing Agent and Note added during the alarm call. The Checking call table shows all check calls from the given lift since lift addition to the database. Each record includes its date/time and result.

Contacts

The left section of the Contacts menu displays a list of all users configured in the **2N® Lift8** system. Click a user to open its card. The following information is displayed in the middle of the window: Username, Firstname, Surname and Contact number. If the user is assigned a contact number, just click Call to set up a call to this user. This opens the Outgoing call window and the call will be made. See below for details on outgoing calls. If the call cannot be set up, you will get a voice message.

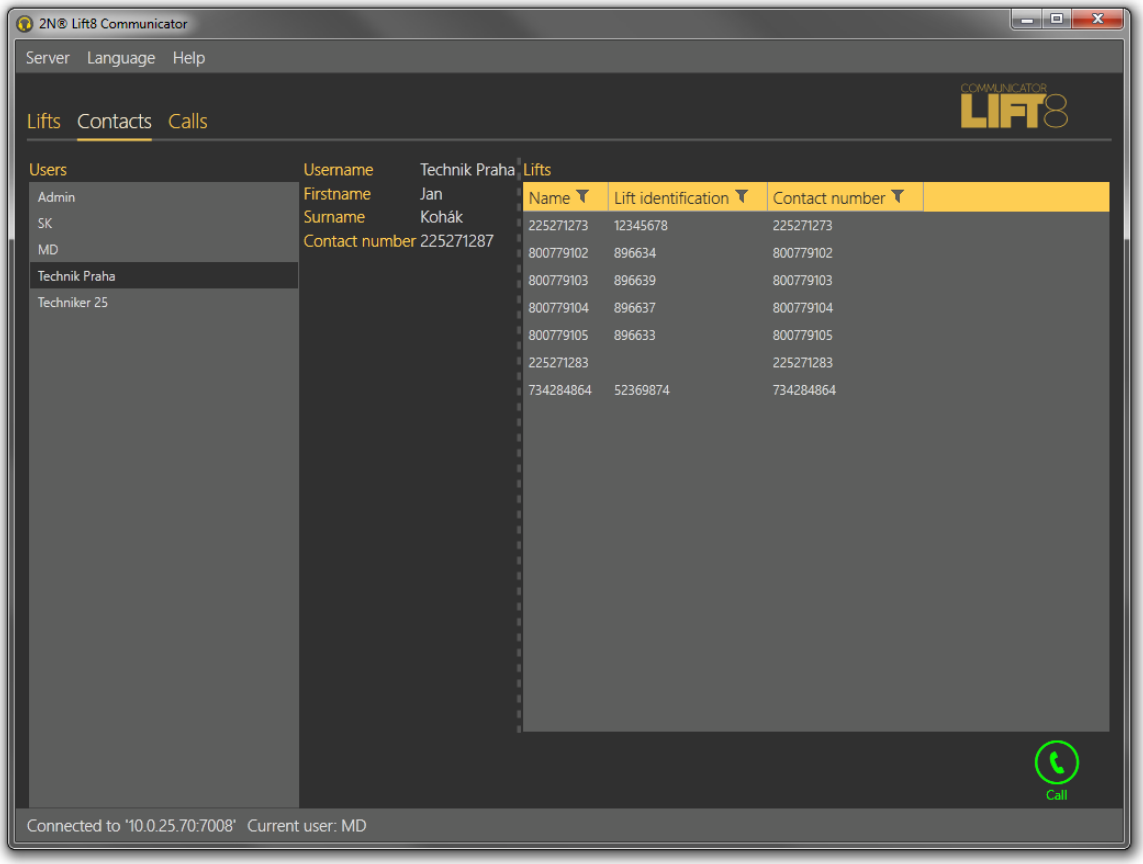


Figure: Contacts Menu

There is a Lifts table to the right. The table displays a list of all lifts assigned to the given user (Dispatcher/Technician/Admin/Own) and includes Name, Lift identification and Contact number for each lift assigned. Use filtration for convenient searching; see below.

Calls

The Calls menu provides a table of all alarm, incoming, missed and outgoing calls from all the lifts and users configured in the **2N® Lift8** system received by the **2N® Lift8 Server** from lift addition until now. Click the filter button at each column to use filtration for call history search. See below for details. The first column or icon defines the call state. Let us explain this function using the filtration settings where you can choose the call state to be displayed.

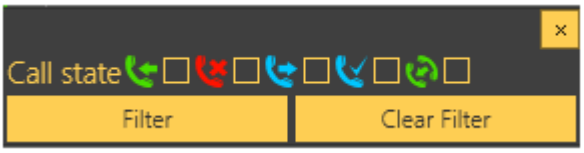


Figure: Call State Filtration

From left to right: The first icon symbols a processed incoming alarm call. The second icon indicates a missed call, which occurs whenever the dispatcher fails, for any reasons, to answer an incoming call in time and ringing was terminated. The third icon signals an outgoing call to another dispatcher, technician or lift from which, however, the last missed call did not come. The fourth icon symbols an outgoing call to upon a missed call, which occurs whenever the dispatcher fails, for any reason, to answer an incoming call in time and ringing is terminated. The dispatcher is notified and calls the lift (Audio Unit) that initiated the alarm call. Such a call is then considered a correctly processed alarm call. The last icon signals that the confirmed alarm call has been transferred to another dispatcher or a technician.

Furthermore, The table provides the following information: check call date/time, **CU** ph one number, serial number if CPC/P100 was successfully used and call-processing agent/dispatcher name. The last table column Note shows the note entered by the dispatcher during the call.

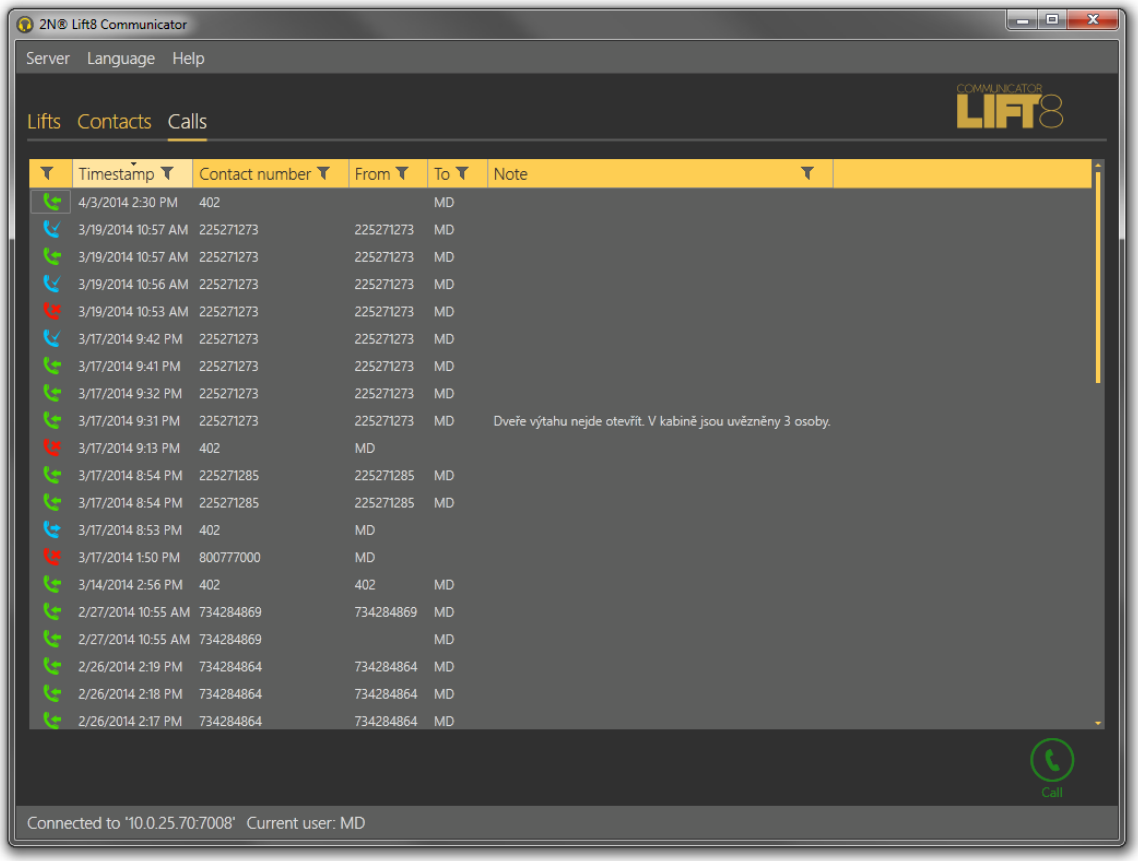


Figure: Calls Menu

Click the filter button at each column to use filtration for call search and combine the

filters to find the required data quickly. 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.

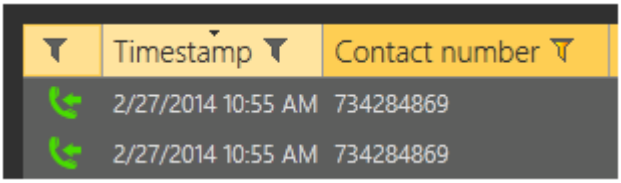


Figure: Left – Inactive Filter, Right – Active Filter

Each column with the funnel symbol includes 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 find all the searched items in the column. Use another filter to make your search more precise and efficient. Having completed filtering, click Delete filter in the used columns to delete all the active filters. If you did not delete the setting, the filtration settings would keep active even upon the **CU** logout and you would obtain filtration results instead of complete information in your next search.

Tip

- You can also click anywhere in the table with your right mouse button to display the context menu and delete the active filters.

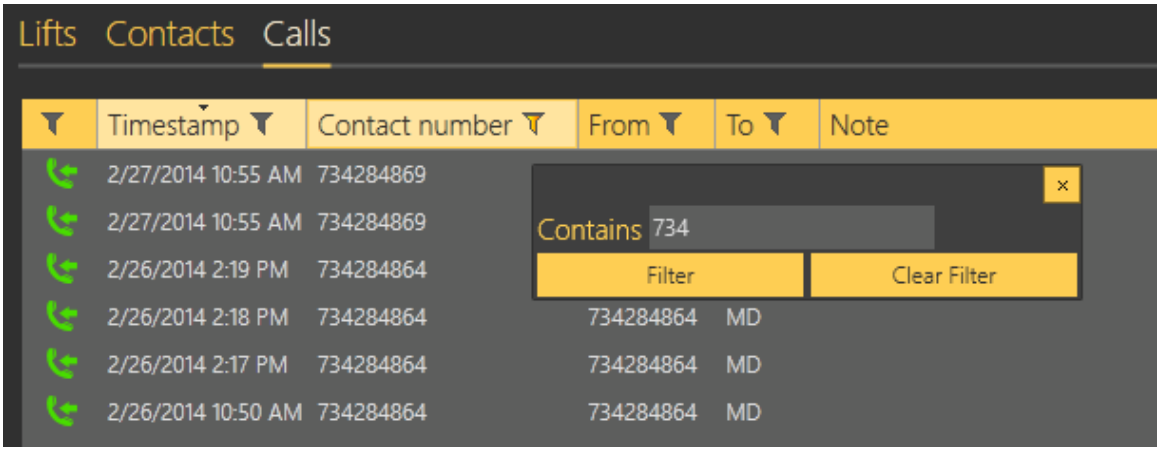


Figure: Filtration Setting Result

Incoming/Outgoing Calls

Every incoming call to a dispatcher/technician number is signalled with an automatic switch to the Incoming calls window and pop-up of an Incoming call window in the left-hand bottom corner of the screen. This is useful when the **2N® Lift8 Communicator** display is hidden under another application as the Incoming call window is always on the top. An incoming call from a lift is also signalled acoustically by a ringing tone in the speakers/headsets. Press Pick up to answer the call or Hang up to reject the call.

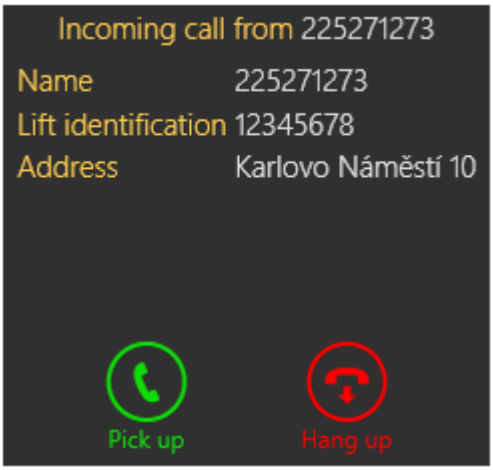


Figure: Incoming Call Pop-Up Window

Tip

- No matter where you pick up the call (whether in the application or the pop-up window), the system always behaves identically.

See the figure below for the Incoming call window. The upper part displays the currently speaking lift name and phone number and one of the following Application states to the right:

- **Ringing**... – the selected outgoing/incoming call is just ringing.
- **Speaking**... – the call was answered by both the subscribers and is in progress.
- **Call terminated** – the call was terminated correctly.
- **Call rejected** – the outgoing call was rejected by the counterparty.
- **Missed call** – the incoming call was not served. Ringing stopped before the dispatcher answered the call.

The left-hand part of the screen provides information on the given lift: Name, Lift identification, Contact number and Address. Use the keypad below these items to control the Speaking call: confirm the call with DTMF or dial the required shaft number. A calling technician can use the keypad for the **CU** voice menu control. Press a button to send the particular DTMF character into the call. If the lift address is completed, the lift location is displayed on the map below the keypad. Use the slider in the left-hand upper corner to zoom in/out.

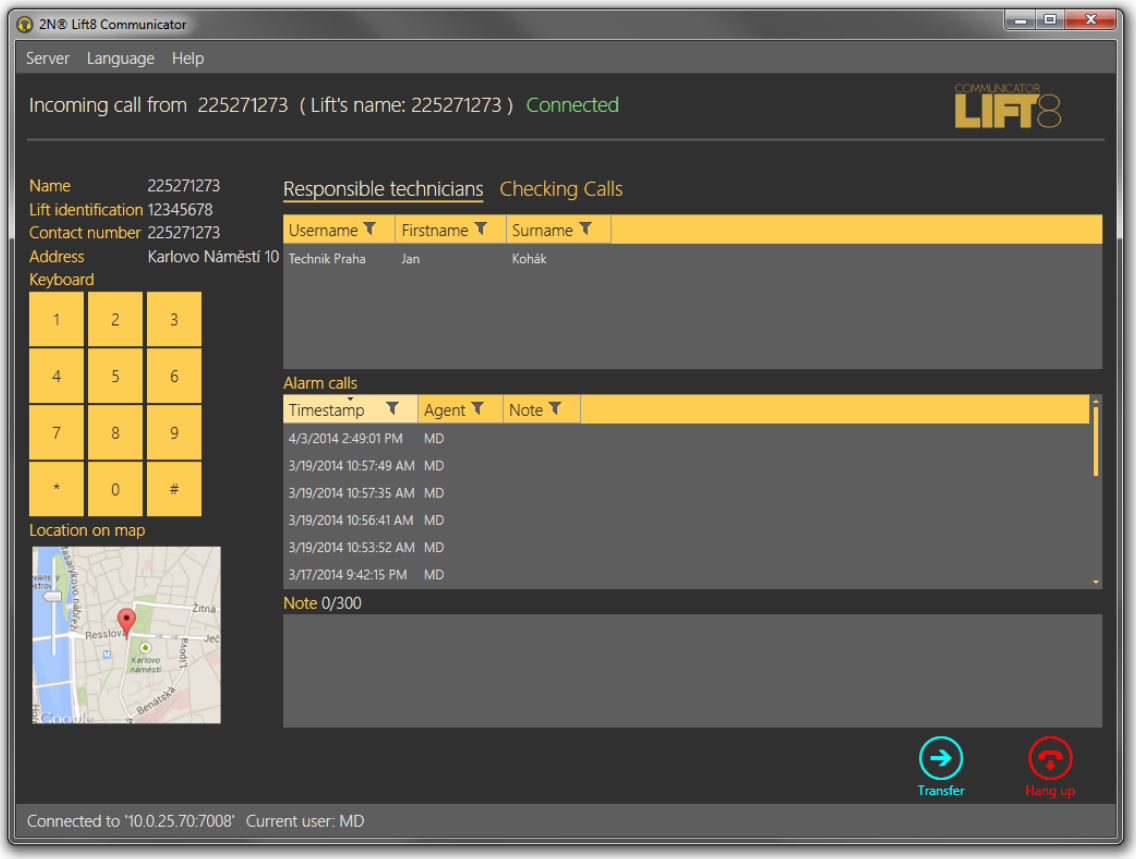


Figure: Incoming Calls

There are three tables to the right like in the Lifts menu. Use the column filters for search; refer to the call describing subsections. The Responsible technicians table displays the technicians responsible for the lift administration and helps quickly select and send the appropriate technician. The Alarm calls table displays a list of alarm calls from the given lift including the call date/time (Timestamp), call-processing Agent and Note added during the alarm call. The Checking calls table shows all check calls from the given lift since lift addition to the database. Each record includes its date/time and result.

The last item of the screen is Note where a note can be added anytime while the lift card is displayed in this window, i.e. after ringing, during the call and after the call end. If you press Save, you will lose the editing option and return to the application relax state and the note will be added to the Alarm calls table. The maximum note length is 300 characters. Find the count of used/total characters per note next to the Note heading.

Note

- The Outgoing call window provides identical formats and functions as the Incoming call window.

Click Transfer to transfer an active call to one of the Available dispatchers/technicians, i.e. those who are online logged in to the **2N® Lift8** system; see the figure below.

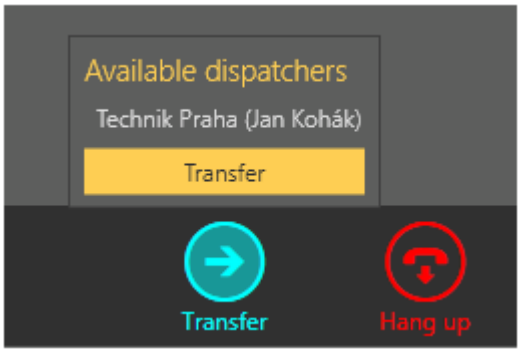


Figure: Available Dispatchers

Click on the dispatcher's name to select the dispatcher. Then push the yellow Transfer button to terminate your call and forward it to the selected destination. This type of transfer is called call transfer with hang-up, i.e. your call is terminated, the caller gets the ringing tone again and this call will alert the dispatcher's line selected by you.

9. Maintenance

This section describes the product maintenance and FW upgrade.

9.1 Operation Interruption and Battery Replacement

Operation Interruption and Battery Replacement

Disconnection and replacement of rechargeable batteries:

1. Disconnect the **CU** from the mains power. Remove the upper cover (see the preceding subsection – **CU** Electrical Installation, Operational Start).
2. Disconnect the battery interconnecting cable (see the figure) to disconnect the backup rechargeable batteries.

3. Disconnect the FASTON terminals of the motherboard – battery connecting cable too to replace the rechargeable batteries.
4. Remove the rechargeable battery holder using a No. 8 spanner.
5. Replace the rechargeable batteries and fix the holder again using a No. 8 spanner.
6. Reconnect the rechargeable batteries with cables and then with the motherboard.
7. Put the upper cover back on the **CU** and tighten the cover-fitting screws. Make sure that the earthing wire is connected with the cover before replacing the cover !

Warning

- Always disconnect the mains power before you start installing, maintaining or checking the **CU**.
- Always use the rechargeable batteries supplied or approved by the manufacturer for replacement! If an correct type of rechargeable batteries is used, there is a danger of fire or explosion or damage to the **CU** electronics.
- Adhere to the polarity of the rechargeable batteries! When their polarity is reversed, there is a danger of fire or explosion or damage to the **CU** electronics.
- Replace both the rechargeable batteries in the equipment at the same time, never mix old and new rechargeable batteries! Make sure that the rechargeable batteries in the device are of the same type and age!
- **Retired rechargeable batteries contain dangerous chemicals and so must be disposed of ecologically in compliance with the applicable regulations!**

Caution

- Remember to put the product in operation in time after **disconnecting the battery interconnecting cable**.
- The product can be stored for a maximum **of 1 week without recharging and for 1 month after full charging**.
- **Never** leave the rechargeable batteries flat longer than needed.
- If the battery is completely flat, **recharge it as soon as possible**.

Always remember that the state of the batteries is essential for the system operation.

9.2 Firmware Upgrade

Use the **2N® Service Tool** to upgrade **2N® Lift8** including the **CU** and audio units connected.

Procedure

1. Start the upgrade **2N® Service Tool** and connect the **CU** (USB, TCP).
2. Select the Device – Upgrade menu.
3. Select the required firmware version.
4. Select the voice menu language version.
5. Choose whether to keep the configuration or reset the parameters to the factory values (via the checkbox).
6. Launch upgrade.
7. First the new FW is loaded to the **CU** (the Service Tool will log out from the **CU** upon the load). Then the upgrading process starts: first the **CU** (the yellow SYSTEM LED is flashing, the audio units are disconnected) and then the audio units (first the red, yellow and green LEDs are shining – the audio unit is waiting for upgrade, then the yellow and green LEDs are flashing – the audio unit is being upgraded).
8. Set date and time (Device > Date/Time setting).

Caution

- You are recommended to factory reset the parameters to set new ranges and default values in the new FW version.

Tip

- Back up your configuration, execute upgrade and factory default reset and upload the configuration into the device (new ranges and default values will be used in the new FW version).
- Check the device time after upgrade.

10. Technical Parameters

This section describes the technical parameters of the **2N® Lift8** product.

Telephone Parameters (PSTN)

Parameter	Value	Conditions
Minimum line current	15 mA	off-hook
Minimum line voltage	22 V	on-hook
Off-hook DC voltage drop	< 8 V< 16 V	I = 25 mA I = 50 mA
Off-hook resistance	>1MΩ	U = 25..100 V
Off-hook impedance	220 Ω + 820 Ω paral. 115 nF	20 to 60 mA
Return loss	> 14 dB	20 to 60 mA
Bandwidth	300 to 3500 Hz	20 to 60 mA
Ringing impedance	> 2 kΩC = 1 µF	25 to 50 Hz
Ringing detector sensitivity	10 to 20 V	25 to 50 Hz
Pulse dialling	40 / 60 ms	
DTMF dialling level	6 a 8 dB ± 2 dB	20 to 60 mA
Dial-tone detector sensitivity	approx. 43 dB	
Overvoltage protection – between A, B	1000 V	8 / 20 µs

Notes

- All the product parameters comply with TBR-21 on condition that the product is to be operated as a single line terminal, i.e. no parallel connection with any other equipment is allowed.
- Line interference and noise picked up by the L8 microphone are relevant factors.

Telephone Parameters (GSM/UMTS)

Telit HE-910, GE-910

- **Bandwidth:**
  - GSM 850/900/1800/1900 MHz
  - UMTS 800/850/900MHz/2100 MHz
- **GSM:** Telit GE-910(EU,QUAD)
- **UMST:** Telit HE-910EUR
- **USIM/SIM card:** Small plug-in 3V
- **Antenna:** One external antenna SMA FEMALE connector
- **Size:** 28.2 x 28.2 x 2.2mm
- **Working temperature range**: -40 °C to +85°C

Other Parameters

Unit type

- **918600, Central unit:** 300 x 170 x 72 mm
- **918610E(XE), Audio unit – lift cabin, universal:** 65 x 130 x 20 mm
- **918611E, Audio unit – machine room:** 225 x 87 x 67 mm
- **918612E, Audio unit – shaft:** 225 x 87 x 67 mm
- **918620E, splitter:** 142 x 92 x 32 mm
- **Working temperature range:** 0–40°C
- **Power supply:** 100–240V; 50/60Hz; 0,75A; 60W max.
- **Accumulator battery:** 2x lead-acid battery 12V, 1,3Ah
- **Weight:** 2,7kg

The manufacturer reserves the right to modify the product in order to improve its qualities.
The product contains no environmentally harmful components. When the product's service life is exhausted, dispose of it in accordance with the applicable legal regulations.

11. Supplementary Information

This section provides supplementary information on the **2N® Lift8** product.

Here is what you can find in this section:

11.1 Troubleshooting

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

11.2 List of Abbreviations

L8	2N® Lift8
CU	System central unit, typically shared by multiple lifts in one building.
Splitter	Interconnects audio units and the CU. Each lift shaft has a splitter of its own.
Audio unit	Audio unit used for voice communication with the control centre or another system unit.
System	CU connected with a splitter and group of audio unit.
Main bus	6 wires (power, audio, data) connecting the CU with splitters.
Bus	Double wire connecting the splitter with lift audio unit.
Incoming call	Call from the control centre to the CU.
Outgoing call	Call from the CU to the control centre.
Check call	Call from the CU to the check call line registered in **2N® Server** or another number defined.
Triphony	Inter-audio unit communication, typically between all audio units of one lift, during repairs or rescue operations, for example.
Control centre	Workplace receiving alarm calls. There can also be separate workplaces for various call types or just the staff mobile telephones.
DISA	Automatic voice menu for incoming call routing to the required audio unit or function activation, remote programming, e.g.
PBX	Private branch exchange (equipped with PSTN connection and analogue local lines).
PSTN	Public telephone network. For simplicity, it is assumed that the CU is connected to the PSTN but works identically on the PBX line too.
GSM	Global System for Mobile Communications
UMTS	Universal Mobile Telecommunications System
TCP	Transmission Control Protocol is one of the set of internet protocols.
ST	The **2N® Service Tool** application is intended for remote supervision and configuration of **2N® Lift8** communicators.
CP	The **2N® Control Panel** application is intended for the administration of users, lifts and authorisations.
CM (Comm)	The **2N® Communicator** application is intended for receiving alarm calls by the dispatcher.
SRV	The **2N® Server** application processes check calls and mediates communication between the **CU**s and PC applications.
Validator	This code monitors the values entered in the applications, and in the event of an error such as excessive length, forbidden character, incorrect format etc., warns the user.

11.3 Regulations

Europe

2N® Lift8 conforms to the following directives and regulations:

Directive 1999/5/EC of the European Parliament and of the Council, of 9 March 1999 – on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity

Directive 2006/95/EC of the European Parliament and of the Council of 12 December 2006 on the harmonisation of the laws of Member States relating to electrical equipment designed for use within certain voltage limits

Directive 2004/108/EC of the Council of 15 December 2004 on the harmonisation of the laws of Member States relating to electromagnetic compatibility

Commission Regulation (EC) No. 1275/2008, of 17 December 2008, implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to ecodesign requirements for standby and off mode electric power consumption of electrical and electronic household and office equipment

Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment

Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC

Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003 on waste electrical and electronic equipment.

11.4 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.

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