

NRT
Emergency Telephone
Installation and Operating Manual



Telegärtner Elektronik GmbH

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Please read the following safety information before beginning the installation.

IMPORTANT SAFETY INFORMATION

PLEASE KEEP THIS OPERATING MANUAL WITH THE APPLIANCE. This manual contains important instructions which you must follow during installation or maintenance work. Please read all instructions carefully before you start work, and keep this manual in a safe place so that you can use it for subsequent work.

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General

Emergency telephones *NRT1 NT* and *NRT2 NT* have proven their value for passenger and goods lifts over a number of years, being constantly evolved. We have our compliance with EN 81-28 safety rules regularly confirmed by TÜV Brandenburg (an independent and neutral rules organization for testing quality and safety).

As our emergency telephones are supplied almost entirely from the telephone line, there is very little installation work, especially as only two free wires are required in the travelling cable.

Furthermore, a wide range of connection and programming options allow convenient adjustment to all common lift units and applications.



The appliance parameters of *NRT 1 NT* can either be programmed using a touch tone telephone or the PRG 100 programming device or via the service control centre.

The appliance parameters of *NRT 2 NT* must be programmed via the service control centre.

A service technician can also use a telephone/mobile to remotely change and adapt additional parameters like volume and microphone sensitivity or recorded announcements etc.

An optional programming device PRG100 enables the service technician to perform an even simpler installation and other diagnostic options, e.g. by selecting the integrated event memory.

General Performance Features of the Emergency Calling System

- Connection to analog a/b telephone connection, main line or extension
- Exchange-supplied, i.e. no additional external electricity supply required
- Dial pulse (DP) or touch tone dial (DTMF) modes available
- A timer number with up to 25 digits for cyclical self-test
- Routine call can be connected to a Telegärtner control centre
- Convenient two-way speech communication (hands-free)
- Acoustic and/or optical signalling of an alarm
- Alarm button configurable as NC or NO
- Microphone and loudspeaker level can be fine-tuned via touch tone telephone
- Programmable talk-time limit
- Optionally activatable incoming call/eavesdropping protection
- Battery-buffered real-time clock for timer calls (routine calls)
- Dial parameters programmable by control centre
- Switching outputs to control panel displays
- Voltage input for alarm filtering (misuse detection)
- Event memory (with time/date details)
- Automatic line adjustment for best possible voice communication

Additional Features of NRT 1 NT

- Automatic exchange detection and code for outside line for operation on private branch exchanges
- Voice recording for announcements
- Up to 4 emergency numbers with a maximum of 25 digits
- Free assignment of alarm/timer destinations:
 - To telephones with recorded announcements, e.g. to caretaker or janitor
 - To Telegärtner control centres with data protocol

Additional Features of NRT 1 NT iS

- Automatic exchange detection and code for outside line for operation on private branch exchanges
- Free assignment of alarm/timer destinations:
 - To telephones with recorded announcements, e.g. to caretaker or janitor
 - To Telegärtner control centres with data protocol

- Up to 4 emergency numbers with a maximum of 25 digits
- Voice recording for announcements
- Internal loudspeaker can be used as central loudspeaker, i.e. no longer necessary to mount a loudspeaker module in the car

Additional Features of NRT 2 NT

- Two emergency numbers for connection to control centre
- Built-in internal voice module, as well as a lift car voice module available
- Internal loudspeaker can be used as central loudspeaker, i.e. no longer necessary to mount a loudspeaker module in the car

Technical Data

Telecommunications Data:

Line Voltage	24 – 64 V DC
Line Current	20 – 50 mA (current limit)
Ring Voltage	32 – 75 V, 23 – 28 Hz 42 – 75 V, 50 Hz
Dial Modes	IWV und MFV
Pulse Dial Ratio	40/60ms

Alarm Voice Units:

Type of Voice Unit	Telegärtner SM1 or DLS1 voice module
Volume	Adjustable in 31 levels in 1.5 dB steps (-14.5 to 32 dB)
Speaker Output	200 mW peak at 50 Ohm
Microphone Sensitivity	Adjustable in 4 levels (19, 25, 31 or 37 dB)

Special Functions:

Alarm Filtering	Input for voltage ranging between 9 and 36 V AC/DC
Display Control Switch	Two floating outputs, max. 30 V, 1 A DC max. 125 V, 0.5 A AC
Timer Calls	Daily, every 3 days, weekly, monthly, interval

General Data:

Operating Temperature	0 – 40 °C
Dimensions	(155 x 217 x 61) mm

Additional Features in NRT 1 NT and NRT 1 NT iS

Voice Announcements

Memory	In battery-supported memory
Recorded Text	Up to 20 seconds
Calming Text	Up to 5 seconds
End Text	Up to 5 seconds

Call Numbers

Alarm Number	Up to 4 numbers, with up to 25 digits each
Service Number	1 number with up to 25 digits
Number of Dialling Attempts	Up to 12

Voice Units

No of Voice Units	Up to 3
Type of voice unit	Telegärtner SM1 or DLS1 voice module

Additional in NRT 2 NT

Call Numbers

Alarm number	Up to 2 numbers, with up to 25 digits each
Service Number	1 number with up to 25 digits
Dialling Attempts	Up to 12

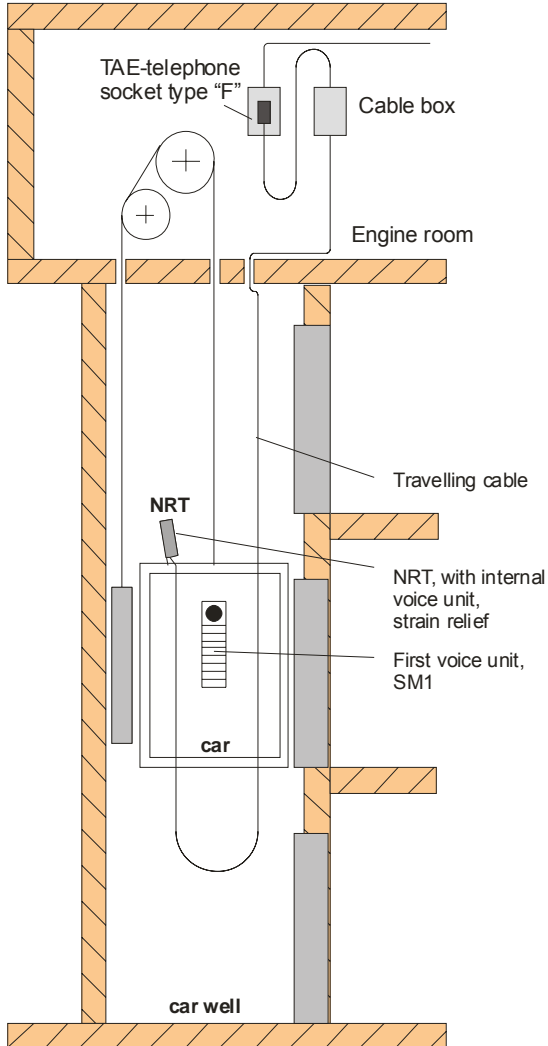
Voice Units

Voice Units	One internal and one external
Type of ext. voice unit	Telegärtner SM1 or DLS1 voice module

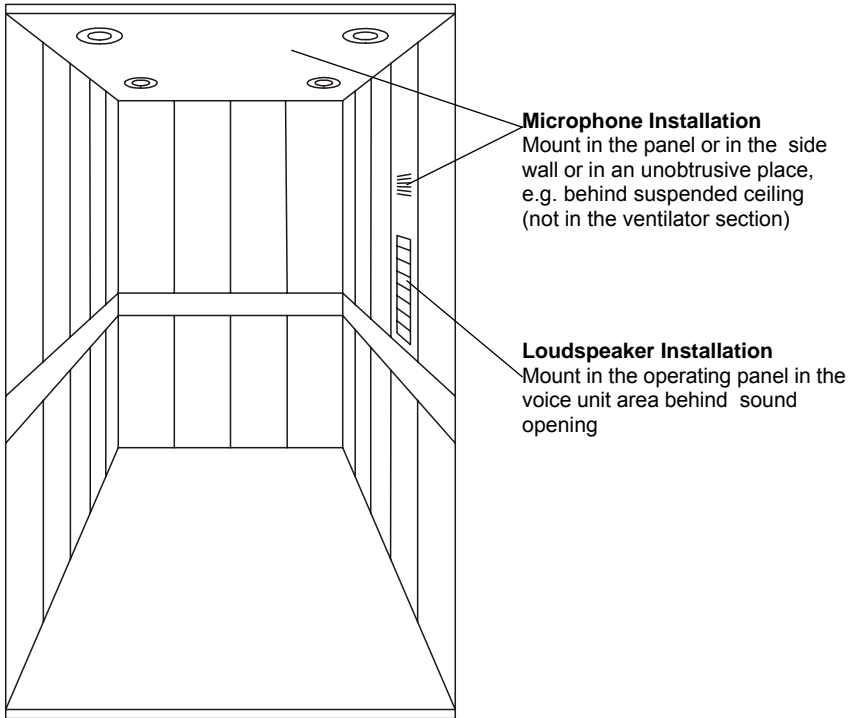
Mounting Location and Installation

NRT has been designed to be mounted on the lift cage. The car voice unit can be connected directly to *NRT* using the system cable.

The wire-saving two-wire technology means that only the exchange line needs to be routed via the trailing cable and connected to *NRT*.

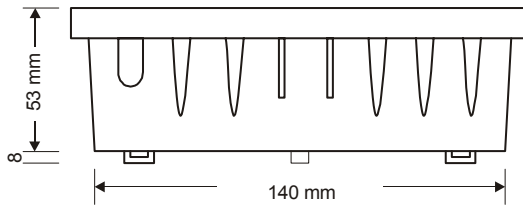
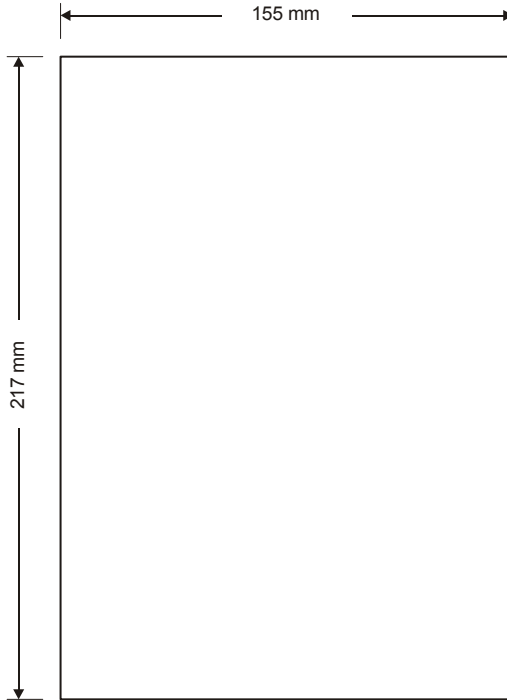


First Voice Unit, Loud Speaker, Microphone

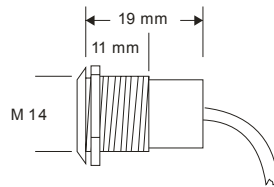
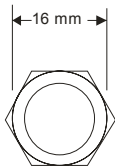
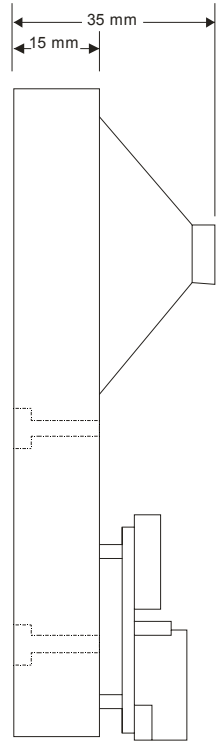
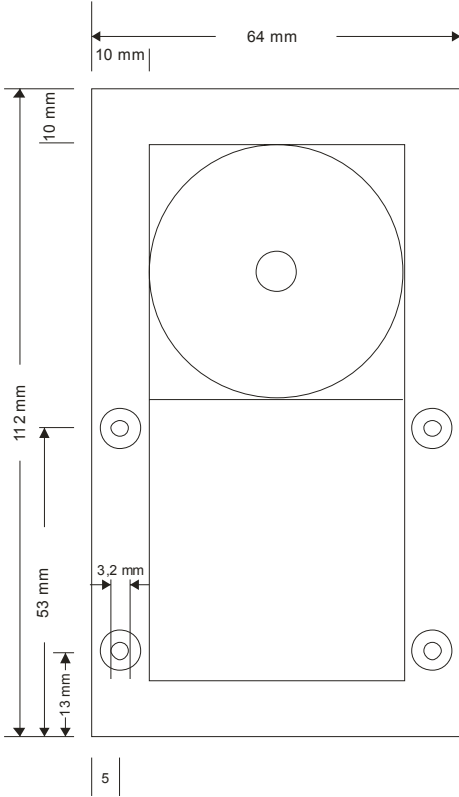


Installation Dimensions

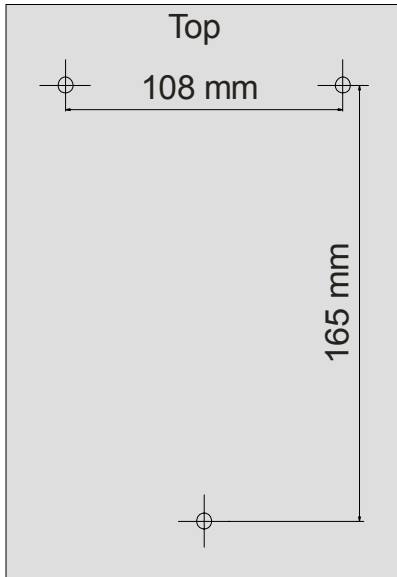
NRT 1 NT / NRT 2 NT Plastic Casing, Electronics Box



Voice Module / Microphone



Bore Holes for Electronics Box

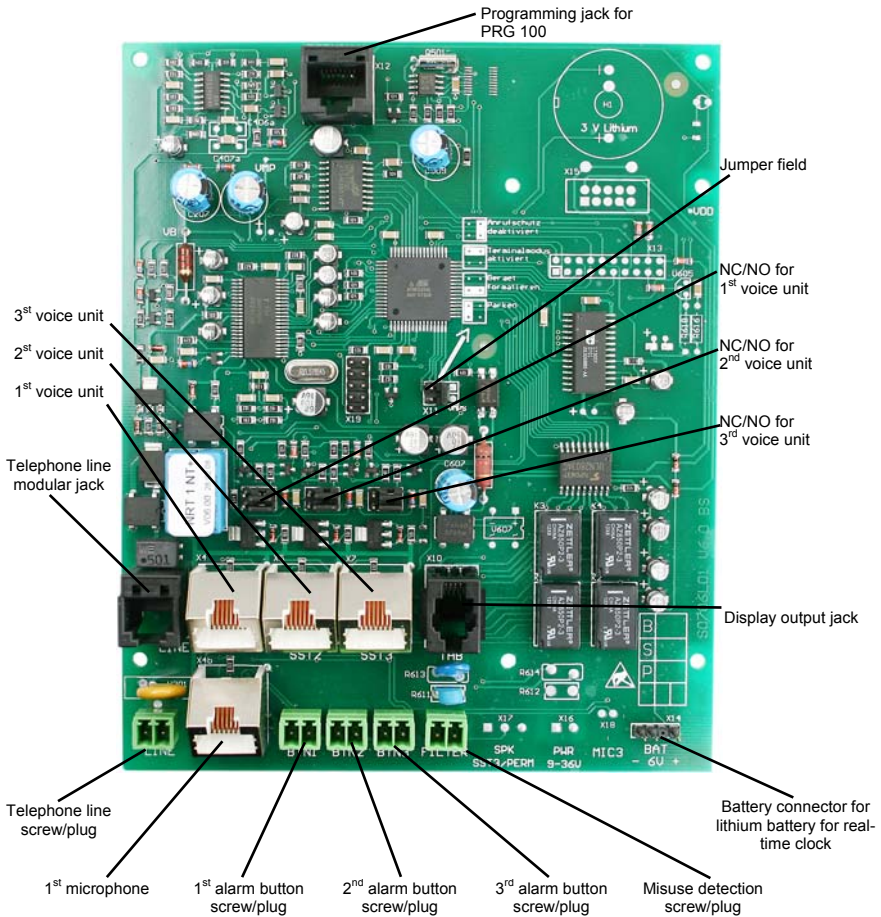


Description of NRT 1 NT Connectors

ESD WARNING



You may have built up static electricity on your body. Before opening the casing and working on the cabling, you must therefore make sure that you have discharged your body by touching earthed metal parts, to prevent damage to the device.

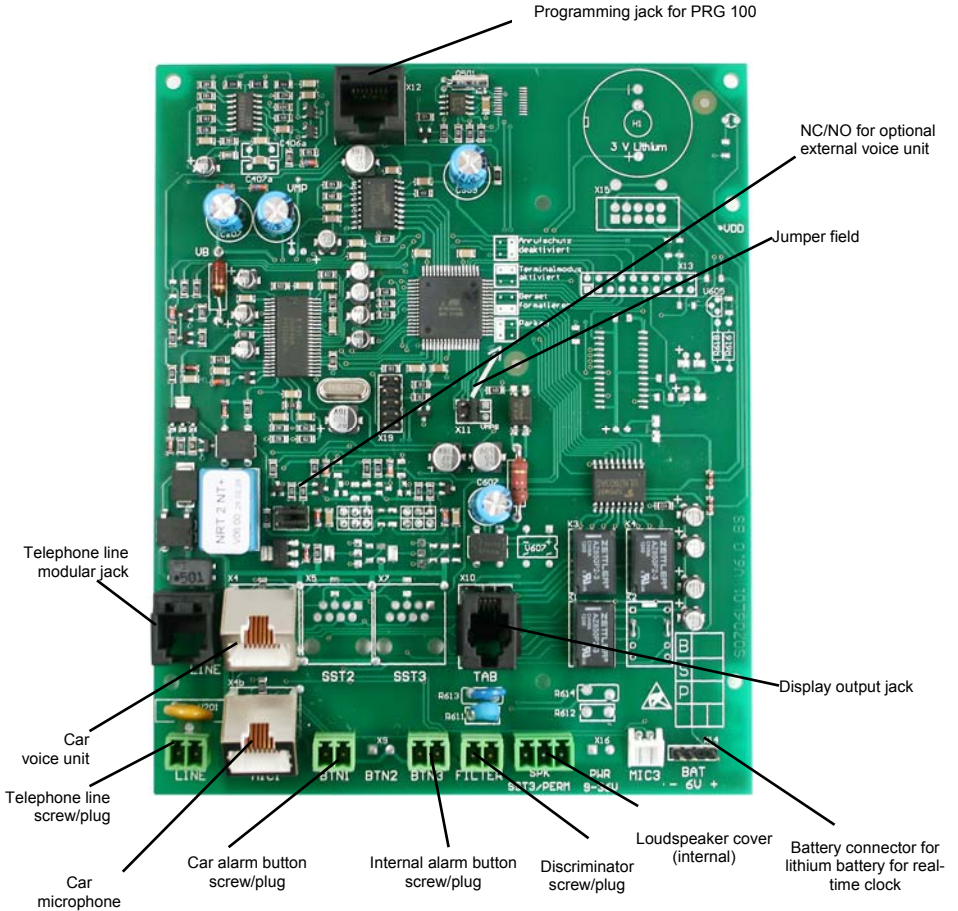


Description of NRT 2 NT Connectors

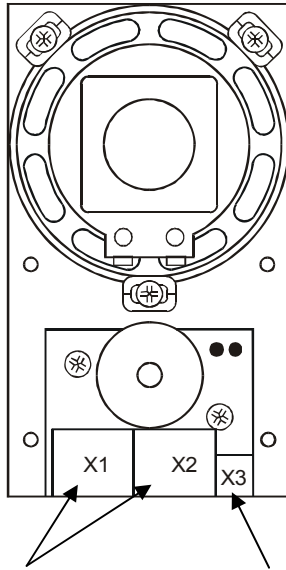
ESD WARNING



You may have built up static electricity on your body. Before opening the casing and working on the cabling, you must therefore make sure that you have discharged your body by touching earthed metal parts, to prevent damage to the device.



Description of the Connectors for SM1 Voice Module



System connection to NRT 1 / 2 NT
or microphone connector

Alarm button

Connecting to the Telephone Line

The emergency telephone is connected to an analog main exchange line or the analog extension of a telephone system using one of the jacks labelled "Line".

Note



We expressly draw your attention to the fact that voice communication may be impaired if no separate trailing cable or shielded twisted pair within the trailing cable is used.

Connecting the Voice Units

Insert the system cable designated for connecting the voice units into one of the 8-pin western jacks provided.

You should connect the car voice unit, or, depending on the loudspeaker configuration, only the microphone, to the jack labelled "MIC1" or the jack above labelled "X4".

In spite of the shielding, you should, where possible, avoid routing the line past strongly alternating magnetic or electrical fields.

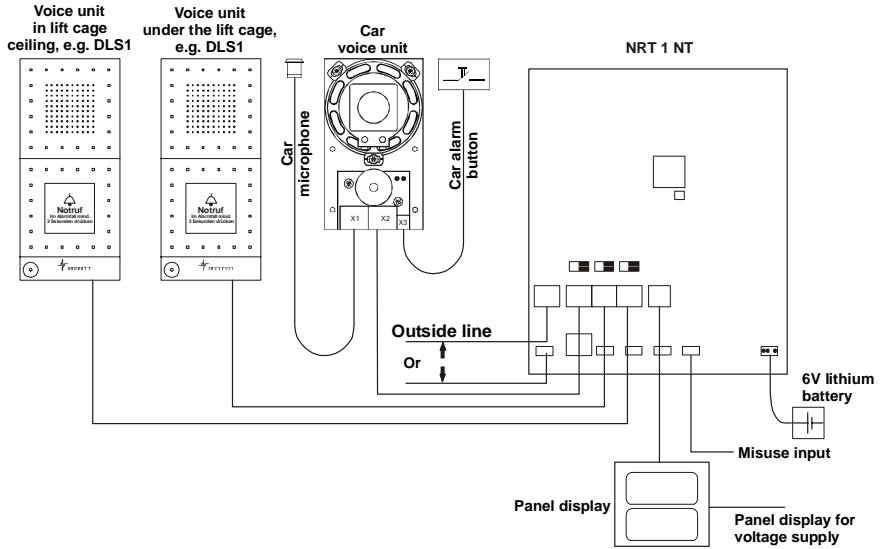
You should ideally place the microphone in the car. We have microphones available in various designs. Please check which microphone design is best suited to your purposes.

The following are available:

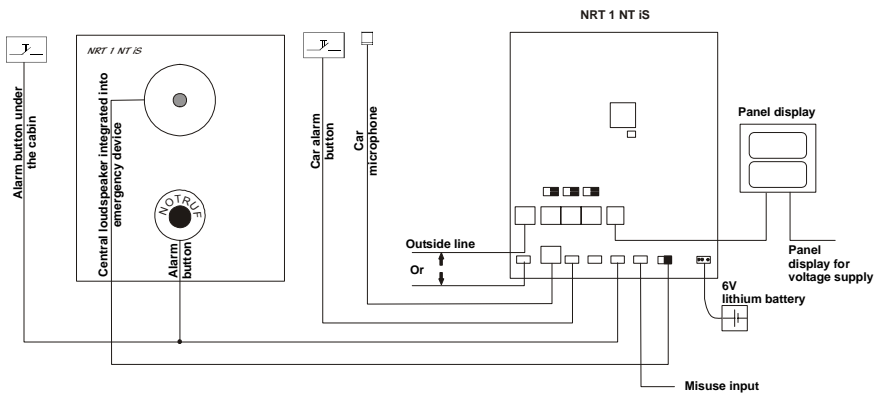
Microphone MK 1	Mounting using a mounting nut	Type No.: 60 1403
Microphone MK 2	Mounting using a self-adhesive foam rubber holder	Type No.: 60 1432
Microphone MK 3	Microphone is supplied in an oscillation-reducing rubber buffer	Type No.: 60 1429
Microphone MK 4	This microphone additionally allows the alarm button to be connected	Type No.: 60 1524

Mounting Variants

Connection Scheme for NRT 1 NT with 3 Voice Units:



Connection Scheme for NRT 1 NT iS / NRT 2 NT Using the Central Loudspeaker:



Connecting and Configuring the Alarm Buttons

Please be sure to note the following points when connecting the alarm buttons:

1. The alarm button must always be completely floating and unearthed, i.e. no external voltage (e.g. well buzzer) or condensers against protective earth!
2. Keep the supply line to the alarm button as short as possible (≤ 5 metres). Do not route the alarm button via the travelling cable, as proper functioning of *NRT 1/2 NT* will otherwise no longer be guaranteed. Should a longer supply line be required, replace the alarm button contact on *NRT 1/2 NT* with a relay contact or our alarm raiser *NRG 1*. You will then be able to use a longer line to activate the relay / *NRG 1*.
3. The alarm button can either be an NC contact or an NO contact. Make sure that you make the correct settings via the jumpers that are placed above the western jacks. If the jumpers are plugged on the right, the alarm button is configured as an NO contact (default delivery status). If the jumpers are plugged on the left, the alarm button is configured as an NC contact.

Unused alarm buttons must be configured as NO contacts!



Alarm button as NC contact



Alarm button as NO contact

Note:



If the alarm button has been configured as an NC contact and there is no NC contact connected, the device indicates this invalid operating state by means of a flashing panel display.

If no panel display is installed, you will be able to hear the switching of the activation relays of the panel displays.

If you are using the SM1 voice module, a warning sound is emitted, in addition.

Connecting Misuse Detection

The screw/ plug connector X8 labelled "Filter" is used to connect a voltage (9-36 V AC/DC). The evaluation of the voltage depends on how misuse detection is programmed using the #*04 programming command (see command description).

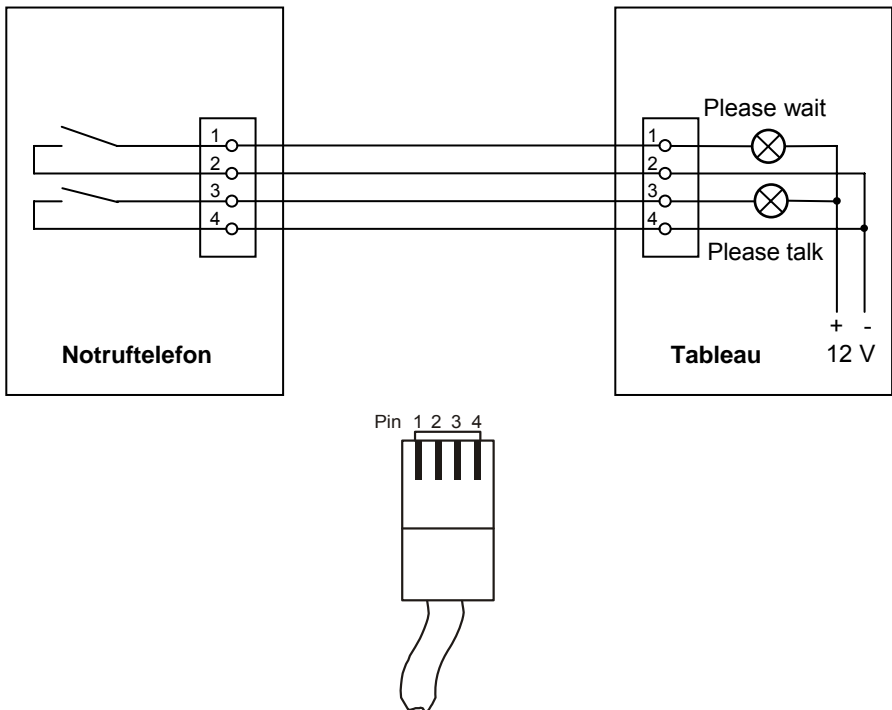
Connecting the Panel Displays

The four-pin western jack X10 "Panel Output" provides two floating switching contacts for activating panel displays.

Pin	Description
1 + 2	Output "Please wait"
3 + 4	Output "Please talk"

The corresponding connecting cables are available as accessories.

Connection example:



Configuring the Jumper

As delivered, the jumper should be plugged in to the “Incoming call deactivated” position.

You can configure incoming call protection as required, depending on programming of the #*08 command and jumper JP (see also program command #*08).

Other possible jumper positions:



Incoming call protection deactivated (default setting): Any caller receives a direct voice connection to the car. If you want this to be prevented, remove or park the jumper.



Terminal mode activated:
Once the alarm button has been pressed, you can use a connected PRG 100 to configure NRT.



Format device:
Once an alarm button has been pressed, NRT is placed in the default delivery state.



Park position:
Not currently utilized and can therefore be used to park the jumper.

VERY IMPORTANT:

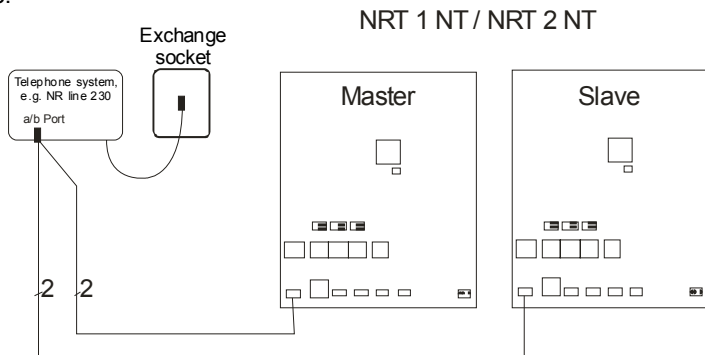


Once you have used the “Terminal mode” or “Formatting” configuration, you must make sure that you return the jumper to “Park position” or “Incoming call deactivated”!

Parallel Switching of NRT 1 / 2 NT+

As of firmware version 05.10, you can use parallel switching to operate up to three NRTs in master-slave mode on an analog extension line.

Example:



Note:



For safety reasons, you should only use a parallel connection of three emergency telephones in exceptional cases!

Installation

In delivery status, all NRT 1 / 2 NTs from firmware version 05.10 and above are configured to the standard application (one telephone line per emergency telephone), i.e. master/slave mode is switched off.

A service technician will need to use telephone command `#*70` to configure each device individually.

Important Planning Information

- It is unfortunately not possible to make a parallel connection to every telephone system provided by other manufacturers. We have had no experience in this respect. We therefore advise you to seek clarification in good time before the order is executed.
- The general rule, providing corresponding extensions are available, should always be: One telephone line per emergency telephone.
- No more than 8 emergency telephones should ever be connected per exchange line.
- Installation should be carried out by experienced service technicians, who should label master/slave appliances in line with their extension.
- You will need to inform control centre staff of the extension of the master/slave devices to enable the alarm devices to be reached and assigned.

Note:



You cannot make a direct parallel connection to main exchange lines (e.g. Deutsche Telekom AG), as conformity is no longer guaranteed. A telephone system always needs to be interposed.

Tested TC Systems:

Telegärtner	NR-Line 230, NR-Line 024, NR-Line iSDN, Kompakt 600 Kompakt 600a, Kompakt 400, Kompakt 400 (SF)
Auerswald	Commander Basic (Only two emergency telephones per a/b port allowed)

Starting Up

Once the emergency telephone *NRT 1 / 2 NT* has been installed as intended, you need to program the desired parameters like call number, dial mode, etc. In addition, you can adjust loudspeaker and microphone to the ambient conditions.

If the lift phone connects to a service control centre:

1. Ask the control centre to program the device
2. Record any announcements
(see telephone programming)
3. Configure sound level, microphone (see page 23)
4. Perform alarm test

If the lift phone connects to a caretaker / janitor (*Attention: applies only to NRT 1 NT (iS)*):

1. Use telephone programming to enter dialling parameters
(see example programming)
2. Record any announcements
(see telephone programming)
3. Configure sound level, microphone (see page 23)
4. Perform alarm test

For mixed connection to control centre and caretaker / janitor (*Attention: applies only to NRT 1 NT (iS)*):

1. Ask the control centre to program the device
2. Use telephone programming to enter operation mode and destination ID
(see example programming)
3. Record any announcements (see telephone programming)
4. Configure sound level, microphone (see page 23)
5. Perform alarm test

Adjusting Loudspeaker and Microphone

1. Call *NRT 1 2 NT* from a telephone, and enter the security code (default setting 0000) **within 2 seconds** of hearing the first beep, in order to access programming mode.
 - ⇒ *NRT 1 / 2 NT* emits 1 beep if you enter the correct security code
 - ⇒ if you enter an incorrect security code, the device hangs up
 - ⇒ you are now in programming mode (cf. programming start).

Adjusting Loudspeaker and Microphone

- Use command #*06 to switch to voice connection mode
 - ⇒ You now have various configuration options which allow the device to be adjusted by means of the following telephone keys:

Key	Function
1	Selects first voice unit (car voice unit)
2	Reduce microphone sensitivity
3	Increase microphone sensitivity
4	Selects second voice unit
5	Reduce loudspeaker sound level
6	Increase loudspeaker sound level
7	Select third voice unit
9	Disconnect voice unit
0	Clear alarm memory and disconnect voice unit

NRT 1 /2 NT confirms every successful key entry by means of a single beep, acknowledging incorrect entries by 2 beeps. Similarly, if microphone sensitivity or loudspeaker sound level are already at maximum or minimum, 2 beeps are emitted.

To prevent inadvertent changes to sound level / microphone sensitivity, these functions are only available if you proceed as described above! However, you can always disconnect the voice unit by pressing 0 or 9.

Note:

Acoustic feedback may occur, depending on installation location, distance between microphone and loudspeaker etc.



Please take the utmost care when changing parameters. Acoustic feedback may prevent you from identifying the dial tone signals. If this happens, turn off the microphone and reduce microphone sensitivity or sound level!

Functional Description

Alarm Release

To trigger an alarm at one of the voice units, you need to press the alarm button until you hear the dial tone. You can then release the button. Dial readiness is signalled acoustically. The alarm is saved in the device until either the service control centre or the service technician clears it by entering "0" during a voice connection.

Alarm Filtering (Misuse Detection)

Alarm filtering is used to filter out false alarms or to delay the alarm. If the function has been programmed accordingly and the conditions are met, the alarm is suppressed and the device hangs up. Alarm filtering is deactivated for a previously saved alarm, i.e. until a voice connection is acknowledged through "0".

Dialling

If the alarm has been accepted as a genuine alarm, the panel output "Please wait" is activated and the device dials the first programmed emergency number. You will be able to hear the dial tones and the call progress tones from the loudspeaker.

If the alarm destination does not answer immediately (engaged, wrong number), the device hangs up and re-dials after 10 seconds, with the number of redials being limited to a maximum of 12. If the service control unit answers, the loudspeaker is switched off for the duration of the data protocol.

Calming Text Played into the Car

(Attention: only for NRT 1 NT)

To calm the trapped person, it is possible to pipe a self-recorded announcement into the car. This announcement is generally repeated once per dialling attempt. You can only record, monitor and activate announcements via telephone programming.

Data Protocol

If it was possible to reach the alarm centre, a data protocol transfer is made to enable the emergency device to be identified and assigned. Should the data protocol have an error, the dial attempts are continued. If the protocol was successful, the control centre pipes an announcement into the car until the operator accepts the alarm.

Voice Connection

If the alarm was executed successfully, voice connection is activated. The voice unit that has triggered the last alarm is always automatically activated!

To signal its readiness to receive voice input, the panel display shows "Please speak", and a 4-tone sound is emitted in the lift car.

Ending the Voice Connection

NRT 1 / 2 NT automatically identifies by means of an engaged tone when the voice connection has been discontinued and then also hangs up. Otherwise, the voice connection is automatically discontinued once the programmed communication time has elapsed. The operator may also use key command "9" to hang up directly.

Alarm End

An alarm is stored in the device until the device is informed that the alarm has ended. If the rescue has been concluded, the control centre must press "0" on the operator telephone while the device is in voice connection mode. A service technician can, of course, also perform this task.

Calling

The control centre or the service technician can also call *NRT 1 / 2 NT* to find out about the status of the rescue. No inputs other than dialling the number of *NRT 1 / 2 NT* are required to access voice connection. Only if incoming call protection is activated

(see programming command #*08), does a further condition need to be met, i.e. that another saved alarm is pending.

If the service technician wishes to change device settings, he must **always** provide authorization by entering the security code (see programming).

Timer Function

NRT 1 / 2 NT has a battery-buffered real-time clock for monitoring functioning and line. This allows routine calls to be programmed at a specified time on a daily, weekly, monthly basis or in, say, a 3-day interval.

The destination number of a timer call can be either a control centre or a simple telephone (only for *NRT 1 NT*). If the destination is a telephone, a morse tone sequence (- -) enables the recipient to distinguish it from an alarm.

Tone Signals

Different tone sequences are used to display different operating and error statuses. The table below provides a compilation of such sequences, with their meanings:

Tone sequence	Meaning in programming mode	Meaning in voice mode
1x beep	Device waiting for input	Device confirms input
2x beeps	Device confirms input	The parameter is already at maximum/ minimum
40x beeps	No alarm numbers have been programmed. The device hangs up.	-
Alternating tone sequence	An incorrect security code has been entered, and the device hangs up.	Communication was terminated by pressing "0" or "9". The device hangs up.
4-tone sequence	The device switches to voice connection.	-

How to Program Using the Telephone

Programming Access

To prevent misuse and inadvertent changes to important parameters, access to the programming mode is protected by means of a security code.

Perform the following steps to access the programming mode:

1. Call *NRT* using a touch tone telephone (if possible, via a landline or using a mobile with inbuilt hands-free facility).
⇒ *NRT* answers by emitting a single beep
2. Enter the four-digit security code **within 2 seconds** of the first beep. If you do not do this, the device will go directly into voice connection mode or hang up (with activated incoming call protection)!
⇒ *NRT* acknowledges the correct security code by emitting a single beep
⇒ if the security code is incorrect, the device hangs up
3. You are now in programming mode.
Now enter the commands in any order (see the next section), so as to configure the device, as appropriate.
Each command is confirmed by 2 beeps.
If no input has been made 10 seconds after a tone signal, programming is concluded, and the emergency telephone hangs up.
If incorrect entries are made, an error tone sequence occurs (8 beeps) or the device hangs up.

Operating Modes

The emergency telephone *NRT 1 NT (iS)* also allows alarms to be received on normal telephones, e.g. by the janitor, caretaker etc.

There are four possible operating modes, as follows:

Operating Mode 0: No alarm acknowledgement

Only a 25-digit alarm number can be programmed. Once the number has been dialled, the emergency telephone switches directly to voice connection mode. The called party is able to speak immediately after lifting the receiver with no further action. This operating mode dispenses with automatic redial.

As this operating mode does not allow you to check whether a voice connection has been created, you should only avail yourself of this variant in exceptional circumstances. An ideal use would be if *NRT 1 NT (iS)* is connected to a reception, with a TC unit transferring the call to an available participant. Under no circumstances should an *NRT 1 NT (iS)* be connected, in this operating mode, to a mobile telephone or an extension with an answerphone, as the trapped person may then be connected to the mobile box or the answerphone.

Operating Mode 1: Alarm Acknowledgement

Up to four alarm numbers, each with 25 digits, can be programmed and can be dialled cyclically one after another if the connection fails (called party engaged or inactive). The emergency telephone responds to the engaged tone or in time-triggered manner and automatically dials the next programmed alarm number. The telephone called is played a request tone at cyclical intervals of around 2 seconds.

Only if an arbitrary number key is pressed on the telephone called, is a voice connection to the emergency telephone obtained.

If no key is pressed, the next alarm number is dialled after around 40 seconds.

By programming the destination ID "Control centre" or "Telephone" (see programming command #*72), you can also enter mixed destinations, e.g. 1st alarm number = caretaker, 2nd alarm number caretaker mobile, 3rd alarm number = service centre)..

Operating Mode 2: Alarm Acknowledgement Optional

In this operating mode, the connection is created and the request tone played in exactly the same way as in operating mode 1.

However, the voice connection is also established here if NRT 1 NT notices that there is no ringing tone (i.e. the party has lifted the receiver).

By programming the destination ID "Control centre" or "Telephone" (see programming command #*72), you can also enter mixed destinations, e.g. 1st alarm number = caretaker, 2nd alarm number caretaker mobile, 3rd alarm number = service control centre).

Important Information:



This operating mode is only suitable under certain conditions, as the alarm cannot be safely assumed to be received by a suitably briefed person. Under no circumstances should an NRT 1 NT (iS) be connected, in this operating mode, to a mobile telephone or an extension with an answerphone, as the trapped person may then be connected to the mobile box or the answerphone.

Operating Mode 3: Repeated Announcement with Alarm Acknowledgement

In this operating mode, the device also behaves similarly to operating mode 1. However, a recorded message designed to inform the called party of the type and origin of the call is also played cyclically here. By programming the destination ID "Control centre" or "Telephone" (see programming command #*72), you can also enter mixed destinations, e.g. 1st alarm number = caretaker, 2nd alarm number = caretaker mobile, 3rd alarm number = service control centre).

Note:



Use the 6V lithium battery for announcements!

Overview of Telephone Commands

Command	Meaning	NRT 1 NLT	NRT 2 NLT	Detailed Description
#6	Voice connection	✓	✗	Page 30
#*00	Phone number input	✓	✗	Page 30
#*01	Dial mode input	✓	✗	Page 31
#*03	Communication time	✓	✗	Page 31
#*04	Misuse detection	✓	✓	Page 31
#*06	Switch to voice connection	✓	✓	Page 32
#*07	Switch to installation voice connection	✓	✓	Page 32
#*08	Incoming call protection	✓	✓	Page 32
#*09	Reset device settings	✓	✓	Page 33
#*12	Automatic exchange detection	✓	✗	Page 33
#*13	Alarm acknowledgement, operating mode	✓	✗	Page 34
#*14	Code for outside line	✓	✗	Page 34
#*20	Time, date, weekday	✓	✓	Page 35
#*21	Timer time, timer sequence	✓	✗	Page 35
#*22	Timer number, announcement yes/no	✓	✗	Page 36
#*55	Return call test	✓	✗	Page 36
#*60	Code for voice connection	✓	✗	Page 37
#*66	Voice unit type	✓	✓	Page 37
#*70	Master/slave operation	✓	✓	Page 38

Command	Meaning	NRT 1 NT	NRT 2 NT	Detailed Description
#*71	Pause before recording	✓	✗	Seite 39
#*72	Code for alarm numbers	✓	✗	Seite 39
#*73	Calming text	✓	✗	Seite 40
#*75	Record calming text	✓	✗	Seite 40
#*76	Play back calming text	✓	✗	Seite 40
#*77	Record announcement	✓	✗	Seite 41
#*78	Play back announcement	✓	✗	Seite 41
#*81	Concluding text	✓	✗	Seite 41
#*82	Record concluding text	✓	✗	Seite 42
#*83	Play back concluding text	✓	✗	Seite 42
#*88	Change security code	✓	✓	Seite 42
#*91	Activation time of the alarm button	✓	✓	Seite 43
#*97	Attention tone/eavesdropping protection	✓	✓	Seite 43
#*98	Select line impedance	✓	✓	Seite 44
#*99	Carry out automatic line adjustment	✓	✓	Seite 44

VERY IMPORTANT:



Command available with alarm device



Command not available with alarm device

Description of the Individual Commands

#6 Voice Connection

If incoming call protection is activated, enter # and 6 to obtain a voice connection to the emergency telephone called. This digit sequence also applies if you have not entered the security code beforehand. Please note: You can use command #*60 to change the code, if required!

NRT	Telephone
	#6
Voice connection	Voice connection

#*00 Phone Number Input (only possible with NRT 1 NT (iS))

The key sequence #*00 allows you to enter up to four alarm numbers, each with 25 digits, including * for "Wait for dial tone" and # for "Pause".

NRT	Telephone
	#*00
Beep	
	Digit sequence for 1 st alarm number
Beep, if no input after 4 seconds	
	Digit sequence for 2 nd alarm number
Beep, if no input after 4 seconds	
	Digit sequence for 3 rd alarm number
Beep, if no input after 4 seconds	
	Digit sequence for 4 th alarm number
2 beeps if no input after 4 seconds	

Description of the Individual Commands

##*01 Enter Dial Mode (DM) (only possible with NRT 1 NT (iS))

Key sequence ##*01 allows you to enter the dial mode. If you enter 1, **NRT 1 NT** switches to touch tone (DTMF).

If you enter other digits, **NRT 1 NT** dials in dial pulse mode (DP).

NRT	Telephone
	##*01
Beep	
	DM (dial mode)
2 beeps	

##*03 Communication Time (CT) (only possible with 1 NT (iS))

Entering a digit produces the maximum speaking time for **NRT 1 NT** in minutes, with 0 allowing the maximum speaking time of 30 minutes.

NRT	Telephone
	##*03
Beep	
	CT (communication time)
2 beeps	

##*04 Misuse Input

NRT 1 / 2 NT is equipped with a voltage input which reacts to the existence of voltage. If the misuse input has been activated with "1", the alarm trigger for the first voice unit is delayed by around 5 seconds if there is voltage at this input. If the misuse input is activated by means of a "2", no alarm is triggered if there is voltage at the input.

If there is no voltage at the input or if the misuse input is deactivated through "0", the alarm is triggered unconditionally. Alarms of the second or third voice unit are independent of the misuse input.

NRT	Telephone
	##*04
Beep	
	0 = deactivated 1 = 5 second delay if voltage 2 = no alarm if voltage
2 beeps	

Description of the Individual Commands

##*06 Voice Connection

Use the ##*06 command to exit programming mode and gain direct access to voice communication with the voice unit that was last active. Note: Once you have switched to voice connection mode, you can change language settings during voice communication! Bear in mind the notes on **Page 19**.

NRT	Telephone
	##*06
4-tone sound sequence	

##*07 Installation Voice Connection

Use the ##*07 command to exit programming mode and gain direct access to voice communication with the voice unit that was last active. Additionally to the preceding command, the communication time for the following connection is set to 30 minutes.

Note: You can also change language settings during voice operation here!

NRT	Telephone
	##*07
4-tone sound sequence	

##*08 Incoming Call Protection

Incoming call protection can also be seen as a kind of eavesdropping protection. If incoming call protection is activated, a voice connection can only be made to the car if an alarm is pending or #6 has been entered. If incoming call protection is deactivated, it is possible to listen into the car at any time.

NRT	Telephone
	##*08
Beep	
	ICP (incoming call protection) 0 = after jumper JP1 1 = on 2 = off
2 beeps	

Description of the Individual Commands

##*09 Reset Device Settings

To restore the default delivery status, you can format the EEPROM. This resets all parameters without, however, changing time and date.

NRT	Telephone
	##*09
alternating and falling tone sequence	
2 beeps	

Initial state settings are as follows:

Security code	0000	Device ID *	0
1 st alarm number	-	ID for 1 st alarm number	0 only NRT 1
2 nd alarm number	-	ID for 2 nd alarm number	0 only NRT 1
3 rd alarm number	only NRT 1	ID for 3 rd alarm number	0 only NRT 1
4 th alarm number	only NRT 1	ID for 4 th alarm number	0 only NRT 1
Timer number	-	ID for timer number	0 only NRT 1
Autom. exc. detection	on	Operating mode	1 only NRT 1
Dial mode	tone	Calming text	off
Communication time	3 min	Incoming call protection	Jumper
Discriminator	off	Pause before announcement	0 only NRT 1

* The device ID (ID number) is only assigned by a control centre during programming.

##*12 Automatic Exchange Detection (AED (only possible with NRT 1 NT (IS))

In automatic exchange detection, the emergency telephone independently identifies whether it is connected to an exchange or an extension, dialling a "0" for an outside line.

Key sequence ##*12 switches the automatic exchange detection of **NRT 1 NT** on with 1 or off with 0.

NRT	Telephone
	##*12
Beep	
	Autom. exchange detection
2 beeps	

Description of the Individual Commands

#*13 Alarm Acknowledgement, Operating Mode (only possible with NRT 1 NT (iS))

Key sequence #*13 plus 0 switches **NRT 1 NT** to operating mode 0, 13 plus 1 to operating mode 1, 13 plus 2 to operating mode 2 and 13 plus 3 to operating mode 3. Entering a digit other than 0, 1, 2 or 3 results in operating mode 0.

NRT	Telephone
	#*13
Beep	
	Alarm acknowledgement
2 beeps	

Explanations regarding operating mode 3, alarm to telephone with announcement:

Once the alarm number has been dialled, **NRT 1 NT** waits, as programmed using #*71, before beginning to play the announcement. Once the call has been accepted at a telephone, the recipient must first wait for the announcement. The announcement ends with a beep. The recipient then has time until the next beep to switch to voice connection to the emergency telephone by pressing a number key on the touch tone telephone. If this does not succeed, the announcement is played again and there is then a further wait of two seconds for the dial tone. This is repeated for up to a total duration of 40 seconds. **NRT 1 NT** then hangs up and repeats the dial process with the next alarm number.

For a description of the operating modes, see page 26 (telephone programming).

#*14 Code for Outside Line (only possible with NRT 1 NT (iS))

If a digit other than "0" is required to obtain an outside line, you can use key sequence #*14 to program it.

NRT	Telephone
	#*14
Beep	
	Code for outside line
2 beeps	

Description of the Individual Commands

****20 Time, Date, Weekday**

First use key sequence ****20** to enter the time in 24 hour format “hh:mm”. Then enter the date in the format “dd.mm.aaaa”. Finally, enter the code for the weekday: 0 = Monday, 1 = Tuesday, ..., 6 = Sunday.

NRT	Telephone
	**20
Beep	
	hhmm (time)
Beep	
	ddmmaaaa (date)
Beep	
	w (weekday code)
2 beeps	

****21 Timer Time, Timer Sequence (only possible with NRT 1 NT (iS))**

First use key sequence ****21** to enter the timer time in 24 hour format “hh:mm”. Then enter the code for the timer sequence: 0 = no timer call, 1 = daily timer call at the specified timer time, 2 = weekly timer call at the specified timer time on the current weekday, 3 = monthly timer call at the specified timer time on the current day, 4= timer call every nn days, where nn is a two-digit input to be made after the beep.

NRT	Telephone
	**21
Beep	
	hhmm (time)
Beep	
	t (timer sequence code) 1 = daily 2 = weekly 3 = monthly
2 beeps	

Description of the Individual Commands

or:

NRT	Telephone
	#*21
Beep	
	hhmm (time)
Beep	
	t (timer sequence code) 4 = interval
Beep	
	nn (nn days, e.g. 03)
2 beeps	

#*22 Timer Number, Announcement Yes/No (only possible with NRT 1 NT (IS))

Use key sequence #*22 to enter the number that is called when the timer is triggered. The number can have up to 25 digits including * for “Wait for dial tone” and # for “Pause”. Next, enter a code defining whether or not the announcement is played in a timer call. If you program a control centre number as the timer destination, no announcement is allowed. 0 means that the announcement is off, 1 that it is on.

NRT	Telephone
	#*22
Beep	
	Digit sequence for timer number
Beep if no input for 4 seconds	
	a (announcement code)
2 beeps	

#*55 Call Back Test (only possible with NRT 1 NT (IS))

Use key sequence #*55 to trigger a remote call. **NRT 1 NT** hangs up if you enter #*55 and then triggers an alarm (taking into account the misuse input). The same voice unit as was last active is always used.

NRT	Telephone
	#*55
2 beeps	
Hang up and trigger alarm	

Description of the Individual Commands

****60 Change Code for Voice Connection (only possible with NRT 1 NT (iS))**

To allow you to access voice connection mode when incoming call protection is activated, key sequence #6 is set in the default state (referred to as VC code below).

You can use command #*60 to change the digit / digit sequence, as required, with up to four digits being permitted. The hash key “#” does not need to be programmed, but always needs to be entered.

You need to enter the new digit sequence twice to avoid errors.

NRT	Telephone
	#*60
Beep	
	Digit sequence for VC code (max. 4-digit)
Beep, if no input for 4 seconds or maximum of 4 digits reached	
	Digit sequence for VC code (max. 4-digit)
2 beeps, if no input for 4 seconds or maximum of 4 digits reached	

****66 Voice Unit Type**

Due to technological evolution, NRT has various voice modules. You can use #*66 to select the voice module you want. Voice module SM1/DLS1 is set in delivery status and does not usually need to be changed.

NRT	Telephone
	#*66
Beep	
	VUT (voice unit type) 1 = voice module SM1/DLS1 (with piezo) 2 = voice module SM2/DLS2 (with LED)
2 beeps	

Description of the Individual Commands

#*70 Master/Slave Operation

If you are operating several NRTs in parallel, you need to assign each device a different extension code. "0" switches master/slave operation off (default setting).

NRT	Telephone
	#*70
Beep	
	Master/slave operation: 0 = off 1 = device is master with extension 1 2 = device is slave with extension 2 3 = device is slave with extension 3
2 beeps	

You can then operate the devices in parallel, with each specific device being called by means of the relevant extension code.

Call Master/Slave Devices

If a number to which several master/slave devices are connected is called, all devices receive the call simultaneously.

Only the master device answers with a dial tone sign, to which the caller (telephone or control centre) needs to respond with the relevant extension code.

The postdialled emergency telephone then switches to normal operating mode and answers with a beep. The other emergency telephones release the telephone line immediately.

Clashes in Alarms with Master/Slave Devices

If more than one master/slave device is simultaneously connected to the same line, this is automatically recognized. The device that reserves the line first also usually obtains the outside line.

The suppressed device hangs up again and will make another attempt after a specified time (20 seconds + n seconds).

In any new attempt, the suppressed device feeds signal tones into the line.

Depending on the master/slave extension code, either 1, 2 or 3 signal tones are played. This is designed to inform the control centre staff that another alarm is pending and that prompt processing of the current alarm is required.

If the line becomes free again before 12 dialling attempts have been made, the previously suppressed emergency telephone proceeds to dial the phone number as usual.

Description of the Individual Commands

#*71 Pause before Announcement (only possible with NRT 1 NT (iS))

#*71 allows you to enter a pause you want to be made after dialling an alarm number for a telephone (not control centre) before the announcement is played. The pause only has significance in operating mode 3 for alarm numbers with code "Telephone". You can enter digits 0 to 9 for a 0...9 seconds pause. The announcement is then played back.

NRT	Telephone
	#*71
Beep	
	Pause
2 beeps	

#*72 Destination Code for Alarm Numbers (only with NRT 1 NT (iS))

#*72 starts input of the destination codes for alarm numbers one to four. Entering code "0" means alarm number dials control centre, entering code "1" means alarm number dials telephone. **NRT 1 NT** uses the code to decide whether or not the announcement is played back.

NRT	Telephone
	#*72
Beep	
	Code for 1 st alarm number
Beep	
	Code for 2 nd alarm number
Beep	
	Code for 3 rd alarm number
Beep	
	Code for 4 th alarm number
2 beeps	

By way of enhancement, you can also assign an alarm number its own operating mode, if required:

Code for #*72	Destination
0	Control centre
1	Telephone: Operating mode from #*13
2	Telephone: Operating mode 0
3	Telephone: Operating mode 1
4	Telephone: Operating mode 2
5	Telephone: Operating mode 3

Description of the Individual Commands

****73 Calming Text (only possible with NRT 1 NT (iS))**

You can use **73 to activate or deactivate playback of a calming text into the car. If you enter 0, it means that no calming text is played. 1 means that a calming text is played.

NRT	Telephone
	**73
Beep	
	Code (1 = on, 0 = off)
2 beeps	

****75 Record the Calming Text (only possible with NRT 1 NT (iS))**

**75 starts recording of the announcement. Once you enter the code, there is a beep signalling the start of recording: you can now record the announcement. End the recording by pressing 8. The maximum recording time is 5 seconds. A recording overwrites an existing announcement.

NRT	Telephone
	**75
Beep	
	Calming text is recorded until key 8 is pressed or the 5 second maximum reached
2 beeps	

****76 Play Back the Calming Text (only possible with NRT 1 NT (iS))**

**76 starts the one-off playback of the calming text. This allows you to check a calming text that you have recorded.

NRT	Telephone
	**76
Beep	
	Calming text is played back
2 beeps	

Description of the Individual Commands

#*77 Record the Announcement (only possible with NRT 1 NT (iS))

#*77 starts the recording of the announcement. Once you enter the code, there is a beep signalling the start of recording; you can now record the announcement. End the recording by pressing 8. The maximum recording time is 20 seconds. A recording overwrites an existing announcement.

NRT	Telephone
	#*77
Beep	
	Announcement is recorded until key "8" is pressed or the 20 second maximum reached
2 beeps	

#*78 Play Back the Announcement (only possible with NRT 1 NT (iS))

#*78 starts the one-off playback of the announcement. This allows you to check an announcement that you have recorded.

NRT	Telephone
	#*78
Beep	
	Announcement is played back
2 beeps	

#*81 Concluding Text (only possible with NRT 1 NT (iS))

You can use #*81 to activate or deactivate the concluding text played into the car. This concluding text is only played if it has not been possible to execute an alarm after the 12 dial attempts. Entering 0 means that no concluding text is played. Entering 1 means that a concluding text is played.

NRT	Telephone
	#*81
Beep	
	Code (1 = on, 0 = off)
2 beeps	

Description of the Individual Commands

#*82 Record the Concluding Text (only possible with NRT 1 NT (iS))

#*82 starts recording of the concluding text. Once you enter the code, there is a beep signalling the start of recording: you can now record the announcement. End the recording by pressing 8. The maximum recording time is 5 seconds. A recording overwrites an existing announcement.

	NRT	Telephone
		#*82
	Beep	
		Concluding text is recorded until key 8 is pressed or the 5 second maximum reached
	2 beeps	

#*83 Play Back the Concluding Text (only possible with NRT 1 NT (iS))

#*83 starts the one-off playback of the concluding text. This allows you to check a concluding text that you have recorded.

	NRT	Telephone
		#*83
	Beep	
		Concluding text is played back
	2 beeps	

#*88 New Security Code

#*88 allows you to enter a new security code. You need to enter the new digit sequence twice to avoid errors. Your input will be acknowledged by a beep. If your repeated input is different from the initial input, the device outputs an error tone sequence (8 beeps) to signal the error, input of the new security code is not accepted and the original code remains valid. You can enter any four-digit security code.

	NRT	Telephone
		#*88
	Beep	
		New security code (4-digit)
	Beep	
		New security code (4-digit)
	2 beeps	

Description of the Individual Commands

##*91 Alarm Button Activation Time

To avoid unwanted alarm triggers, the minimum default activation time for alarm buttons is set to 3 seconds.

You can now use this command to set the time for any duration between 1 and 9 seconds.

The following applies to all settings: You need to press the alarm button until you hear the idle tone!

NRT	Telephone
	##*91
Beep	
	MAT (minimum activation time) 1 = MAT 1 second ... 9 = MBD 9 seconds
2 beeps	

Please note: If an undeleted alarm is still stored in the device, i.e. a person has, say, not yet been rescued, the minimum activation period is always one second. An emergency filtering (via misuse input) is superfluous.

To delete an alarm, you need to press "0" on your telephone while maintaining voice contact with the car. The alarm is then deleted and the emergency telephone hangs up.

##*97 Attention Tone/Eavesdropping Protection

You can use this command to activate eavesdropping protection.

If you enter a digit between "1" and "6", an attention tone is played into the car every 10 to 60 seconds. "0" switches off the attention tone.

NRT	Telephone
	##*97
Beep	
	EP (eavesdropping protection) 0 = eavesdropping protection off 1 = attention tone every 10 s ... 6 = attention tone every 60 s
2 beeps	

Description of the Individual Commands

##*98 Impedance

Depending on telephone connection used (main line or extension), it may be necessary to adapt the pre-set impedance. If, say, no reasonable two-way communication is possible despite line adjustment (see command ##*99), you can try to use command ##*98 to switch the impedance to 600 Ohm by entering "0".

Then, perform the line adjustment again!

NRT 1 / 2 NT is set by default to outside line impedance using "1".

NRT	Telephone
	##*98
Beep	
	IMP (impedance) 0 = 600 Ohm 1 = 1000 Ohm (default setting)
2 beeps	

##*99 Line Adjustment

To guarantee optimal two-way/hands-free communication on all TC units or main connections, *NRT 1 / 2 NT* is able to adjust automatically to a particular unit/connection type.

Use command ##*99 to start the adjustment, during which an adjustment tone is played.

The adjustment takes no more than around 20 seconds. You should refrain from speaking into the receiver during this time, as this may interfere with the automatic adjustment.

NRT	Telephone
	##*99
Adjustment tone is played, automatic adjustment is performed	
2 beeps	

You only need to perform the adjustment once when starting up. The result of the adjustment is automatically saved.

Example of How to Program Using the Telephone

NRT 1 NT is installed in lift no. 3 and connected to an extension of the TC system in the building, with number 26. In the case of an alarm, **NRT 1 NT** should first call the caretaker using the internal number 22.

If the caretaker is not available, his mobile phone number 0171/123123 should be dialled. If no connection is made here either, the service control unit should be called using 069/987987.

The text "Alarm from car 3" should be played to the caretaker as an announcement. Tone dial is used to dial and the communication time is 3 minutes. No discriminator is used. An outside line is obtained by dialling "0", no pause is to be inserted before the announcement, the security code is "0000".

The first thing we recommend is to carry out a reset on **NRT 1 NT**, to produce a defined initial state. This ensures that the following features do not then need to be re-programmed:

##*01 = dial mode = DTMF

##*03 = communication time 3 minutes

##*04 = discriminator = off

##*14 = outside line key = none

##*71 = pause before announcement = 0 seconds

##*88 = new security code = 0000

	NRT	Telephone	Remark
		26	Call NRT 1 NT with DTMF telephone (internally here)
	Beep		NRT 1 NT answers
		0000	Enter security code, start immediately after beep
	Beep		NRT 1 NT acknowledges
		##*09	Trigger reset, create initial state
Alternating & falling tone sequence			Implementation of resets
2 beeps			NRT 1 NT acknowledges
		##*13	Operating mode
Beep			NRT 1 NT acknowledges
		3	Operating mode = 3
2xPiep			NRT 1 NT acknowledges
		##*00	Enter number
Beep			NRT 1 NT acknowledges
		22	1 st alarm number, caretaker

NRT	Telephone	Remark
Beep if no input for 4 seconds		NRT 1 NT acknowledges
	0#0171123123	2 nd alarm number, caretaker mobile
Beep if no input for 4 seconds		NRT 1 NT acknowledges
	0#069987987	3 rd alarm number, control centre
Beep as no input for 4 seconds		NRT 1 NT acknowledges
2 beeps as no input for 4 seconds		NRT 1 NT acknowledges, end of number input
	#*72	Code for alarm numbers
Beep		NRT 1 NT acknowledges
	1	1 st alarm number is telephone
Beep		NRT 1 NT acknowledges
	1	2 nd alarm number is telephone
Beep		NRT 1 NT acknowledges
	0	3 rd alarm number is control centre
Beep		NRT 1 NT acknowledges
	0	4 th alarm number is control centre (waiting without input is possible here)
2 beeps		NRT 1 NT acknowledges
	#*77	Recording the announcement
Piep		NRT 1 NT acknowledges
	"Alarm from car 3, alarm from car 3, alarm from car 3" 8	Record text , Use key "8" to end the recording Text is played once as a check
2 beeps		NRT 1 NT acknowledges
NRT1 NT hangs up		Wait or press "0" to disconnect

Battery Replacement

The optional lithium battery (type Varta: 2/CR1/2AA, 6V/950mAh) is only required if:

- the timer function is used or
- you want to play back voice recordings

The battery connector is coded and must be plugged into the male connector in this position.

To fix the battery inside the casing, use the self-adhesive tape.

If used as directed, the battery has a lifespan of at least 5 years.

You must make sure to unplug the battery when the device is dismantled or stored. If you fail to do this, any timer call that might still be programmed will cause the battery to discharge in only a few days.

CAUTION



- Do not incinerate the battery or batteries as they might explode. You must dispose of the batteries correctly. To do this, read your local disposal regulations.
- Do not open or damage the battery or batteries.

CAUTION



Do not discard the emergency telephone or the batteries in the rubbish bin. This product must be disposed of correctly. For more information, contact your local waste management or hazardous waste advice centre.

Troubleshooting

Fault	Error	Measure
Device does not obtain an outside line	No response to alarm button	Check telephone connection and alarm button connection
Device answers with 40 beeps after alarm is triggered and then hangs up	No alarm number programmed	Ask the control centre to program alarm number
Device dials, then hangs up again shortly afterwards and tries to redial (12x)	Party called engaged or phone number incorrect	Check programmed phone number
Device cannot be programmed by control centre	<ol style="list-style-type: none"> 1. Device not connected to outside line 2. Incorrect security code 	<ol style="list-style-type: none"> 1. Check outside line 2. Enter correct code (default 0000)
Device whistles (acoustic feedback)	<ol style="list-style-type: none"> 1. Sound level too high 2. Microphone too sensitive 3. Distance between microphone and loudspeaker too small 	Switch to external voice unit and temporarily detach microphone. Then, do the following: <ol style="list-style-type: none"> 1. Press “5” to reduce sound level 2. Press “2” to reduce microphone sensitivity or 3. Increase distance
Dial does not work	<ol style="list-style-type: none"> 1. DP/DTMF dial mode incorrectly programmed 2. Device is in extension, but no digit for an outside line has been programmed 3. Alarm number either not programmed or incorrectly programmed 	Ask the control centre to program the correct values for: <ol style="list-style-type: none"> 1. Dial mode 2. Outside line 3. Alarm number

Fault	Error	Measure
Panel display flashes and/or piezo squeaks	Alarm button selected as NC, but no NC connected or broken wire	Set slide switch accordingly or correct broken wire

Legal Information

General observations about our products and this manual:

- We reserve the right to make changes to our product in the interests of technological progress, without prior notice. Due to continual advancement, photographs or illustrations in this operating manual may differ from the product supplied.
- Texts, illustrations and photographs in this operating manual may not be reproduced in any way, even in the form of excerpts, without our prior written consent.
- We accept no responsibility for possible typographical errors, including those which might occur in technical specifications or illustrations.

Information on product liability law:

- All products from our product range may only be used for the indicated purpose. In the case of doubt, please contact a skilled specialist or our service department.
- All energized products (especially when 230V mains powered!) must be disconnected from the power supply before being mounted or opened.
- Damage (including consequential damage) caused by modifications to our products are excluded from product liability. This also applies to inappropriate storage or other outside influences.
- Working with 230V mains voltage and handling mains- or battery-powered products requires compliance with the relevant regulations. Such work should therefore only be carried out by an experienced specialist.
- This product complies with all relevant technical regulations valid in Germany and the EU.

Art. Nr. 11 1407

As of:
10th April 2008

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