neat

SMILE

User manual

NE41 14002-02 V2.1

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SMILE kit contents

The list below shows the included parts in the package. If any part is missing or is defect, please kontakt your reseller or distributor.

#	Denomination
1	SMILE unit
2	Necklace with PIN
3	Wristband

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Declaration of Conformity

Hereby NEAT Electronics AB declares that the radio equipment type SMILE is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address:

http://www.neat-group.com/downloads/documentation

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US Notes

FCC ID: 2AGLF1400304

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Content

1 About SMILE

The SMILE Family is a range of products meant for the care sector, either in a home care living or in a warden facility. The SMILE Family consist of two portable triggers, SMILE and SMILE ID.

The term SMILE or SMILE unit will be used for the trigger in general and if not stated otherwise it refers to the standard SMILE.

1.1 SMILE

SMILE is a portable alarm trigger which must be connected to a receiver (e.g. NOVO Homecare Phone, TREX 2G Portable Transceiver, D-TECT and D-SERVER System) to be able to send alarms.

1.2 SMILE ID

SMILE ID is based on the standard SMILE but with a grey appearance and is also equipped with an RFID circuit which is trigged by the magnetic fields created by a D-POS Antenna or a LOOP Antenna.

SMILE ID also has a built in accelerometer which enables the possibility to monitor unit inactivity.

1.3 Intended use

The SMILE is intended for use in homes and wardens to provide a feeling of security with the possibility to dispatch alarms in the event of an accident.

SMILE ID is intended to be used in the care sector for monitoring persons who demands extra attention or nursing by enabling positioning in a D-POS, DPOS-II or D-SERVER system.

1.4 General Use

SMILE is to be carried by the user, either in a necklace or on a wristband. An alarm button enables the possibility to trigger an alarm manually. The alarm is trigged by a light touch on the red alarm button and the alarm is acknowledged by blinking green.

More detailed information about the functions and use of a SMILE-ID can be found in D-POS II Technical handbook NE41 17030-02.

2 SMILE

#	Denomination
1	LED
2	Alarm button

3 SMILE parts

#	Denomination
1	SMILE Unit (with red alarm button)
2	SMILE PIN (with latch and necklace)
3	SMILE CLIP (Optional)
4	Necklace with PIN
5	Wristband

4 LED indications

The LED indicates status when the alarm button is pressed.

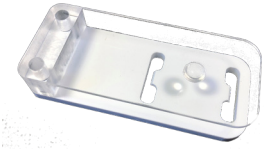
When pressing the alarm button, the LED lights red during the transmission until it receives an ACK. When an ACK is received the LED lights green for 2 s.

If the LED rapidly blinks during transmission (red) and ACK confirmation (green), this indicates the battery is low (and a Battery Low alarm is also sent) and the unit should be replaced.

Blink	Action
1 red flash/blink	The alarm button sends an alarm
1 green blink	The alarm is acknowledged
Flashing red or green	Low battery, replace the unit

5 SMILE Accessories

5.1 EPA (Easy Press Adapter)



In some cases the user cannot use his or hers finger to press the alarm button on the trigger. EPA can help since it enables the user to use the palm of a hand or the elbow to trigger an alarm with the SMILE or SMILE-ID.

5.2 BERLOCK

The berlock trim is an accessory and is used to reduce the user feelings stigmatizing.

6 Mounting

6.1 PIN/necklace

Thread the pin into the holes and press until the latch clicks into place.

Release the pin by pressing the latch (1) and then pulling it upwards (2).

6.2 Wristband

Thread the wristband through the holes and attach on arm.

6.3 CLIP

Fix CLIP on the back of the SMILE, thread the PIN trough the holes on the SMILE until the latch clicks in place.

To detach the CLIP, press the PIN latch and remove the PIN.

6.3.1 Mounting the EPA

Gently press the EPA to the front of the SMILE/SMILE ID.

To detach, use a thin blade (e.g. a table knife or similar) insert under the EPA and gently bend the hooks from SMILE.

Do not use excessive force or the hooks may break.

6.4 BERLOCK

The BERLOCK is mounted in the same way as the CLIP.

To remove the BERLOCK, stick a paperclip in the wristband hole closest to the necklace and detach the PIN.

6.5 Changing the top shell

The SMILE design allows for replacement of the top shell. Remove the top shell by gently pulling the wristband holes outwards.

Attach the new top shell and press until a distinct “click” is heard.

A removed top shell is expended and must be discarded!

7 SMILE Programmer

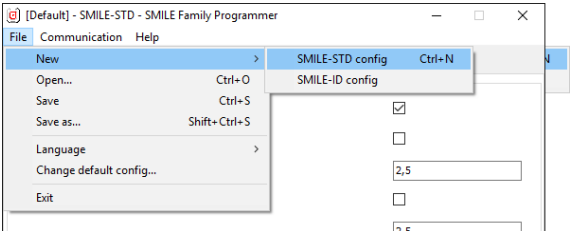
SMILE Programmer is a simple tool to change/customize the configuration and the user interface is simple and straightforward. Using SMILE Programmer requires a NPU (NEAT Programming Unit) which is available as an accessory from your distributor.

The software is built up around six tabs:

- Buttons and Alarm types
- Radio
- Info
- Activity
- RFID
- RFID zones/codes

7.1 The drop down menus

7.1.1 File



New

Press New to select a new standard configuration for a SMILE or SMILE ID.

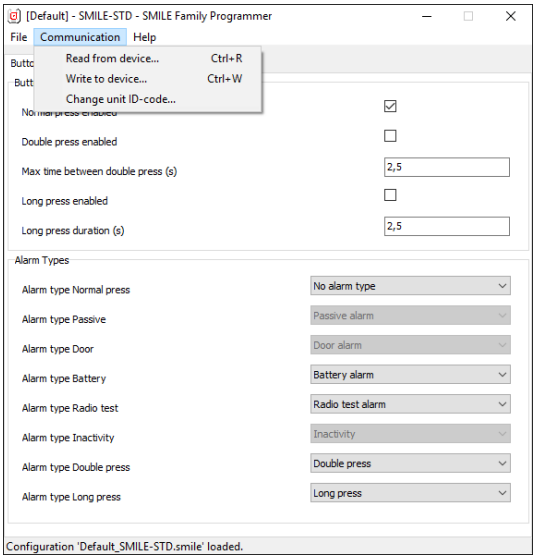
Open..., Save, Save As...

The options **Open..., Save, Save As...** and **Change default config** should be quite self-explanatory and is for handling configuration files.

Language

Change language of the programmer interface.

7.1.2 Communication



Read from and write to device

When a unit is read from, the firmware is automatically recognized by the programmer.

The general procedure for obtaining the configuration is:

- Start the reading process in SMILE-ID Programmer.
- Press the alarm button to connect the SMILE-ID with the programmer.
- Pressing the alarm button a second time to read actual configuration.

Read from unit

Click **Communication** -› **Read configuration from device** (or press the keyboard shortcut combination CRTL+R) in SMILE Programmer.

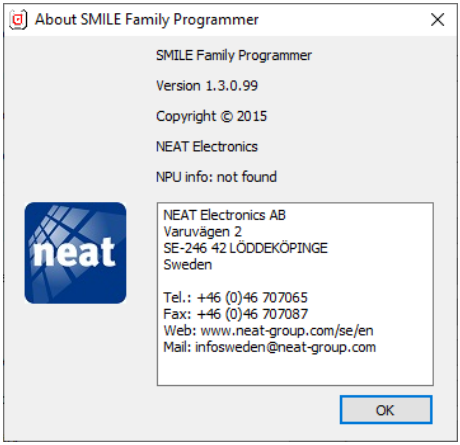
A pop up window appears where the alarm button on the requested unit should be pressed.

After this, press the alarm button again time to read the configuration. The pop up windows closes and the read is confirmed with a status message in the lower left corner.

The configuration data is now displayed in the programmer window and changes can now be made.

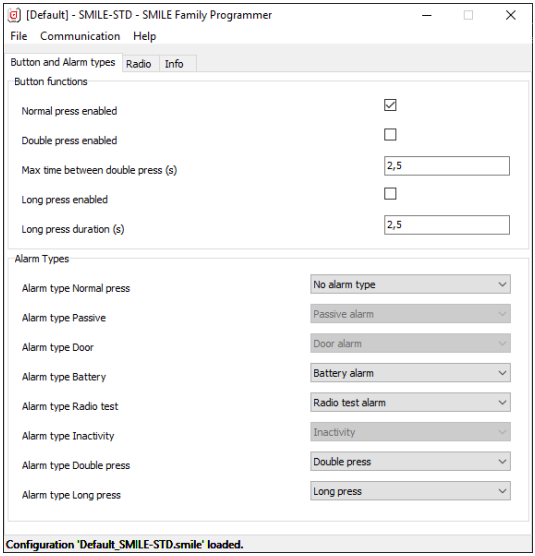
Writing to the unit is done in a corresponding way.

7.1.3 Help



This drop down item displays the software version and firmware version of the connected NPU. The information displayed is read-only.

7.2 Button and Alarm types



The Button and Alarm types tab is divided into two sections:

- Button functions
- Alarm Types

7.2.1 Button functions

SMILE supports a number of different press types, i.e. how the alarm button is pressed. By default Normal press is always enabled.

Normal press enabled

A normal press is when the alarm button is pressed and kept pressed for max. 0.3 ms.

Double press enabled

Enable if Double press should be available. Double press is when the alarm button is pressed two times within the specified press time configured in the box **Max time between double press (s)**.

Long press enabled

Enable if Long press should be available. A long press is when the alarm button is pressed and kept pressed for a specified time configured in the box **Long press duration (s)**.

Together with the standard short one press on the alarm button the following is configurable in SMILE:

- Double press - sends a double press alarm by default
- Triple Press - sends a reset alarm by default
- Long Press - sends a long press alarm by default

The time for the above mentioned alarm is set in the Long/Double press time boxes and is applied to all the enabled press options.

7.2.2 Alarm Types

The unit allows the posibility to change the alarm type for every action that the unit can perform.

To send alarms with position info it is convenient not to change the alarm type in the boxes for:

- Alarm type Normal press = No alarm type.
- Alarm type Double press = Double press.
- Alarm type Long press = Long press.

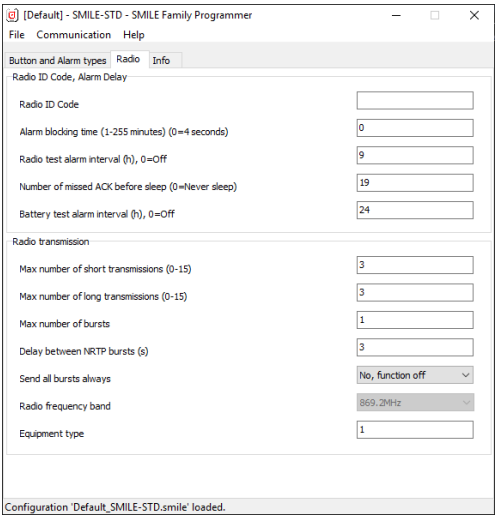
The unit also sends automatic alarms to manage technical issues:

- Alarm type Battery.
- Alarm type Radio test.

And other alarm types can be sent by the unit described in the manual:

- Alarm type Passive.
- Alarm type Door.
- Alarm type Inactivity.

7.3 Radio



The Radio tab is divided into two sections:

- Radio ID Code, Alarm Delay
- Radio transmission.

7.3.1 Radio ID Code, Alarm Delay

Radio ID-code

When a unit is read, the Radio ID code is displayed in the Current box. To change ID code, enter the new Radio ID code in the New box, eg. 1A3D.

Values oooo (four zeroes) and FFFF are forbidden.

Alarm blocking time

For users who frequently presses the alarm button, hence trigging many alarms within a short time, the option to block user alarms is very convenient. A value o (zero) blocks the transmission during 4 seconds.

Radio test interval (h)

Set a value for the periodical test alarm, e.g. 23 sends a test alarm every 23 hours.

Number of missed ACK before sleep

In order to preserve battery the unit can be put into Sleep Mode after a certain number of Radio Test Alarms have been sent without receiving an ACK.

In sleep mode it is actually only the Radio Test Alarm that is paused. All other functions works as usual and the unit will resume from Sleep Mode as soon as any other alarm receives (e.g. a user alarm) an ACK and the Radio Test Alarm transmits will start again.

Battery test interval (h)

The battery status is checked internally and the check interval is set here. If the battery status is below a certain threshold value when checked, a battery alarm is sent.

7.3.2 Radio transmission

Max number of short/long transmissions (0-15)

Number of short and long transmissions are for possible preservation of battery.

Default is 3 short and 3 long transmissions.

Max number of burst

Number of times to repeat the short/long transmissions.

Delay between NRTP burst (s)

The time the unit waits to repeat the NRTP burst.

Send all burst always

Even if the device receives the ACK the unit will send all the bursts configured.

Radio frequency band

To select the region frequency.

Equipment type

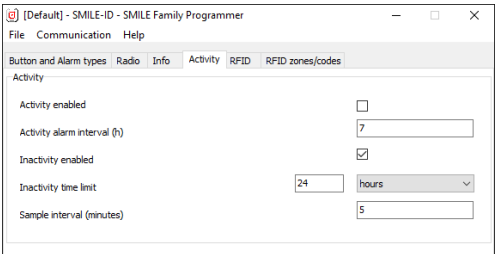
To identify the equipment that connects with NPU.

Do not change this parameter.

7.4 Info

This is a read-only window displaying technical data from the read unit.

7.5 Activity



The SMILE-ID unit has been built with an accelerometer intended to detect either inactivity or activity and automatically send an alarm if this occurs.

Activity enable

Check box to activate activity sense, i.e. enable activity alarms.

Activity Alarm interval (h)

Set max time for activity before an activity alarm is sent, in hours, e.g. 7 hours.

Inactivity enable

Check box to activate inactivity sense, i.e. enable inactivity alarms.

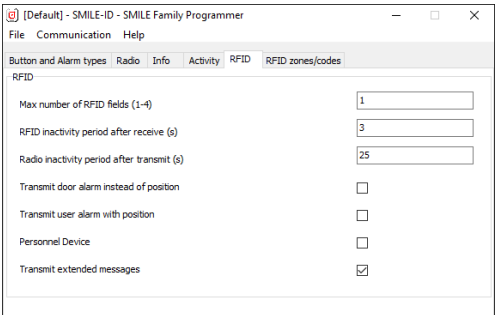
Inactivity time limit

Set max time for inactivity before an inactivity alarm is sent, in minutes or hours, e.g. 24 hours.

Sample interval (minutes)

This is the time the unit will take to review the position and compare with the previous one.

7.6 RFID



Max number of RFID fields (1-4)

Number of Position ID codes included in the NRTP message.

RFID inactivity period after receive (s)

When an RFID message has been received the RFID receiver is inactive for a certain period in order to save battery power and this period is set here (in seconds).

Radio inactivity period after transmit (s)

When the SMILE-ID has transmitted a message the unit will not send any messages from the same position for a period of time in order to save battery power and this period is set here (in seconds).

If the SMILE-ID however receives another position, it immediately sends the message.

Transmit door instead of position

If the system is used as a wandering alarm together with care phone NOVO the SMILE-ID can be configured to send a DOOR Alarm to NOVO when the SMILE-ID enters the field.

No position information is included in the DOOR Alarm message.

Transmit user alarm with position

To include on the NRTP message the Radio Id code and the Position Id code.

Personnel Device

Check this box whether the unit is a personnel device or not.

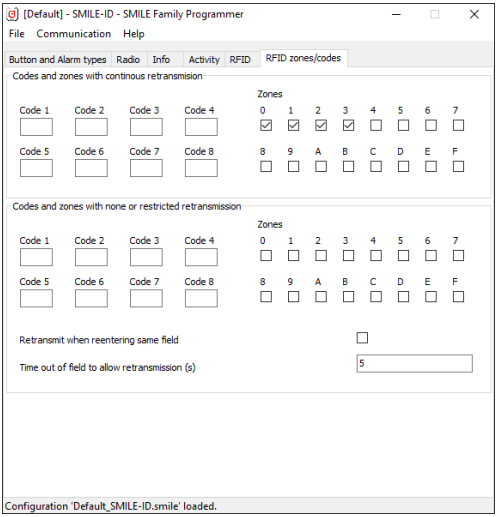
Transmit extended message

If the receiver needs more information than normal the SMILE-ID can be configured to send extended messages.

The information included in an extended messages is:

- Previous positions
- SMILE-ID type (resident or personell device)

7.7 RFID zones/codes



The RFID tab is divided into two sections:

- Codes and zones with continuous retransmission.
- Codes and zones with none or restricted retransmission.

7.7.1 Codes and zones with continous retransmission

A word about continous and restricted transmissions

These settings allows the system to manage how often transmissions should occur in an installation. By default, when a SMILE-ID enters a D-POS II field and stays in that field a transmission occurs every 25 seconds (default value, defined by parameter name “Radio inactivity period after transmit”). In some applications this might drain the battery, eg. when the user spends his/her afternoon in a public area (which is defined as a zone) in a nursing home.

Codes and zones with none or restricted retransmission

Restricted retransmission: Retransmit when re-entering same field.

When enabled (checked) the unit retransmits if the user exits from a field and then (without entering a new field) re-enters the same field. Together with the next option (see below) it is possible to further specify how long the unit must be out of the field before a re-transmission occurs.

Restricted retransmission: Time out of field to allow retransmission (s)

When enabled (checked) AND the option above is checked the unit retransmits only when the unit has been out of the field for the specified time.

The position codes entered in this section are connected to the checkbox in the Restricted retransmission: Retransmit when re-entering same field, see above.

An example:

- Enter a position code.
- Uncheck Restricted retransmission: Retransmit when re-entering same field
- Set Restricted retransmission: Time out of field to allow retransmission (s) to 10

This will result in:

A SMILE-ID entering a zone (e.g. Zone 1) will transmit when entering the zone and will never re-transmit unless leaving the zone AND entering another zone (other than Zone 1) before returning to this zone (Zone 1).

However, if Restricted retransmission: Retransmit when re-entering same field is checked then the unit can leave the zone and re-enter and re-transmission will occurs, but only if the unit has been outside the zone for 10 seconds or more.

A position code can only work in one zone type and a particular zone can only be selected in either zone type. If this is done in the programmer an error message will display when trying to write to the unit in the programmer. However, no warning is displayed when saving the configuration to disk.

8 Use and maintenance

8.1 Safety notes

- Read instructions prior to use
- Always test the system per instructions prior to use.
- The product may not be suitable for all persons.
- Check device regularly and replace when necessary.
- Always check the function of the product after making adjustments.
- Our units are NOT intended for any life support device, thus intending a device whose malfunction may result in damage to a life.
- Use Use only original parts.
- Do not expose to direct sunlight.
- Keep away from dust, moist and dirt.
- Do not drop, knock, twist or shake the device.
- Do not warm up the device or use it near fire.
- For repairs, contact a NEAT dealer.

8.2 Cleaning

- Clean the device with a soft cloth, dampened slightly with mild soapy water.
- Do not clean the device with harsh chemicals, solvents or other corrosive substances.

8.3 Recycling

Dispose of properly. The worn out product must be returned to a recycling facility for proper disposal or returned to NEAT.

9 Technical data

Measure	34 x 42 x 15 mm
Weight (incl. battery)	14 g
$Frequency_{RF}$ - EU	869.2 MHz (Social alarms) Category 1 869.4 MHz (Social alarms) Category 2
$Frequency_{RF}$ - Non EU*	866, 868, 906, 916, 921 MHz
$Frequency_{RF}$ - US	916.2 MHz
$Transmit\ power_{max}$ - EU	869.2 MHz 10 mW (EIRP) 869.4 MHz 500 mW (EIRP)
$Transmit\ power_{max}$ - Non EU	According to local regulations
$Transmit\ power_{max}$ - US	According to local regulations
RFID frequency	125 kHz
Battery life ›	5 years
IP Class	IP67
Temperature range	+5 - +55 °C

* *According to local regulation for social alarms.*

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