

**neat**

# USER GUIDE



# IOR

**RADIO TRANSCEIVER  
FOR WIRED I/O**



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## Important Information



Always treat your product with care. Only NEAT Electronics authorized personnel should perform service.

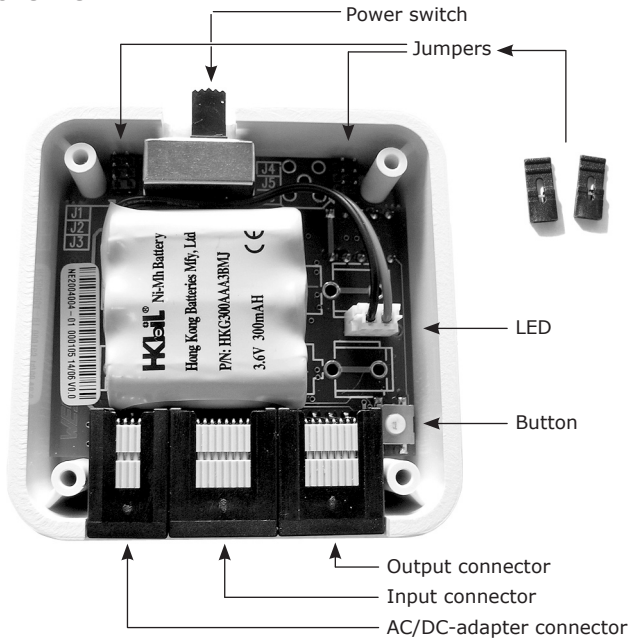


Do not expose your product to open flames, lit tobacco products or temperatures above 60°C.



This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be returned to NEAT Electronics for recycling. The recycling of materials will prevent negative consequences for the environment, human health and help to conserve natural resources.

## Overview



## Installation

1. To change the configuration of the IOR, remove the lid and mount or remove jumpers. The jumper settings are described on pages 7-9 in this manual.
2. Connect alarm transmitters and/or alarm receivers to IOR as described in pages 10-13 in this manual.
3. Close and fasten the lid using the screws supplied.
4. Mount the IOR in an appropriate place.
5. Connect the inputs to the jack marked **IN**.
6. Connect the output to the jack marked **OUT**.
7. Connect the AC/DC adapter to the jack marked **DC**.  
Then connect the AC/DC adapter to a mains outlet in the apartment. Only use the AC/DC adapter provided by NEAT, part no. NE31 03001-01.
8. Turn on the IOR with the switch marked **ON OFF**.

## Configuration

IOR is configured by mounting or removing jumpers on the circuit board inside the unit, as shown in the image on page 5. Please restart the IOR after changing the jumper configuration.

For advanced configuration, the computer program *IOR Programmer* can be used. This is described in the *Technical Handbook for the IOR Family*, document number NE41 06007-02.

## Power Mode

For longer battery life, IOR can be configured to go into power save mode when running on the backup battery. The power mode is determined by the setting of jumper J6 and whether power is taken from the AC/DC-adaptor or from the battery only.

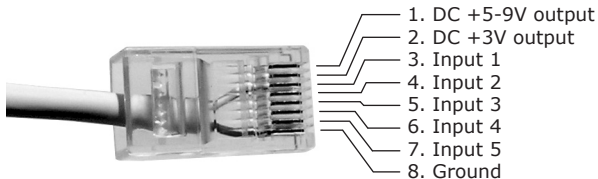
Power Source	Jumper J6	
	ON (mounted)	OFF (not mounted)
AC/DC-adaptor	Normal	Normal
Battery only	Normal	Power save

In *power save mode*, no radio test alarm is sent, no battery low alarm is sent and inputs 4 and 5 are not available for use. Note also that in power save mode, no radio alarms will be received and the button inside IOR does not work.

**Note:** When running on batteries in normal power mode, only radio messages with long preamble will be received. A short delay of up to 0.5 seconds may also occur before IOR reacts on input 4 and 5.

## Inputs

The inputs are connected to the jack marked **IN**. The pin layout is shown in the picture below.



Input 1 is connected between pin 3 and 8, input 2 between pin 4 and 8, etc.

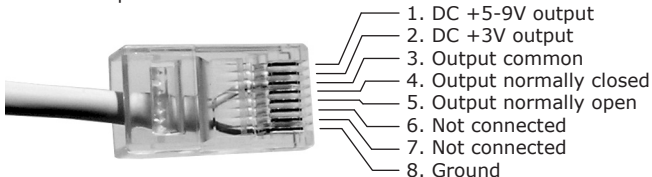
Inputs 1-3 may be configured either as normally open or normally closed. Inputs 4-5 are always configured as normally open. If input 1 is configured as normally open, an alarm will be sent when pin 3 is tied to pin 8. If input 1 is configured as normally closed, an alarm will be sent when the connection between pin 3 and pin 8 is broken.

Jumpers J1-J3 inside the IOR determine the mode of inputs 1-3 as shown in the table below.

Jumper	ON (mounted)	OFF (not mounted)
<b>J1</b>	Input 1 normally closed	Input 1 normally open
<b>J2</b>	Input 2 normally closed	Input 2 normally open
<b>J3</b>	Input 3 normally closed	Input 3 normally open

## Output

The output is connected to the jack marked **OUT**. The pin layout is shown in the picture below.



The output can be configured in one of the following three modes.

**Pulse mode** In this mode the output relay will be closed for 3 seconds when an alarm is received (see foot-note).

**Toggle mode** In this mode the output relay will change state when an alarm is received.

**Static mode** In this mode the output state will only change when special on and off commands are received from the home care phone.

The output mode is configured by jumpers J4 and J5 inside IOR.

J4	J5	Output Mode
OFF	OFF	Pulse mode
OFF	ON	Toggle mode
ON	OFF	Static mode

**Note:** *IOR Programmer* can be used to change the time that the relay is closed in pulse mode, see page 7.

## Connecting an Alarm Transmitter to IOR

The IOR output can be activated from an alarm transmitter such as ATOM or INKA. If an ATOM is programmed into IOR, the IOR output will be activated each time the button on that ATOM is pressed.

Up to 8 different alarm transmitters can be programmed into the same IOR. Only alarm transmitters that have been programmed into an IOR will activate its output (see foot-note).

To program an alarm transmitter into IOR, follow these steps:

1. Choose a transmitter number **X** between 1 and 8. Two alarm transmitters can not have the same transmitter number in one IOR.
2. Remove the lid of the IOR. Press and hold the button inside IOR while switching IOR on.
3. Wait until the LED inside IOR flashes **X** times and then release the button.
4. Activate the alarm transmitter.
5. The LED inside IOR flashes once to indicate that the radio code from the alarm transmitter is stored.

**Note:** Using *IOR Programmer*, IOR can be configured so that all alarm receivers will activate its output, also those that are not programmed into IOR, see page 7.

## Connecting IOR to Portable Receiver TREX

When an input on IOR is activated, an alarm is sent. The portable alarm receiver TREX can be programmed to receive alarms sent by IOR when a particular input on the IOR is activated.

To program a TREX to receive alarms triggered by one input on IOR, perform the following steps:

1. Choose Programming and then Add transmitter from the menu in the TREX.
2. Activate the input on IOR or press the button inside IOR once for input 1, twice for input 2 etc, with no more than 1 second between each button press (see footnote).
3. The LED inside IOR flashes to indicate that the radio code is transmitted. The TREX beeps to indicate that a radio code is received.
4. Choose an alarm text and alarm number in the TREX.

See the TREX User Guide for further information on how to add a transmitter in TREX.

## Connecting IOR to Home Care Phone NEO

The home care phone NEO can be programmed to receive alarms sent by IOR when a particular input on IOR is activated.

There are 8 alarm receiver positions in NEO. Choose one position depending on what alarm type that is appropriate.

Position (P)	Default Alarm Type in NEO
1-3	User alarm
4	Smoke detection alarm
5	Door alarm
6	Bed alarm
7	Carpet alarm
8	Passive alarm

To program alarms triggered by one input on IOR into receiver position **P** on NEO, perform the following steps:

1. Press and hold the grey button on NEO while switching NEO on.
2. Wait until **P** beeps are heard, then release the button.
3. Activate the input on IOR or press the button inside IOR once for input 1, twice for input 2 etc, with no more than 1 second between each button press (see footnote on page 11).
4. The LED inside IOR flashes to indicate that the radio code is transmitted. Then the home care phone sounds to indicate that the radio code from IOR is stored.

## Controlling IOR from Home Care Phone NEO

The NEO can be programmed to activate the output of a particular IOR, either when the alarm button on the NEO is pressed or by command from the alarm central.

Before starting, you must decide which receiver position **Y** to use in the NEO. If the IOR output shall be activated by pressing the alarm button on the NEO, any position can be chosen. However, you must use the *NEO Programmer* to change the alarm type for that position to *Send radio on alarm*.

If the IOR output shall be activated by command from the alarm central, position 8 shall normally be used unless the alarm central has informed you otherwise.

To program NEO to activate the output of an IOR, follow these steps:

1. Remove the lid of the IOR.
2. Press and hold the grey button on NEO while switching NEO on.
3. Wait until **Y** beeps are heard and release the button.
4. Press and hold the button inside IOR for more than 3 seconds and then release the button (see foot note on page 11).
5. The home care phone sounds and indicates that the radio code from IOR is stored.

## Declaration of Conformity

We NEAT Electronics AB, Varuvägen 2, 246 42 Löddeköpinge, declare under our sole responsibility that our product IOR, NE10 04004-06, is in conformity with the directives 1999/5/CE, 73/23/CE and 89/336/CEE and conforms to the standards:

Safety: EN60950-1:2001

EMC: EN 301489-3 v1.4.1 Class I

Radio: EN 300220-3 v1.1.1

Löddeköpinge, October 2005



Lars Nyström  
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CE 0341

## Notes

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