



TELEPHONE LINE RECEIVER RTH2

USER MANUAL

Warranty and liability limitations

The RH11 – RF2 receiver is provided with a 24 months warranty to become effective from the purchase-sales date. The warranty period shall ensure free of charge repair of troubles occurred due to the manufacturer fault.

The warranty shall be applied, if the receiver is installed by qualified specialists according to this document.

Upon expiry of the warranty period the maintenance and repair of the receiver shall be performed at the buyer's expense.

The warranty may be terminated prematurely in the following cases:

- The receiver was repaired or was attempted to repair by an unauthorized person;
- The receiver was used not for its intended purpose;
- The receiver was stored and/or installed in an inappropriate premises with inappropriate climate conditions, aggressive chemical environment;
- The receiver was mechanically broken and/or intentionally damaged;
- The receiver was damaged due to *force-majeure* (lightning discharge etc.) circumstances.

The manufacturer shall not be liable for the following:

- receiver malfunctions, if the receiver was installed or used not according to its operation manual;
- termination or restriction of electrical power supply to the receiver buyer or to the receiver user, and shall not reimburse the receiver buyer or the receiver user for the occurred property or non-property losses;
- robbery, fire of premises or other incurred losses to the receiver buyer or to the receiver user, and shall not reimburse the receiver buyer or the receiver user for the occurred property or non-property losses as a result of these events.

Attention!

Read this user manual carefully.

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Trademarks and patents	Other trade names mentioned in this document may be registered trademarks or trademarks of respective product manufacturers or vendor products.
Manufacturer	UAB Trikdis, Draugystės g. 17, LT-51229 Kaunas, Lithuania
Version	This document applies to receiver RTH2.
Certification	CE mark
European Union directives	2004/108/EC (EMC directive) 1999/5/EB (compliance directive)
Further information	Contact information may be found on www.trikdis.com

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1 About telephone line receiver

Telephone line Receiver RTH2 receives event reports from security control panel's telephone communicator. Received events are processed and transferred to the monitoring software.

Note: We configure the receiver with preset settings on client's request.

2 Technical parameters

Name	Description
Communication channel	telephone lines- tonal or pulse
Receiving formats	contact ID, SIA, Ademco Express 4+2 and others
Primary power supply	100 – 240 V (50 / 60 Hz) AC network
RS232 data output ports	1 x DB9
Operating temperature	From 0°C, to +55°C
Dimensions	225 x 235 x 115 mm
Weight	1.21kg, with cables

2.1 Report receiving technology

Name	Description
1. SIA Protocol format	Standard SIA DC-03-1990.01
2. Contact ID	Standard SIA DC-05-1999.09
3. Ademco Express 4+2 formats	Standard SIA DC-05-1999.09, 4+2 format with checksum – 4 digit account code, 2 digit event code, 1 digit checksum
4. Pulse protocols 3/1, 4/1, 4/2, which use 2300 Hz HSK signals	Operating at the speed of 10... 40 bauds and by using 2300 Hz HSK and kissoff signals
5. Pulse protocols 3/1, 4/1, 4/2, which use 1400 Hz HSK signals	Operating at the speed of 10... 40 bauds and by using 1400 Hz HSK and kissoff signals

3 Receiver assembly

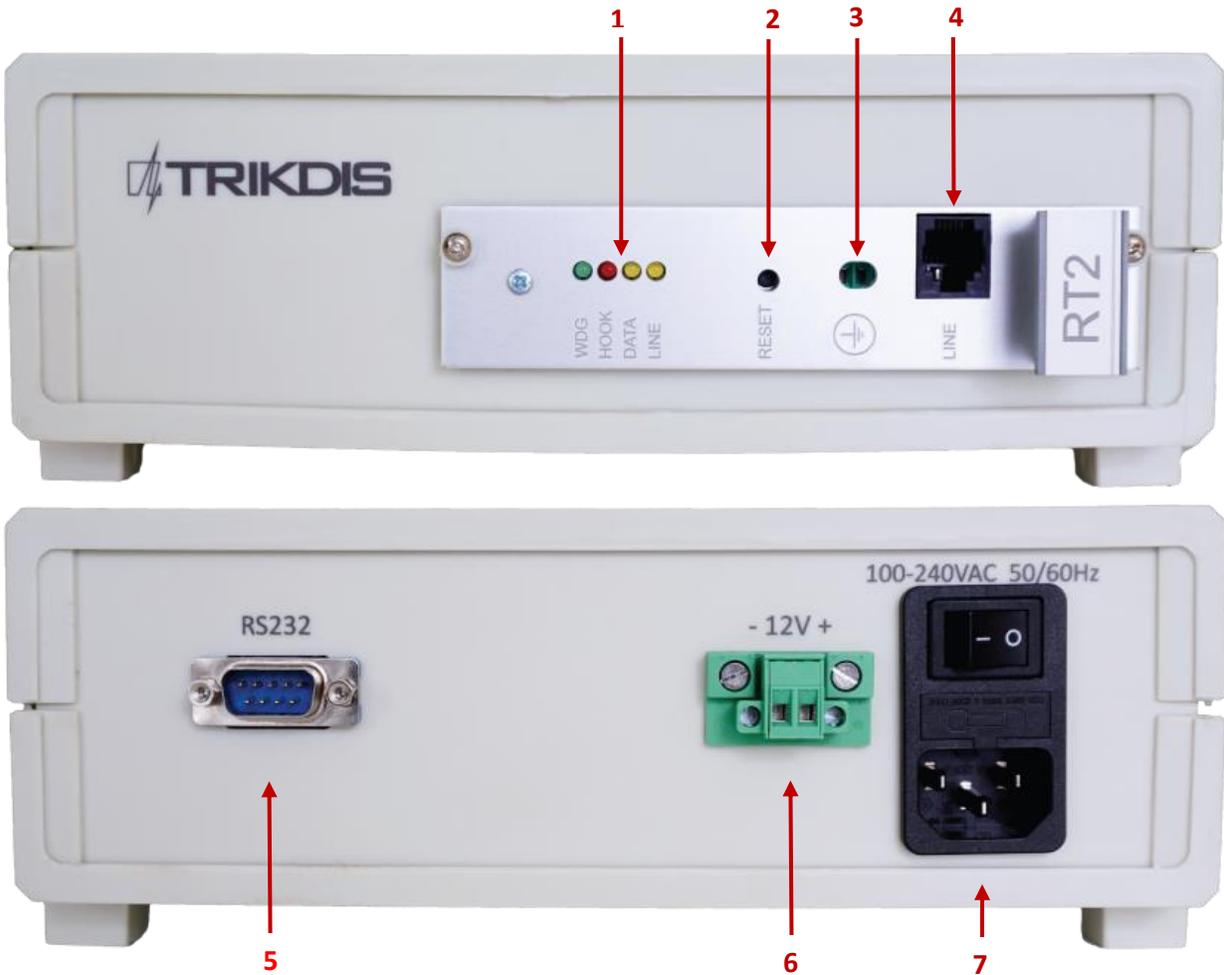
Receiver	1 pc.
1.5 m power supply cable	1 pc.
1.8 m RS232 Null Modem cable	1 pc.

Note: *SPROG-1* or *UP2* cables for receiver programming are not included.

4 Power supply

The receiver is powered with the alternating current (AC) source. To ensure an uninterrupted operation the receiver should be connected to a 12 V, 7Ah battery, providing backup power supply for 12 hours.

5 Receiver Structure



1.	Light indication	6.	Backup battery connection
2.	RESET button of the device	7.	AC cable connector and turn on/off button
3.	Earth connection		
4.	Connector telephone line input		
5.	RS232 data output port		

5.1 Light indication

LED indicator	Operation	Value
"LINE" yellow Telephone line operation	Off	Telephone line not connected or not available
"HOOK" red Headset lift	Lights up	Handset is lifted
"DATA" yellow Data reception	Flashing yellow	During data reception from a peripheral device

<p>“WDG” green Power supply status</p>	<p>Flashes in short periods</p>	<p>Power supply voltage during standby and operation</p>
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6 System installation

6.1 Equipment installation steps

1. If received device does not have preset exploitation parameters, please set them as described in **7 Setting of exploitation parameters.**

Note: 1) *SPROG-1* or *UP2* cables for receiver programming are not included with the receiver.
 2) To set the parameters you need to install GProg2 software. To download GProg2 installation file go to <http://www.trikdis.com/>

2. Connect receiver to computer using RS232 cable to forward events to the monitoring software.
3. Set up your monitoring software to display receiver messages. Please follow instructions in your monitoring software documentation.
4. Connect AC power supply cable.
5. Turn on the receiver. Receiver is working properly when LED named “WDG” is flashing.
6. Press RESET button.
7. Check if your monitoring software are displaying messages from RTH2 receiver.

- 7.1. **If nothing was received:** check LED “Line” it should be yellow, if not recheck connections. In case that problem still accure, please make sure that exploitation parameters are set correctly or contact technical support. How to check and change parameters please refer to **7.2 Setting of exploitation parameters.**

Note: The integrated receiving module generates service messages, indicated in annex A.

7 Setting of exploitation parameters

7.1 Exploitation parameters of the receiver

Title	Permissible range	Set value
Number of rings until handset of the module will be lifted	1 - 8	2
Telephonic line control on/off	enable / disable	enable
Time from handset lift till start of HSK signal	500 ms – 4000 ms	2000
Duration Kissoff (and confirmation) signals	500 ms – 8000 ms	900
Time period between HSK signals	1 s – 16 s	4
Permissible duration of message reception	2 s – 16 s	2

SIA HSK duration	500 ms – 2000 ms	900
Common time limit for a single communication session	15 s – 255 s	60 s
Output protocol	Surgard or Radionics D6600	Surgard
Time limit for reception of SIA blocks	1 – 32 s	8 s
HSK order (priority of reception protocols)	SIA FSK HSK	SIA FSK HSK
	Dual tone HSK (1400+2300 Hz)	Dual tone HSK (1400+2300 Hz)
	3/1, 4/1, 4/2	2300 Hz
	3/1, 4/1, 4/2	1400 Hz

7.2 Setting RTH2 exploitation parameters with GProg2

The receiver parameters can be set via *SPROG-1* or *UP2* programmer using GProg2 software. Also you may need to install USB driver. The GProg2 and USB drivers are available on our website www.trikdis.lt.

Note: The software GProg2 should be installed into PC, operating OS MS Windows 2000/XP/Vista/Win 7.

7.2.1 Connecting to computer

1. Open the RTH2 housing and take out the module (do not forget to disconnect backup battery).
2. Connect the module to power supply.
3. Connect the module to a computer with *SPROG-1* or *UP2* programmer.

7.2.2 Installing USB driver

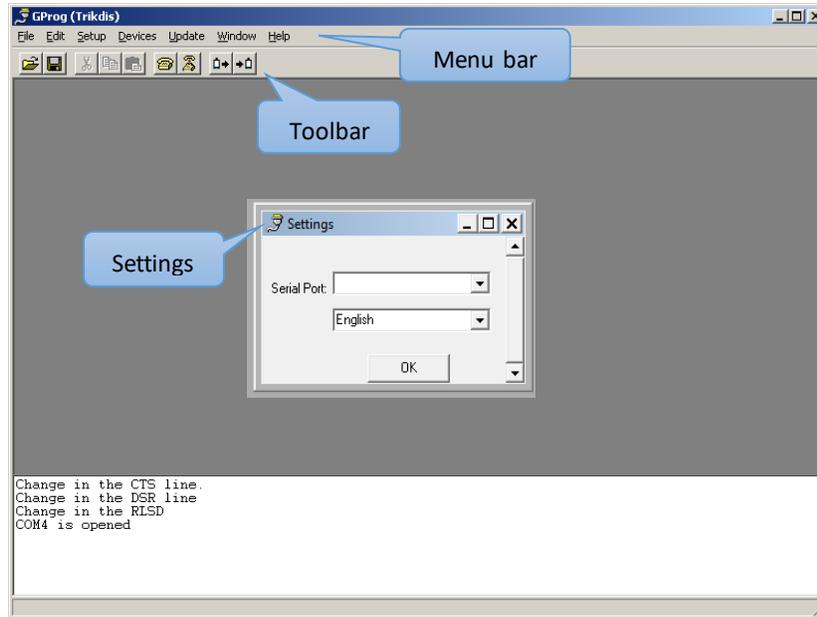
USB drivers must be installed on the computer. When the module connects to a computer for the first time, MS Windows OS should open the window *Found New Hardware Wizard* for installing USB drivers.

4. Download the USB driver file **.inf* for MS Windows OS from the website www.trikdis.lt.
5. In the wizard window select the function [*Yes, this time only*] and press the button [*Next*].
6. When the window *Please choose your search and installation options* opens, press the button [*Browse*] and select the place where the file **.inf* was saved.
7. Follow the remaining wizard instructions to finish the USB driver installation.

7.2.3 Starting GProg2

8. Start program by clicking GProg2 icon , then in Settings window specify serial port (e.g.: COM3).
9. In menu bar choose command [*Devices*] and select RT2.
10. Press the icon  in toolbar to connect receiver.

11. To read the operational parameters stored in the internal memory of device, press the  button.
12. When data download has finished a window *Configuration is received* will appear.

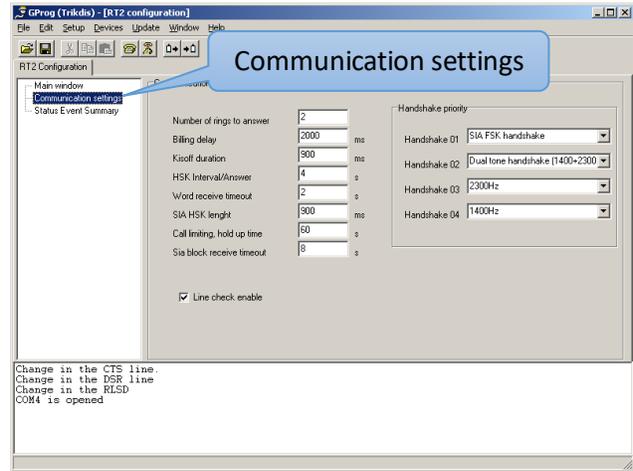
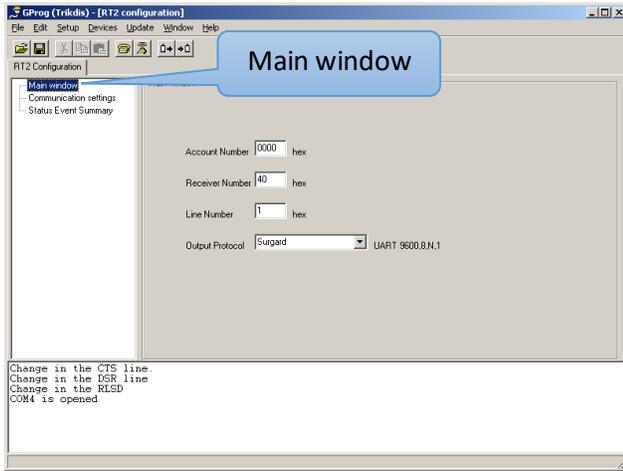


7.2.4 Toolbar icons description

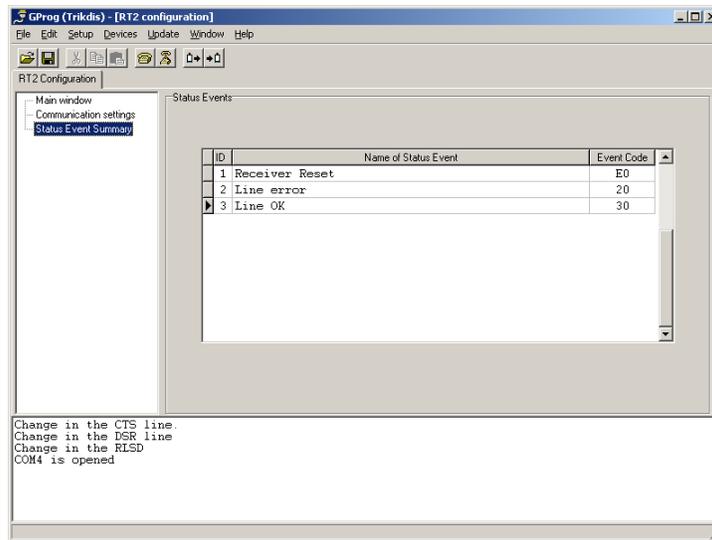
	[Open] – icon for opening saved file with extension “.tcfg”
	[Save] – icon for saving established parameters file with extension “.tcfg”
	[Connect] – icon for connecting to serial port
	[Disconnect] – icon for disconnecting from serial port
	[Receive config] – icon for reading parameters of the device
	[Send config] – icon for writing the new parameters into device memory
	[Generate configuration report] – icon for printing established parameters report

7.2.5 Setting parameters

13. In branch **Main window** set Surgard protocol.
14. If necessary, you can change parameters in branch **Communication settings**, the recommended values are shown in **7.1 Exploitation parameters of the receiver**.
15. To save parameters go to *[File/Write device]* in menu bar or press icon .
16. To save set parameters in your computer, go to *[File/Save us]*. File name, place to save may be selected freely. It can be used later as a template to configure other modules.



A Annex Service messages of telephonic communication receiver



Message	Code	Description
COM TROUBLE	05	communication failure between the device and concentrator
COM RESTORE	06	Communication with the concentrator restored
TEL LINE ERROR	20	Telephone line failure or disconnection
TEL LINE OK	30	Telephone line restored
MODULE DISCONNECT	C0	Device disconnected
MODULE CONNECT	C1	Device connected
RECEIVER RESET	D0	RESET button of receiver is pressed