

# VBRC-4

## Radio Communicator



**Installer Manual**

**17 December 2014**

# CONTENT

- 1. INTRODUCTION.....3
- 2. SYSTEM STRUCTURE.....3
- 3. SYSTEM PROGRAMMING WITH PC SOFTWARE.....5
- 4. TROUBLESHOOTING.....6
- 5. FIRMWARE UPGRADE.....7
- 6. VBRC-4 LED SIGNALS.....8
- 7. TECHNICAL DATA.....8

## 1. INTRODUCTION

VBRC4 communicator is ideal solution for installation places where radio communication infrastructure is already built. By means of the device **immediate alarm transmission** is guaranteed **without any additional operation cost**. Other main advantage is that the device is **independent from any service provider**. According to device type the VBRC4 can be connected to the serial port / telephone line connector of the alarm control panel. Although the communication is one-way, even so it is **stable and reliable** due to multiple event sending to monitoring station.

To use the highest range of provided functions **please read** carefully the *Installer Manual*.

For the confident programming and secure usage please keep all warnings in *Installer Manual*, with highly focusing to security directions.

## 2. SYSTEM STRUCTURE

VBRC-4 communicator is based on the TR48 UHF radio transmitter. The VBRC-4 is able to receive the telephone communication of the control panels with its Telco decoder and forward the events via its radio. The Telco interface can be used standalone, or with external telephone line, so communication is also possible through telephone line. The two-way Telco connection between the communicator and the control panel ensures reliable reporting and can be used with the most of the control panel manufacturers. VBRC-4 is able to receive communication from some control panel types (SECOLink, Alpha) through serial port. Additionally it sends 2 inputs status and test events.

As it uses a one-way radio, the VBRC-4 communicator sends every report multiple times, in packages. Each package contains the events more times (3 by default), and also, the packages are sent more times (3 by default). Every event has a unique identifier encoded, which helps the monitoring station to decide, whether it is a new event, or a resend/repeat of a previous one, so that it will receive the event only once.

The System ID of the target monitoring station can be set (1..15) according to the reception pattern of the repeater network. This way the routing of the radio transmissions can be set, and also it can be used to avoid unwanted duplicate receptions at overlapping reception areas, thus decreasing network traffic.



„VGA” connector for  
 - installation  
 - programming

#### Connectors description

**+12V** (Red, 1) – Positive power supply

*Note.:* Use at least 1,5 A capacity power supply.

**GND** (Black, 15) – Negative power supply

**INPUT 1** (Green, 2) – External contact input

**INPUT 2** (Orange, 3) – External contact input

**LINE-T** (Yellow, 4) – External telephone line

**LINE-R** (White, 5) – External telephone line

**PANEL-T** (Brawn, 6) – CP telco communicator

**PANEL-R** (Blue, 11) – CP telco communicator

**Serial RX** (13) – For connecting SECOLink, Alpha alarm control panels.

**Serial TX** (14) – For connecting SECOLink, Alpha alarm control panels.

*Note:* Different cable types are needed for usage of VBRC-4 through telephone line and serial port (with SECOLink, Alpha control panels).

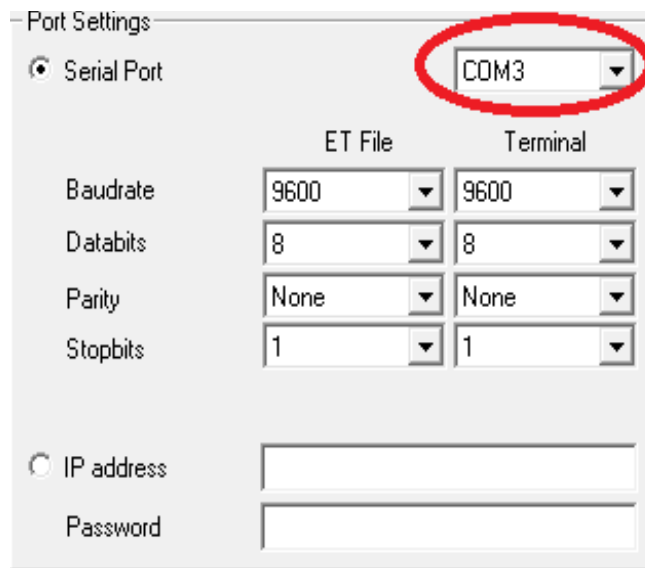
For the radio it is recommended to install a separate antenna with proper ground point. If used with a rubber antenna, connected directly to the radio antenna terminal, the transmissions can disturb the telephone communication. This problem may not be noticed immediately, but it may cause communication problems in the future.

*Note:* It is not recommended to use rubber antenna in any installation.

### 3. SYSTEM PROGRAMMING WITH PC SOFTWARE

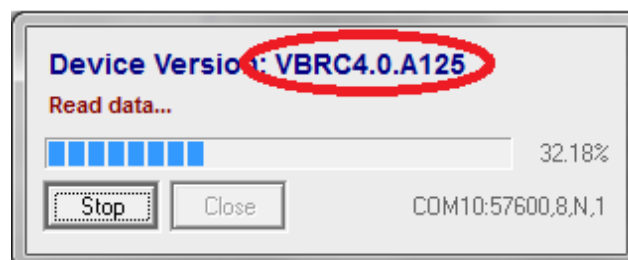
VBRC-4 module programming is allowed through serial port. Please use *Eni-Term* software for programming. The programming steps are the following:

1. By means of VUP cable and mini USB cable, connect the VBRC-4 module to the programming PC (for serial programming).
2. Please start Eni-Term software.
3. Choose the ET (settings) file for programming:
  - VBRC\_4\_v1.00.et – VBRC-4 module programming
4. In Communication / Port Settings menu set the communication port / IP address for programming.



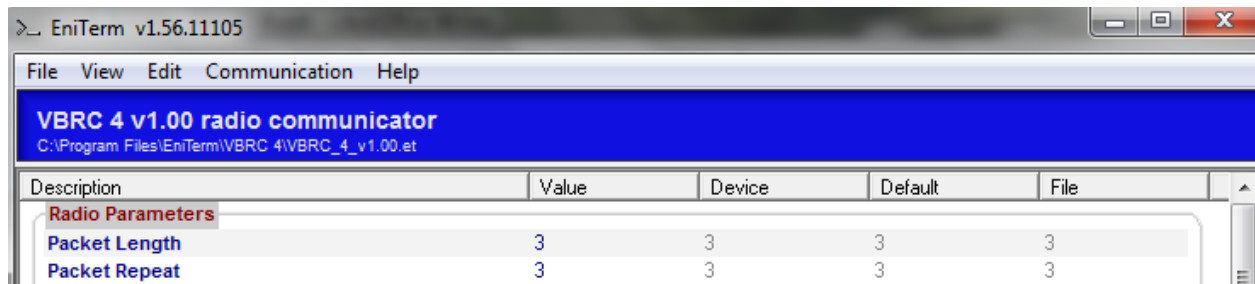
5. By clicking to *Communication / Read Data* menu you can read settings from device.

**Note:** During data reading (and sending) VBRC-4 firmware version can be checked.



6. Please execute the required settings in *Eni-Term* software.

**Note:** The software functions are shown in *Eni-Term* help menu.



7. Click to *Communication / Write Data* menu to send the modified settings to device.

**Note:** During data reading (and sending) VBRC-4 firmware version can be checked.

## 4. TROUBLESHOOTING

**TROUBLE:** Any abnormal operation in functions during the usage of the device.

**SOLUTION:** Firmware upgrade with the newest firmware file usually solve these kind of problems (see *Firmware update* part in manual).

**TROUBLE:** There is no connection between programming PC and VBRC-4 module (during serial programming).

**SOLUTION:** Check the cable plugging in PC side. In programming PC *Control Panel / Hardware / Device Manager* application you can check which COM port appears / disappears in device list during plug / unplug programming cable (with connected VBRC-4). Please check whether COM port setting is correct in programming software.

**TROUBLE:** No communication is received from alarm control panel / comm. trouble.

**SOLUTION:** Check, that the alarm control panel is set to DTMF (Tone) dial mode, communication should be enabled, there should be added phone number a client account, additionally Contact ID (Full) format should be selected. In some control panels might be required to disable 'telephone line monitoring' and 'wait for dial tone' options. It may help if you connect 1K resistor parallel to control panel TIP / RING connector.

**TROUBLE:** No serial communication with Paradox Esprit control panel.

**SOLUTION:** Serial connector of Paradox Esprit control panels only works if the PGM functions are not used.

**TROUBLE:** Communication between radio transmitter and Enigma receiver is unstable.

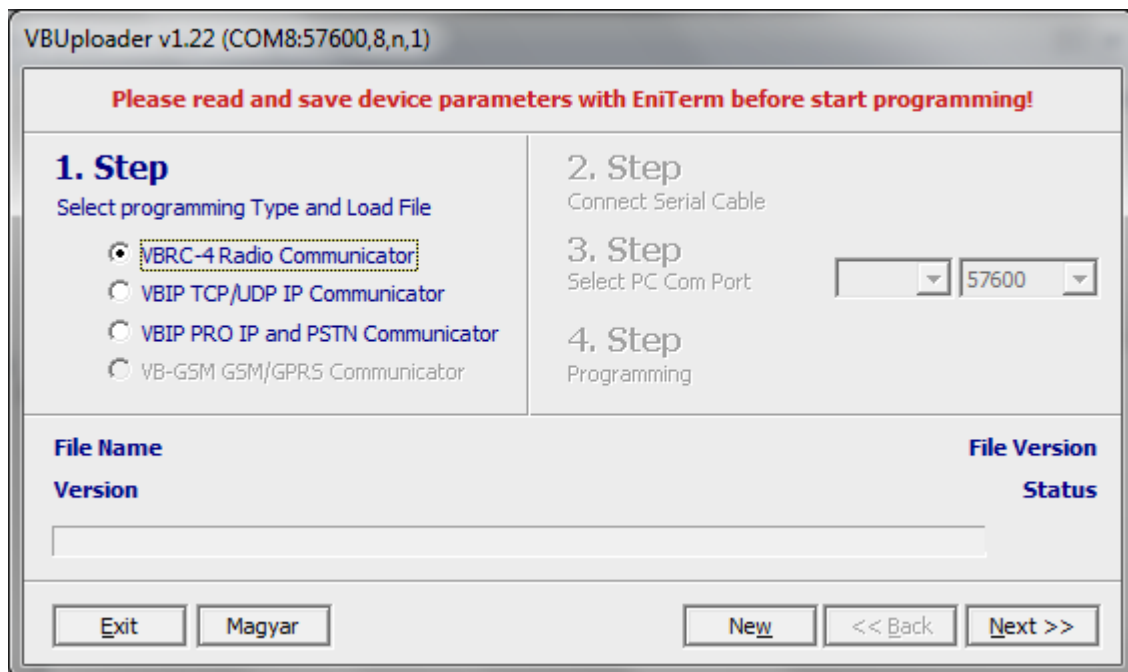
**SOLUTION:** There should be at least 7 signal level at Enigma receiver side. If the signal level is lower, antenna position or antenna type should be modified. If it doesn't help radio repeater unit might be required.

## 5. FIRMWARE UPGRADE

It is recommended to upgrade regularly device firmware to use new functions and eliminate possible bugs.

Firmware upgrade can be done by the following steps:

1. Get the latest firmware files from your distributor (VBRC-4).
2. Save settings from the VBRC-4 with Eni-Term software (please check 3. *System programming with PC software* chapter).
3. Start *VB Uploader* program for firmware upgrade.



4. Choose item (VBRC-4) for upgrade (1. STEP), then NEXT.
5. Choose the proper firmware file for upgrade (2. STEP), then NEXT.
6. Choose the COM port where VBRC-4 is connected (3. STEP), then NEXT.
7. Upgrade process can be started with *START* button.

8. **A Do not forget to send back the saved VBRC-4 settings at the end of the upgrade** (please check 3. *System programming with PC software* chapter).

9. To use new functions it might be required to get the latest *Eni-Term* software with the newest ET (setup) files – please download and use newest version.

## 6. VBRC-4 LED SIGNALS

2 quick red LED flashings – pause – 2 quick red LED flashings = Communicator is ready to use, no external telephone line

1 quick red LED flashing – pause – 1 quick red LED flashing = Communicator is ready to use, external telephone line is connected properly

Red LED lights continuously = During serial programming

Yellow LED flashes = When communication is received

Yellow LED blinks continuously = Low power supply voltage

## 7. TECHNICAL DATA

| Product                             | VBRC-4                       |
|-------------------------------------|------------------------------|
| Power supply                        | 12 V DC                      |
| Maximum current consumption         | 1.5 A                        |
| Operating frequency                 | UHF 440-450 MHz              |
| Transmission power                  | 2 W                          |
| Event receiving (through tel. line) | Yes                          |
| Event receiving (through serial)    | Yes (with individual cable)  |
| Input / Output                      | 2                            |
| Output type / Load capacity         | Open collector / up to 50 mA |
| Operating temperature               | -10 °C / 50 °C               |
| Case protection                     | IP 53                        |
| Sizes (W / L / H)                   | 72 x 118 x 34 mm             |
| Weight                              | 235 g                        |