conference mode (full duplex)

wireless PTT switch

simultaneous voice and data communication

AES-128 encryption*

built-in GPS receiver*

powered by two AA batteries
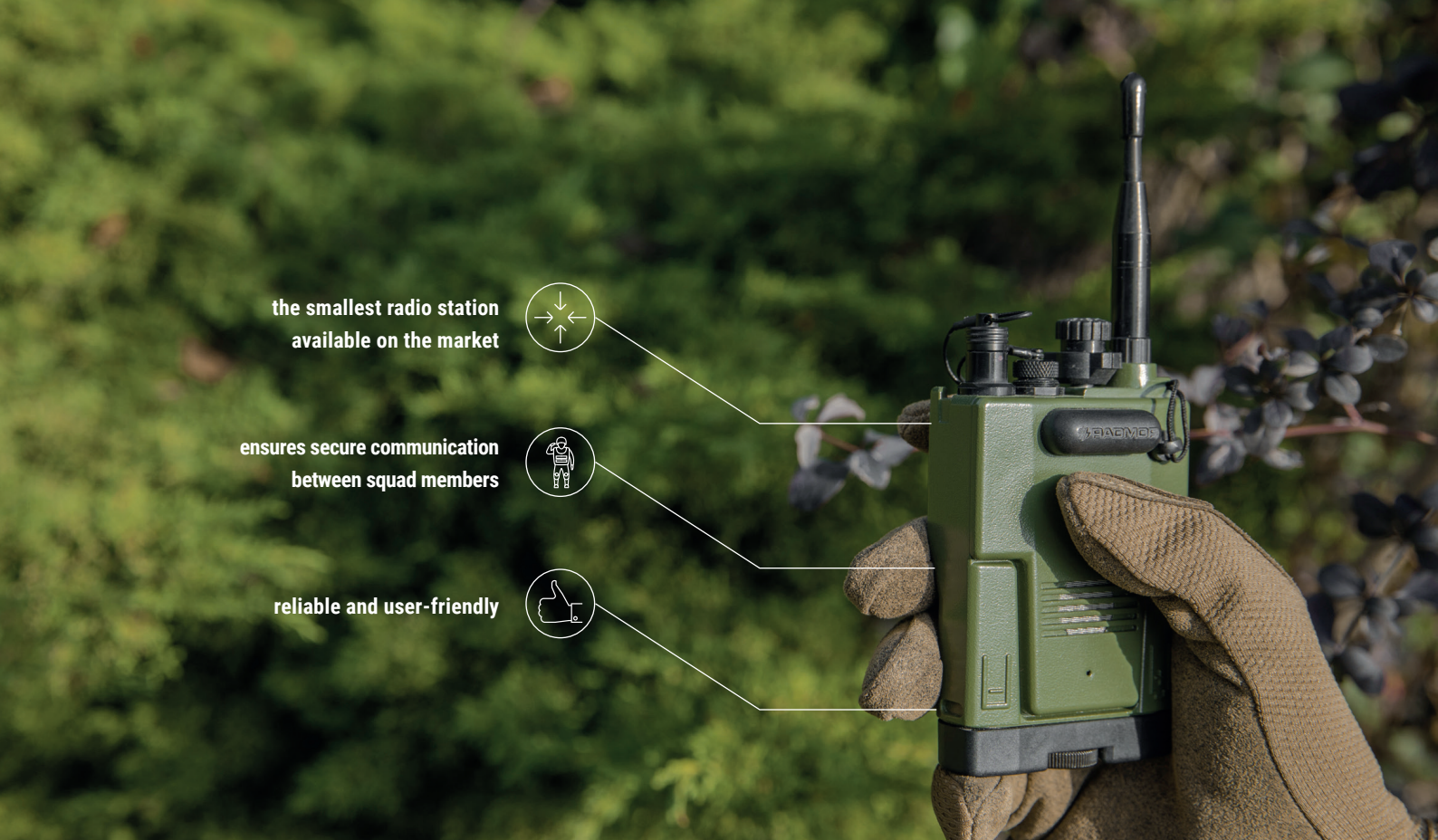
one of the smallest radios available on the market

* options; some services are available only in selected radio versions

WB GROUP

Soldier personal radio
R35010

the smallest radio station available on the market

ensures secure communication between squad members

reliable and user-friendly

General

The R35010 radio is intended for communication between team members or combat teams in small radio networks. It operates in the frequency band from 2405 MHz to 2480 MHz, and users can communicate using 16 channels. The R35010 operates in a Direct Sequence Spread Spectrum (DSSS) system with pulse reception and transmission. Impulse works allows to radically minimize the risk of transmission detection. It is a small and lightweight device designed for immediate use.

Simple operation and reliability enables communication between all members of the task group. The radio allows to create up to 64 different radio networks operating on the same frequency. In addition, the grouping feature gives ability to create radio networks of a variety of structures, including hierarchical.

Optional equipment

GPS

The device may have built-in GPS receiver for geographic positioning, allowing transmission of GPS position (depending on configuration): autonomously with different repetition times, at the end of each broadcast, or on demand by the other radio. The radio has a built-in GPS antenna, but it is also possible to connect an external antenna.

AES encryption

R35010 may be optionally fitted with AES encryption algorithm.

The types of communication available on the R35010 radio

- simplex digital voice communication with the initialization of transmission by built-in PTT button, wireless PTT (WPTT)

- simplex digital voice communication with automatic retransmission

- duplex digital voice communication (conference mode) with transmission being enabled by WPTT or by voice (VOX), with the possibility of simultaneous data transmission (19.2 kb/s). A maximum of 4 radio stations in a given network can transmit simultaneously; the number of listening users is unlimited.

- max data transmission rate, up to 125 kb/s

Retransmission

Unique in personal radios, and at the same time very useful function is the possibility of automatic retransmission. Working with retransmission dramatically increases the range of communication. It provides better „coverage" of the area, bypassing the various obstacles in the urbanized area or in buildings. It works well in a heavily corrugated area or when there are other obstacles to communication. Only possible in simplex mode.

Initialization of transmission

- built-in PPT button

- wireless PTT button (WPTT)

- by voice (VOX) – in conference mode

Wireless PTT button

Power supply

The radio is powered by two AA size batteries, but you can also use ordinary alkaline batteries. They enable the radio to operate for up to 16 hours (transmit: receive: listen: = 1: 1: 8) – depending on the type of operation.


Chargers

Voice information

In the absence of a display, providing by the device voice information about the selected channel and low battery is a very useful feature. These messages are delivered to the headset loudspeaker if it is connected to the radio or via the internal loudspeaker for manual operation. This function is activated during radio configuration.

Fill Gun

Quick programming – Fill Gun

The „Fill Gun" programmer is used to quickly copy the parameters of radio pre-sets.
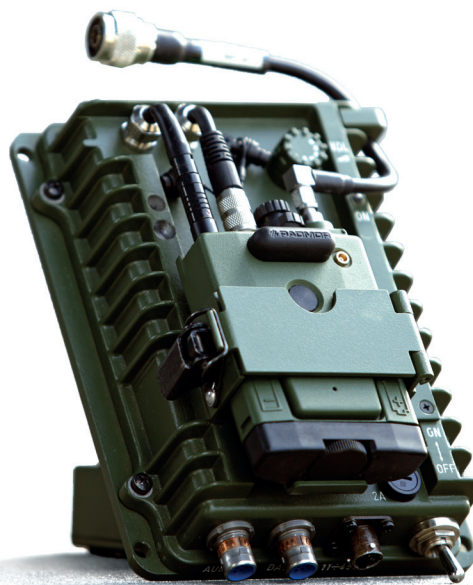
Mobile adapter

Mobile version

The vehicle adapter allows you to mount the radio in the vehicle and connect it to the intercom (on-board internal communication network). Connecting to a mobile antenna increases the range of communication. Good sound quality can be ensured by connecting adapter to an external handset. After mounting of the radio in the vehicle, it is powered from the on-board network.

Group function and integration

Activating the grouping feature gives you the opportunity to create radio networks of various structures that selectively transmit or receive correspondence. You can create this way e.g. hierarchical networks mapping the command vertical structure in the service, as well as networks integrated with the high-level radio networks HF/VHF/UHF.

Emergency erasing

The user can quickly erase all the settings of the radio. After that normal operation in the transmission and reception mode is not possible. The restoration of normal operation is possible only by re-configuring.

Accessories

- wide range of headsets

- wireless WPTT switch

- vehicle adapter for mobile set

- handset to work with mobile set

- deck antennas

- single, or ten socket charging devices for recharging radios or independent devices for rechargeable batteries

- cases – for attaching the radio over a shoulder, or the MOLLE vest

- clip for attaching the radio to a belt or the MOLLE waistcoat

- integrator enabling cooperation of R35010 with Rother radios manufactured by WB GROUP

TECHNICAL SPECIFICATION

Basic technical parameters

Frequency range	**2405 ÷ 2480 MHz** (ISM band)
Channels raster	**5 MHz**
Number of programmable pre-sets	**16**
Modulation technique	**DSSS**
Voice encoding method	**CVSD**
Max data rate	**125 kb/s**
Encryption algorithm (option)	**AES-128**
GPS receiver (option)	**built-in** (with internal or external antenna)
Transmitter RF power	**800 mW; 650 mW; 400 mW; 100 mW**
Receiver LF power	**250 mW @ 8Ω** (internal speaker)
	20 mW @ 32Ω (external speaker)
Power supply voltage	**2.1 ÷ 3.6V** (2 x AA)
	5,0 V through DATA socket
Access type at duplex	**TDMA**
Number of users at full duplex (conference)	**4 simultaneous transmissions**
	unlimited listeners

Basic performance parameters

Radio range in the open area	**1200 m**
Range of WPTT/DWPTT	**2 m**
Operation time (Tx/Rx/S'By = 1/1/8)	**up to 16 godz** (depending on operation mode)
Power supply	**2 x AA NiMH battery** or **2 x alkaline battery**
Dimensions (without antenna)	**115 x 69 x 37 mm**
Weight (without battery and chargers)	**270 g**
Dimensions of WPTT	**64 x 40 x 18 mm**
Weight of WPTT (with battery)	**53 g**
Power supply of WPTT	**CR2450 3.0V lithium battery**

The radio complies with the NO-06-A107 and MIL STD-810G environmental standards and provides IP67 protection.