

# ROTA - results over the air

- **ROTA**
- Version: 0.0 2012.06.xxx
- Date: 01.03.2012 (Tarmo Klaar)
- Homepage: <http://www.tak-soft.com>

## Technical specification:

- GSM / GRPS module (GPRS Class 12)
- 3,7V 2400mA Li battery (Working time ~48h)
- Working temperature: -10..30C
- Weight: 300g
- 2 COM ports for SI-readout stations with Serial port (Station communication baud rate 38400, extended mode)

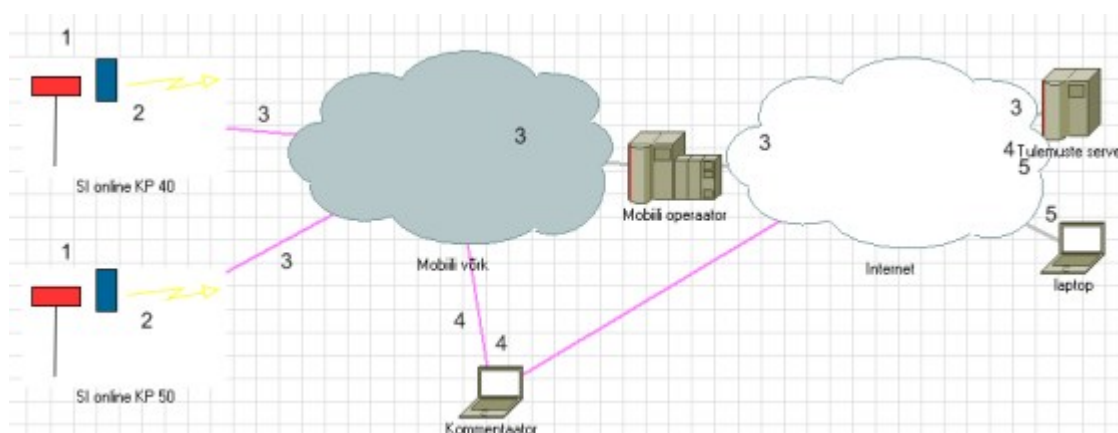
## How it works:

ROTA (results over the air) is solution for SPORTident punching system to send punch information from forest to event center by using GSM/GPRS technology. System is not design to send information immediately; delivery delay is about 20...40sec.

ROTA device is raining proof and have internal battery for about 40 h works.

ROTA is sending data to the internet web server. Sending interval is configurable as also service URL. Any web server with PHP and mySQL support could be used. If there are network error, ROTA will store locally punches (up to 90) and tries to resend if network will be available again.

Event software will download information from web service using own internet connection (could be also mobile-internet (GPRS/EDGE/3G etc).



## Configure web service

1. Edit setting file: rota\_setup.php with correct database information
2. Copy 3 files and 1 folder to web server
3. Test service

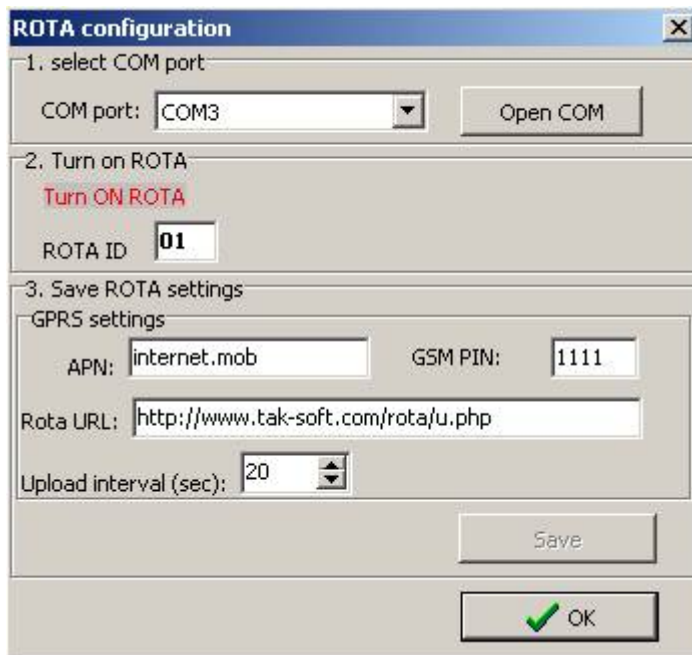
## Setup ROTA



1. Charge fully battery
2. Insert battery, **check polarity!**



3. Connect ROTA with computer using additional cable
  1. Start **Rota monitor** software
  2. From menu select Setup and **ROTA Configuration**



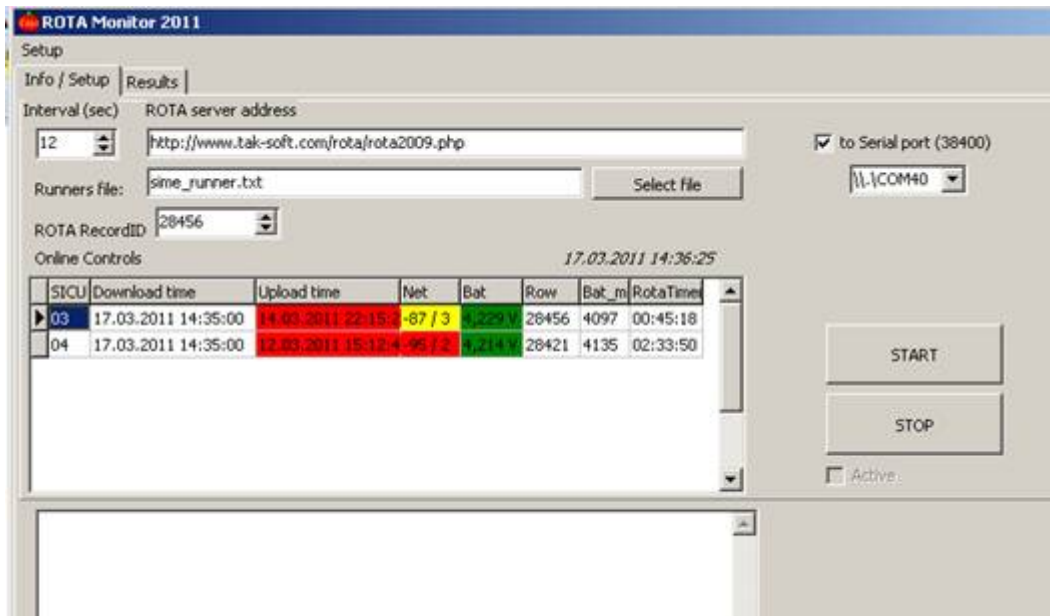
- 3. Enter correct internet access point (APN) and SIM card **PIN number**
- 4. Enter service **URL** (max xxx chars) [http://server.ee/rota\\_up.php](http://server.ee/rota_up.php)
- 5. Enter **interval** (10..60sec)
- 4. Turn **OFF** ROTA device
- 5. Add SIM card



- 6. Close ROTA box
- 7. Prepare SI - readout station(s)
  - 1. Set communication speed to **38400** bps
  - 2. Program SI station(s):
    - 1. Set correct **code-number** and **working time**
    - 2. Set **Auto Send**
    - 3. Set **Extended Mode**
- 8. Connect SI station(s) to ROTA COM1 or COM2 port.
- 9. Turn ROTA device **ON**
  - 1. Check ROTA LEDs
  - 2. Make test punch (check that correct COM port led flash) and check that device will send data to server (GPRS and BUSY led's flashing).
  - 3. Check punches from web service.

## Setup ROTA monitor

- 1. Execute ROTA monitor



2. Select "Info/setup" page
  1. Enter Service URL (**Rota server address**) and downloading interval (in seconds)
  2. Select **runners file** (CSV file in SIME format)[optional]
  3. Select **Serial port** (for sending punches to event software)
  4. Activate service by pressing **START** button
  5. Check status information

Rota monitor will start download new punches from web server after defined interval. You may check status from ROTA online controls status table and results from Results page (if runners file is defined, then results are with runners names). If "To serial port" is checked, then ROTA monitor emulates Sportident station and sends out punch record as it comes from Sportident station (using baud rate 38400 and Sportident Extended instruction).

Each record in web server have own unique ID. If something fails, you may change Rota **RecordID** and Rota manager will download results again.

## Setup speaker software

Follow instruction from speaker or event software manual.

For sending punches from ROTAmonitor to event software:

1. If using Online Manager software, then no need for external programs. OnlineManager will load data directly from web server.
2. If ROTA and event software (Sportsoftware or other) are on different computers - use serial cable;
3. If ROTA and event software are on same computer - 2 serial ports and serial cable (one for output, one for input). You may use USB-Serial adapters.
4. If ROTA and event software are on same computer without serial ports - use Zero-Modem virtual ports.

Freeware Zero modem emulator: <http://com0com.sourceforge.net/>

1. Install software

2. Define virtual ports using setupg.exe
3. Start RotaMonitor and select created virtual port
4. Start event software and select second virtual port for input.

Latest software and information <http://www.tak-soft.com/services/rota/>

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