SAK-232 - Quick User's Guide

Manual control

Sumary of manual modes:

F1   **manual movement** (indicated by a horizontal bar in upper-left corner of the display)

F2   **"zero" position** (allows to assign a "zero" position, like a north direction, at any physical position of the rotor)

F3   **soft limits** (when in the "F3" mode, simultaneous press of both E and W buttons starts a procedure of automatic limits search; however the rotator must be equipped with its own hard-limit switches)

F4   **factory settings** (press both E and W buttons simultaneously when in the F4 mode, to recall factory settings)

F5   **gear ratio** (when in the F5 mode: first, with E and W buttons select number of pulses and confirm with the P button; then, in a similar way select and confirm number of degrees equivalent to the selected number of pulses)

> **Note:** use the following gear ratios for RAU and RAK rotors from Zelpro: RAU: 6 pulses/4 degress, RAK: 4 pulses/4 degress;

To select one of the above modes, press the P button and hold it until a symbol of the required mode is displayed.

Usual way of configuring your SAK-232 is setting gear ratio of your rotator first (F5), and then setting soft limits (F3).

Rotor should be connected, with its 4 wires, according to MOTOR and PULSE labels on the rear side of the SAK-232.

Stored positions

There is a possibility to store of up to 199 pre-programmed positions, for easy later recall. To enter into this mode, press and hold P and then immediately W.

Storing positions:
- enter the F1 mode (indicated by a horizontal bar in the upper-left corner);
- move your rotor to the required azimuth, using E and W buttons;
- press and hold P for approximately 1.5 seconds – the display will start blinking
- select required position number, using E and W buttons;
- press P to accept, the display starts blinking faster;
- press and hold P again; the display stops blinking and the position is stored.

Computer control

The SAK-232 is equipped with a standard RS-232 serial interface, which you can connect to any PC.

Note: If your computer does not have an RS-232 interface, you can use its USB interface, with a USB to RS-232 converter. Ask for one at your local computer store.

The RS-232 settings are:

    9600, 8N1, no handshake

which details to:

Baud rate:	9600 bps
Word length:	8 bits
Patiry bit:	no
Stop bits:	1
XON/XOFF:	no
RTS/CTS:	no

The SAK-232 can cooperate with many programs for hams amateurs having possibility to control rotors. One of such programs is LOGGER (http://www.kc4elo.com). To use this program configure it to use a Yaesu rotor (Config->Rotor Type->Yaesu GS-23/GS-232) and configure available RS-232 port to the settings given above (Config->Rotor Port).

You can also use any terminal program. HyperTerminal is one of such programs. It is available in standard distributions of MS Windows family of operating systems. Use the commands given in the below command reference. Each command should be terminated with <ENTER> key.

Command Reference

Each of the below commands consists of a command code, being a single capital character. The command may be followed by one or more parameters. The parameters are separated by <SPACE>. Each command is terminated by <ENTER>.

A aaa

Move to a required azimuth, given by the **aaa** number; **aaa** should be a number between 0 and 359.

K

Automatically find and store limit positions of the rotor. Requires the rotor to be equipped with hard-limit switches.

O aaa

Orientation – assign a real known azimuth to the current position of the rotor.
aaa denotes a number between 0 and 359.

P pp ddd

Set gear ratio.
pp   number of pulses, a number between 1 and 999
ddd number of degrees, a number between 1 and 24;
   ddd must not be greater than **ppp** (not less than one pulse per degree);
   pp/ddd must not be greater than 24 (not more than 24 pulses per degree)
A "gear ratio" is an individual parameter of any type of rotor and indicates how many pulses of its internal pulse-switch are required to move by a specified angle expressed by degrees.
Example: by issuing a:
P 5 3
command, you specify a rotor which generates 5 pulses ber each 3 degrees of its rotation move.

R ddd

Relative move.
Move by **ddd** degrees, relative to the current position; **ddd** may be a positive or negative number, with its sign indicating direction of move. If **ddd** exceeds programmed soft limits or rotor's hard limits, then actual move is made to that limit only.
Examples:
R 12 move "right" by 12 degrees
R −45 move "left" by 45 degrees

S

Stop.
Immediate, unconditional stop of any move in progress.

Manufacturer:

http://www.zelpro.com.pl