
RF550 Encoder
Version 1.1
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USER MANUAL

Commands available from the front panel:

Encoder knob: rotate to set the value of the selected parameter
(VF0 frequency or memory number).

Encoder knob switch (press knob to activate):

VF0 mode (cursor in the display FREQ: line)

short press : change the frequency digit to be modified;
medium press : change mode to memory;
long press : copy the VF0 frequency in the currently selected memory;
very long press: toggle LCD backlight.

Memory mode (cursor in the display Mnnn: line)

short press : change the memory digit to be modified;
medium press : change mode to VF0;
long press : copy the currently selected memory frequency to VF0;
very long press: toggle LCD backlight.

Short press means pressing the knob for less than 1s.

Medium press means pressing the knob for more than 1s but less than 2s.

Long press means pressing the knob for more than 2s but less than 4s.

Very long press means pressing the knob for more than 4s.

To ease knob press time evaluation, a growing block indicator is shown at left of the frequency value. If it is `_`, then this will be a short press. If it is `■`, then this will be a medium press. If it is `■`, this will be a long press. Lastly, if a B appears, this will be a very long press (backlight toggle). Release the knob when the desired time has elapsed.

In memory mode 1000 memories are available, numbered from 0 to 999.

BACKLIGHT WARNING: At least on the LCD I used, the backlight adds some 80mA to the supply current, which without backlight is about 120mA. Remember that the encoder is powered by the receiver-supplied +15V which is rated for 200mA maximum.

Available serial commands (from the Arduino USB interface):

B[<n>]	Set/Get blinking cursor status: <n>=0 OFF <n>=1 ON.
C	Copy current memory frequency to VF0 and go to VF0 mode.
EEE	Init EEPROM (three uppercase E required).
F[<fr>]	Set/Get VF0 frequency.
H	Show this help text.
I	Show program info and license.
L[<n>]	Set/Get backlight: <n>=0 OFF <n>=1 ON.
M[<nnn>]	Show current/Recall memory <nnn> and go to memory mode.
O	Save options in EEPROM.
U[<n>]	Set/Get numeric format: <n>=0 ITA, <n>=1 USA.
R	Returns RRR:<version>. Used by RF550Control to check encoder.
S	Returns current status.

T	If compiled in (default: no), performs an output bits test.
X[<m>]	Set VF0/Memory mode: <m>=V VF0, <m>=M Memory.
W<mnum>[:<f>]	Write current VF0 frequency/frequency <f> to memory mnum.
Z[<n>]	Set/Get non-significant zero suppression: <n>=0 OFF <n>=1 ON.

If a command is issued without the optional parameter, shows current value.
To avoid unwanted deletions, the command to reinitialize the EEPROM must be issued in UPPER CASE and repeated exactly three times, so it is required to type EEE, any other form (e.g. eee, EEEE, EE, E, etc.) triggers an error.

Commands have a 5s timeout, after which a CR is implicitly assumed, so if you type, say, F, and then stop typing, after 5s the F command is executed.

A PC GUI control program (RF550Control) is also available. You can find both Linux and Windows 64 bits executables along with the source code for Lazarus in the RF550Control.zip archive.