ьIRobzyl Manual - Firmware for Quansheng UV-K5

Spectrum analyzer capable of processing up to 250 channels per second. Incredibly fast list scanning, convenient parameter configuration menu, quick history saving, changing scan types,
bands, channels "on the fly", multi-selection lists and bands (for the Russian Federation 32 bands) and
much more. Support EEPROM Expansion with 512k Version: Allows you to manage 1000 channels.

4 Scan Modes: Frequency, Band, Band, and List – ultra flexible for any situation! Transmit directly from spectrum mode. AFC - enable automatic frequency tuning.
MANAGE SEARCH HISTORY: You can manage your history in one click, scan separately
Channels in history, delete, blacklist, save to memory with the click of a button. Add a channel to the scan list from VFO mode in one click.

DUAL VFO MODE HAS BEEN REMOVED. - It doesn't make sense, because there is only one radio chip in the radio and it jumps from channel to channel one way or another. This freed up space and expanded the scanner's functions. In List Scan mode, you can monitor many more channels at once.

Firmware installation is carried out as standard. Additional calibrations do not need to be sewn.
When switching from another firmware, we carry out a rollback (stock + native calibrations). Then we sew.
After flashing, we recommend doing a hard reset from the menu.

VFO (DIRECT FREQUENCY INPUT) AND MR MEMORY MODE

On-screen indication:
Statusbar: TX/RX/PS modes, timer, backlight mode, battery
Top row when receiving: RSSI data. S-Meter. Dbi. **On transmission:** audio bar.
Middle Row: Left Block (S +/-) PTT Mode and Offset. Scan List.

Button 1 (long hold or F+1) - Switch to VFO mode with frequency transfer.
button 2 (long hold or F+2) - Add channel to list or change list (in MR mode) L1-L15
3 button (long hold or F+3) - Toggle VFO/MR mode

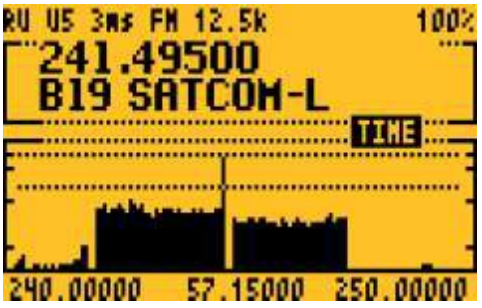
VFO & MR MODES - The bottom row corresponds to the logic of the buttons.

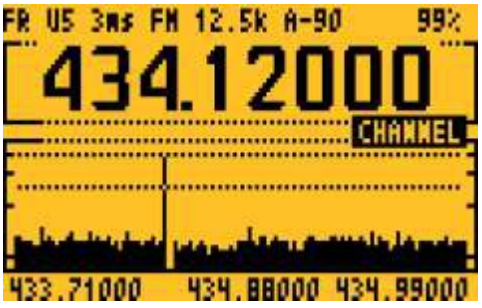
F+ ↑ ↓ Buttons- SQL Control (Noise Suppressor) **Button 4**
(Long Hold) - Change Bandwidth Button **5** (Long Hold) -
Change Step
Button 6 (Long Hold) – Change Power
Button 0 (Long Hold) – Change Modulation
Button 9 (long hold) - Turns on the constant backlight. Pressing it again returns the mode.
F+0 button - Radio. The radio has a simple look. Up and down search for the nearest channel.
Scan button (long hold or F+Scan) - Scan signal frequency
M button - start the menu

SPECTRUM ANALYZERS (scanners)

F+7 - List Scan (Display in the upper left corner SL) **F+8 -** Band Scan (Display in the upper left corner RU) **F+9 -** Lane Scan (Display in the upper left corner of FR)

Once you go to any of the scanners, you can switch between them with the 6 button





SPECTRUM ANALYZER MODE

The firmware offers three different kinds of scanner (spectrum analyzer).

F+7 - Scan Lists (SLs)

F+8-Band Scanning (RU)

F+9 - Frequency Response (FR/RG)

Button 1 - Switch Frequency to Listen **Button 2** - Easier Access to Simple Scanner Screen **Button 3** - Select Bandwidth to Listen to
button 4 - menu with one or more options for selecting lists or SL/RU bands
button 5 - access to settings (options menu) **button 6** - navigation through SL/RU/RG/FQ scanner modes **button 7** - saving basic settings
Button 8 - options for displaying additional rows in the advanced mode
Button 9 - Modulation Selection
Button 0 - Access the history screen
Scan/F buttons – setting the Uxxx noise reduction parameter
M button - switch to monitoring on frequency
Fn1 - Switch from Normal Mode to FL Mode (Frequency Lock, Monitor)
Fn2 - blacklist frequency for listening

buttons [↑] [↓] - navigation through lists or bands

SPECROANALYZER PARAMETERS (BUTTON 5)

The control of all parameters of the spectrum analyzer is the same for all modes.

Button 5 - Open the options menu. **buttons** ⬆⬇ - move through the points
buttons 1 and 3 - name the value. **Button 7** - save parameters
button 1 in the frequency input point activates the input mode
button 3 in the history clearing and reset points activates the

DelayRssi - Delay in RSSI measurement before changing frequencies (in ms) - affects the scan speed. **SpectrumDelay** - Pause time after signal detection (in ms) - if 0, continues the scan immediately. **MaxListenTime** - Maximum time to listen to the signal (in seconds) - After that, the scan continues. **PTT Emission** – What to do when pressing PTT: LAST VFO / NINJA (Random Free / LAST RECEIVED
FStart - Initial frequency of the scan range (in MHz).
FStop —End frequency of the scan range (in MHz).
STEP – Frequency scan step (in kHz): 0.01, 0.05, 0.1, 0.5, 1.0, 2.0, 5.0, 6.25, 10.0, 12.5, 20.0, 25.0, 50.0, 100.0.
ListenBw — Bandwidth: WIDE (25 kHz) / NARROW (12.5 kHz).
Modulation – Modulation Type: FM/AM.
DEFAULT PARAMS - Resets all spectrum parameters to factory (3 seconds hold).
RX_Backlight_ON – Backlight when receiving a signal: ON / OFF.
Freq Counting — Frequency counter in history: ON (counts the number of times) / OFF (counts time).
CLEAR HISTORY — Clear scan history (3 seconds hold).
RAM — Display of free RAM (for information only).
PowerSave – Power Saving Mode: OFF / 100ms / 500ms / 1s / 2s / 5s.
Noislvl_OFF — Noise level for disabling reception (above this — the signal is counted). **UOO_trigger** - Additional threshold for UOO mode (50 - UOO on, 0-49 - normal U). **POPUPS** - Popup display time (in ms) - 0 = disabled.

U is the trigger threshold (RSSI level trigger).
When the RSSI (signal) on any frequency exceeds U, the spectrum "stops" at this frequency, eavesdropping begins).The higher the U, the more difficult it is to find the signal (you need a very strong signal to stop scanning).The lower the U, the faster it stops at any signal.

With the 7 button, you can save the settings for each list or band separately.

SELECTING SCAN LISTS OR BANDS (BUTTON 4)

In the list (SL) and band (RU) scanning modes, you can select only the rows you need.

In selection mode**, press 4** to select a row and move to the next one for multi-select.
Press 5 to select one row while discarding the rest.
EXIT - return to scanner

To scan by range, specify the range and conditions in the options menu (5). Save them (7)

WORK IN THE SEARCH HISTORY MODE (BUTTON 0)

Buttons[↑][↓] - Navigation through history
Button 1 – Skip Frequency
button 2 - save frequency to the nearest empty memory location
button 3 - remove frequency from history
button 5 - scan history only button **8** - clear history
Scan/F buttons – setting the Uxxx noise reduction parameter
M button - switch to monitoring on frequency
Fn1 - switching from normal mode to FL mode
Fn2 - blacklist frequency for listening

DETAILED FREQUENCY MONITORING (M BUTTON)

When you press the transmit button, you will enter VFO mode with a fixation on the selected frequency or channel (if you have saved this frequency with the 2 button). By holding the 2 button in home screen mode, you can add a channel to the scan list (s1-s5).

In the detailed monitoring mode, you can control the captured frequency.
M button - go to detailed monitoring parameters

2/8 button - move through the list **Buttons**[↑][↓]- Changing the value of a pip

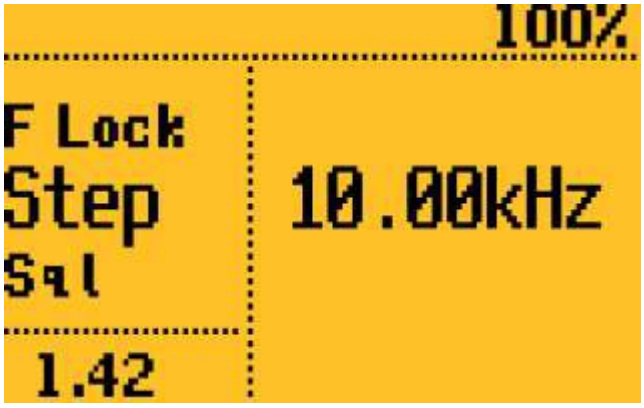
LNAs – Low Noise Amplifier (LNA) – the signal amplification stages in front of the mixer.
LNA – Gain of the first LNA stage. – higher = stronger signal but more interference.
PGA – Programmable Gain Amplifier (after LNA). – Balance between sensitivity and distortion.
MIX - Mixer Gain (Frequency Mixing).- Higher = Better Dynamic Range but More Noise. **XTAL F Mode Select** — Quartz filter (XTAL) filtering mode (reduces noise, but can distort). **OFF AF Rx de-emp** — Disabling de-emphasis (correction of pre-empsions) during reception.
Gain after FM Demod — Gain after FM Demodulator. — Adjusts the receiving volume.
RF Tx Deviation – Transmission frequency deviation (FM deviation). – Affects the transmission bandwidth (higher = louder, but more spectrum).
Compress AF Tx Ratio - Compresses the dynamic range.
Compress AF Tx 0 dB — Compression level 0 dB in transmission.— Compression start point.
Compress AF Tx noise — Compressor noise during transmission. — Noise suppression in quiet areas. **MIC AGC Disable** - Disables automatic microphone gain control (AGC).
AFC Range Select — AFC (Automatic Frequency Tuning) operating range.
AFC Disable - Disable AFC.
AFC Speed - AFC Speed.

NINJA MODE

To activate the ninja mode, go to the F+4 list scan mode.
Go to the options menu **(button 5)** and select PTT-NINJA MODE. Save the setting **(button 7)** The channels must be loaded into the walkie-talkie via chirp and the scan lists are set. Select the list with the channels of which you will work. Repeat the selection on the second radio. Now when you press the transmit button, the radio will be randomly change the channel for receiving and transmitting within the list. You can communicate without leaving the scanner

mode.

MENU ITEMS



In the menu, you can calibrate the battery readings and select its type.
You unlock the transmission range at your own risk. Remember the laws and follow them!

MENU
Sql (MENU_SQL) – Squelch level – from 0 (always open) to 9 (very strict).
Bandw (MENU_W_N) — Channel bandwidth: WIDE (25 kHz) or NARROW (narrow, 12.5 kHz). Demodu (MENU_AM) — Demodulation type: FM (default) or AM (aviation).
Roger (MENU_ROGER) — Turn on/off the "roger beep" (end-of-pass tone). Compnd (MENU_COMPAND) — Compunder (compression/expansion of sound): OFF / TX / RX / TX+RX. ScraEn (MENU_SCREN) – Enable scrambler (voice encoder) – ON/OFF.
Scramb (MENU_SCR) — Selects the scrambler number (if ScraEn is enabled).
ScanLi (MENU_S_LIST) - Select the Scan List.
TxTOut (MENU_TOT) - Transmission Timeout (TOT) - The amount of time that PTT can be held (in seconds). Mic (MENU_MIC) - Microphone sensitivity (microphone amplifier).
BackLt (MENU_ABR) — The screen backlight lasts when the buttons are pressed.
BLMin (MENU_ABR_MIN) - Minimum backlight brightness (in percentage). BLMax (MENU_ABR_MAX) - Maximum backlight brightness (in percentage).
BltTRX (MENU_ABR_ON_TX_RX) – Send/receive backlight: OFF / TX / RX / TX+RX. SqTone (MENU_SQL_TONE) — Turn on/off the tone noise canceller (CTCSS/DCS). RxDCS (MENU_R_DCS) is a DCS receive code (digital subtone).
RxCTCS (MENU_R_CTCS) is a CTCSS receive code (analog subtone). TxDCS (MENU_T_DCS) is a DCS transmission code.
TxCTCS (MENU_T_CTCS) is a CTCSS transmission code.
TxODir (MENU_SFT_D) - Frequency Offset Direction (TX Offset): OFF / + / -. TxOffs (MENU_OFFSET)—The value of the frequency offset (TX Offset) in kHz.
RxOffs (MENU_RX_OFFSET) — RX Offset.
BatSav (MENU_SAVE) – Battery Save: OFF / 1:1 / 1:2 / 1:4 / 1:8. ChSave (MENU_MEM_CH) — Saves the current frequency to the memory channel.
F1Shrt (MENU_F1SHRT) - Short press the side key of F1 (Side1). F1Long (MENU_F1LONG) - Long press the F1 side key. F2Shrt (MENU_F2SHRT) - Short press the F2 (Side2) key. F2Long (MENU_F2LONG) - Long press the F2 side key. BatCal (MENU_BATCAL) - Battery Calibration.
BatTyp (MENU_BATTYP) — Battery type (Li-ion, NiMH, etc.).
TxPwr (MENU_TXP) – Transmit power: LOW / MID / HIGH.
BusyCL (MENU_BCL) - Busy Channel Lockout. BatVol (MENU_VOL) — Display the battery voltage.
POnMsg (MENU_PONMSG) - Power On Message. KeyLck (MENU_AUTOLK) — Auto Key Lock. BatTxt (MENU_BAT_TXT) - Battery Text - Display % or V. ChDele (MENU_DEL_CH) - Delete memory channel.
ChName (MENU_MEM_NAME) — Name of the memory channel.
Reset (MENU_RESET) — A full factory reset.
F Lock (MENU_F_LOCK) — Frequency Lock.