

Quansheng UV-K5 - Manuale del Firmware UV 2.9R5

The Ouansheng UV-K5, K5(8), K6 and k5-plus radios have the option of being upgraded with unofficial firmware.

Therefore, I disclaim all liability for transmitting outside the bands allowed by the manufacturer. What you do with your radio is at your own risk.

These updates are substantial to the point that there was a need to rewrite the manual, as the menu and functions are different.

Please note that the use of this radio requires an HAM radio licence.



This manual is for version 2.9R5 of the IJV firmware.



1. Official website of UV-K5

Click on the model name to find the official Quansheng radio pages UV-K5; UV-K5(8).

In the final part, there is the section "**Downloads**" the manual and the latest official firmware.

Otherwise, download it directly here:

 \Rightarrow Direct link to UV-K5 - \rightarrow k5_Firmware_v2.01.31_publish. \Rightarrow Direct link to UV-K5(8) \rightarrow k6_Firmware_v3.00.15.bin. ⇒ Manuale UV-K5 in italiano.

2. The IJV Firmware

Based on the firmware of 1of11. IUOIJV takes this radio to the next level!

2.1 Download Firmware-IJV

- Click on the button to download the zip file. It contains the following files:
 - o changelog.txt
 - o firmware_IJV_v2.9.R5.bin
 - leggimi.txt
 - o note installazione modulo chirp.txt
 - Readme-ENG.txt
 - o uvk5_IJV_v2.9R5_jh11i1.py
- The procedure for using the CHIRP module is explained in chapter 8.1.
- Should there be a problem with this firmware, you can always reload the official one and the radio will be exactly as it was before. Refer to chapter **2.3**.

Last Update : V 2.9R5 : 01/02/24

You can support us in our efforts with a donation.

To Fabrizio IUOIJV for creating the firmware. To Sirius for creating the manual.

2.2 k5prog-win

- To load the firmware into the radio you need the software **k5prog**.
- + This programme allows you to save the configuration and calibration data recorded in the EEPROM. Indeed, is strongly recommended to do so.
- It happens that version 1.27 gives problems, so we decided to remove it.
- Links of Github website.

2.3 Backup of Calibration and Original Configuration

- As mentioned above, it is important to safeguard the original Calibration and Configuration files:
- Install the cable <u>driver</u>. Check that it is well recognised by Windows and k5prog-win.

 \rightarrow Start the radio normally (user mode), connect the cable from the computer to the radio, start k5prog-win. Using the buttons: "Read Configuration" and "Read Calibration", save those two files in your folder.

 If you need to restore the radio as it was originally, it is not enough to put back the original firmware, you will also have to load the original "my_calibration" and "my_config" files:

 \rightarrow with the k5prog-win programme via the 'Write Configuration' and 'Write Calibration' buttons.

These files include a hundred or so parameters such as the 3 transmission powers, squelch, RF Gain, start message, 200 channels, VFO, etc., and are recorded on an external EEPROM memory.

A These files are different from radio to radio, it is not certain that those of another are compatible with yours. The calibration is adjusted at the factory for each individual radio.

2.4 Online tool for Mac as well

There is a utility for flashing firmware online. This is useful for those with a Mac or versions prior to Windows 10.

Follow this <u>link</u>, everything else is intuitive. <u>https://egzumer.github.io/uvtools/</u>

A It does not work with Safari or Brave, it requires a Chromium-based browser so use Chrome, Edge or Opera.

2.5 Upload the IJV Firmware

- 1. Make sure you have a sufficiently charged battery.
- 2. Plug the cable into the PC, but DO NOT start the software.
- 3. Set the radio to update mode:
 - While pressing the PTT button, switch on the radio.
 - \rightarrow The white LED lights up.
- 4. Connect the cable to the radio. The first time the plugs do not fit very well, you have to push a little to get them all the way in.
- 5. Start the software **k5prog-win**.
- 6. Then choose the right COM port in the software and click on 'Connect'.
- 7. Via the software **k5prog-win**, upload the file *firmware_IJV_vxxx.bin* previously downloaded.
- \rightarrow The white LED blinks.
- 8. At the end of the flashing, switch off the radio and disconnect the cable.

2.6 Adjusting the radio after update

A Be careful after installing the new firmware to make these adjustments. Only if this is a first-time installation or if you are coming from other firmware:

Perform an automatic VFO RESET: start the radio by pressing PTT + EXIT.
 Set menu items as desired.

This is used to correctly set the initial settings for a good radio working.

VFO RESET can also be performed with the RESET menu in the Service Menu.

What it has more of, what it has less of.

+ WHAT'S HERE

- Single VFO with direct insertion frequencies above GHz.
- AGC FAST / SLOW / Only for AM and SSB.
- AGC MAN also in FM with 35-level attenuator adjustment.
- Transmission in emulation <u>DSB</u> (Double SSB). (Always active, now only disconnected if you activate the Upconverter function).

- Preselection for an Upconverter with transmission lock.
- Increased waiting times during scanning.
- Rit & Xit in all modulations.
- Stable SSB reception.
- Reception gain customisable to your needs.
- SATCOM circuit activation with reception boost > +9dB.
- FM Broadcast.
- VOX
- 1750 Tone
- Compander
- Extended reception Frequency range: 15 \rightarrow 1300MHz. With Rx gap between 620 and 840MHz.
- Unlockable limited transmission: NO AIR BAND / NO 27 MHZ.
- Rapid Frequency and Tone Search: FC (Frequency Copy) function.
- Quick Tone Search.
- Quick partial or full memory scan.
- SMETER
- TX modulation indicator
- Selective Calling with reception audio suppression (Code Squelch)
- Selective sending DTMF, ZVEI, CCIR.
- Scramble.
- CW (Continuous Wave) modulation.
- Distinct squelch for each single VFO line (A and B)

Services menu (ex hidden) (to activate it, switch on the radio while holding down the PTT and side button 1)

- QRA.
- Fine frequency calibration.
- TX Power adjustment for each of the 3 levels.
- Adjustment of each of the 9 Squelch Levels: RSSI, NOISE, GLITCH.

- WHAT'S NOT

- SPECTRUM (will never be there)
- Password
- NOAA
- VOICE
- ALARM
- Battery voltage and calibration indication.
- Blinking LED.
- Charging info on USB.
- AIRCOPY

)4. Display

Symbols and abbreviations on the screen.

Symbols that may appear in the top line





Symbols that may appear in the bottom line



5. Function of keys

The keys have different functions when pressed, pressed for a long time or in addition with the key $\mathbf{F}_{\mathbf{x}}^{\mathcal{R}}$.

5.1 Short-press keys functions.

Кеу	Function	
м	ightarrow Access to radio menu.	
ΕΧΙΤ	→ In SCAN : stops the scan and returns to the initial frequency. → With the Rit/Xit function active, realigns the Rx to the Tx by resetting the Step. Resets the last 2 digits of the VFO by aligning it to the lowest KHz.	
РТТ	ightarrow In SCAN : stops scanning and leaves the last scanned frequency.	
Scan	ightarrow In SCAN : Momentary insertion of a frequency in the Black List.	
F# 🔏	\rightarrow Activates secondary functions. The letter F appears in the top lefthand corner and remains active for 8 seconds.	

5.2 Long-press keys functions.

Кеу	Function	
1 Band	ightarrow AGC shift selection: SLOW / FAST / MAN.	
2 A/B	ightarrow Select VFO line A or VFO line B.	
3VF0/MR	ightarrow VFO or Memory mode.	
4 FC	ightarrow Fast VFO storage with automatic assignment to first free slot.	
5	ightarrow Change bandwidth N- N W W+	
6H/M/L	\rightarrow Power selection L M H.	
7	ightarrow Sets memory channel to bank 1, bank 2 or none.	
<mark>8</mark> R	\rightarrow In Duplex, inverts freq Rx and freq Tx. \rightarrow In Simplex, activate the Rit/Xit function. (<u>7.8</u>)	
9	ightarrow Select in rotation 4 pre-set steps for the set modulation type.	
0 FM	ightarrow Switch modulation type FM; AM; SSB; CW. With display of STEP.	
Scan	→ Scan start which can be of 2 types : Partial or General. In VFO, SG appears at the top left of the status line. If you have set bandwidth limits, i.e. you want to do a partial scan, then you will see SP. Sm1, Sm2, Sm appear in Memory mode. If pressed and held in scan, it switches between lists. (<u>7.1</u>)	
F# $_{\mathcal{S}}^{\mathcal{B}}$ \rightarrow Keypad lock, including side keys.		
м	\rightarrow Works with AGC MAN, saves the default Gain level. (7.3)	
ΕΧΙΤ	→ Resets the selected VFO band back to initial conditions: BW, modulation, power, step, offset, etc. The message appears Clear VFO .	

5.3 Keys associated with F

The F key must be pressed once and lasts 8 seconds.

Кеу	Function		
F+ 1 Band	ightarrow Change band to VFO mode.		
F+2A/B	→ Switches from dual channel to single channel, on display. In Single, the VFO is 4-digit, the frequency above Ghz can be set directly. VFOs are called VAx or VBx to make it clear which one is active. (<u>7.4</u>)		
F+3 VF0/MR	ightarrow Copies the memory frequency to VFO.		
F+ <mark>4</mark> FC	→ Frequency Copy (Frequency Meter). → When listening to FM music, disable interrupt on Rx. The FM symbol is combined with 'Lock'.		
F+ <mark>5</mark>	ightarrow Activates or deactivates Compander (FM only).		
F+ <mark>6</mark> H/M/L	→ Completely disable transmission. The H/M/L power indicators disappear on the screen. This function remains set even after restarting the radio.		
F+Zvox	\rightarrow Switch VOX on or off.		
F+ <mark>8</mark> R	ightarrow Enable UpConverter on the active VFO.		
F+9Call	→ Recall Fast Call Channel.		
F+OFM	ightarrow Radio FM broadcasting.		
F+ <mark>迷</mark> Scan	ightarrow Search-frequency CTC/DCS subtone search function.		
F+∧ Up	→ In FM, in Rx when Rx AGC MAN is selected, Gain increases. → In VFO Rx: Rit/Xit, increase frequency in Rx according to lowest step.		
F+V Down	→ In FM, in Rx when Rx AGC MAN is selected, Gain decreases. → In VFO Rx: Rit/Xit, decreases frequency in Rx according to lowest step.		

5.4 Side keys

The two side keys are programmable via the services menu 57, 58, 59, 60.

You can attribute a function to short or long pressure. Side1S: S is for Single click. Side1L: L is for Long press. Side2S Side2L

Functions	Description	
NONE	None	
FLASH LIGHT	Switches on the LED.	
TX POWER	Power selection L M H.	
MONITOR	Activate monitor, set Squech to 0.	
SCAN	Start scan. (<u>7.1</u>)	
VOX	Activates the VOX function.	
FM RADIO	Activates FM broadcast radio reception.	
VFO CHANGE	iE Select A-band or B-band = long pressure 2A/B.	
VFO SWAP	In VFO, switch from double to single.	
SQL +	Increase squelch by one level	
SQL -	Decreases squelch by one level	
REGA TEST	Link info REGA	
REGA ALARM	Λ	
CW CALL CQ	Sends caller ID in morse code. Operates in CW modulation only. (QRA menu)	

PTT + Side2 = 1750 Tone

6. Menu

To access the main menu, press the key ${\sf M}$.

To enter the selected item with the arrows, then press the key ${\sf M}$.

To confirm your choice, press the key ${\sf M}$.

To exit the menu item without confirming, press the key **EXIT**.

6.1 Main menu

	Menu Default		Firmware IJV	
1	SQL		0-9 (0 = Monitor)	
	To correc	tly adjust :	squelch levels, switch off the dual watch.	
	Each VFO	line (A an	d B) has its own Squelch level. Useful in case of dual watch.	
2	STEP		0.02, 0.05, 0.10, 0.50, 1.00, 2.50, 5.00, 6.25, 8.33, 9.00, 10.00,	
			12.50, 25, 100, 1000	
3	MODE		FM, AM, <u>DSB, CW</u>	
4 BW W/N NARROW-, NARROW, WI			NARROW-, NARROW, WIDE, WIDE+	
	Adjusts as well as the audio filter as the bandwidth.		audio filter as the bandwidth.	
		Audio	BW RF	
		filter		
	N-	1.7kHz	6.25kHz	
	N	3 kHz	12.5kHz	

	w	6kHz	25kHz		
	W+ 9kHz		25kHz		
5	Tx PWR		LOW, MID, HIGH		
6	Tx DIR	OFF	OFF, +, - Direction Shift/Offset repeater bridges.		
7	Offset	0.000MHz	0 to 999.9999 MHz Frequency shift/offset for repeater bridges.		
8	RxCTCS	OFF	OFF, 67250.3Hz Sets a CTCSS subtone in reception.		
9	TxCTCS	OFF	OFF, 67 to 250.3Hz Sets a CTCSS subtone in transmission.		
10	Rx DCS	OFF	OFF, D023N, D025N, 26754 Set a DCS code in reception.		
11	Tx DCS	OFF	OFF, D023N, D025N, 26754 Sets a DCS code in transmission.		
12	тх тот		OFF, 30sec, 1min to 5min TX time limit.		
	With notice	at 10 and 5	seconds before closing.		
13	BusyCL	OFF	OFF, ON Lock PTT if busy.		
14	ChSave	CH-001	1 to 200		
15	ChName	CH-001	10 characters max		
16	ChCanc	CH-001	Delete stored channel.		
17	ChDisp	p FREQ FREQ, CHANNEL NUMBER, NAME, NAME_S FREQ_L, NAMI			
	In Sinale	mode vou	ode you can choose the font size for the channel name and its		
	frequency	$r_{\rm res}$ L = Large and S = Small.			
18	BLTime	1 min	OFF, 5sec, 10sec, 20sec, 1min, 3min, RX/TX, ON, NIGHT		
	RX/TX: Ass	sumes the e	xact time of transmission or reception. ON: Always on.		
19	BLMode	RX/TX	RX/TX, OFF		
	Determine	etermines the event that causes the display to light up.			
20	BEEP	ON	ON, OFF Keys sound.		
21	Sc REV	CARRIER	CARRIER, SEARCH, TIME, LOG		
	How do th	e scan resui	nes.		
	CARRIER: r	esumes sca	nning after the signal has disappeared.		
	SEARCH: st	tops when i	t finds a busy channel and stays there.		
	TIME: Stop	s on busy c	hannel for 5 sec. then starts again.		
	LOG: This v	vill be used	in the future to link the radio to an app.		
22	KeyLok	OFF	OFF, AUTO AUTO locks the keyboard after 10 sec. of inactivity. The		
			Reyboard can be activated temporarily with a long press on the F# $\mathcal{P}^{\mathcal{B}}_{key}$		
23	TailTF	ON	* NCy. ON OFF It eliminates the tail tone i.e. the small rustling noise that		
	.unc		occurs when releasing the PTT when using a bridge.		
24	RipTTE	OFF	OFF, 1*100ms to 10*100ms Eliminates head hum in Rx. When		
			bridge carrier is released, it closes the audio for the set time.		
25	Scramb	OFF	OFF, 2600 to 3500 Hz Encrypts voice with an obfuscating		
			frequency. (FM only).		
26	Mic dB	+15.1dB	+1.1dB to +15.1dB Increases or decreases microphone sensitivity.		

27	27 MicBAR OFF ON, OFF		ON, OFF	
	It inserts a volume level bar in the centre.			
	Useful for DSB transmission, in fact for optimal modulation it is best not to exceed half the			
	scale, so the Mic dB level should not exceed 4 dB.			
28	3 Compnd OFF OFF, TX, RX, RX/TX			
	Compande	er: compress	sor/expander filter, enhances vocals (FM only).	
29	vox	OFF	OFF, 1 to 10 Smaller = more sensitive.	
30	1 Call	CH-001	One Key Call Channel, scelta del canale di chiamata di	
			emergenza ad unico tasto.	
31	ScLisT	LIST2	LIST2, LIST1, ALL Channel scan list selection.	
32	Own ID	102	102 Set a personal ID.	
33	UPCode	123	123 Initial selective code.	
34	DWCode	456	456 Final selective code.	
35	D Lmon	ON	OFF, ON/ DTMF Local monitor: DTMF sidetone switch. (PTT + S2 =	
			Tone 1750).	
Allows you to monitor, listen locally to the tones sent by th		Allows you to monitor, listen locally to the tones sent by the radio.		
36 D RSP DO DO NOTHING, BOTH. REPLAY, RING		DO NOTHING, BOTH. REPLAY, RING		
<u> </u>				
37	7 D Hold 10s 5s to 60s		5s to 60s	
38	D PRE 30*10ms			
39	D DCD	OFF	ON, OFF	
40	D List	CALL1		
41	41 D Live ON ON, OFF		ON, OFF	
42 Dig ID OFF OFF, DTMF CALL ID, DTMF BEGIN, DTMF END, DTM		OFF, DTMF CALL ID, DTMF BEGIN, DTMF END, DTMF BEG+END, ZVEI1 BEGIN,		
	^z		ZVEI1 END, ZVEI1 BEG+END, ZVEI2 BEGIN, ZVEI2 END, ZVEI2 BEG+END, CCIR-1F	
			BEGIN, CCIR-1F END, CCIR-1F BEG+END; CCIR-1 BEGIN, CCIR-1 END, CCIR-1	
			CCIB-1E = 50 ms	
			CCIR-1 = 100 ms	
43	DigSRV	OFF	OFF, Single, Roger, MDC 1200, Apollo Quindar, Digital Code ID	
	Acoustic	or digital s	ignals sent at the start and/or end of the call. (7.5)	
44	4 Info IJV MOD V.x.x, Batt Volt.		IJV MOD V.x.x, Batt Volt.	
45	Beacon		OFF, 5sec, 10sec, 30sec, 5min, 10min, 20min.	
46	BatSav	OFF	OFF, 50%, 67%, 75%, 80%	
	It allows	the radio t	o remain active for only a few moments, thus reducing	
	consump	tion.		
	The cycle	consists o	of 4 phases of 100mS each, saving on how many times in this	
	cycle the	Rx is activ	e or in suspension.	
	The greater the savings, the lower the performance in reception, especially in			
	scanning.			

47	dBm/Sm	S/Meter	S/Meter, RSSI dB	
48	SatCom	OFF	ON, OFF	
	Activates the filter change circuit for frequencies after 240 MHz and sets the radio chip to (
	+9dB increase in reception, this once activated remains in memory the next time it is			
	switched c	on. Similar te	o a preamplifier, to be used in exceptional cases of low signal	
	because it	can cause a	listortion in listening, switch it off when not needed.	
	The messo	ige RESET S	ATCOM appears.	
49	UpConv	OFF	OFF, 50, 125	
	Set the rac	lio to opera	te with a transverter (<u>Upconverter</u>) for the HF.	
	It offset its	elf to 50 or	125 Mhz from the display reading and disables Tx on that frequency.	
	It only wor	ks for band	s 1 and 2. Then choose how high to scale then do F+8, 'Up' will appear	
	below the	frequencies		
50	Preset	Preset 26-30, 70-75, 75-80, AIR 1, AIR 2, VHF 1, VHF 2, SEA, SERV,		
		UHF, LPD, PMR		
	It sets up reception and scanner filters with search limits per selected band.			
	Pressing the M button stores the bands and returns directly to the main VFO screen.			
	AIR 1: 118-126, AIR 2: 126-137, VHF 1: 142-148, VHF 2: 150-155, SEA: 155-163, SERV: 162-174,			
	UHF: 430-433, LPD: 433-436, PMR: 446-447			
51	R× AGC		MAN, FAST, SLOW	
	Auto Gain	Control: in N	NANual, the sensitivity of the RF Gain can be changed by pressing the	
	F+ button/	\ o F+V.		
	FAST or SL	OW: determ	ines how quickly or slowly the AGC recovers gain after attenuating a	
	strong sigi	nal. (<u>7.3</u>)		
	In Rx, it ap	pears to the	e left of the centre line: M+0, FST or SLW.	
52	Tx VFO	SAME	SAME VFO, VFO A, VFO B	
		VFO		
	In Dual RX,	choose the	TX channel. Same as RX, A or B.	
	lf set to VF	O A or B, 'XŁ	' appears on the top line of the screen.	
	(Cross-Bar	nd Receiving	g/Manual Transmission)	
53	3 DualRX ON ON, OFF (Dual Watch)			

6.2 Services Menu

To activate it, switch on the radio while holding down the PTT and side button 1

	Menu	Default	Firmware IJV
54	4 RESET		VFO, ALL
	VFO only r	VFO only resets menu parameters, ALL also clears memories.	
55	PonMSG	FW MOD	NONE, FW MOD, MESSAGE.
	Info shov	ved when s	starting the radio. Firmware name; custom message;
	nothing.		
56	QRA		Write your CW call sign. Max 8 digits.
57	Side1S	SQL +	FM RADIO, VFO CHANGE, VFO SWAP, SQL +, SQL -, REGA
			TEST, REGA ALARM, NONE, FLASH LIGHT, TX POWER,
	<u></u>		MUNITOR, SCAN, VOX.
58	Side1L	MONITOR	FM RADIO, VFO CHANGE, VFO SWAP, SQL +, SQL -, REGA
			MONITOR. SCAN. VOX.
59	Side2S	SOL -	FM RADIO, VFO CHANGE, VFO SWAP, SOL +, SOL -, REGA
			TEST, REGA ALARM, NONE, FLASH LIGHT, TX POWER,
MONITOR, SCAN, VOX			MONITOR, SCAN, VOX.
60	Side2L	FLASH	FM RADIO, VFO CHANGE, VFO SWAP, SQL +, SQL -, REGA
		LIGHT	TEST, REGA ALARM, NONE, FLASH LIGHT, TX POWER,
		MONITOR, SCAN, VOX.	
	Assigns a	function to	the side buttons below the PTT. S= Single click, L= Long press.
61	F Lock	OFF	OFF, FCC, CE, GB, 430, 438
	It blocks c	ertain funct	ions depending on the legislation of the country you are in.
62	Txp EN	ON	ON, OFF
	OFF totall	y blocks the	TX, the radio becomes just a receiver.
63	FrqCal	Fine calibra	tion of the radio oscillator frequency. Requires the use of a
		frequency meter.	
64 TxpCal Adjusts Tx power for the 3 levels L, M, H.		power for the 3 levels L, M, H.	
	First choose the desired power on any freq, then menu PwrCal and adjust the power. (
	(7.6)		
65	SqlGli	Calibratio	n of Glitch Squelch Parameter.
66	SqlNoi	Calibratio	n of Noise Squelch Parameter.
67	SqlRss Calibration of RSSI Squelch Parameter.		



7.1 Scanning

In memory mode you can set a channel to bank 1, bank 2 or none by long-pressing the

7

Start scanning:

In Memory or VFO mode, long press the key Scan. Starts general or partial scanning between a minimum and a maximum or between memories. Display of STEP for few seconds.

If you want to start a scan in VFO mode, it is recommended to first select the desired band type in the menu **50 Preset**.

During the scanning process:

To switch between lists, long-press the key *****Scan. Following symbols will appear on the screen:

SP = Partial Scan, SG = General Scan, Sm1 memory scan list 1, Sm2 memory scan list 2, Sm* memory scan all lists.

The scanning direction can be changed or continued using the buttons $\land Up/\lor Down$. EXIT \rightarrow Stops the scan and returns to the initial frequency. PTT \rightarrow Stops scanning and leaves the last scanned frequency.

When the scan stops on a frequency, by pressing **EXIT** it stops scanning and stays on that frequency.

There is the possibility to change during scanning: BW Filters, Step and Fast Frequency Saving.

Black List:

It is possible to exclude up to 40 unwanted frequencies in a black list. When the scan stops at an unwanted frequency, make a short press on the key *Scan, it will be entered into the Black List. The following will appear on the screen: "BlackList In #(n)" where (n) is the number of frequencies entered. Exiting scan mode or switching off the radio will delete the black list.

Locking and unlocking the keyboard by long keypresses $F#^{\Re}$ is possible during scanning.

7.2 Partial scan

- 1. Enter the lowest frequency in VFO, e.g. 144.0000 (7 chars.).
- 2. Long press the button Myou will see the message "Set Range Low OK".
- 3. Enter the highest frequency, e.g. 145,6000 (7 chars.).
- 4. Long press again Myou will see the message "Set Range Up OK".
- 5. Start the scan by long-pressing the key 🖹 Scan.

7.3 RF Gain

The function **RF Gain** is the same to that of large radios or CBs. You can increase or decrease the sensitivity as required.

Adjust RF Gain

- 1. Switch to the desired frequency and long-press the **EXIT** = Clear VFO. This acts on the active VFO and the associated band.
- 2. Activate Monitor (open squelch), M+0 appears in centre left, (*M is for MAN*). The level change of the AGC MAN must be done during reception, not in standby.
- 3. Tune in to a frequency you want to receive.
- 4. If the desired frequency is in another modulation than FM, change it now with a long press of the key **O**FM.

Make sure you are in MAN and not in FAST or SLOW by long-pressing the button.

(In FM, the AGC is always in MAN).

- 5. Press key $\mathbf{F}_{\mathbf{x}}^{\mathcal{R}}$ or long press key $\mathbf{1}$, \mathbf{F} appears in the top line of the display.
- 6. With the arrows up $\!\!\!\!\wedge$ and down $\!\!\!\vee$ adjust the Gain level until correctly received.
- 7. To store the level, long-press the M.

Each band has its own gain, the level you store applies for the active band at that time.

To reset RF Gain to default on all bands perform a VFO Reset (Start the radio by pressing PTT + EXIT).

7.4 Entering frequencies above 1000 MHz (GHz)

Single VFO method (new)

1. Switch to Single VFO mode: **F+**2A/B

2. Enter the desired frequency (8 digits).

VFOs are called VAx or VBx to make it clear which one is active.

Dual-channel method (old)

- 1. Switch to VFO.
- 2. Enter the frequency 999.999.90
- 3. Adjust in the STEP menu by how much you want to increase.
- 4. Use the key \land **Up** to go beyond 1000MHz. The displayed frequency starts without the first 3 digits.

7.5 DTMF, ZVEI, CCIR... SelCall

• To make selective calling work:

RADIO 1	RADIO 2
Own ID = 1	Own ID = 2
UPCode = 2	UPCode = 1

MENU settings

_				
32	Own ID	Enter your code e.g. 1		
33	UPCode	Enter the recipie	nt's code e.g. 2	
39	D DCD	ON	DTMF decoding enabled	
42	Dig ID	DTMF CALL ID	Selective Digital ID to DTMF	
43	DigSRV	Digital Code ID	Selective call activated	

Do the same thing on the other radio by reversing the codes as shown above.

• To activate the other ZVEI and CCIR selections:

MENU settings

33	UPCode	Enter the code to be transmitted e.g.: 12345 is used before		
		transmission ZVEI BEG CCIR BEG DTMF BEG		
34	DWCode	Enter the code to be transmitted e.g.: 12345 is used at the end of the		
		transmission ZVEI END CCIR END DTMF END		
42	Dig ID	ZVEI END	Selective ZVEI (e.g.)	
43	DigSRV	Digital Code ID	Selective call activated	

To send in Tone 1750, press **PTT + S2** (side button 2).

Tone duration is ZVE11/2 70ms; CCIR1 100ms; CCIR1F 50ms, selectable from the 42 Dig ID menu.

7.6 Power Output Adjustment

Exact adjustment of transmission power for the 3 levels L, M, H:

- 1. Access the Services Menu by switching on the radio while holding down the PTT and side button 1.
- 2. Choose any frequency in the UHF band.
- 3. Select one of the 3 powers L, M, H.
- 4. Go to services menu 64 **TxpCal** and set the power.
- 5. Repeat the operation at will for all 3 levels.
- 6. Repeat the operation on the VHF band as well.

By pressing the **PTT**, this value in Watts will appear below the **Tx**, symbol.

7.7 CW Modulation (Continuous Wave)

CW (Continuous Wave), allows telegraphic communication by means of an external key telegraph or PTT.

To hear the note monitor, enable ON in menu **35 D Lmon**.

- Enter your call sign in the services menu **56 QRA**.
- Assign the CW / CALL CQ function to a side button.
- Activate Beacon and Call CW Repeat interval time. Menu **45 Beacon**. When they are active, Bc appears for Beacon and Cc for Call CW.
- The Beacon (<u>Radiofaro</u>) sent is made up of:

VVV DE "QRA"/B "QRA"/B "FIELD1" "FIELD2".

For a total of 8 + 8 + 15 + 15 characters. If you write it with Chirp: 8 + 8 + 12 + 12.

String 1 takes it from the first line of the welcome message, String 2 from the second line.

The welcome message can be changed with the software <u>CHIRP</u>.

 Pressing the key you have assigned to CW / CALL CQ starts the automatic CALL CW call. The abbreviation Cc appears when it is active.
 Sending the CW / CALL CQ consists of: CQ CQ DE QRA QRA PSE.

• Pressing PTT disables both Beacon (returns to OFF) and CALL CW.

The Rit/Xit function can be used on CW.

7.8 Rit/Xit

The Rit/Xit function works in VFO on any FM, AM, DSB and CW modulation.

To make full use of the Rit/Xit function, it is necessary to switch to Single Channel mode.

With the dual channel VFO display, only the Rit function can be used.

1. Switch to Single Channel View F+2A/B

- 2. Long press 8 R to activate Rit, Xit or exit.
 Rt or Xt will appear down and the Function F at the top of the screen.
 The frequency is also split: above in small the Tx frequency and below in large the Rx frequency.
- 3. Use the arrows to change the KHz frequency.
 - In Rit the Rx frequency will change, in Xit the Tx frequency will change.
- 4. The key **EXIT** realigns the Rx to the Tx by resetting the Step. Reset the last 2 digits of the VFO by aligning it to the lowest KHz.

Check that F is active, because after 8 seconds it comes off. If it does, press the F button again.

7.9 Radio broadcast FM

To enter FM radio mode press F+0 FM. Press F+1 Band to switch between VFO and MR mode.

VFO mode

- Press the keys \land **Up** / \lor **Down** to change the frequency.
- Or use the keypad to enter the FM frequency manually. (3 or 4 characters).
- Press F+2A/B to start the automatic search process for FM radio channels. This process will automatically store the searched channels, up to 20 FM channels can be stored.
- The keys \land **Up** / \lor **Down** are used to change the scan direction.
- Press F+3 VFO/MR to start the manual FM channel search process. In this process, users must manually store found channels.
- Press the key M to store the found channel. The message appears: SAVE? CH-01, Select with the keys ^ Up / V Down the number of the desired memory. Press the M to record the channel.
- To exit the search process press **EXIT**.

MR memory mode

- Press the keys \land **Up** / \lor **Down** to switch between pre-stored FM channels.
- Or use the keyboard to enter the channel number. (2 characters).
- To delete a stored channel: press the M, will appear: DEL? CH-01. Press again the key M to confirm deletion of selected memory.

"Do not disturb"

During FM broadcast listening, it is possible to disable the interruption in case of Rx by pressing F+4 FC. The FM symbol is flanked by 'Lock'.

To exit FM Radio mode, press either: F+ OFM, EXIT or PTT.



Interfacing the radio with a computer.

8.1 CHIRP 🚥

1. Download and install the software <u>CHIRP-next</u>. Minimum required:

- Windows 10 and later (64-bit)
- macOS Big Sur and later (universal binary with Intel and Apple Silicon support)
- Linux (all modern distros with python3, details here)
- 2. Install the cable driver.
- 3. Download the zip file containing the module: LINK ZIP IJV. (Link2)
- 4. Make sure your battery is sufficiently charged and connect the radio with the cable.
- 5. Open CHIRP and make sure you are in developer mode, then \rightarrow 'Help' menu \rightarrow tick 'Developer Mode'.



6. To the alert message, answer Yes and restart CHIRP as requested.7. Click FILE in the menu, select 'Upload module'.

8. At the alert message, answer Yes. Upload the attached module uvk5_IJV_v2.9_jhl.py.

8000	CHIRP						
File	Modifica	Visualizza	Radio	Aiuto			
	Nuovo		Ctrl+N				
	Nuova fine	stra	Ctrl+Maiusc+N				
	Apri		Ctrl+O				
	Apri config	urazione sta	:	>			
	Apri recent	e	:	>			
	Salva		Ctrl+S				
	Salva con n	ome	Alt+Ctrl+S				
	Importa da	file					
	Esporta in O	SV	Ctrl+E				
	Carica modulo						
	Stampa			Ctrl+P			
	Anteprima	di stampa					
	Chiudi			Ctrl+W			
	Esci						

- 9. Read the radio using the normal procedure, selecting in the radio list the model:
- UV-K5-IJV vx.x.



10. Set the display of all fields, then \rightarrow View menu and tick: Show extra fields.

🚥 CHIRP (QS_UVK5_PMR_LPD_ISS_CB-Sea-Satcom-Firm_UV-03.img)									
Fichier Editi	on Vi	sualizza	Radio	adio Aiuto					
QS_UVK5_PMR_LF		Most	Mostra campi aggiuntivi						
Memorie Impo		Nascondi memorie vuote							
		Usa carattere a larghezza fissa				Tone			
		Usa carattere più grande			10110				
1		Ripristina schede all'avvio							
2		446.0187	50 PIV	IK 02		1			
3		446.0312	50 PN	1R 03					

A The module uvk5_IJV_v2.9_jh1.py must be loaded every time you want to change the radio or the .img configuration file.

Download here a.img configuration file generic suitable for the IJV module for CHIRP. It contains the following frequencies:
 PMR; 69 LPD; ISS; 40 CB; 18 Sea; 12 SATCOM.

