QUICK TALK ON...

CHIRP! THE EASY WAY TO SET UP YOUR HANDHELD

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SCOPE

- Why program your handheld?
- But there's an OEM program for that!
- What you'll need to use CHIRP
- Cloning / Changing Simpler radios (Baofeng, etc.)
- Issues with Quansheng custom firmware
- Examples given: Baofeng UV-5R & UV-5RH Pro / Quansheng UV-K5(8) IJV Mod

WHY PROGRAM YOUR HANDHELD?

- Once you know how, cheap Chinese handhelds are usable from the keypad (unlike some Yaesus!)
- Entering one or two favourite frequencies or split/CTCSS details for repeaters is not a problem
- Good quick reference: https://w7apk.com/baofeng
- Single page cheat sheet PDF: https://barconline.org/wp-content/uploads/UV-5R-Quick-Reference.pdf
- Bulk entry can be **VERY** tedious
- Copying larger, customised configurations between radios is not a manual task – you need programming software!

OEM (ORIGINAL EQUIPMENT MANUFACTURER) PROGRAMMING TOOLS

- Every manufacturer probably provides their own software and drivers
- e.g. https://www.baofengradio.co.uk/software/
- Most radios have a distinct way of managing their configuration storage – that OEM tools understand well
- Allows more advanced configurations & special radio options
- … but can lead to a proliferation of programming tools as you acquire more radios!
- So: a need for a comprehensive tool that can program any handset.

OEM BAOFENG SOFTWARE

- Cable chip drivers (see later slides)
- UV-5R Mini
- UV-5RH Pro (with GPS)
- UV-5RH
- UV-5R (“The World’s Most Popular Radio”)
- … plus many other models.
- … BUT DOES NOT SEEM TO WORK!

CHIRP AND RT-SYSTEMS

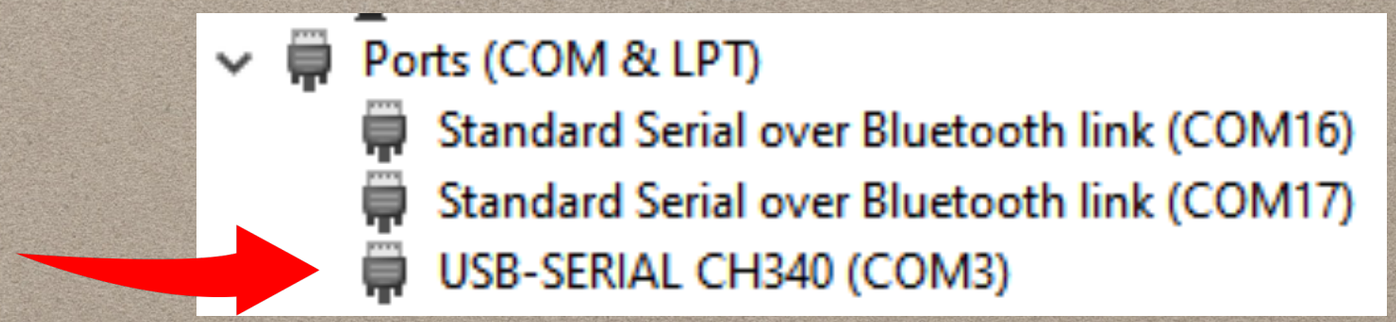
- RT Systems (https://www.rtsystemsinc.com/) also provide commercial programming software and cables for over 600 radios
- You'd buy the variant for your radio – each variant costs $25, with a cable around $30
- CHIRP is Free Open Source Software, for ~ 710 radios (started around Aug 2008 by Dan Smith KK7DS)
- Available from https://chirpmyradio.com

WHAT YOU'LL NEED

- Programming cable – this style usually works with several types of cheap Chinese handset from Baofeng / Quansheng etc.
- A computer running:
  * Windows (10 and later, 64-bit only)
  * macOS (Big Sur and later, Intel or Apple Silicon)
  * Linux (any modern distro)

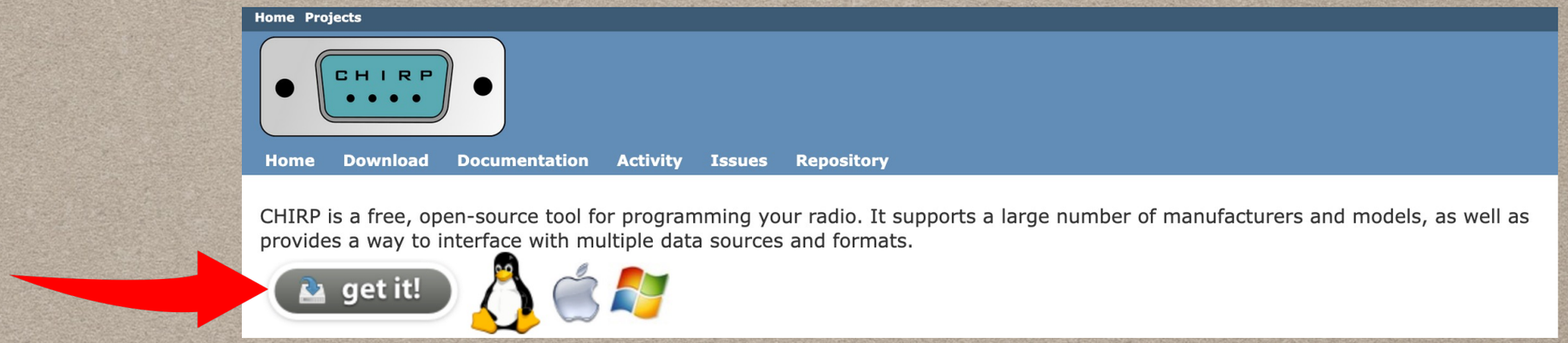
CH340 DRIVERS

- Inexpensive programming cables use the CH340 USB CDC (Serial) chip
- Drivers / installation instructions for this chip (Windows, macOS, Linux) are linked in this article:
- https://learn.sparkfun.com/tutorials/how-to-install-ch340-drivers/all
- Also available from https://baofengradio.co.uk/software



GETTING CHIRP

- https://chirpmyradio.com



- Two versions:
- **CHIRP-next** is a redesigned version - A new version of CHIRP-next is created each day from the work of the development community
- **CHIRP-legacy** is an old version that's no longer updated. Some old hardware may need it.

DOWNLOAD CHOICES

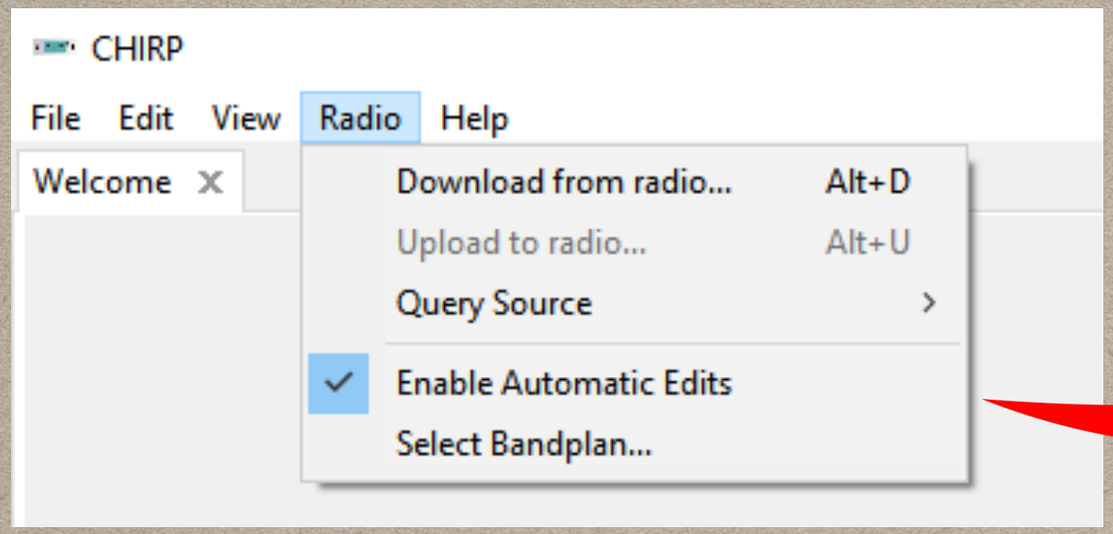
	Name	Last modified	Size	Description
	Parent Directory		-	
	chirp-next-20260130.app.zip	2026-01-30 02:21	43M	MacOS Application
	chirp-next-20260130-win64.zip	2026-01-30 02:20	24M	Windows standalone application
	chirp-next-20260130-installer.exe	**2026-01-30 02:20**	**19M**	**Windows Installer (recommended)**
	chirp-20260130.tar.gz	2026-01-30 02:20	2.4M	Source Tarball
	chirp-20260130-py3-none-any.whl	2026-01-30 02:20	2.1M	Python 3 wheel
	build_info/	2026-01-30 02:20	-	

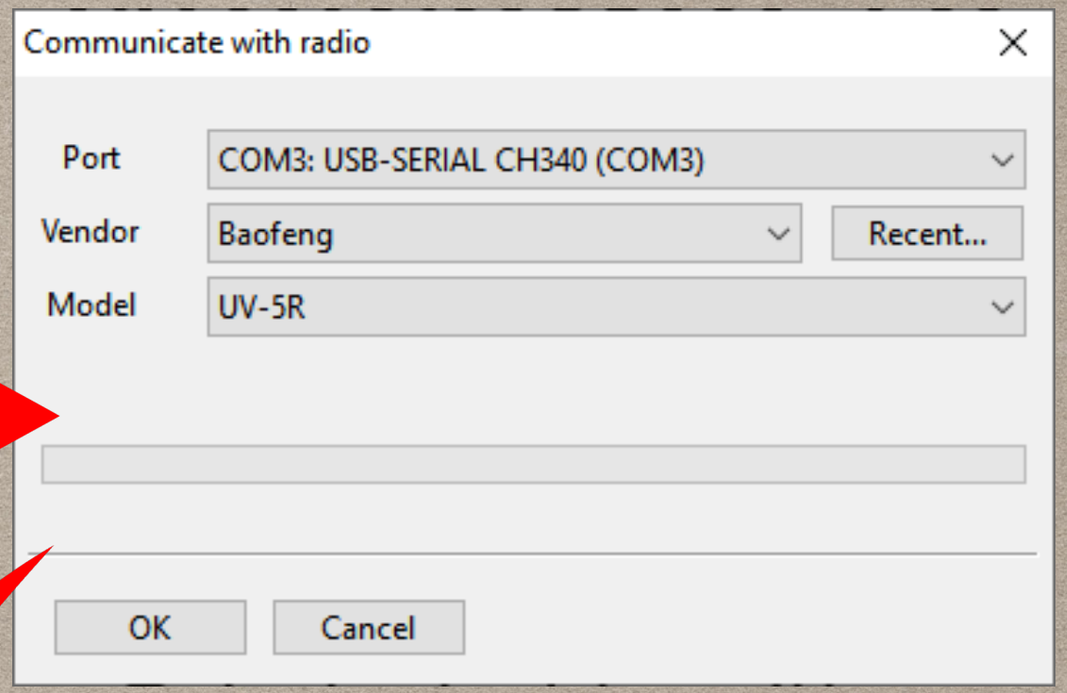
- The recommended download for your OS will be highlighted in green…
- Download it, scan it for viruses, then install.
- You will probably get a warning from Microsoft Defender SmartScreen.
- Click ‘More Info’ and ‘Run anyway’. Choose defaults.

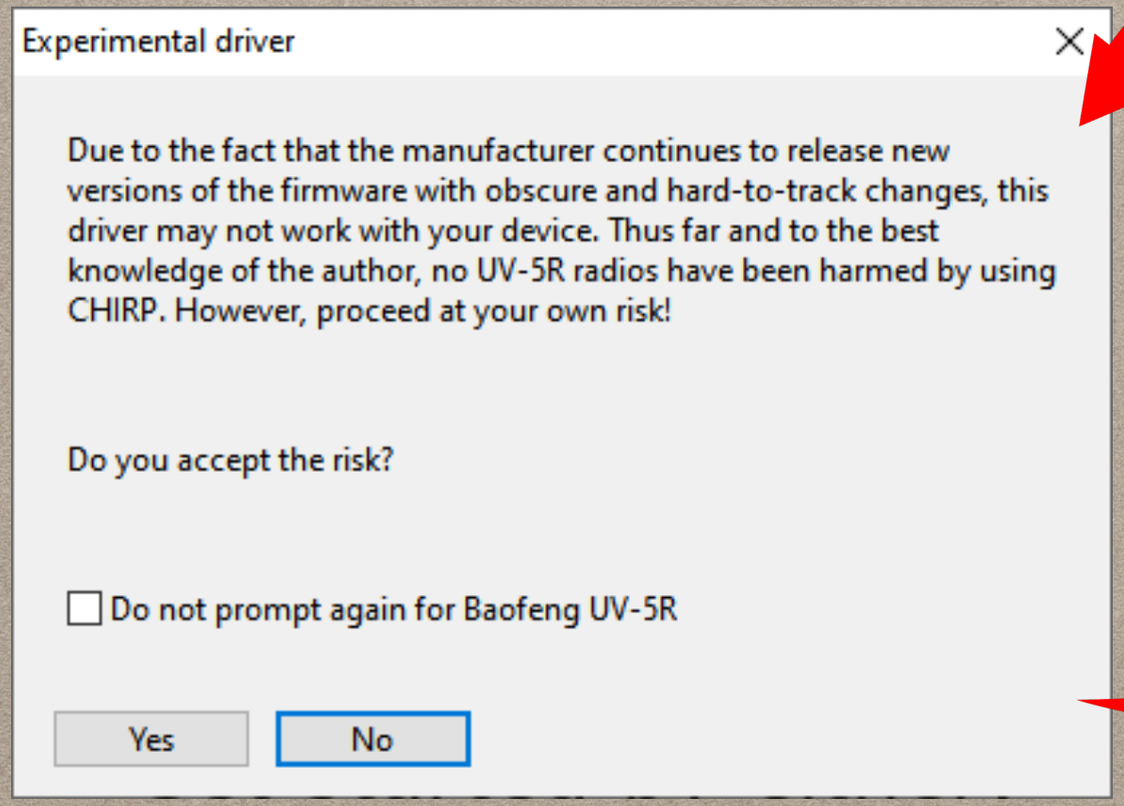
FIRST: DO NO HARM!

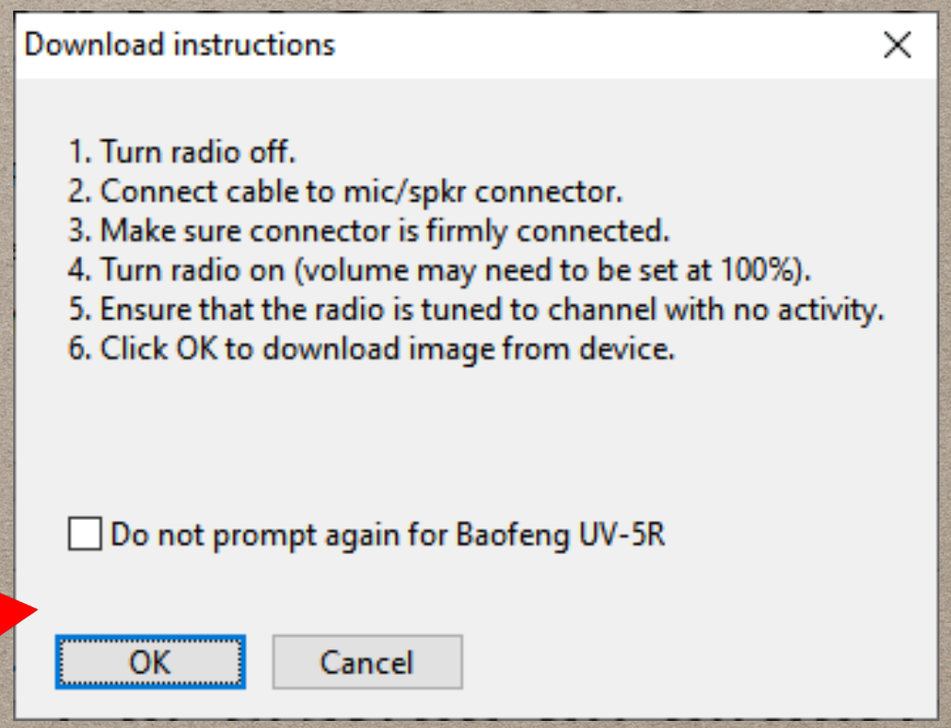
- Be careful: DO NOT KEY THE PTT WHEN THE RADIO IS CONNECTED TO THE COMPUTER!
- Probably best to set low power mode:
  MENU 0 2 MENU 🔼 / 🔽 MENU EXIT
- Also increase squelch, tune to unused frequency:
  MENU 0 0 🔼 / 🔽 MENU EXIT
- Before you do any programming - download the radio's initial configuration.
- This can be restored in case of mistakes.

DOWNLOAD FROM RADIO



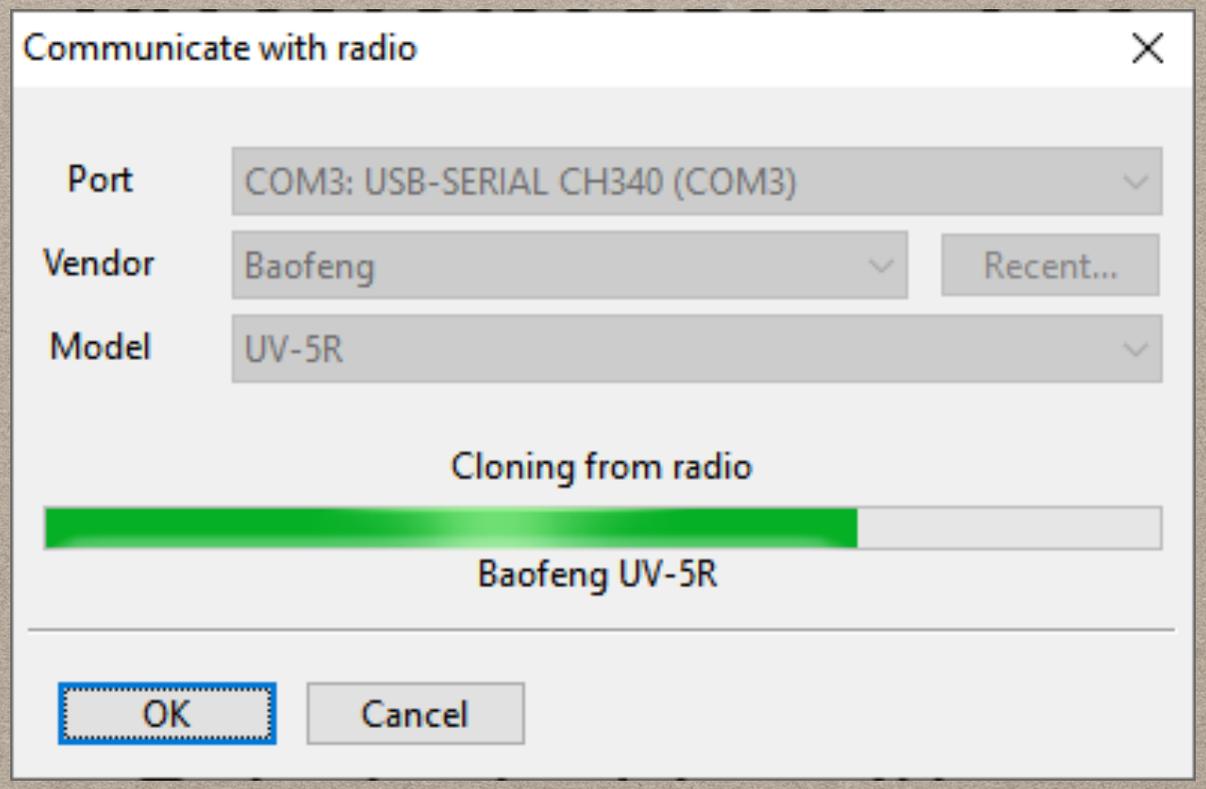






DOWNLOAD FROM RADIO

- Click OK, and you'll see a flashing RED LED 🟥



SPREADSHEET VIEW OF MEMORIES

CHIRP (Baofeng_UV-5R_20260206-after-a-while-of-using.img)

File Edit View Radio Help

Baofeng_UV-5R_20260206-after-a-while-of-using.img

Memories Settings

Filter...

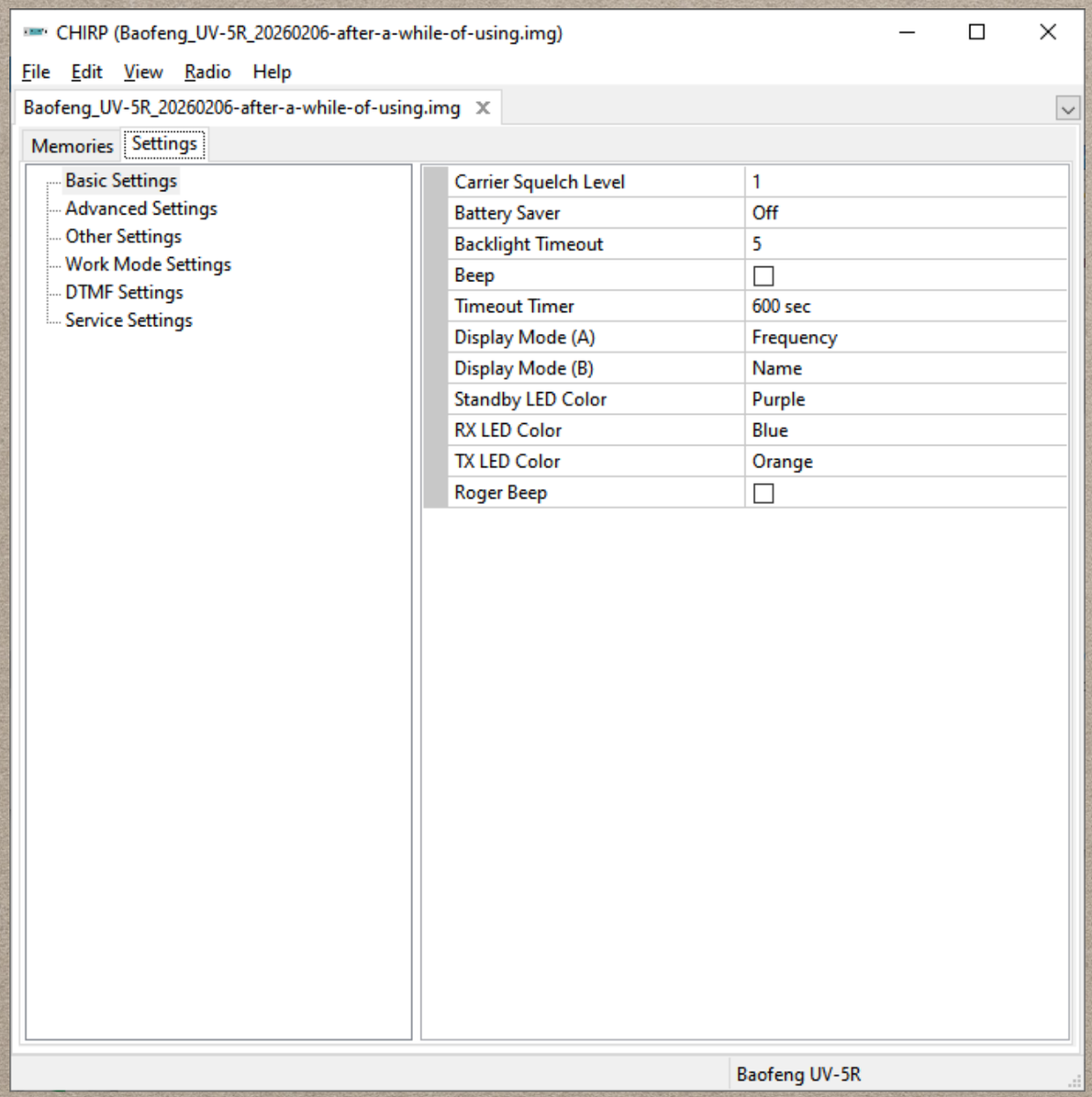
	Frequency	Name	Tone Mode	Tone	Tone Squelch	DTCS	RX DTCS	DTCS Polarity	Duplex	Offset/ TX Freq	Cross Mode	Mode	Skip	Power	Comment
0	145.700000	GB3KN	TSQL		103.5				-	0.600000		NFM		High	
1	433.275000	GB3RE	TSQL		103.5				+	1.600000		NFM		High	
2	145.762500	GB3IK	TSQL		103.5				-	0.600000		NFM		High	
3	430.975000	G5BSD	TSQL		82.5				+	1.600000		NFM		High	
4	145.625000	GB3MH	TSQL		88.5				-	0.600000		NFM		High	
5	433.100000	GB3NK	TSQL		103.5				+	1.600000		NFM		High	
6	430.900000	GB3BK	TSQL		103.5				+	1.600000		NFM		High	
7	439.675000	GB3NS	TSQL		82.5				+	1.600000		NFM		High	
8	145.687500	GB3XP	TSQL		82.5				-	0.600000		NFM		High	
9	145.775000	GB3NL	TSQL		82.5				-	0.600000		NFM		High	
10	145.737500	GB3AL	TSQL		77.0				-	0.600000		NFM		High	
11	145.612500	GB7VR	TSQL		82.5				-	0.600000		NFM		High	
12	430.950000	GB3OY	TSQL		82.5				+	1.600000		NFM		High	
13	430.050000	GB3LV	TSQL		82.5				+	1.600000		NFM		High	
14	433.350000	GB3HR	TSQL		82.5				+	1.600000		NFM		High	
15	145.500000	2M CALL										NFM		High	
16	144.800000	2M APRS										FM		High	
17	432.500000	70 APRS										NFM		High	
18															
19															
20	446.006250	PMR1										NFM		High	
21	446.018750	PMR2										NFM		High	
22	446.031250	PMR3										NFM		High	
23	446.043750	PMR4										NFM		High	

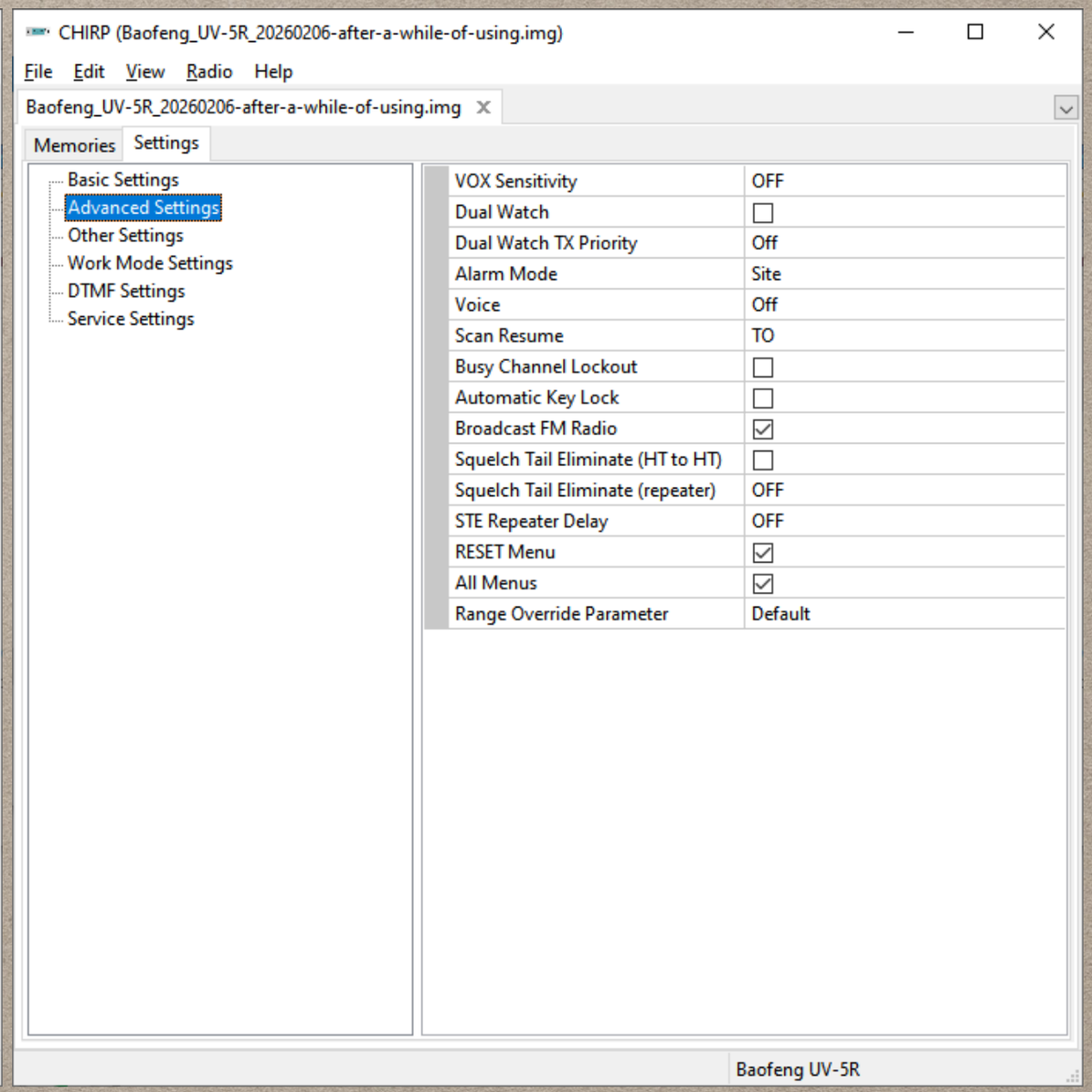
Activate Windows
Go to Settings to activate Windows.

Baofeng UV-5R

- Save this initial import for later!
- Then save it as a ‘working’ file

BASIC & ADVANCED SETTINGS





OTHER & WORK MODE SETTINGS

CHIRP (Baofeng_UV-5R_20260206-after-a-while-of-using.img)

File Edit View Radio Help

Baofeng_UV-5R_20260206-after-a-while-of-using.img

Memories | Settings

- Basic Settings
- Advanced Settings
- Other Settings
- Work Mode Settings
- DTMF Settings
- Service Settings

Firmware Message 1	HN5RV01
Firmware Message 2	1
6+Power-On Message 1	170718N
6+Power-On Message 2	
Power-On Message 1	M0CUV
Power-On Message 2	UV-5RTP
VHF Lower Limit (MHz)	130
VHF Upper Limit (MHz)	179
VHF TX Enabled	☑
UHF Lower Limit (MHz)	400
UHF Upper Limit (MHz)	520
UHF TX Enabled	☑
Power-On Message	Message

Baofeng UV-5R

CHIRP (Baofeng_UV-5R_20260206-after-a-while-of-using.img)

File Edit View Radio Help

Baofeng_UV-5R_20260206-after-a-while-of-using.img

Memories | Settings

- Basic Settings
- Advanced Settings
- Other Settings
- Work Mode Settings
- DTMF Settings
- Service Settings

Display	B
VFO/MR Mode	Frequency
Keypad Lock	☐
MR A Channel	14
MR B Channel	16
VFO A Frequency	430.537500
VFO B Frequency	145.375000
VFO A Shift	Off
VFO B Shift	Off
VFO A Offset (0.0-999.999)	0.000000
VFO B Offset (0.0-999.999)	0.000000
VFO A Power	High
VFO B Power	High
VFO A Bandwidth	Narrow
VFO B Bandwidth	Narrow
VFO A PTT-ID	1
VFO B PTT-ID	1
VFO A Tuning Step	12.5
VFO B Tuning Step	12.5

Baofeng UV-5R

DTMF & SERVICE SETTINGS

CHIRP (Baofeng_UV-5R_20260206-after-a-while-of-using.img)

File Edit View Radio Help

Baofeng_UV-5R_20260206-after-a-while-of-using.img

Memories Settings

- Basic Settings
- Advanced Settings
- Other Settings
- Work Mode Settings
- DTMF Settings
- Service Settings

PTT ID Code 1	20202
PTT ID Code 2	
PTT ID Code 3	
PTT ID Code 4	
PTT ID Code 5	
PTT ID Code 6	
PTT ID Code 7	
PTT ID Code 8	
PTT ID Code 9	
PTT ID Code 10	
PTT ID Code 11	
PTT ID Code 12	
PTT ID Code 13	
PTT ID Code 14	
PTT ID Code 15	30303
ANI Code	80808
ANI ID	EOT
Alarm Code	119
DTMF Sidetone	OFF
DTMF Speed (on)	50 ms
DTMF Speed (off)	50 ms
PTT ID Delay	0

Baofeng UV-5R

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File Edit View Radio Help

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Memories Settings

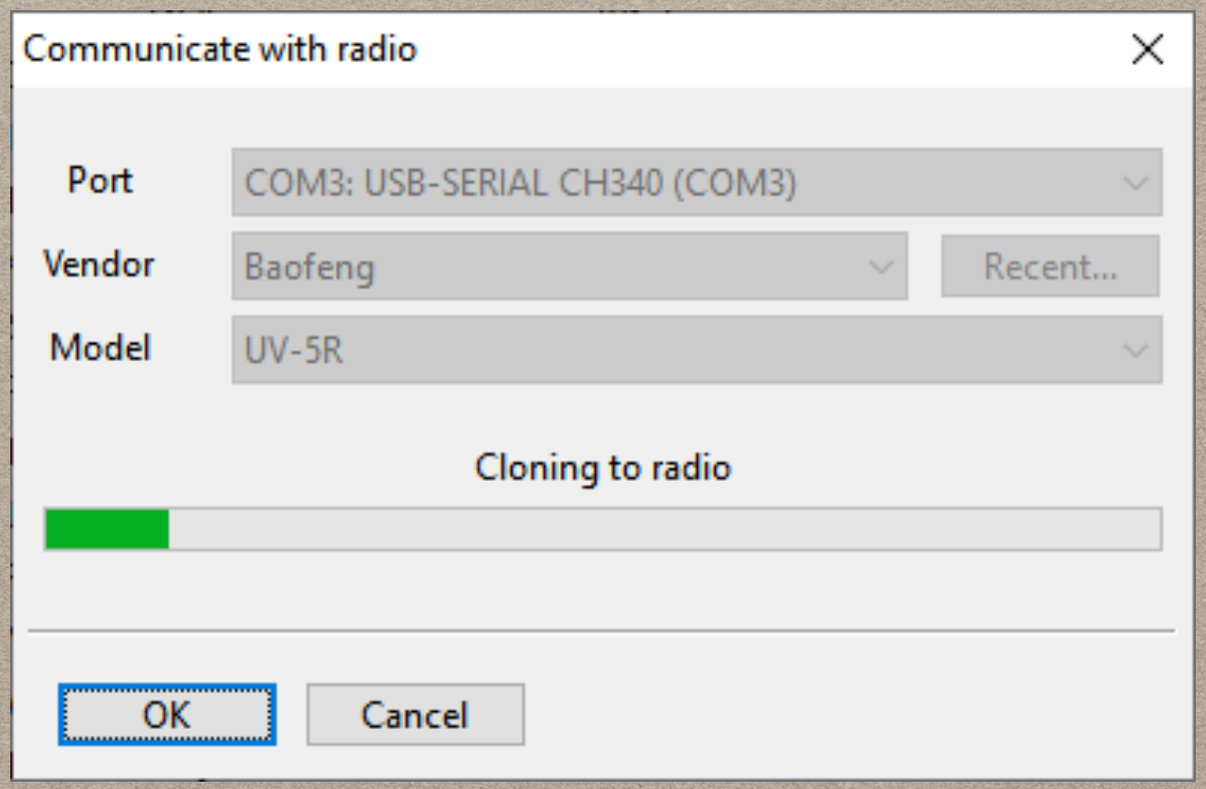
- Basic Settings
- Advanced Settings
- Other Settings
- Work Mode Settings
- DTMF Settings
- Service Settings

VHF Squelch 0	0
VHF Squelch 1	21
VHF Squelch 2	23
VHF Squelch 3	25
VHF Squelch 4	27
VHF Squelch 5	29
VHF Squelch 6	30
VHF Squelch 7	31
VHF Squelch 8	32
VHF Squelch 9	33
UHF Squelch 0	0
UHF Squelch 1	14
UHF Squelch 2	15
UHF Squelch 3	16
UHF Squelch 4	17
UHF Squelch 5	18
UHF Squelch 6	19
UHF Squelch 7	20
UHF Squelch 8	21
UHF Squelch 9	22

Baofeng UV-5R

UPLOAD TO RADIO

- Click OK, and you'll see a flashing GREEN LED 🟩

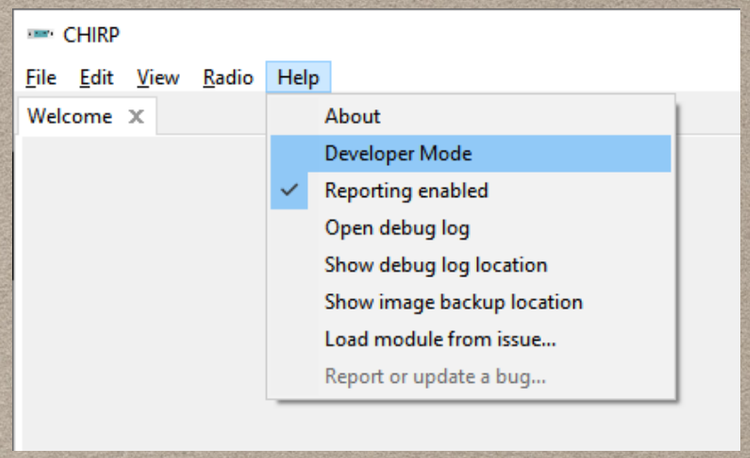


QUANSHENG - MODIFICATIONS

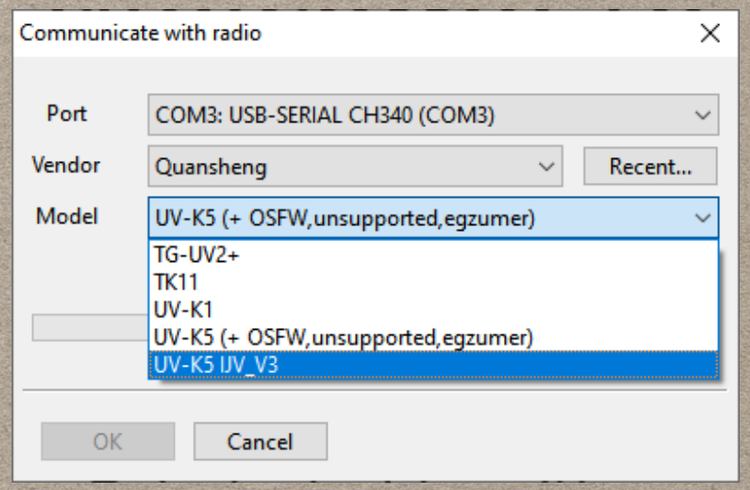
- Quansheng UV K5(8) factory firmware is supported (just choose ‘unsupported’)
- IJV 3.60 firmware turns it into a different radio – ‘upgrade’ is not covered here!
- But CHIRP doesn’t support it ‘out of the box’
- IJV web page: https://www.universirius.com/en_gb/preppers/quansheng-uv-k5-manuale-del-firmware-ijv_v3/

QUANSHENG IJV AND CHIRP

- Download IJV firmware: https://www.domox.org/?file=firmware_IJV_V3.60.zip



- Unzip this to a folder
- Open CHIRP
- Help menu / Developer mode. At the 'are you sure?' alert say yes, restart CHIRP.



- File / Load module (say yes).
- Choose IJV_N3_60.py (do this on each launch)
- Then read / write as usual. There are **MANY settings!**

SUPERB
wallpapers
That's all Folks!