

Keith Rawlings G4MIU

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The UV-K5 is a 2m/70cm dual-band handheld with up to 5W RF output and wideband receive, including air band and broadcast FM. This set, **Fig. 1**, came with a drop in charger, fused (19 x 5mm 1A) two-pin/UK 13A adaptor, battery, antenna programming lead wrist strap and user manual.

With dimensions of 115 x 60 x 37mm and weighing around 230g with battery fitted the radio has a stylish design and fits comfortably in the hand, **Fig. 2**.

The front of the radio is pretty much standard for a handheld housing the display, keypad, speaker and microphone. The left-hand side houses the PTT and two programmable 'function' buttons and the right-hand side the speaker/microphone connectors and a USB C secondary charging socket. The 1600mAh battery covers the whole of the rear of the set, with the top housing the reverse SMA antenna connection, signal/programming LED and large On/Off volume control.

Features

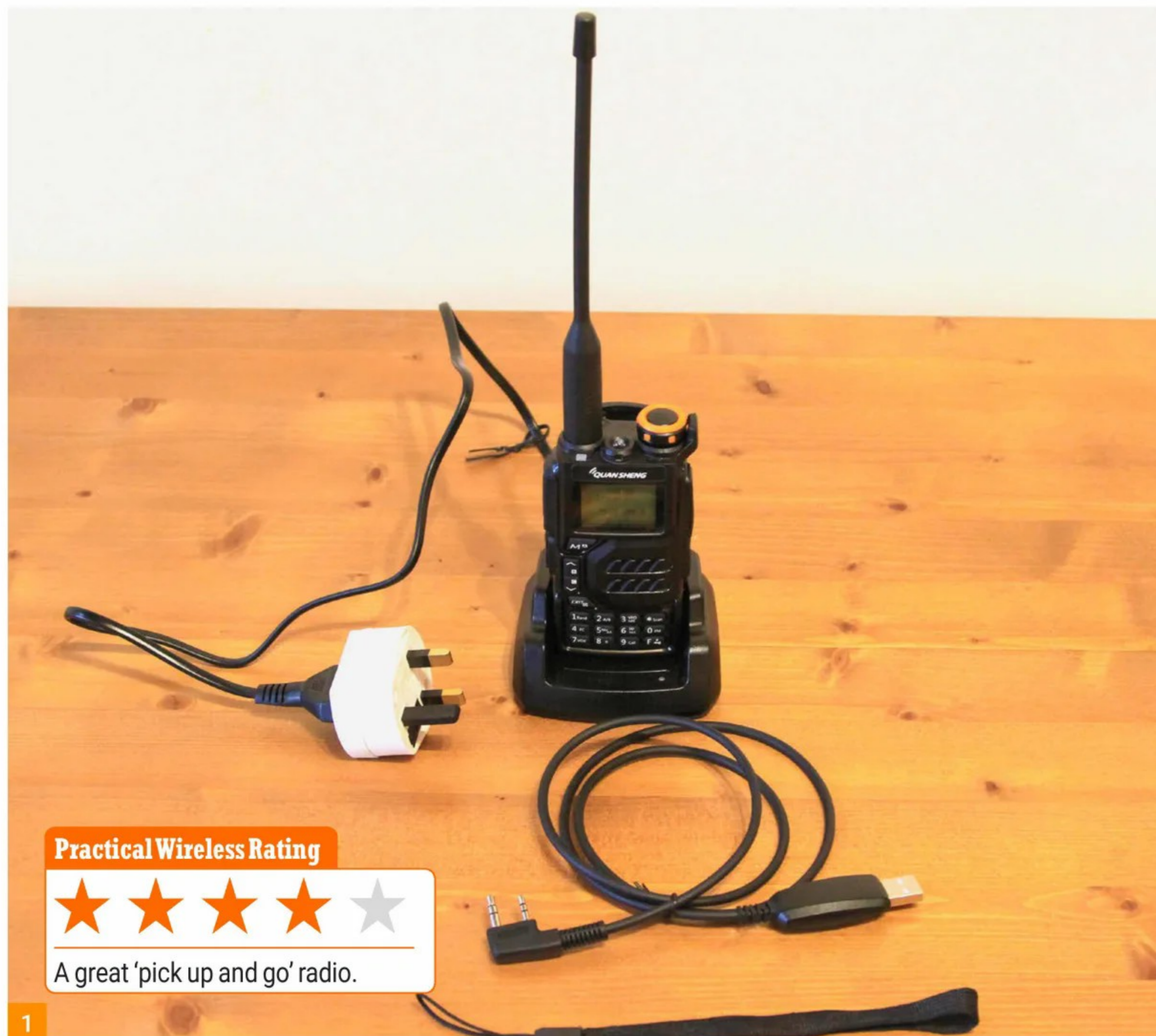
Like most modern radios the UV-K5 has a lot of features:

- It may be operated in dual Watch mode VV+UU+VU.
- There are 200 memory channels available plus 20 FM broadcast band channels.
- Three power output levels are provided – High, Medium, and Low.
- DTMF, CTCSS and DCS tones are supported plus tone scan facility to search for received tones.
- UV-K5 radios may be easily 'cloned' by linking with each other 'over the air' such as on the 70cm band.
- NOAA weather channel scanning (no use in the UK) and Voice Announcement.

In use

The radio is simple and intuitive to use and it is possible to easily operate the radio one handed by using a thumb to press the buttons, all of which have a positive action. Frequency may be directly entered from the main keypad, which has a number of secondary functions selected by the 'F' key. The large orange rimmed volume control stands out, it is free turning with little friction, so easily moved especially when in a pocket.

The set has plenty of receive audio output although this can sound 'tinny' especially with the volume set to a moderate level. VHF air-band reception is disappointing, stronger signals suffer from distortion such that I believe there may be an AGC issue with the radio. In the military air-band, the set will receive NFM only. On broadcast WFM reception is good although understandably 'Lo-fi'. Reception is interrupted if a signal is received on one of the main bands, which then



The Quansheng UV-K5

Keith Rawlings G4MIU reviews a bargain 2m/70cm handheld from China.

takes priority.

Battery life seemed good although I always topped up after use by utilising the drop-in charger.

The manual tells you much of what you need to know but is not up to Yaesu/Icom standard and takes a bit of interpretation.

Transmit audio quality was found to be good and the receiver sensitivity is excellent.

One morning I had a good Q5 QSO on 70cm, handheld to handheld with **Ben M3EUO** over a distance of 2km+, **Fig. 3**, while I walked along country footpaths. The same route on 2m was not quite as good, this I put down to lower efficiency of the handie antennas.

PC programming

While the radio may be programmed manually from the menu this is tedious and is more easily done via the free PC Programming software. The radio may be configured, memories programmed, CTCSS tones set, repeater shifts entered, power levels, channel names set and so forth. Configurations may be saved for later retrieval. The radio has to be switched on before the Baoefeng style cable is inserted. I noted that

the radio still operates while the programming lead is connected and the blue LED illuminated. The software, **Fig. 4**, is simple to use and makes programming very easy.

Performance tests

I casually ran some performance tests on the radio and results may be seen in **Table 1**. The manual specifies sensitivity in dBm for 12dB, SINAD which I have emulated. RF power output was measured with a Bird 43 so will be $\pm 5\%$. Sensitivity was checked using a Marconi 2019A and Sinadder Linear B SINAD meter. Harmonics were monitored on an HP 8559 spectrum analyser and frequency on a Racal Dana 9915 frequency meter, the latter locked to a precision reference signal.

Allowing for measurement uncertainties the set was found to be close to published figures. The level of transmitter harmonics, however, could be better.

Conclusions

The UV-K5 is a sturdy handheld, which is well made, compact and generally works well. It is a great 'pick-up-and-go' radio and fun to use.

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Fig. 1: UV-K5 outfit. Fig. 2: UV-K5 in the hand. Fig. 3: Ben M3EUO using the UV-K5. Fig. 4: Screenshot of the Programming Software.

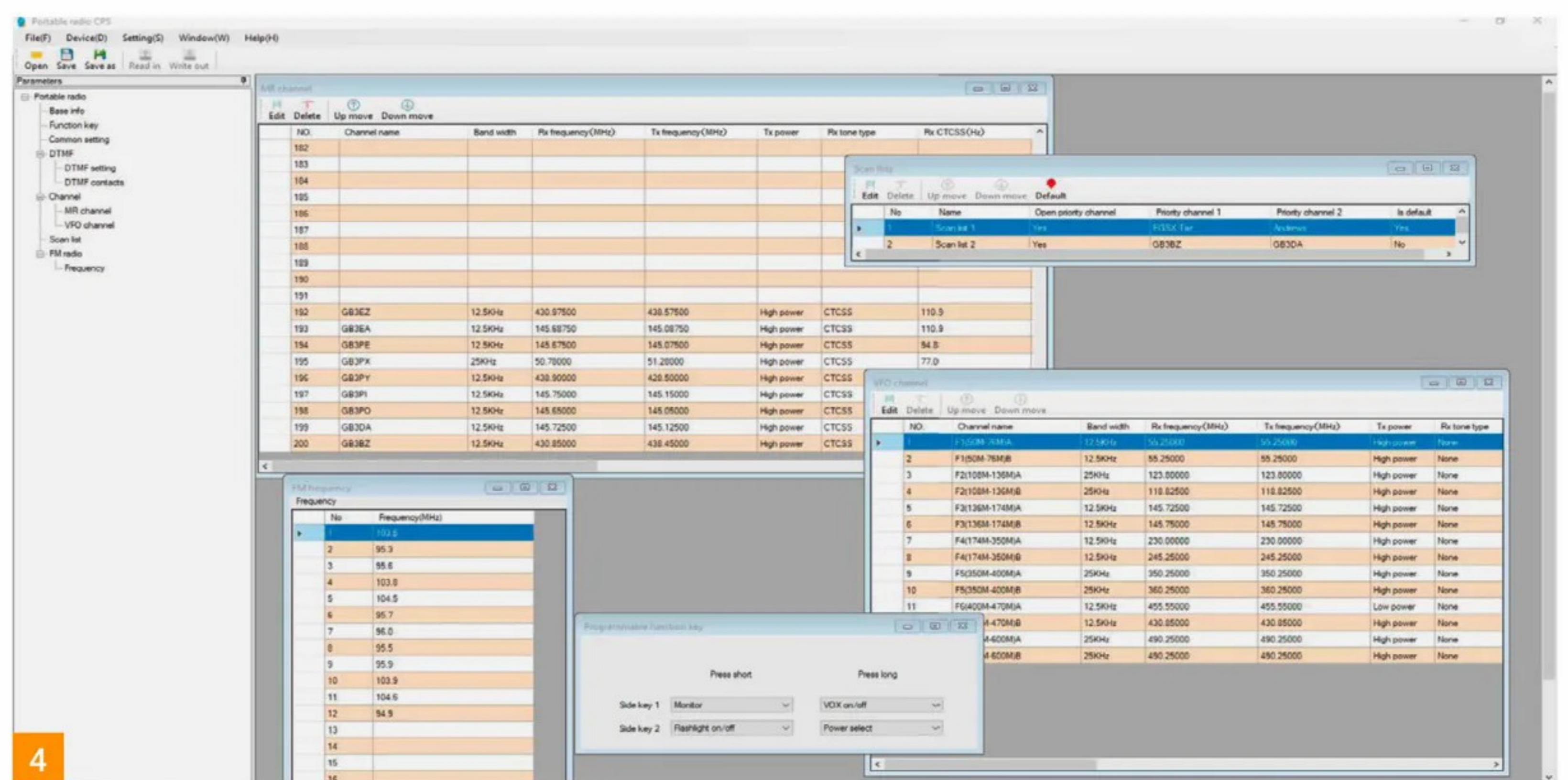
My son, who now has the radio, lives 3.5km away and we find it great for keeping in touch. It has adequate transmit power, a sensitive receiver and is relatively cheap. This needs to be tempered against transmit harmonics being a bit on the high side, so it's probably best not used on a main base station antenna, and the set cannot be recommended for air-band reception (which Mirfield acknowledge).

The item under review was purchased from Mirfield Electronics whose current price is £34.95 + p&p. It is also available from other UK suppliers.

www.mirfield-electronics.co.uk

Software&Manual:

www.qsfj.com/support/downloads/3002



TX Power Output	Low	Medium	High			
145 MHz	2.6W	3.2W	4.5W			
433 MHz	2.8W	3.2W	4.4W			
Sensitivity @	50MHz	70MHz	145MHz	160MHz	433MHz	450MHz
dBm for 12dB SINAD	-120dBm	-126dBm	-127dBm	-127dBm	-126dBm	-126dBm
Harmonics	2nd	3rd				
145MHz	37dB down	40dB down				
433MHz	41dB down	47dB down				
TX Frequency Accuracy	145MHz	433MHz				
Measured	145.00005	433.0001				

Table 1: Measured Performance

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