

Anytone AT-779

70MHz

FM mobile transceiver

The Anytone AT-779 is a 70MHz FM transceiver, suitable for mobile use.



The 4m can be a very useful band and this small mobile transceiver reminded me just how useful.

A couple of months ago, I had a chance to look at the Wouxun dual band handheld for 70 and 144MHz and, in the course of carrying out that review, I was reminded of what a useful band 4m can be. I was delighted to then get the chance of having a look at the Anytone AT-779 low band VHF mobile transceiver. The coverage of the rig is from 66 to 88MHz, but of course, the useful frequency range for us is the 70MHz band. The advertising for the rig lists the following as the key features:

- Frequency range: TX /RX : 66-88MHz
- Number of memory channels: 199
- Step sizes: 12.5/15/20/25/30/50kHz
- Squelch: CTCSS/DCS
- Hard wired microphone
- Power levels 5/10 & 15 watts
- Clone-by-cable software is free download

First impressions

The first impression on taking the rig out of the box is of the size – or rather the lack of it! The rig is tiny. It's barely bigger than my iPhone. That's immediately good news if you are thinking about fitting the rig in a car where

space is at a premium. Similarly, it won't take up much space in the shack.

The microphone is hard-wired into the rig, which is not so good news if you were thinking about using it with a hands-free kit in the car. The rig is easy to operate and has some very basic controls.

The knob on the right of the rig serves not as a channel change control, as you might think, but as an on/off switch and a volume control. Channel change is achieved by using the up/down keys on the microphone. The 'Fun' key serves as the Function key to get into the menu, which allows you, amongst other things, to change the power level.

RF output on the review rig was High (17W), Medium (8W) and Low (4W). It would be good if the medium power level was 10W as that would then enable Foundation Licence holders to use their maximum licenced power.

In use

I quickly found my way around the controls of the rig and had a listen to it on the monitor receiver – the transmitted audio sounded good quality as was confirmed later in contacts on the air. A quick check with the signal generator showed that the rig is not particularly sensitive. This is quite normal for low band VHF FM sets where the noise level can be quite high – so a very sensitive set might be rather counterproductive. In practise, the sensitivity of the AT-779 was

good in both fixed and mobile situations. Driving past a petrol station, I noticed that even a very strong signal was wiped out. I suspect that in a very dense urban area, then the AT-779 might struggle with a high ambient noise level.

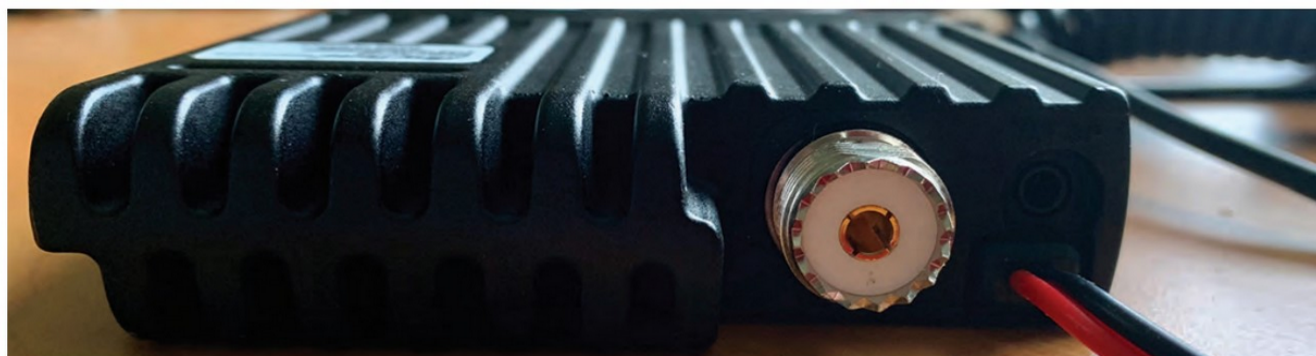
The squelch is easily adjusted from the menu and seemed nicely balanced.

People always ask me about the spurious signals produced by the transmitter on low-priced sets. I do not have laboratory quality equipment to make these tests; but I do have some simple equipment that allows me to get a feel for the quality of the output. Initial tests of the 2nd and 3rd harmonics based on a transmission on 70.450MHz showed that these harmonics were not as low as I would have liked. Discussion with other users (including someone with some very decent test equipment) showed that other units were much better than the review model, so it may be that I was unlucky with the review model, although Martin Lynch & Sons were able to reproduce the issue on another model, from the same batch. As soon as I raised this with Martin Lynch & Sons, they took the matter up with Anytone to see if improvements can be made.

The rig comes with a PC programming cable (USB). However, given the nature of operation on 70MHz, this is probably largely unnecessary, as there is no repeater operation requiring repeater shifts, CTCSS tones and the like. Operation is simplex, so you will probably be quite happy, as I was, to move between the different channels



The clear front panel of the Anytone AT-779 shows the rig is easy to operate and has some very basic controls.



I connected a quarter wave magmount on the car, connected it to the radio and placed the AT-779 in the centre console of the car.

using the up/down keys on the microphone. The AT-779 does support the use of CTCSS tones, should you require it.

On the air

So, how did the rig work on air? I wanted to find out. Not having a 70MHz aerial on the house, I popped a quarter wave magmount on the car and placed the AT-779 in the centre console of the car. It fitted easily! The only snag was that the rig's speaker is downward facing, so the audio is not as strong as it might be if you use the rig in this way. There is an extension speaker socket, so this is easily remedied if you need to.

With the rig all connected up and the car parked in the yard, I tried a CQ call on 70.450MHz. I was, if I'm honest, totally surprised to be called straightway by Luke, 2WOLXT about 7 miles from me in Letterston. Luke's signal was strong and I was delighted to find that he was receiving me well. It's an obstructed path, so I felt that was very promising. On finishing the contact with Luke, I was then called by Richard, GW1JFV in Haverfordwest, some 15 miles away. Signals to and from Richard were a little weaker with some noise, but the path is much more obstructed, particularly as both our aerials were quite low.

A few days later, I asked Richard if he would help do some tests as I drove around. He kindly agreed. Richard runs 25W to a Sandpiper 'Ringo-

Ranger style' aerial at 12 feet above ground. For much of our test, the signal path was obstructed. Nevertheless, as I drove around the North Pembrokeshire countryside, stopping at various spots to check signals – including the bottom of some valleys, we were amazed at the coverage that we got over distances of 20 or so miles in very undulating terrain. I found that 70MHz FM does a remarkable job of covering areas that 144 or 430MHz FM would struggle with, given a similar power level and antenna. We were both very excited and enthused with the results of this test.

After an extended QSO of about 30-40 minutes on the rig's high power setting, the AT-779 was rather hot! There is no fan to cool the heat sink, so do be aware that the rig will get hot – be careful where you place it. The downward facing speaker meant that I had the volume on maximum as I was driving around and the audio level was still a little on the low side. I also noticed that the up/down buttons on the microphone are very sensitive, so it is easy to change channel inadvertently (if you are not going to QSY – the lock feature might be worth using).

Overall

The AT-779 is a simple, easy to use 4m FM radio with a tiny form-factor. The power levels are useful for both fixed and mobile users.

The rig does get very hot after a reasonable length QSO on the high power setting – please be careful. The levels of the 2nd and 3rd harmonics of the review radio gave cause for concern, but I am happy that not all radios are affected. Transmitted and received audio is good. An extension speaker may be useful when using the rig in a noisy mobile environment. The hard-wired microphone reduces the flexibility of the rig – more difficult to use a hands-free kit, which is needed if you want to operate when actually mobile.

Importantly, the AT-779 reminded me how good 4m FM operation can be. I know many people have 4m FM capability but perhaps have not used it in some time. With better weather and hopefully, more freedom to travel to mobile/portable locations on the horizon, the AT-779 combined with a simple vertical antenna could make for lots of fun.

The Anytone AT-779 costs £79.95 and is available from Martin Lynch & Sons (www.hamradio.co.uk). Very many thanks to Martin himself and Gary Spiers at ML&S for their help and support in producing this review.

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