

# Anytone AT-D578UVPRO dual band mobile

**A** look at the Anytone AT-D578UVPRO dual band 144/430MHz DMR/FM mobile.

Whilst DMR handhelds have proliferated over the last year or two in the amateur market, DMR mobile rigs have been harder to find. Anytone, with their DMR handhelds have built a good reputation as a product that does what it should without too many quirks or foibles. When they announced a dual band mobile, it's fair to say that there was a great deal of anticipation to see if they could reproduce the success of their handhelds in a mobile package.

I was delighted when I had the opportunity to review it. The rig arrived just before our house move from Oxfordshire to Pembrokeshire that initially curtailed experiments a little bit. However, I quickly unpacked the rig and connected it up to the V-2000 vertical on the roof.

Moonraker supply the AT-D578UVPRO with their own codeplug that has all UK digital and analogue repeaters pre-programmed, along with the various simplex channels for analogue and digital use on 2m and 70cm. If you provide Moonraker with your DMR ID at the time of purchase, they'll program that up for you as well, so all you have to do is to switch on.

## In use

My very first test was to try out the GB7TC repeater at Swindon. I put out a call and was pleased to be called by Tim, MOKEP at Abingdon. We had a quick conversation and then were joined by Ian, G8NXJ from near Reading. Although Tim was hearing me perfectly, Ian was reporting that my audio kept coming and going. This was odd! Initially I thought there was a loose connection of some kind, but of course, that didn't explain why Tim (and others that called in) were hearing me ok – initially I thought Tim was being polite and not liking to say that the radio sounded iffy! Investigation continued over a day or so as we narrowed it down to people who had a Motorola rig were hearing the 'broken' audio from me. Finally, Chris, 2E0UCW came up with the reason, which I should have thought of myself, it was the Talker Alias data that the Anytone is capable of transmitting that caused the problem. The



The Anytone AT-D578UVPRO is a dual band DMR/FM mobile transceiver.



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Motorola didn't like it, didn't know what to do with it, so dropped audio, re-synchronised so that the audio reappeared until it happened again! It is possible to configure the Anytone not to transmit the Talker Alias data (normally this is your name and DMR ID) if this is likely to cause you regular problems.

## Going mobile

With this conundrum solved, I decided to put the rig in the car. It wasn't too difficult to find a home

for it, being a modestly sized unit. Immediately, I enjoyed the fact that I could put one side of the radio on an analogue repeater and the other side on a digital repeater. It doesn't have to be split that way – you could have both sides of the radio on different digital repeaters or both sides of the radio on analogue if you wanted to. On the local analogue 70cm repeater, GB3TD, I checked that the audio was what people expected me to sound like and it was. Over on Digital coverage using the GB7TC repeater worked well and I was happy to have the higher power available from the rig that

got over the problem of dropping out that can happen when operating mobile with lower power. When driving over the Cotswolds to visit my Mum in Cheltenham, I found that the GB7CC repeater, part of the Salop Cluster Network, on Cleeve Hill above Cheltenham was accessible for much of my journey, which was very useful indeed.

As I was driving around, I was interested to note that the rig sent a tone as you went in and out of the coverage of the digital repeater. I found the rig's display clear and easily viewable in both shack and mobile use. When mobile, you'll probably use the program keys on the microphone (there are plenty!) – make sure that you're familiar with their operation, or you'll get in a mess, like I did! The keys on the microphone can be programmed from within the codeplug.

Rather like the Anytone AT-868 and AT-878 handhelds, the AT-D578UVPRO has Digital Monitor for DMR, so you can listen to a repeater output channel and hear any talkgroup that is transmitted on that timeslot (a channel can either be timeslot 1 or timeslot 2). If a transmission pops up – you can go to that talkgroup, without having to have a specific channel programmed up, by long pressing the zero key so the display shows Private ID, then hit # so the display shows Talk Group ID. Then enter the number of the Talk Group you want to use and hit the PTT – you'll now be using that talkgroup. If you're operating mobile, you'll want to have the various channels programmed up to make things safer and easier, but if you are stationary in the car or operating from home, this will give you a good deal of flexibility.

In the car, the two separate volume controls for each side of the radio were particularly handy for quickly adjusting which side of the radio you wanted to listen to. The audio level from the speaker was good even when driving. You can, should you wish, pipe audio out of the speaker/microphone that comes as standard. I didn't find that particularly useful, but others might.

## APRS and other features

The AT-D578UVPRO is also advertised as having digital and analogue APRS. This is so, but might not be quite what you expect. Using the internal GPS on the rig (a GPS antenna is provided that you can affix somewhere suitable in the car, the rig can determine your position and send an APRS beacon on either the analogue network (144.800MHz) or on the digital network as you prefer. You can configure when it does this, generally either at the beginning or end of a transmission. You can't have it send a beacon every 5 minutes or when you've travelled a specified distance – which might be better. The other thing is that the rig does not receive APRS data – it only transmits it (this is the same for the otherwise excellent AT878 Plus handheld). Configuration of the APRS setup is all managed from within the codeplug where you can adjust the path, APRS symbol and so on.

For DMR use there's Roaming functionality included as well, although that wasn't exploited

in the current version of the Moonraker codeplug. You could add it yourself, though if you fancy a play with the codeplug. The idea is that where you have several repeaters in range that carry the same talkgroup, you can use the roaming functionality to automatically switch to the strongest signal.

There's a crossband repeater function built into the rig – there's crossband analogue to analogue (can be UHF-VHF or VHF-UHF), crossband analogue to digital (can be UHF-VHF or VHF-UHF) and crossband digital (UHF to VHF or VHF-UHF on different time slots). You can have hours of fun with this – and there's plenty of videos on YouTube to show it in operation. With the capability of analogue to digital, there's nothing to stop you using a cheap FM handheld around the house, through the AT-D578UVPRO coming out on a DMR repeater – or going through an MMDVM hotspot and coming out on DMR, Fusion, NXDN, P25. You might very reasonably ask if that makes any sense to do, but it could be a fun thing to try. The crossband repeater capabilities may find serious application for RAYNET work.

Something that Anytone did very well with the AT-878Plus handheld was the Bluetooth implementation and this has been repeated with the AT-D578UVPRO. The Bluetooth module is fitted as standard and will interface with many in car audio systems such that you can pipe the audio from the rig through your car audio system and that you can use the hands free microphone as the microphone on the AT-D578UVPRO. A Bluetooth Push To Talk button is also provided that you can pair with the rig, strap it to say, the gear stick and use that to key the rig. With the first release of firmware, you had to keep the PTT button depressed when you wanted to transmit, but this has been amended so that you can push it to latch the PTT on and then push it again to latch the PTT off – much better.

As far as I'm aware, this is the first mobile radio with full Bluetooth integration as standard, offering full hands-free capability – a real plus for safe, simple mobile operating.

## Codeplug programming

Although, as supplied by Moonraker, the rig's codeplug is comprehensive and well-thought out, if you're like me, you'll probably want to make some tweaks to the setup. A programming lead that connects to your computer by USB is supplied with the rig. The Customer Programming Software (CPS) can easily be downloaded – you can find it on the Moonraker website – or there are other sources on the Internet, if needed. The drivers for the programming lead and rig did not cause any difficulty for me, running on a Windows 10 machine. The CPS was fairly straightforward to use, particularly if you have worked on the AT-868 and AT-878 codeplugs – the software is structured in the same way.

Moonraker make regular updates to the codeplugs for all the Anytone DMR radios including the AT-D578UVPRO, incorporating new

repeaters, frequency changes and so on. You can download these from the Moonraker website and upload them to your radio, using the Customer Programming Software. The only thing you'll need to change is the Radio ID – your DMR ID.

In actual fact, if one of the repeaters you are using changes frequency, for example, you can easily make a change, without having to connect the rig up to the computer and modifying the codeplug. Rather, you can do this from the front panel. Select Settings/Channel Set and from within the menu you'll be able to change most of the required parameters. The changes will then be saved within your radio. Just make sure that next time you use the CPS on the computer, do a 'read' from your radio first, before working on the codeplug, rather than using a version of the codeplug that you may have on your computer, otherwise you'll end up losing your changes.

## Firmware upgrades

Those of you who have used the Anytone AT-868 and AT-878 handhelds will know that the manufacturer is proactive regarding firmware releases and this seems to be the case with the AT-D578UVPRO – at the time of writing a new version of firmware has been released which fixes various bugs that were in earlier releases. Firmware upgrades are easy to install. There are good instructions contained within each release and you can find plenty of YouTube videos on how to install the firmware if you would like visual confirmation of the written instructions.

## Conclusion

If you are a keen DMR user and you have been waiting for a rig to use in the car, then the Anytone AT-D578UVPRO is well worthy of consideration. The performance is good and although user experience is subjective, I found it easy to use. Although some users have reported some bugs and glitches, there aren't any showstoppers that I encountered in the review period – or have seen reported online. If you have either of the Anytone DMR handhelds, then you may well enjoy the similar functionality and approach on the AT-D578UVPRO.

Many thanks Moonraker for the loan of the AT-D578UVPRO for the review and to Chris Taylor, GOWTZ of Moonraker for helping point me in the right direction when questions came up. Also, many thanks to Chris Waters, 2E0UCW for his assistance in unravelling some of the queries, especially the one involving Motorola rigs and the Talker Alias DMR data!

The AT-D578UVPRO costs £349.99 and is available from Moonraker, [www.moonraker.eu](http://www.moonraker.eu).

**Tim Kirby, GW4VXE**  
longworthtim@gmail.com