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AOR's AR-Mini Pocket Sized Scanner EVALUATED

Kevin Nice has been getting to know the latest radio from AOR. A departure from their radios of late, but the handy sized AR-Mini is a convenient package with computer management. It covers from 0.100 to 1299.995MHz.

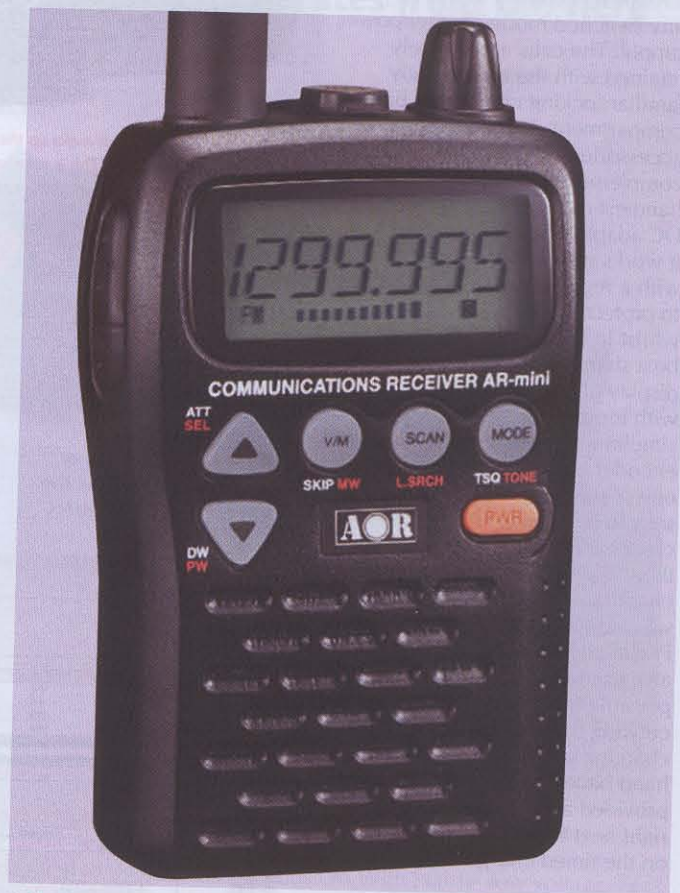
If you are an AOR owner, then this radio will come as quite a shock for you. Gone is the usual quirky AOR user interface (awkward controls) and the rather unusual layout. I can hardly believe that I am typing these words, but the latest radio from AOR has made me realise that in spite of the excellent performance of the radios they produce, AOR has always had a problem with ergonomics. Now, I have to come clean here and say that I have four AOR radios in my shack, two of which are never turned off, the AR7030 is probably the best h.f. radio I have ever owned, relegating the Racal RA1792 to second place and I actually sold that, but kept the AR7030. My AR5000 is my main base station set, as it covers up to 3GHz and is rock solid with it's GPS derived frequency standard, but they are difficult to drive! Their controls are stiff and awkward, their buttons are either too small or they sit in front of multiple layer menus, that seem to have no logical path to the option you want to change. The AR-Mini on the other hand, has no numeric keypad, but it is a joy to use!

Light Weight

At 60x90x24mm and an all in weight of 210g, this latest offering from AOR is small, but not too small, it covers from 0.1 to 1299.995MHz in a.m., n.b.f.m. and w.b.f.m. There's no s.s.b., but this doesn't matter. The AOR Mini is aimed at those enthusiasts who want a quality pocket sized scanner, that's robust and performs well. You get those things and it's computer controlled. The bonus here, is that for a change, the software for this radio is actually available when the radio was launched, a serious improvement and in my view, an acknowledgement by AOR that computer management is important and that their customers expect to use the facility. Another good move on re this control of the radio by PC, is that this is accomplished via a USB port on the PC rather than the slow inadequate and rapidly disappearing RS-232 serial ports of yesteryear.

The control software is a free download from the AOR website, but the interconnecting lead must be purchased as an accessory. £53.95, there is also a cloning lead to allow the direct copying the contents of one AR-Mini to another.

Whilst the computer application is a great bonus to the



● Fig. 1: Minimal controls are well utilised, to ensure easy operation.

management of the radios 1000 alpha-tagged memories, which also store eight other fields in addition to name and frequency. It would be rather nice to have some radio control built into the software. At least the AR-mini Programming Tool does make the memory management a whole lot easier than hand entering the

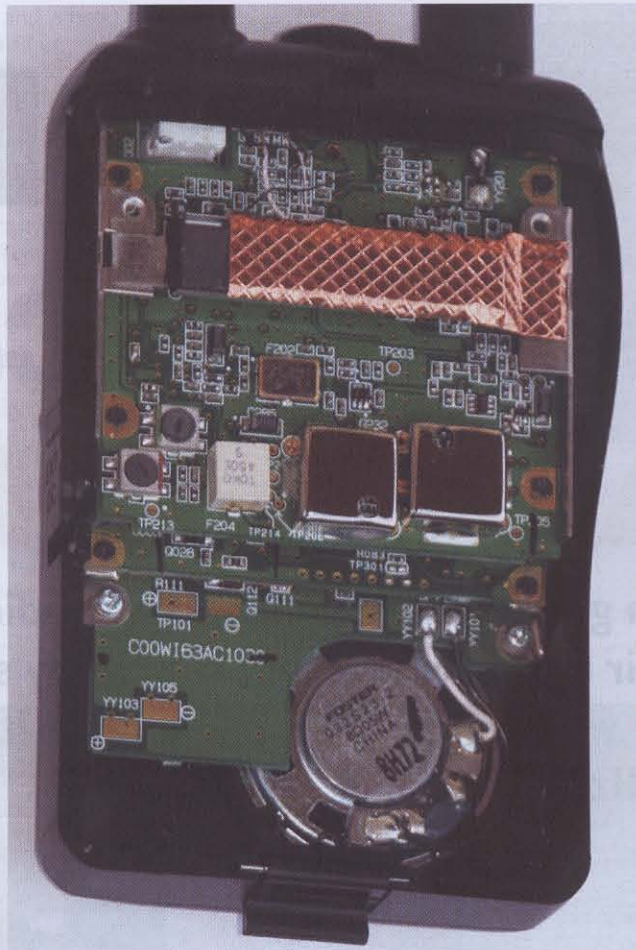
data. Plus, of course, you can make a back-up of the radio's memory so that you have a safe copy. If you happen to have more than the 1000 memory channels provided by the AR-Mini frequencies that you are interested in, then you can load the ones you need for a particular excursion if needed. Oddly, the application doesn't appear to have an icon so you are presented with a generic box instead, though the installation on my *Windows XP* laptop was pretty smooth. I happened to have an older version of the Silicon Labs USB to UART bridge driver, that's used in the data lead, already installed on the PC, so this was replaced by the version I downloaded from www.aoruk.com/software/ar-mini_software.zip

What You Get

Supplied with the AR-Mini is the usual compliment of items to get you going, an SMA antenna, a pocket clip, lanyard, user guide, two NimH AA sized cells of some 2500mAH capacity and a very tiny switched mode charger/power supply. The cells are securely retained with the increasingly familiar locking clip on the battery compartment. There are other accessories available to complement the AOR-Mini, the handiest of which is probably the DC adapter for in car or truck use. It works with either 12 or 24V input and supplies the AR-Mini with a regulated 6V supply. My next choice would be a soft case to protect the set, as it's so easy to end up scratching the display whilst in use. Since it is a clear and easy to read affair, it would be a shame to render it less so. This clear and easy to read display also has flexible back-lighting, which is configured, as with most other options, via the menu system that invoked with a simultaneous press of the function key and the set-top rotary encoder button. There are 34 options that can be set this way, one of which is the switching on of the battery charging. As the set can be used with cells other than rechargeables, the battery charging facility is not automatic, there is also a warning that the charging function must only be used when the NimH types are fitted. Personally, I like this approach, it's also used by Yaesu in their FT-817 portable transceiver. And it saves you cooking the cells by always having a charging voltage applied. There is a hand battery voltage indicator provided as option 29 in the menu, right next to option 30 which turns on the timed charge facility.

In Use

As you might imagine, this was the first function that I used so that the cells were full of charge. Oddly, there are some extra functions in the



● Fig. 2: Three circuit boards make up the AR-Mini. It also has a ferrite bar antenna for m.w. and short reception. This is switchable, so that you can use an external antenna, but it performs very well and mostly better than an external wire.

menu that aren't covered in the user guide. Also, you can only enter the menu when the radio is in v.f.o. mode.

I've mentioned the clear and easy to read alpha-numeric display, sadly it only gets to show six digits of frequency or memory name. Unfortunately, the text field is limited to six characters too, so you don't even get to scroll through the any extra letters for longer names. There are extra smaller display elements that show channel number and fraction's of kHz, but since the l.c.d. is not a dot matrix, the elements are fixed, hence the limitation, but better clarity compared to a radio that uses the dot matrix approach.

Even with this limitation, the radio ships with almost 200 preprogrammed short wave broadcast stations with their names included in the memories.

As you might expect, with 1000 storage memories, they are organised into banks, a total of 10 banks of 100 channels each. In addition, there is the customary band-edge search limit memories too, there are 22 pairs of those.

It's clear that the AR-Mini wasn't designed for high speed searching and scanning, as the step rate is a pretty slow 8 channels per second, this may be due to it having a fairly high accuracy frequency stability of 2.5ppm.

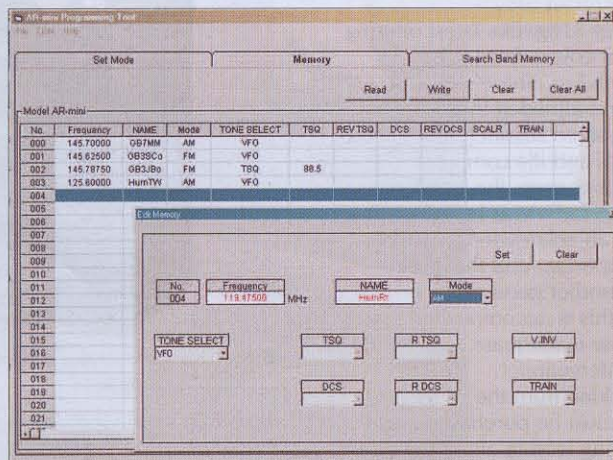
The AR-Mini is pretty versatile, it benefits from triple conversion and is pretty sensitive, it has a dual watch capability and up to 100 lock-out memories, in addition to those already mentioned. Step sizes are what you'd expect for a modern handheld, i.e. 5, 6.25, 8.33, 9, 10, 12.5, 15, 20, 25, 30, 50 and 100kHz. and they can be selected for any mode, except the 9 and 8.33 steps are only available on m.w. and airband, respectively.

My only dilemma, is where the AR-Mini fits in with other hand-held scanners, I guess time will tell. It's certainly pleasant to use and very well made. The controls are rugged and have a

tactile response. Audio quality is good too. So, if you are looking for a mini hand-held that's got good memory capability, then the AR-Mini might just be what you are looking for.

Where From?

My thanks to AOR UK for the loan of the AR-Mini for this review. The pocket scanner is available from AOR UK www.aoruk.com Tel: (01629) 581222 and the UK radio dealer, with an RRP of £259, it is, like all other imports, a victim of recent non-favorable Yen to Sterling exchange rate changes.



● Fig. 3: The AR-Mini memory management application in use.