

HF DXing From Small Spaces

In recent years, CW has undergone something of a revival with large numbers of radio amateurs taking, and passing, the morse test to get to the bands. However, it never ceases to amaze me that the dozens of class A licensees that I know of within a 3 mile radius of me very rarely surface on anything other than 2m. TVI must account for some of them not being too keen to fire up their expensive HF rigs, but that does not seem to be the real problem. A brief period of high activity follows the acquisition of the coveted class A ticket, then a deep rooted belief sets in that unless a monster tower and beam can be erected, no DX contacts can possibly be made.

Want to work HF DX but only have a small garden? Well, David Reynolds, G3ZPF, has some ideas for effective 'limited space' antennas for newcomers (and perhaps old-timers) to the HF bands.

Their initial lack of success in DX chasing is invariably put down to having to make do with wire aerials, but in reality may have more to do with lack of HF operating experience than the aerial limitations. At VHF/UHF frequencies, the dimensional accuracies required in the construction of aerials inevitably means that almost all arrays are commercially manufactured. This seems to instil the belief that no aerial can be any good unless (a) it is made of aluminium tubing, and (b) it is made in a factory. On transferring their activities to HF, many amateurs seem to bring this belief with them — often spending considerable amounts of money on commercial limited space

aerials only to be disappointed with the results.

I am particularly interested in DX chasing but my location dictates that this be done with low wire aerials: I have, in recent years, been asked to give talks at the local radio club. In these talks, I attempted to explain that at HF it is quite possible to 'roll your own' aerials at minimal expense; and although a tower and a beam certainly make things easier, it is still possible to chase DX even on indoor aerials.

In reproducing the gist of those talks I hope to inspire others to reconsider what they had previously thought to be an 'impossible' QTH. As I have no professional involvement with the electronics

industry, the descriptions given do not go beyond that required for the RAE course. The only 'qualification' that I can claim to have, that relate to the topic, are the achievement of working over 100 countries on *each* of the 80 to 10m bands (pre WARC) and 15 years worth of experience. Of the latter, it can only be said that if we learn by our mistakes then I've had one hell of an education!

Reference Books

I have read quite a number of books over the years, but have yet to find an aerial in any of them that would fit into my garden exactly as it was described. The general im-

pression I gained from the books was that the aerials would not work at all unless constructed exactly as described. Yet I have found it possible to take great liberties with the layout of HF wire aerials and still get them to perform very well. Doubtless, the real purists would be able to get an extra dB or so out of them, but then they probably have far more room and height than I have ever had.

I would strongly advise borrowing copies of the various aerial books from the public library before deciding to buy any, and although personal preference will obviously vary, my own favourite is "HF Antennas For All Locations" by Les Moxon G6XN. This covers both the practical construction of wire aerials for limited spaces and also goes into the theory for those who like to delve deeper.

Initial Considerations

The first decision you must make is which bands to operate on. For many newcomers nowadays this is no simple matter. When I first got my licence, it was usual for an 'apprenticeship' to have been served as an SWL before coming on the air. This now seems to be the exception rather than the rule. Those that have come over from CB activities will find the channelised life at VHF/UHF vaguely familiar, but the vast majority of those new to our ranks share a general lack of background knowledge about the hobby in general.

To those who think themselves in such a position I would recommend the "Amateur Radio Operating