



FIG 2: A block diagram to illustrate the ease with which a 50MHz station may be set up. The coaxial feed from the antenna is introduced to a coaxial relay to be switched as follows: to a three-transistor converter fitted with a 45MHz local oscillator crystal to develop an IF of 5MHz to be fed to the station communications receiver. For the British band of 50-52MHz the receiver tunes 5-7MHz. For the American band of

50-54MHz the receiver tunes 5-9MHz. If these tuning ranges are not convenient any other tuning span may be chosen by appropriate selection of the converter local oscillator crystal, e.g. a tuning coverage on the 'IF strip' of 26-30MHz (to represent 50-54MHz) would require a converter crystal at 24MHz, which when subtracted from 50MHz produces the desired IF in the converter.

On 'transmit' the antenna is

switched to a three-stage unit that accepts the outputs from a variable frequency oscillator at 12.525MHz which it multiplies twice, then twice again to produce the transmit frequency of 50.1MHz, the centre frequency of the British allocation. The three-stage unit may utilise any power transistors rated to operate above 50MHz or three valves such as two E180F multipliers and a QQVO3/10 power amplifier.

Long before this happened those same enthusiasts had not by any means been sitting idly by awaiting the passage of events. Recognising the future potential of 'Six' many of them had equipped their stations with 50MHz converters (home built at first: later commercial models appeared) to feed into main station receivers to monitor what the rest of the world, or at least those countries which had the band, were doing with it.

One lone but powerful voice from Europe was that of EI2W, the station of Harry Wilson near Dublin ('...the only licensed 50MHz station in Europe'), which during the Fifties demonstrated the band's capabilities by working literally hundreds of American stations on 'Six' in the sunspot maximum which came round in the customary eleven-year cycle right on cue after the great DX openings of the late Forties.

Cross-band working

With the passage of successive eleven-year cycles came the

thought that although British amateurs were not permitted to *transmit* on 50MHz there was no barrier against *receiving*. Why not, then, many of them asked, *send* on 28MHz and *receive* on 50MHz? None of them was fortunate enough to enjoy permission to send as well as to receive on 'Six', unlike the redoubtable EI2W, who by the end of 1979 had worked into 40 of the USA states by direct 50MHz exchange, using no more than 40W and a home-built 3-element beam antenna.

For the rest it would need to be cross-band or nothing. And cross-band it soon turned out to be, with remarkable success. Countries throughout the world where the 50MHz allocation existed were opened up for cross-band communication with the United Kingdom. These cross-band 50-to-28MHz exchanges began to become almost commonplace, if one may be permitted the use of an adjective that does less than justice to the foresight of the pioneers of 'Six' in this country. Their diligent monitoring of

28MHz, of significant signals at or near 50MHz (eg, Russian television), plus the selection of the crucial moment when 'Six' would promise to peak — notably at the equinoxes — brought them due reward.

An even greater reward was imminent and this was the possibility of engaging in transmission as well as reception on 'Six'. Towards the end of 1982 it was announced that '...for research purposes only, a very limited number of Class A licensees will be permitted to operate from 50 to 52MHz outside UK broadcasting hours on a non-interference basis'. This cheering news showed that the foot in the fifty meg door was prising it just that little bit more open — but not by much, for the concession which was granted allowed little more than a few hours of transmitting time generally at dead of night when all-pervasive television had at last closed down and before it was resumed at an all too early hour soon after.

And there the matter rests as these words go to press — but rests