SHF rabbit’s ears?

Dear Sir — 35 years ago, when satellite broadcasting was still being invented by Arthur C. Clarke, the BBC, with a little help from me, was trying to launch a new, high-quality sound service, using FM on VHF. Then, oddly enough, we hired a working transgender (at Wrotham) but no receivers — we had to make them ourselves. We managed to get a few receivers by contract — I remember the Fitton and the Crystal-KB — but it was a grinding job trying to get the industry interested in the public market. We swilled gin with the manufacturers; we battled with BREMA, until we eventually had some working prototypes.

But the big hang-up was the ‘market-ing’ — the makers said: ‘Yes, we can make a pretty box with polished veneer and a tygan fret and we can give you a “magic eye” that twinks when you tune; but we can’t sell this “aerial” you talk about — this great mass of twisted coat-hangers that goes on the roof; you’ll just have to get rid of that!’ So we said ‘We can’t — we’ve done all we can with the transmitter and we need some directivity and gain at the receiver; you’ll have to try again.’ So they did; they put more gain into the receiver and raced to raise the sensitivity so that it would work on half a microvolt. And so it was.

You bought a set: the dealer turned it on and gave you an impressive blast of blue-spectrum noise. ‘Do I need an aerial, then?’ you shouted. ‘Not really, Sir, a piece of wet string will do — or perhaps your wife would prefer this charming set-top aerial,’ and he put a pair of rabbit’s ears on the set, plugged it in and you were sold!

At least you were happy for a few hours, days or weeks; until you had to go back to the shop and complain that you couldn’t find the loose screw that was rattling at the back of the set. ‘Oh no, Sir, it’s not the set; you see, the reproduction is so faithful that you can hear the distortion; but on the same channel; then the pictures will suffer from cochannel interference because the little dish is too small to give enough discrimination against the off-axis radiation from the unwanted satellite.

Then another satellite goes up and transmits to a neighbouring area on the adjacent channel with the opposite polarisation. Even worse interference, because the little dish, squinting obliquely through the two systems, does not give enough discrimination against the unwanted polarisation.

So the public will complain and the broadcasters will again have to scrape off the egg and tell people to put the rabbit’s ears in the dustbin and pay up to have a dish on the roof (at least as big as the dustbin lid) or wherever there’s a clear view of the satellite. And then, while the small-dish makers are enjoying their profits, the promotion and sales of more suitable satellite-receiving aerials may get under way so that every country in the world may have an equal chance of enjoying interference-free reception, in the way that it was planned.

Perhaps all small, set-top aerials should be banned. But maybe, rather like cigarettes, all that can be done is to force them to carry an ITU interference warning label such as: ‘Small dishes can seriously impair your reception’. — Yours faithfully.

R.V. Harvey (M)

Kitty Crag, Grasmere

cumbria LA22 9GL, England

12th December 1985

‘All at sea’

Dear Sir — In his article ‘All at sea’ (November/December 1985 E&P, p.824) Admiral Sir Lindsay Bryson suggests that at the end of its run, it would announce its presence by a ‘figure-of-eight’ pattern. That is until they send up the next satellite, 6, 12 or 18° away from the first, but on the same channel; then the pictures will suffer from cochannel interference because the little dish is too small to give enough discrimination against the off-axis radiation from the unwanted satellite.

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