Multifeed reception – the Brazilian way

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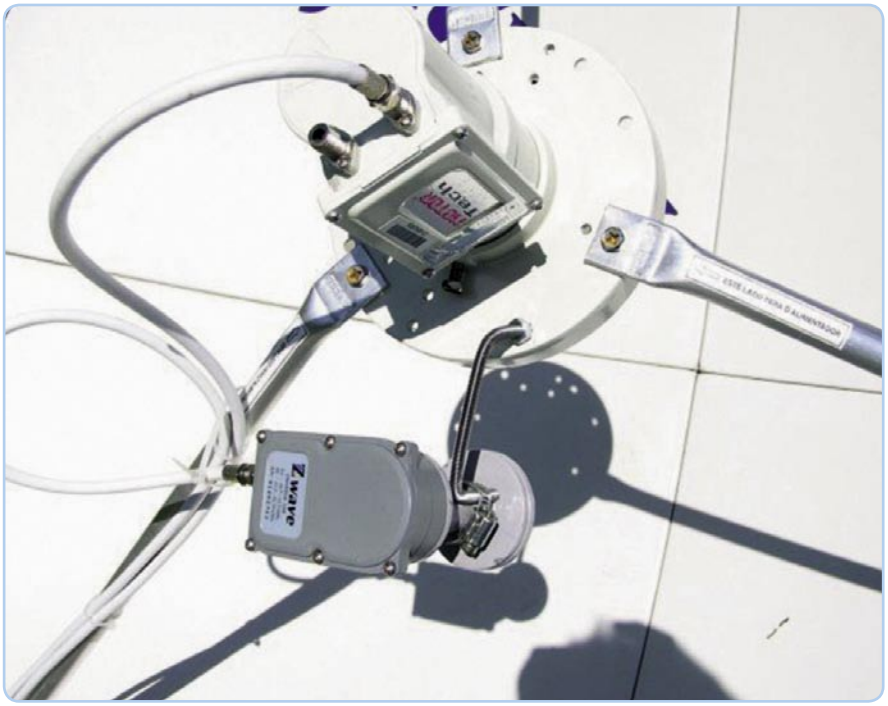
The author's reception equipment in the Natal province in northeastern Brazil

A simple solution:
a metal rod connects the second feed to the focus feed with integrated polariser

What can you do if professional solutions simply aren't available? You start to improvise and become a craftsperson. In Brazil, satellite reception is way more complicated than in Europe, because the most interesting channels are spread over many different satellites and even over the C and Ku-bands. And as if that wasn't enough, signals are transmitted in circular and linear polarisation. So you get all imaginable kinds of transmission types in Brazil.

This is when it gets tricky:
4 C-band feeds are connected to each other



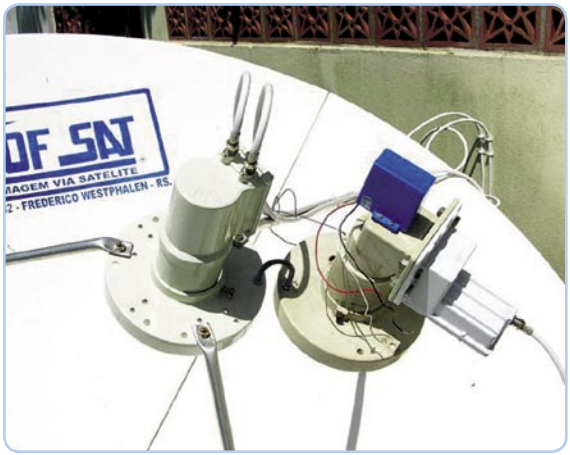
Simple but efficient: a looped tube fixes the second LNB to the mount. In the case shown this is enough to receive BRASILSAT 3 (276° East) and NAHUEL 1A (288° East)

One of the most popular satellites in this part of the world is BRASILSAT 1 at 290° East (70° West) which in Brazil is affectionately known as "B1". Other popular satellites include AMAZONAS at 299° East (61° West), which transmits in both the C-band and the Ku-band, as well as the two PanAmSat PAS birds at 302° East (58° West) and PAS 1 at 350° East (45° West), both of which also use the C and Ku-bands. Last but not least the INTELSAT 805 at 304.5° East (55.5° West), the NSS 806 at 319.5° East (40.5° West) and of course BRASILSAT B3 ("B3" for Brazilians) at 276° East (84° West) as well BRASILSAT 4 ("B4") at 268° East (92° West) are major positions for Brazilian satellite enthusiasts.

Some satellites are positioned very close to each other and can be received at the same time in multi-feed. But what can you do if C and Ku-band signals come in from the same satellite and if these signals also use different polarisation modes? There's only one way: the do-it-yourself way!

A brutal way of achieving a goal: simply cut it in two

A continuous rail serves as multifeed mount



Single-cable solutions like in Europe are not possible here: the polariser switches between polarisations and has to be controlled using dedicated cables

This is how simultaneous reception of C-band and Ku-band signals is achieved. Because of the prime focus antenna a grooved feed is used for the Ku-band LNB.