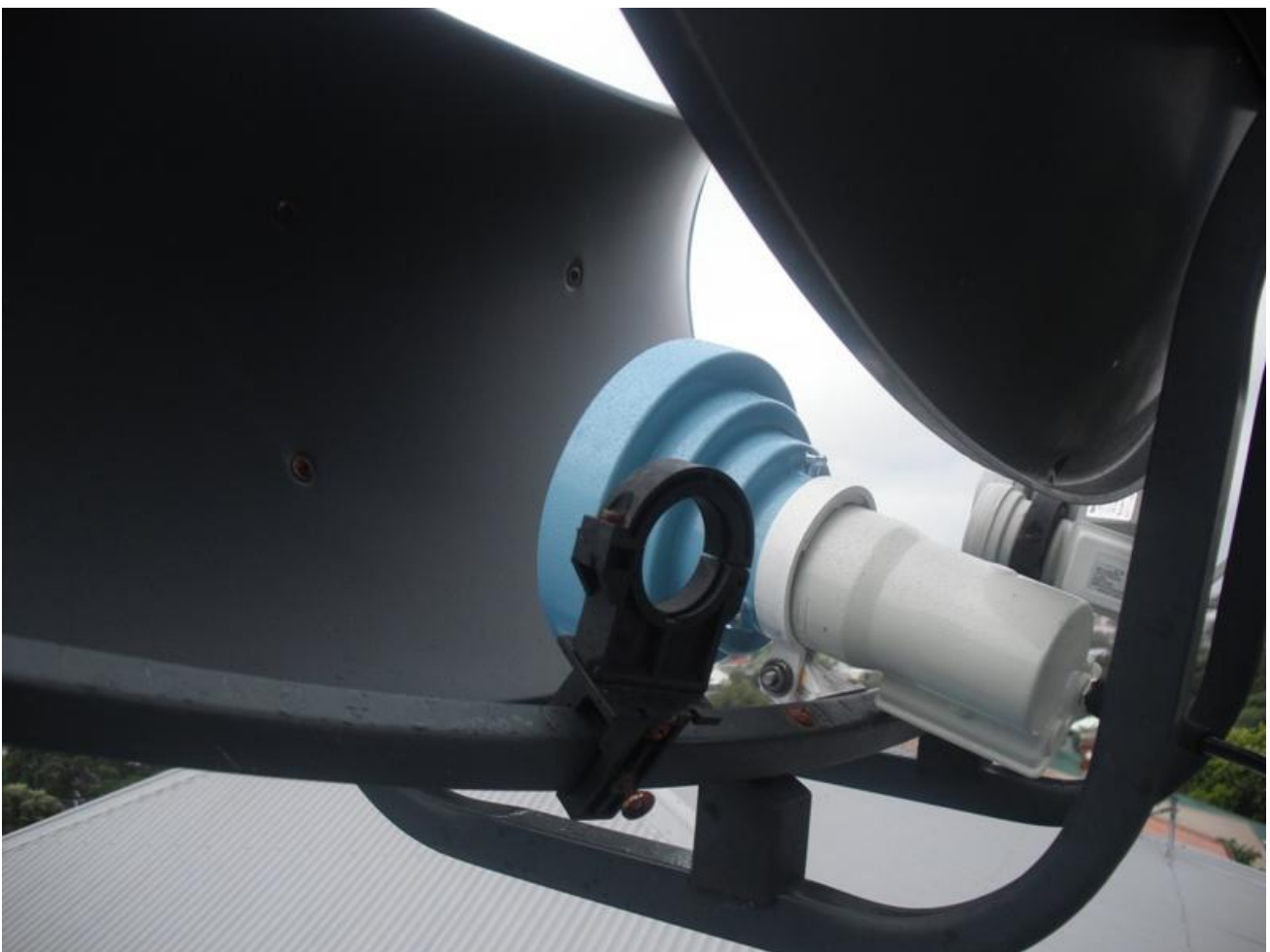


Modifying a toroidal 90cm multi beam antenna for IS5

The installation was made when Pas 2 was on the air. The line up was PAS8 where the dish was locked on to, Pas2, Optus D1, and Optus C1 Optus D2. As we all know Pas 2 is no longer with us. The client just happened to be a prominent broadcaster for whom I installed the dish some 14 months ago.

This customer decided he wanted to be able to have access to as many English channels as possible. His job requires him to be well advised on channel format, and current events. He requested access to IS 5 and Peter and I decided that we would fit a c band LNBF to his toroidal 90cm.

We had conducted some tests on a toroidal prior to us having access to scalar ring assemblies. The signals would bounce around a little, so we decided to fit a 13k and a conical feed horn.



The war cry will be what about IS8, well what about it. IS8 had nothing of interest for our client, so it was removed. The positioning of the feed horn only took a few minutes but the positioning to obtain maximum signal “just under 10Db CNR” requires the LNBF to be raised up from the bar holding the other LNBF’s in their holders by a bout $\frac{3}{4}$ to 1 inch.

What we ended up doing was using a standard plastic drain pipe holder which has an adjustable hinge which we mounted on the front of the LNB support “Guide” and adjusted the hinge for best signal . Once tightened the C band LNBF was rigid, and once the conical feed was adjusted our signal was a little 10 db CNR.



Given the IRD threshold for the IS mux carrying Australia Network and the BBC requiring a little over 5.1 db CNR to provide clear pictures our 10 dB far exceeded the signal requirement for a stable picture.



The end result was Optus D1 "Free View and SBS 1 and 2 "Optus C1 SBS / Seven IS5 BBC World and Australia Network Optus D 2 and globe cast and UBI FTA channels.



A similar upgrade was undertaken nearly seven months ago to a 1.1m Triax Unique dish which uses much the same principle this dish was also retro fitted with. IS5, D 1, C1 D2 during the last seven months it has not missed a beat with the signal strength even amazing its owner