

QRP ATV?

What, yet another ATV record attempt? Ho Hum, how boring, Do you say? But wait a minute, what about an Australian ATV record using stock standard A/V sender/receivers sold by Jaycar, utilizing 15mW over 175km? Remember, these units are designed to show Video from Foxtel set-top boxes from room to room, say up to 100m. This is really a story about how you, the amateur can get on 5.7Ghz ATV with minimal equipment. The authors' 5.7G units are displayed in the photo. I purchased my set on Ebay Australia for \$150. Jaycar's will set you back about \$250. An SMA socket was substituted for the original patch antenna. These are in the Amateur 6cm band.



We are indebted to Peter VK2TPK and the boys from Hornsby & District ARC for allowing us to share the top of Mt Warralong (Watagan forest) with them during the recent John Moyle field day contest.

Dan VK2GG and Graham VK2DWL found a spot looking through the aperture between some trees, having a southerly aspect. Jack VK2TRF traveled to Mt Gibraltar, some 175km away. As usual, Jack brought the rain with him. Now Mt Gibraltar is a very busy site, having all kinds of nasty RF installations which could hamper the record attempt, or

swamp the puny 15mW from the transmitter. On the other hand, Mt Warralong is a Forestry Fire tower site, with mainly forestry UHF yagi's on it. It has a steep (possibly) 4X4 entry track, but first one has to gain entry past the locked gate. As the HADARC had already made the necessary application on the variety of forms, OH& Safety requirements, etc, all we had to do was to approach HADARC with cap in hand.

The authors have been “playing” with 6cm ATV for several months. 76km was quite a thrill, but of course 175km was really exceptional. It seems that 5.7Ghz is an remarkable band. Dan had constructed a pair of 15dbi horns (HDLANT from ARRL web site) out of copper sheet, and these proved reasonably effective over 10-25km paths. For this attempt, Dan made a “tuppy” feed out of WR137 waveguide, which he attached to his 1.2m dish. Jack used a “Golden Dish” for improved gain over the original ? db.





The rain came down quite heavily at Mt Gibraltar towards the end of the record attempt session, but not before P5 pictures were received at each end of the link. How's that for minimizing spurious RF emissions, using QRP for a record attempt? As usual, the hot sun melted the 'Tim-Tams' at the Warrawalong end. Further successful ATV transmissions on 10Ghz and 2.4Ghz were made along the link for the purpose of the John Moyle event.

EQUIPMENT:

12-15mW exciters (described above). Receivers as also described above. 1.2 meter dish with 'penny' feed (G4ALN). Modified Gridpack dish with 'golden mesh'.

Dan VK2GG, Jack VK2TRF.