

# CAPITAL COMMUNICATIONS COMPANY

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## Aerial Bandwidth Test Report

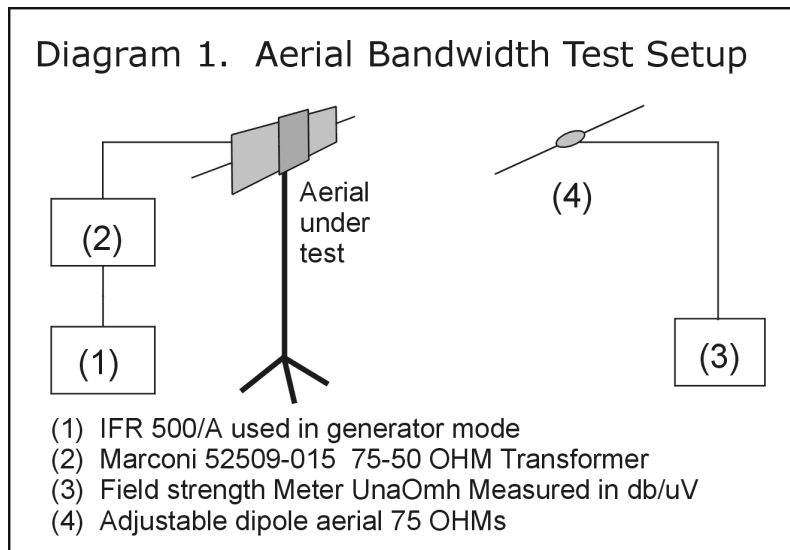
The testing of Aerial Science's Aerial Type SmartBand VHF/UHF was carried out on 27 September 2000. The weather conditions were fine, with normal temperature, humidity and air pressure for September.

Test site was clear of metal objects and aerial was tested in the horizontal position 1 meter above the ground. Mounted on a metal test stand, which was considered to represent a normal installation. The aerial was believed to be randomly selected from available stock.

### Test Equipment used:

- IFR 500/A used in generator mode
- Marconi 52509-015 75 to 50 ohm transformer
- Field strength meter UnaOmh measured in db/uV
- Adjustable dipole aerial 75 ohms

IFR calibration was checked against a spectrum analyser H.P.8335. Field strength meter checked, all appears well within Manufacturer's Specification and gave no more than 2 db variation over the tested frequencies.



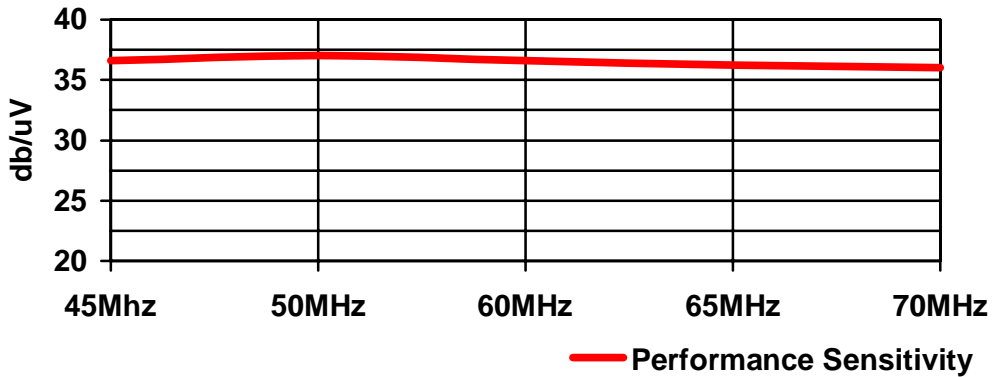
### Method of testing

Equipment connected as shown in Diagram 1. As testing was carried out, in an open area, on television bands, difficulty was encountered in finding "clear" test frequencies and measurements were often taken below and above the band of channels being tested.

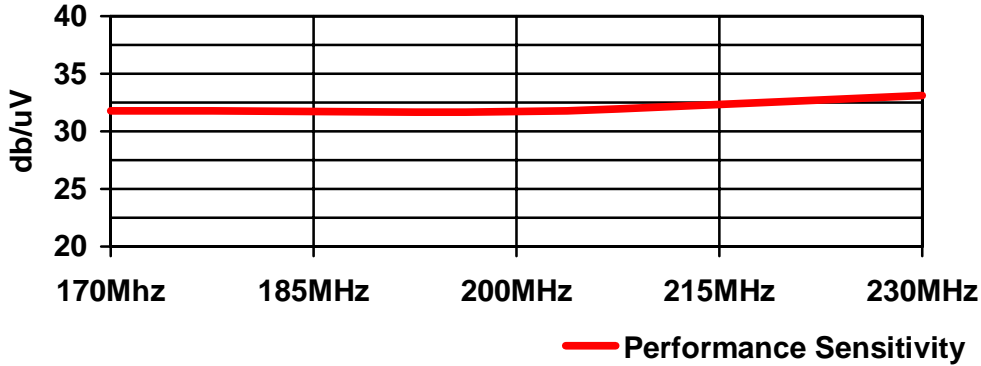
Aproximately 10m of coax RG6 was used between the aerials and test equipment. No correction was made for the cable losses.

Results:

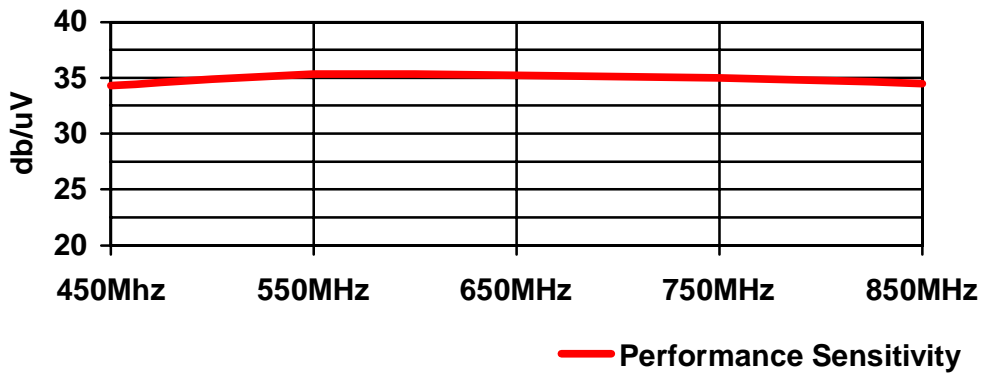
**TV Band 1 (Low VHF: 45MHz to 70MHz)**



**TV Band 2 (VHF: 170MHz to 230MHz)**



**TV Band 3 (UHF: 450MHz to 850MHz)**



**Conclusions**

The purpose of testing was to obtain the bandwidth of the aerial over the television bands. Due to television transmissions it was not possible to test each channel but it was believed the above results gave a good indication of the bandwidth over the frequencies shown.

J. Smith