



Feeds for Smaller Diameter Antennas

Designs have been built for a 4-horn static split system in the military band, and conical scanning systems in the civil band. Designs also exist for conical scanning in the military and static-split in the civil bands. In all cases, in association with the appropriate reflector systems, the Gain/Noise Temperature (G/T) ratios required for presently-envisaged satellite systems can be met with some performance margin. It is recommended that for most applications, a dual reflector system using a quasi-paraboloid/hyperboloid configuration should be used. This combination results in an improvement in gain of up to 1dB over conventional systems. Computer

programmes are available for defining optimum profiles.

4-Horn Static Split Feed

For use with 14m (40ft) diameter Cassegrain reflector system.

Data summary

Frequency band:

Receive: 7250–7750MHz.
Transmit: 7900–8400MHz.

Polarization: Circular.

Gain: 59.3dB (65% efficiency at horn aperture), 8000MHz.

Single Horn Feed

For use with 12.8m (42ft) diameter Cassegrain reflector system, with rotating off-set sub-reflector for conical scanning.

Data summary

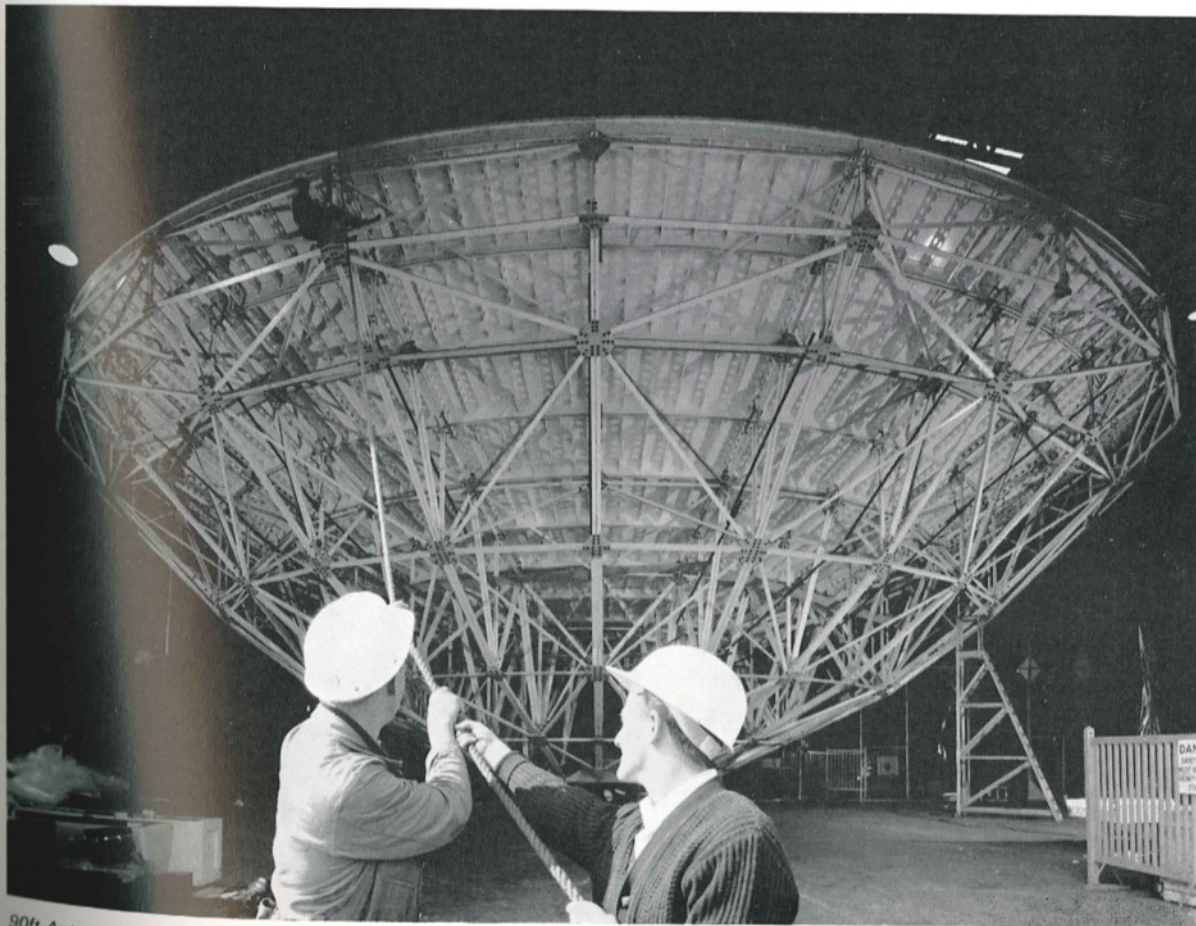
Frequency band:

Receive: 4045–4196MHz.
Transmit: 6275–6425MHz.

Polarization: Circular or variable linear (remote control with tell-back is available).

Gain:

At 4120MHz 53.4dB (71.9% efficiency at horn aperture).
At 6350MHz 56.7dB (64.5% efficiency at horn aperture).



90ft Antenna for Bahrain under test