

Multiple Satellite Feed System



- **Receive Multiple Satellites from one Antenna**
- **Available for most New or already installed Prime Focus Antennas**
- **Includes Support Struts, Feed Plate Assembly, Feedhorns and Cover**

Overview

The Multiple Satellite Feed System is designed for C and/or Ku band applications with the flexibility of satellite orientations from 2° to 8° spacing. Each system is custom built for your specific antenna and required satellite alignment with easy to follow placement instructions for correct focal distance. We utilize a relatively small diameter system to minimize signal loss due to shadowing. Each feed system is pre-oriented at the factory to your specific location with regard to feed spacing and declination angle for ease of installation and alignment.

Components

Feed assembly - The system features a unique feed assembly design that allows for discrete elevation and azimuth adjustment of off boresight feeds without regard to the orientation of the mounting struts on the antenna. This is achieved using an outer ring for strut mounting and an inner slotted feed plate. The inner plates rotate in the outer ring to provide off boresight elevation adjustment. The feedhorn assemblies slide side to side in the slotted inner feed plate to provide off boresight azimuth adjustment. The entire assembly features a powder coat finish for rust prevention and other environmental protections. The feed system is manufactured from 3/16" aluminum plate to provide a lightweight, sturdy corrosion resistant platform.

Feed Horns - For dual pole C Band reception we feature Chaparral's Model 1329. With 35 dB of cross pole isolation and an extremely low failure rate, it has become an industry standard. It is mounted in clamp assembly, which provides polarity and focal length adjustment.

Support Struts - We now supply rectangular aluminum tubing for support struts, pre-cut and drilled. This is probably our biggest improvement in our system since its original design. System stability and aesthetics have been improved dramatically. The struts are significantly lighter for reduced shipping costs and ease of installation.

Cover - Another recent system upgrade is our injection molded cover. It is lightweight, yet rigid and durable, constructed of high quality plastic with U/V stabilizer for long life in high wind environments.

Performance Characteristics

It should be noted first of all that replacing your original feed system with our multi beam retro-fit will not degrade your signal levels of "on boresight" satellites. It should also be noted if you are replacing a "cassagrain" styled feed system, you should expect better "on boresight" performance.

In a typical multi beam scenario (2,3 or 4 feeds), you would have one feed on or near boresight with no signal loss. Conservative estimates of adjacent feeds "off boresight" loss (at C/N and S/N) are as follows:

- at 2° off boresight = .75 dB Loss
- at 3° off boresight = 1 dB Loss
- at 4° off boresight = 2 dB Loss