

BUD (Prime Focus) TUNE UP - Can be done with an old (swinging needle) analog meter

Preface: The following assumes that your electronics are in working order. And there is no slop in the polar axis. and your feed is centered, and stays there. Skew, Focal length and F/D has been calculated and adjusted. Use C band only to align. When that is done, Ku can be tackled, if equipped.

(1) Move dish(actuator) to it's highest point (Zenith)

(2) Measure and calculate dish face to polar axis angular difference and adjust to your required declination. This is the most important step, the accuracy of the declination adjustment determines how quickly you get your BUD tracking accurately.

(3) Adjust the Polar angle to your Latitude.

(4) Pan the sky by rotating mount on pole, Stop at your strongest signal.

If you are unable to see any signal indication, adjust polar angle and repeat. You may also have to try the other polarity.

(5) Adjust Polar angle to peak your signal.

If you use the Modified Declination, you should have to lower the polar "look" angle. If using a DVB receiver, confirm that it is your true south satellite. If it's not True, but a few degrees E or W, is the dish "Fudge factor" on the correct side? If not, go ahead and adjust as necessary. DVB confirmation isn't absolutely necessary, but may help speed the process.

(6) Move dish off of Zenith(With the actuator ONLY). watch for signal from satellites, The first few satellites E or W of center will not show much azimuth correction is required, as the dish "look" angle doesn't change much. Azimuth adjustment will become more apparent the further from true south you get. There, the actuator moves the dish more up/down than E or W. Peak the signal by rotating mount on pole (Azimuth). DO NOT ADJUST POLAR ELEVATION OR DECLINATION IF NOT AT ZENITH. Actuator - Azimuth - Actuator - Azimuth, if necessary.

Repeat until you have peaked at the furthest (from center) signal your actuator allows. (This is also a good place to "fine Tune" your focal length, as the feed is closest to the ground.)

(7) Mark your mount/pole orientation. Mark on mount aligned with a mark on the pole.

(8) Check the operation on the opposite side of the arc. If it is not "ON", and you have to adjust azimuth, do so, And transfer the mark on the mount onto the pole. Halfway between the two marks on the pole, assuming the east and west sat are equidistant from center(Zenith).is the ideal location for your mount on the pole,

Center your mount mark between the 2 marks on the pole. Readjust declination and elevation. and check azimuth on E or W satellites. If the mount mark moves further from the ideal, you have adjusted the declination opposite of what you need. Readjust as necessary. Move dish back to zenith, Readjust declination. up or down, and polar elevation. For a peak signal. May also require moving dish with actuator slightly. Repeat adjusting the declination and polar elevation at zenith, east and west azimuth adjustments until the mount mark align between your original marks on the pole. When that is accomplished.

(9) Tighten it up and start programming satellites.