

HOW TO for a Polar mount Parabolic BUD - Big Useful Dish.
Preface - Some required specifications for success.

Your feed Must be centered.

If your feed is not centered, it will affect the angle at which the dish looks. This can be vastly different than the angles you measured to calculate to adjust the declination.

On a single mount point feed ant, I.E: button-hook, or variant.
At zenith, if the feed sags, it is towards the bottom of dish.
So we compensate with the polar angle. But, The actual discrepancy is in the declination angle. When we drive the dish off of zenith, the feed doesn't sag to the same point on the dish. It's now sagging off to the left or right of the center bottom of the dish. This would mean the azimuth would also be off one way for sats to the east, and off the opposite way for sats to the west. The elevation is also thrown off by this asymmetric variance. There is no way to compensate for all this. Too many variables!

On a tripod mounted feed, if the feed is up or down from center, This will effectively add to or subtract from our calculated declination. We go to our Zenith sat, and adjust our polar axis angle compensating for the higher or lower look angle of the dish. Then we do the end of the arc, and adjust the AZIMUTH. But when we return to zenith, we have to make a large re-adjustment to Polar axis angle. This may then throw off AZIMUTH on the other end of the arc. We cannot compensate with the Polar axis angle. compensation must be made with the declination. Through much experience and experimentation, compensation can be made to the declination angle. But it is very time consuming.

If it is left or right of center, it will affect only the angle the dish is driven to by the actuator. A very slight re-adjustment of the polar angle and Azimuth may, or may not, be necessary to compensate for this.