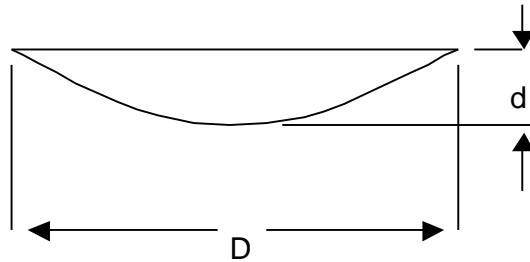
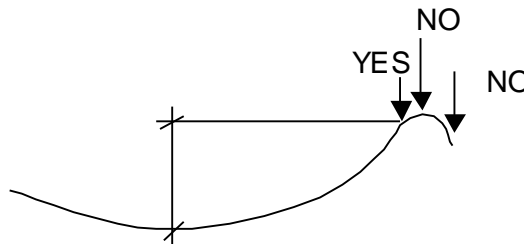


Calculating a Parabolic Dish's Focal Point

Calculating the correct focal point of your dish is important when installing a feed. Even if the dish is a standard manufactured unit, they will vary from dish to dish due to tolerance. To calculate the Focal point (F) of your dish, you need to measure the diameter (D) and depth (d) of the dish.



Place a rigid straight edge across the dish and measure the depth to the center of the dish keeping the measuring instrument square to the straight edge. The measurements should be of the actual parabola. Do not include the rolled edge of the dish in your measurement.



When measuring, be as precise as you can be. Maintain 1 mm if using metric and .01" in inches for accuracy. Now using your measurements, apply them in the following equation to determine the correct focal point.

$$F = \frac{D^2}{16d} \quad \text{where } F = \text{focal point of dish, } D = \text{diameter and } d = \text{depth}$$

Example $D=21.45''$ and $d=2.55''$

$$F = \frac{(21.45)^2}{16(2.55)} = \frac{460.10}{40.80} = 11.28''$$

Refer to the data sheet that comes with your feed to determine its actual focal point. Use both pieces of data to properly install the feed on your antenna system. If all measurements are correct it should be very close to optimum, but further optimization could be done with a "on the air signal" or use sun noise measurements.