Smart Aligner – Aligning Microwave Dishes Course

Topics Covered

Note: This training course assumes that the Introductory
Course has been completed and the user is familiar
with the basic operation of the Smart Aligner System.

1. Mounting to Dishes with Shrouds: Slides 3 - 5
2. Dish Mounting System for Parabolic Dishes: Slides 6 - 9
3. Using the Dish Target Calculator on the app: Slides 10 - 13

Mounting to Dishes with Shrouds

1. If the microwave dish has a shroud of at least 3" of depth, then the supplied Bracket will work on that antenna.
2. Attach Tether. The Bracket Handles are always in this orientation (right side looking in the antenna's direction).
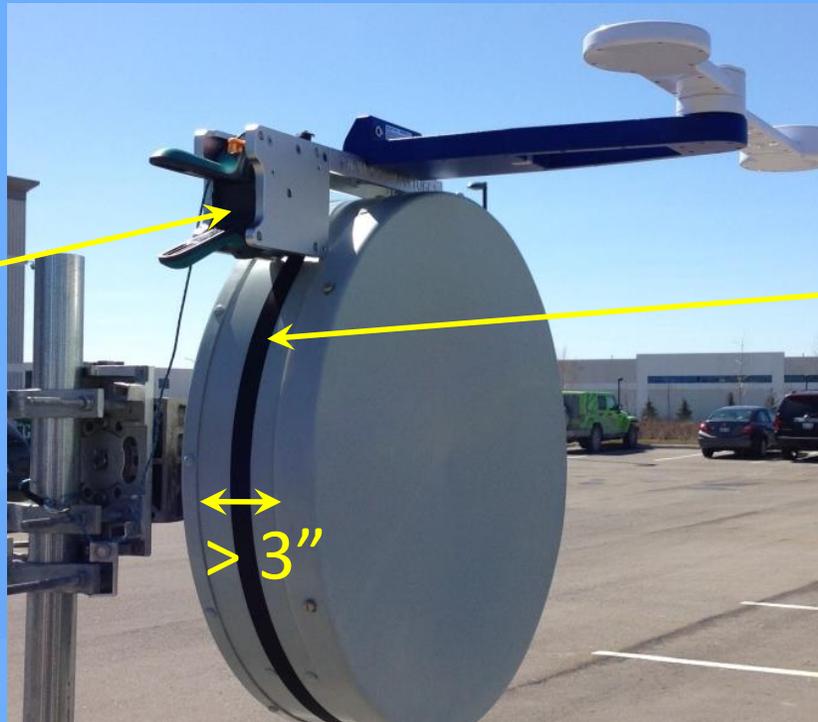

Bracket Handles on right side looking forward.

Ratchet strap goes around the circumference of the antenna.

> 3"

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Mounting to Dishes with Shrouds

3. Before tightening the strap completely, align the Channel of the Bracket to the forward (or rear) edge of the radome lip. Keep the Channel level before the final fastening. If the dish diameter is greater than 5', an optional 15' Strap Extender can be used (10' diameter max).
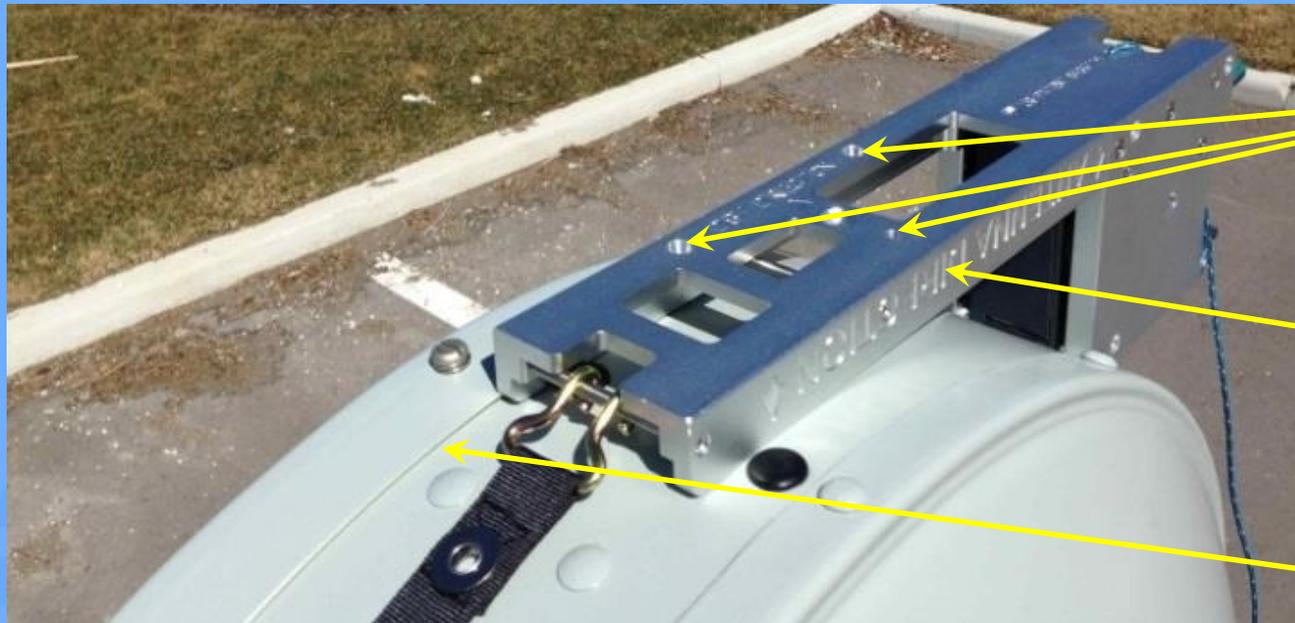
Tool mounting pattern on backside of Channel.

Bracket Channel is level.

Radome lip

# Mounting to Dishes with Shrouds

4. Insert the Tool's Tether in the same hole as usual.
5. Mount the Tool into the mounting pattern and perform the survey as usual. Tool only mounts in the forward position.

Tool's Tether in hole (usual tether hole).

Dish Mounting System

1. The Dish Mounting System is used for parabolic dishes that do not have a shroud (drum antenna).
2. It is comprised of two components: the Dish Mount and the Horizontal Bar.

Tool

Dish Mount
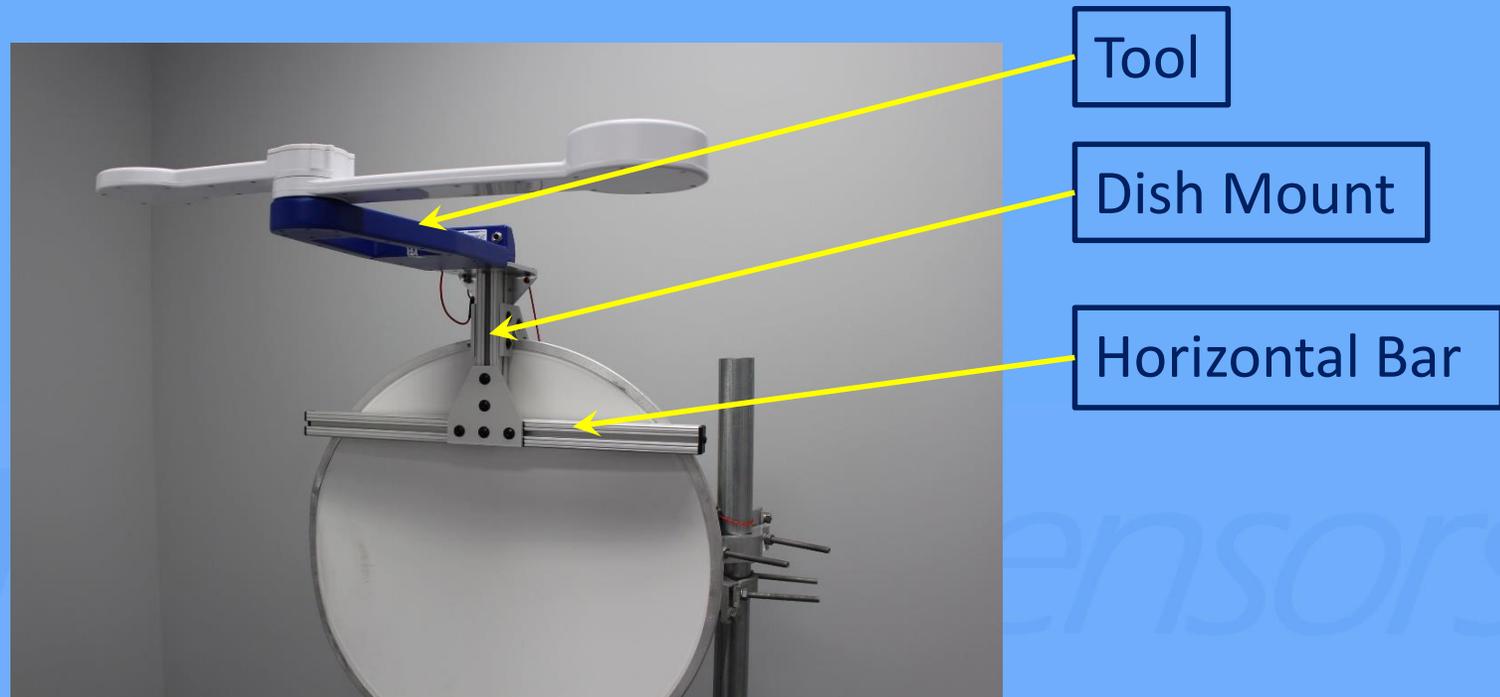
Horizontal Bar

Dish Mounting System

3. The Dish Mount is designed to hook over the top of the dish.
4. The Tool mounts to the top of the Dish Mount.
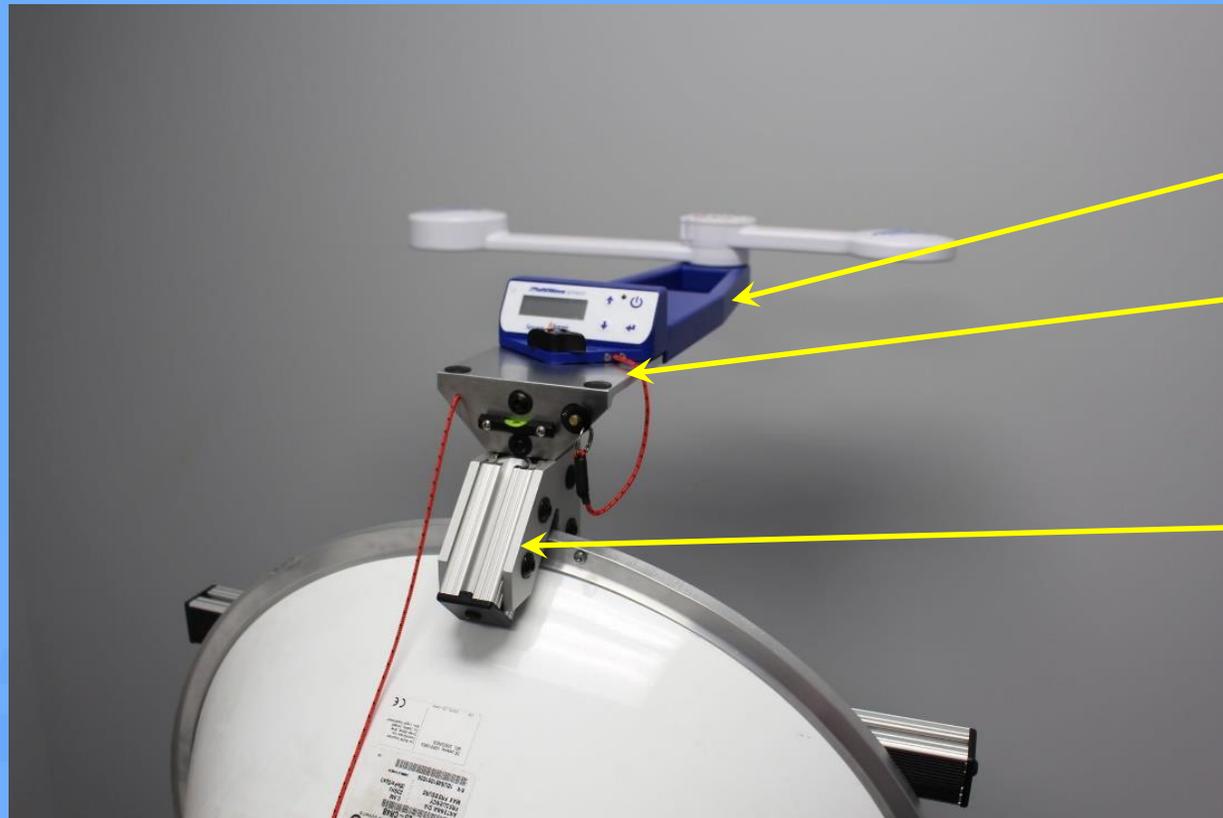
Tool

Mounting platform

Catch

Dish Mounting System

5. The Horizontal Bar can be ordered in difference lengths to accommodate various microwave antenna diameters as follows:

| Horizontal Bar Length	Dish Diameter Range
2'	1.5' to 2'
3'	1.5' to 4'
4'	1.5' to 8'
6'	1.5' to 16'

Dish Mounting System

6. All parts of the Dish Mounting System that make contact with the dish have non-skid rubber to prevent movement while the Tool is attached.

7. Tether the Dish Mounting System as per usual before putting the Dish Mounting System on the antenna.

8. Ensure that the Mounting platform is level by using the bubble level.

9. Tether the Tool before attaching to the Mount. Tool mounts forward only.

10. Use the Tool as usual for the survey.

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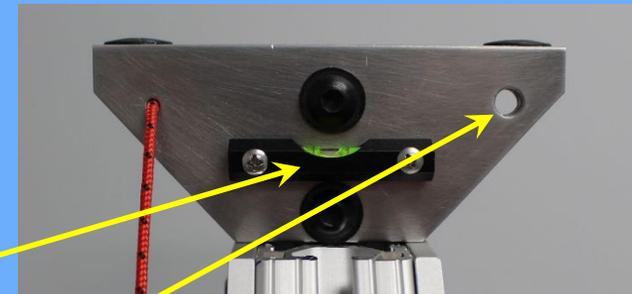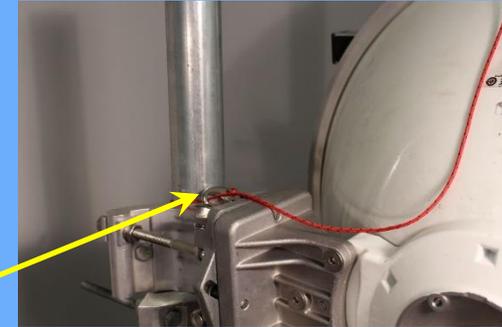
Dish Target Calculator

1. When performing panel antenna surveys, the RF Engineer calculates the azimuth and tilt for the antenna's orientation. Microwave dishes are point-to-point alignments, so that the Dish Target Calculator can perform this calculation if the RF Engineer has not provided it. This utility is found in the same area where the azimuth target is entered. Tap this Icon.
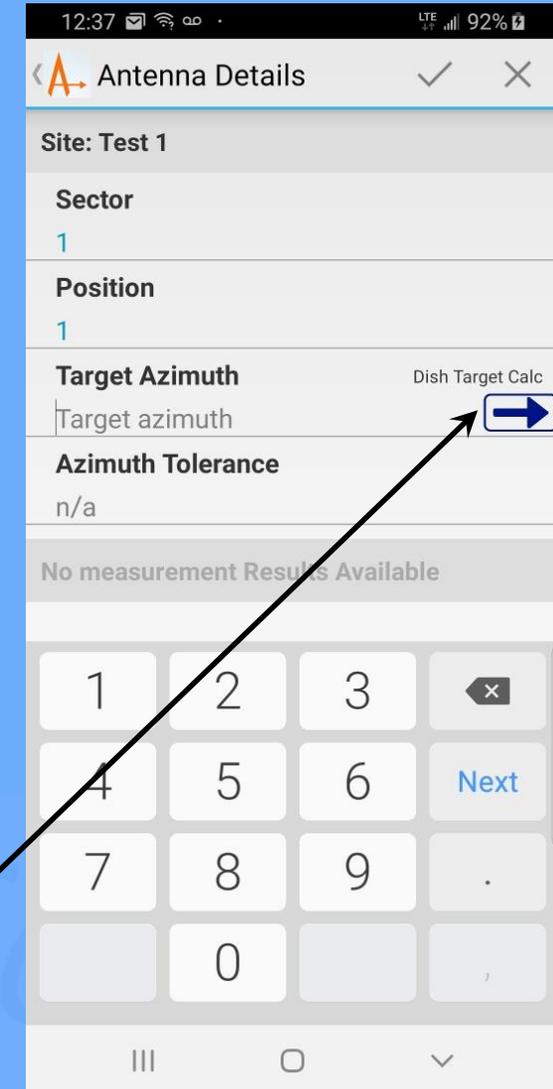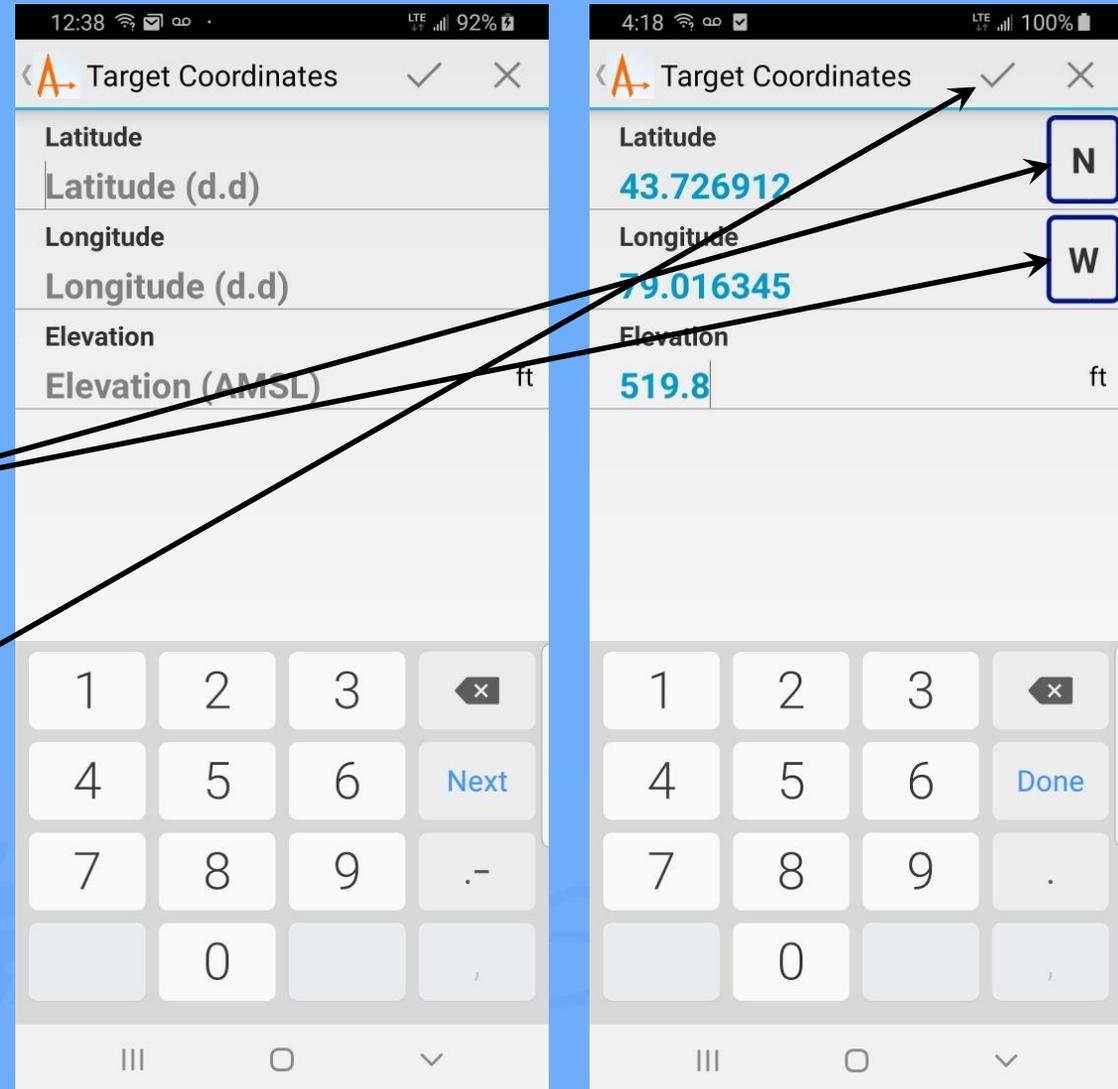
Dish Target Calculator

2. This utility needs coordinates from the Origin (where you are) and the Target (where it is aiming).

3. If the Tool is connected to the app, simply select From Tool and the Origin coordinates will display automatically.

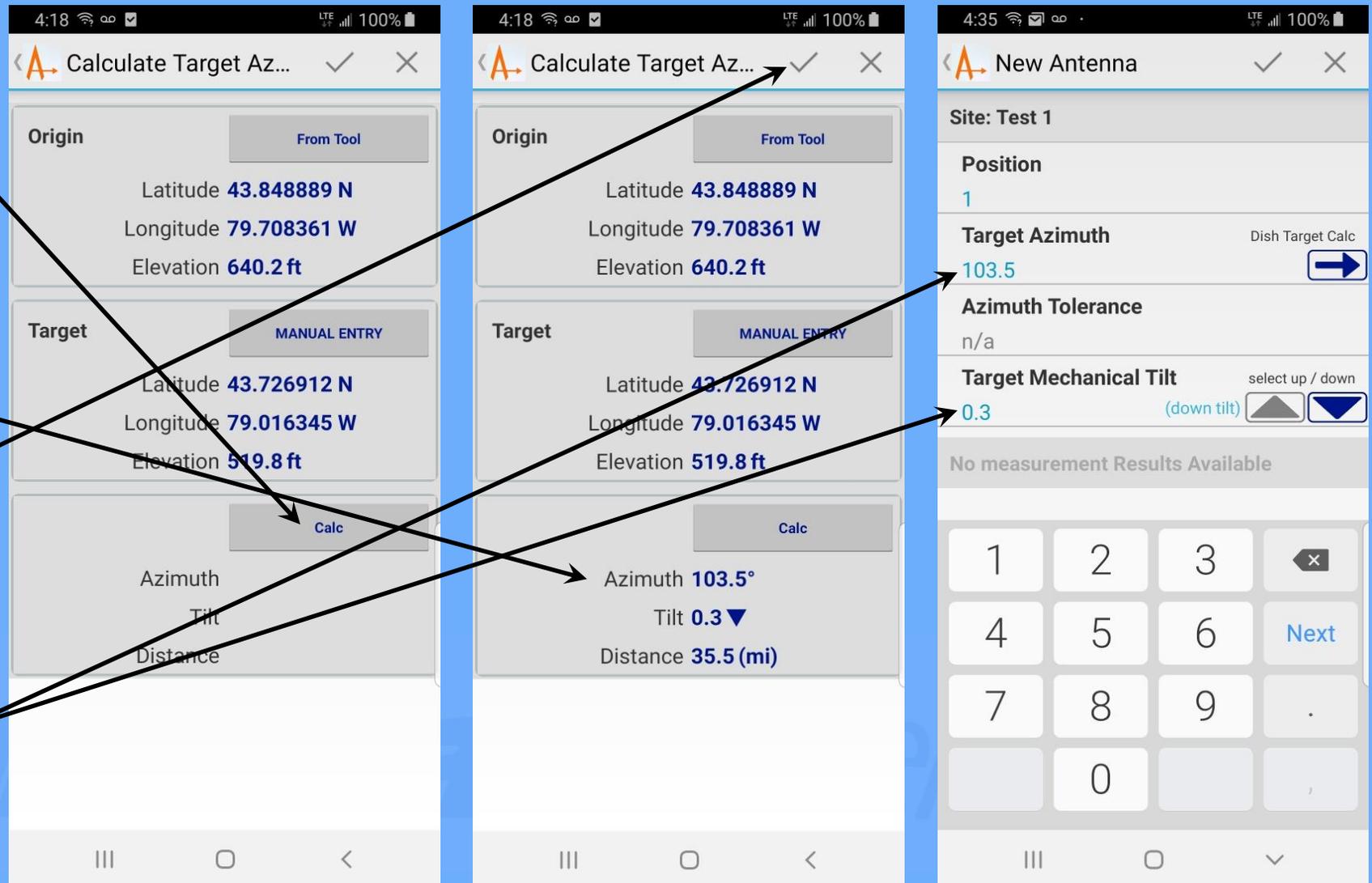4. To enter the Target coordinates, select Manual Entry.
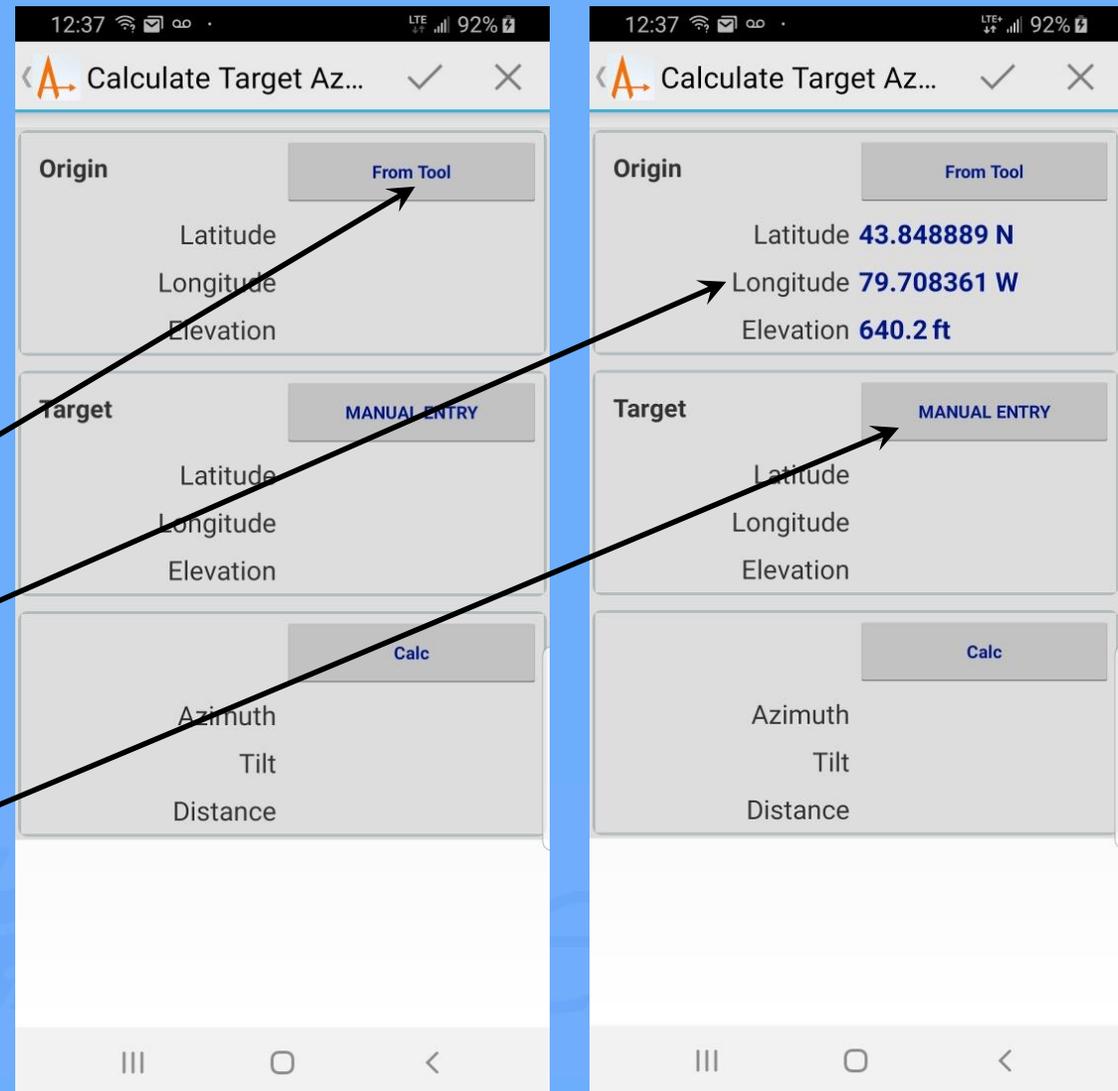
Dish Target Calculator

5. Enter the coordinate information using the keypad. The app will default to Latitude (N) and the Longitude (W). Change these directions by selecting them as required.

6. Once the coordinates are entered, select the checkmark to save the information (*Save* in iOS).

Dish Target Calculator

7. Select *Calc*.
8. The calculated path and distance are displayed.
9. Select the checkmark (*Save* in iOS).
10. Azimuth and Tilt are populated.
11. Align as normal.

Course End

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