

SMG 11: Tilt Pole Calibration

Oct 20, 2026 · @Johan

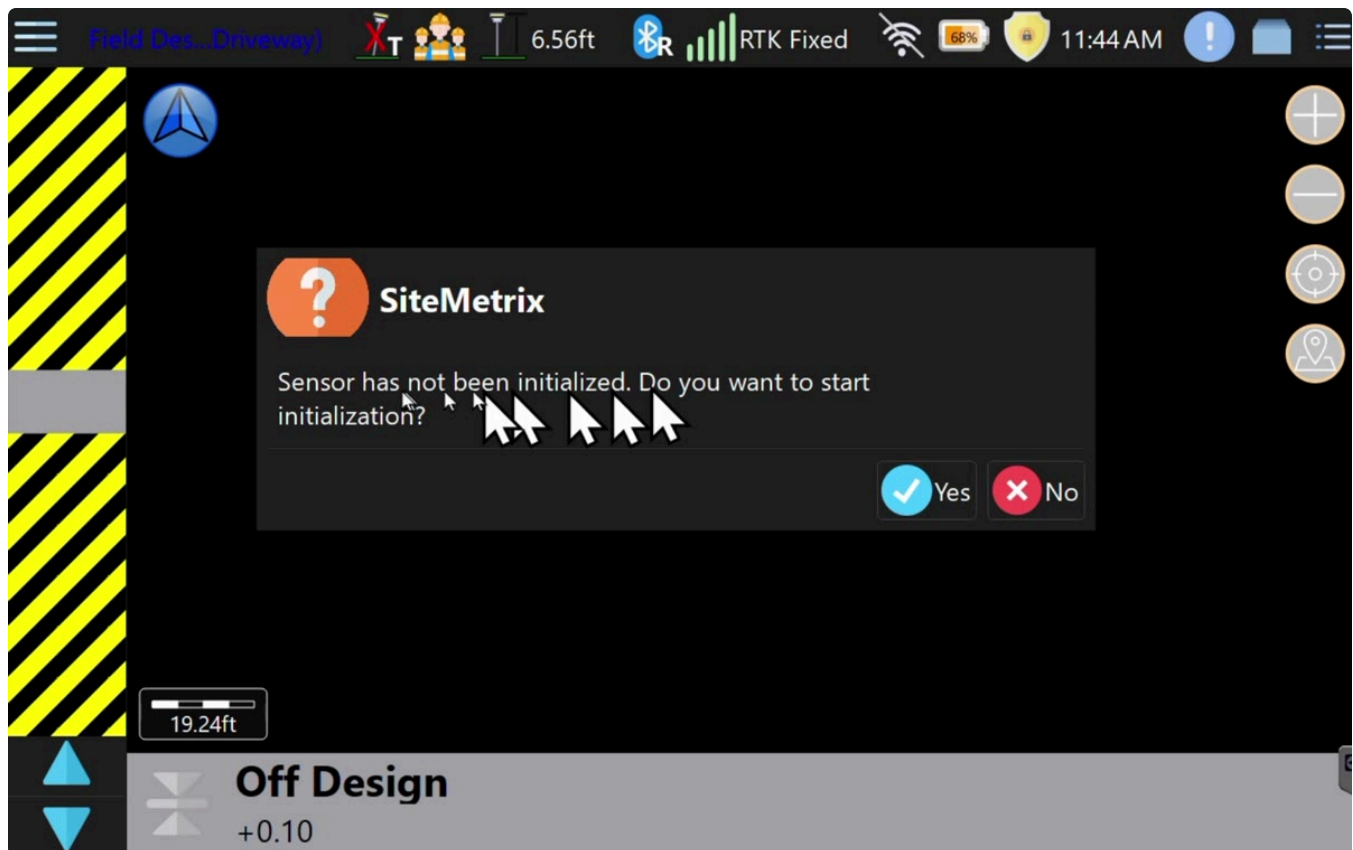
Use this guide to initialize and calibrate the tilt sensor in the rover receiver, so SiteMetrix Grade (SMG) can measure accurately with the pole tilted.

You need: the rover on its pole with RTK Fixed, and open ground where you can keep the pole tip in one spot.

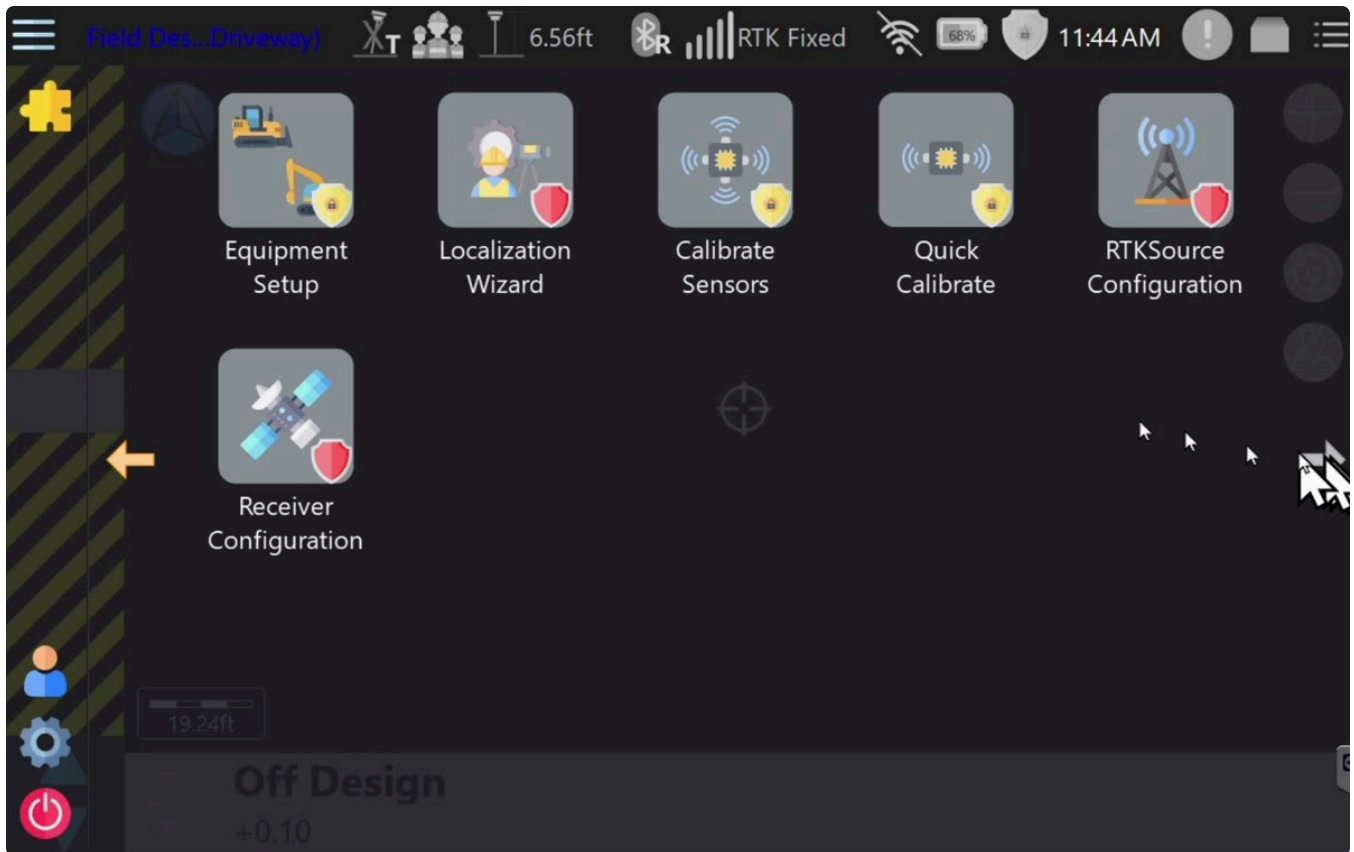
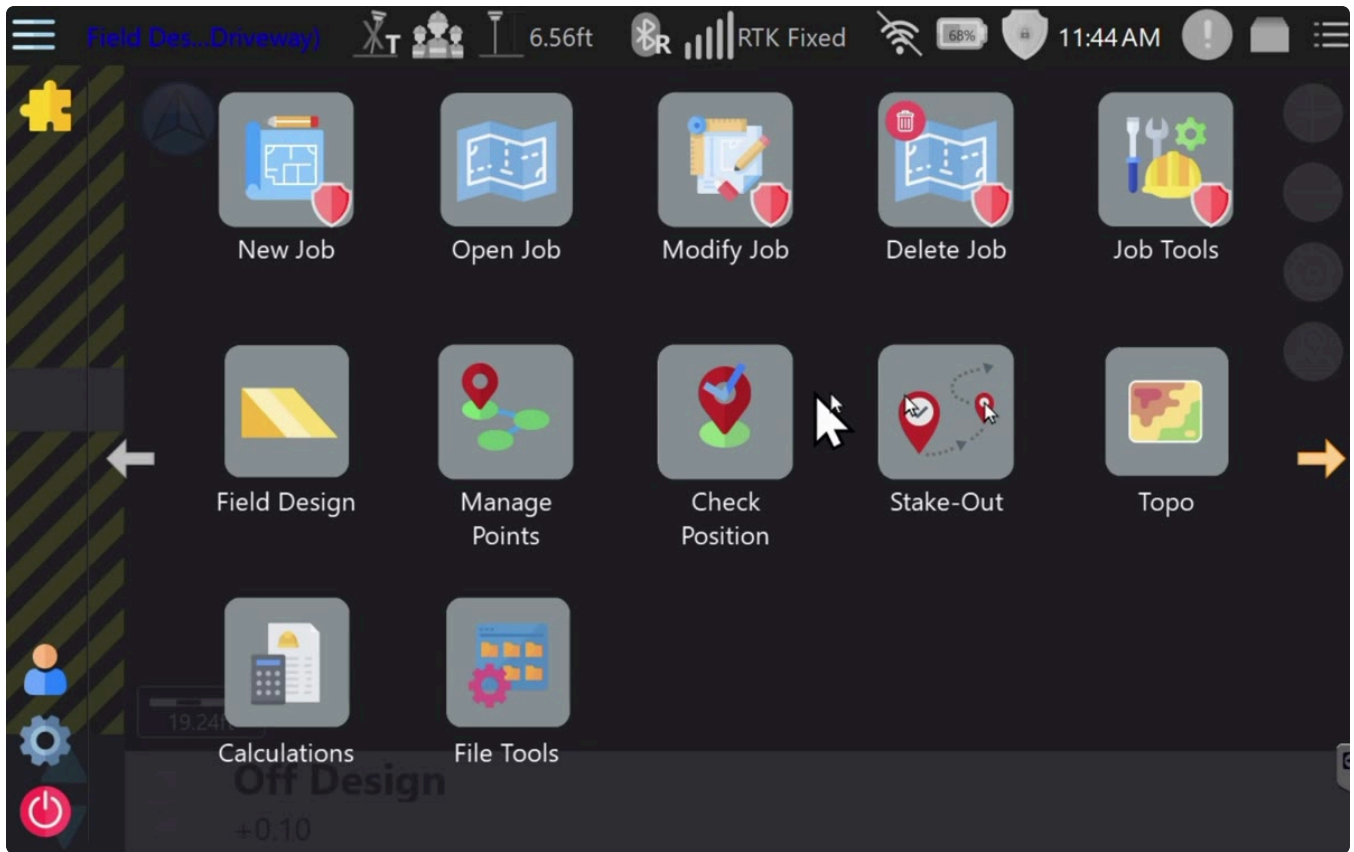
The process has three parts: **initialize**, then **calibration step 1 (x-axis)**, then **calibration step 2 (y-axis)**. In each part, keep the pole tip in the same spot and swing the pole **30°-45° each way** until the bar reaches 100%.

1. Open Calibrate Sensors

1. If the sensor has never been set up, SMG asks *"Sensor has not been initialized. Do you want to start initialization?"* Tap **Yes**.

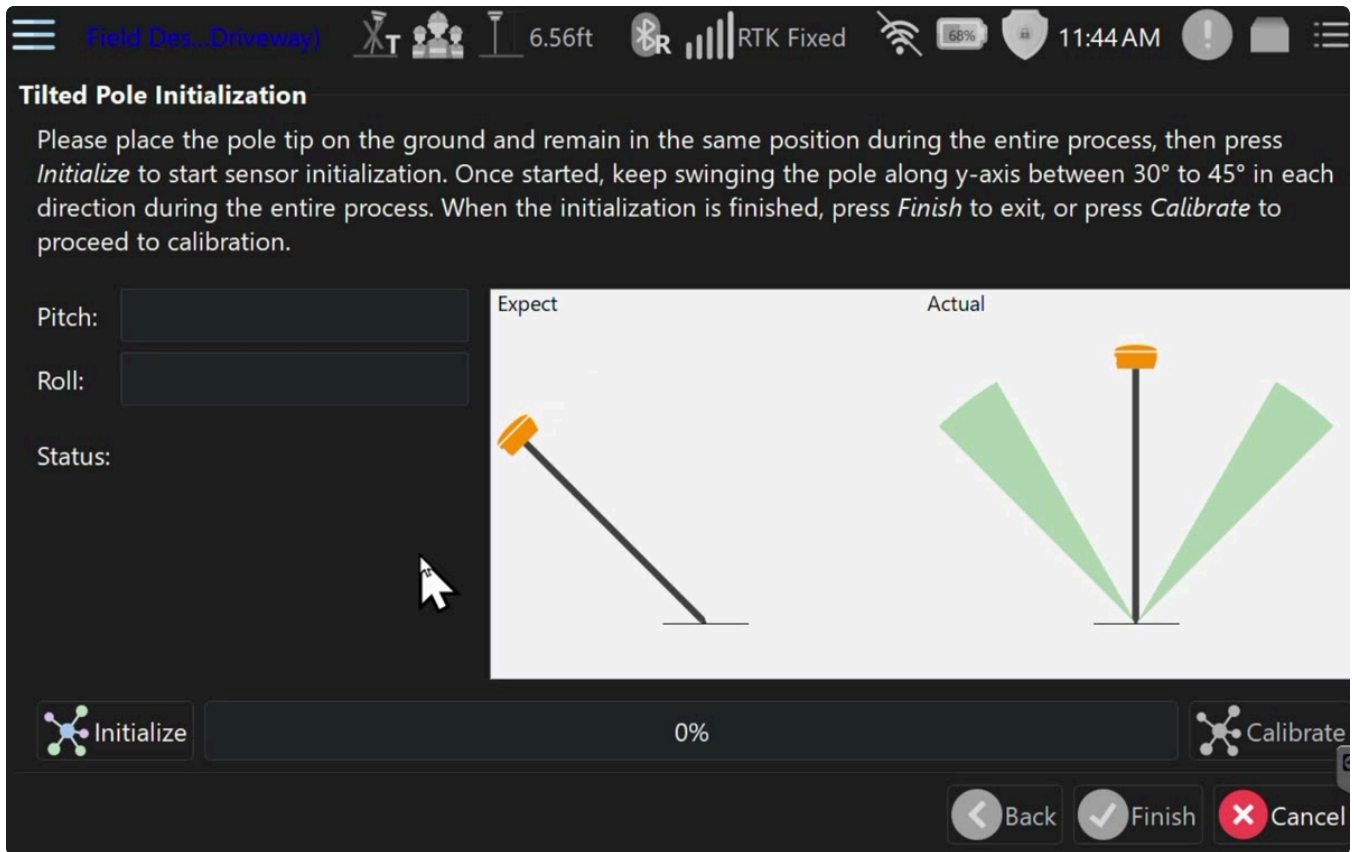


2. To start it yourself: open the **menu**, tap the **right arrow** to go to the second page, then tap **Calibrate Sensors**.



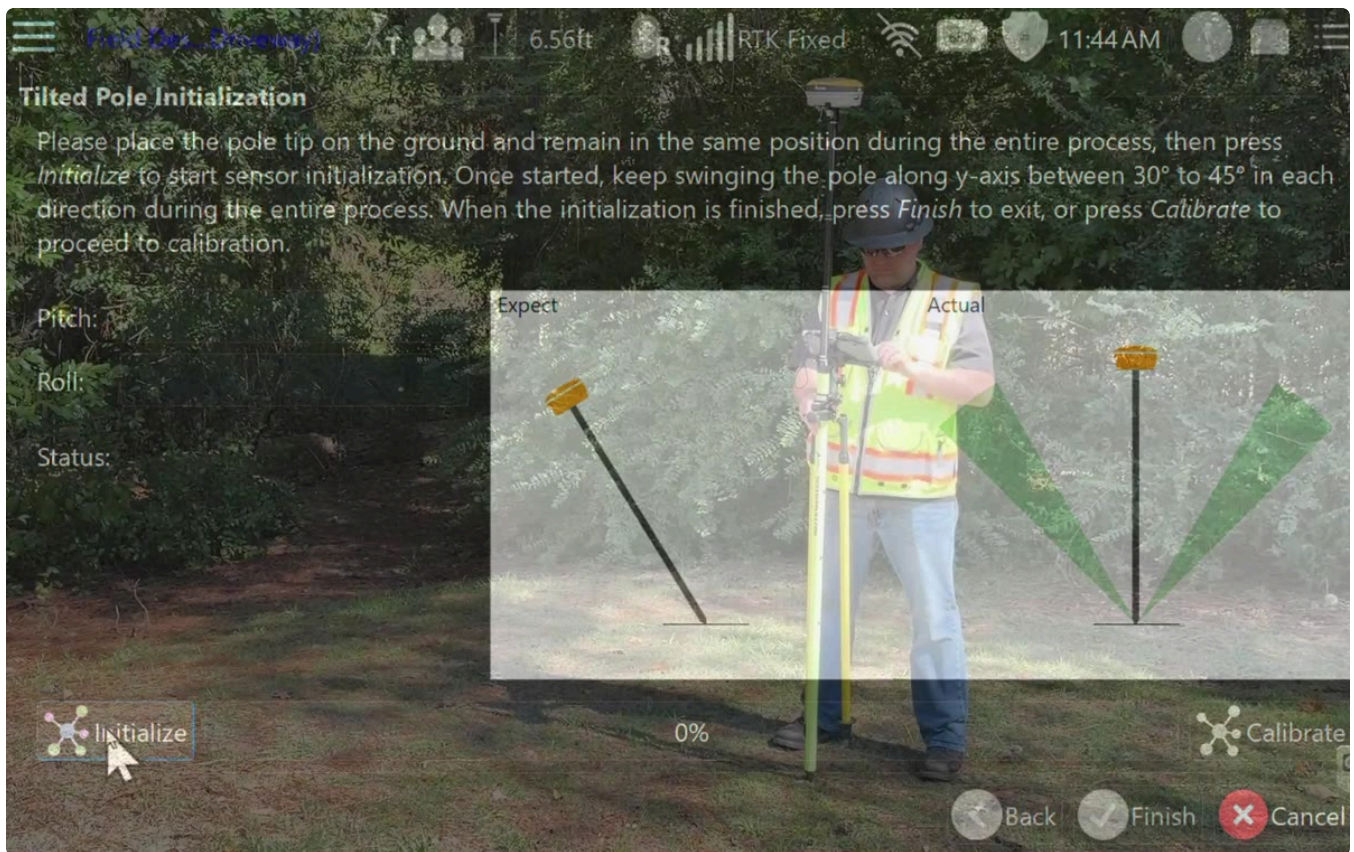
2. Initialize the sensor

1. The **Tilted Pole Initialization** screen opens. Read the instructions at the top.



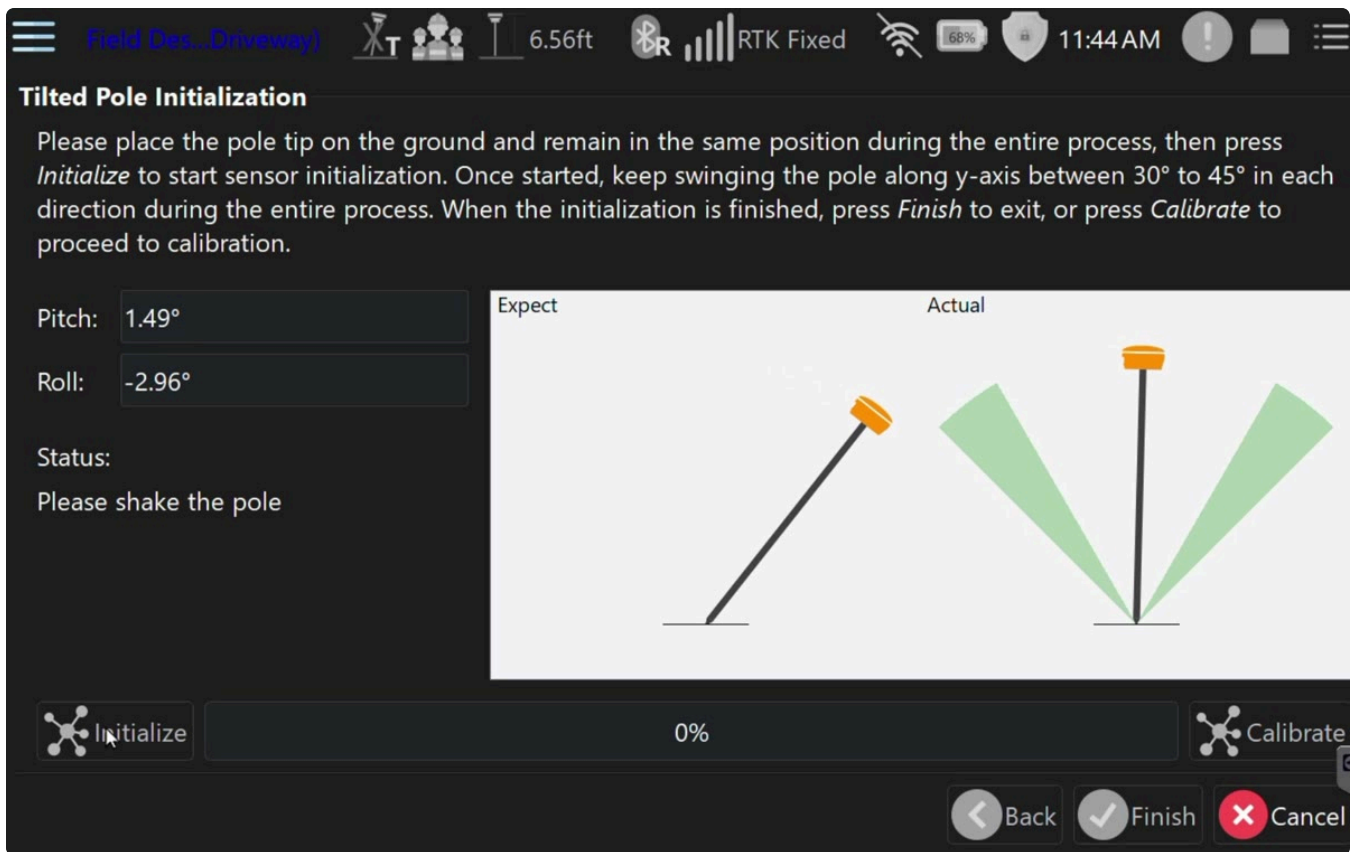
2. Place the pole tip on the ground and tap **Initialize**.

3. Keep the tip in place and swing the pole along the **y-axis** (side to side in the video), 30°–45° each way.

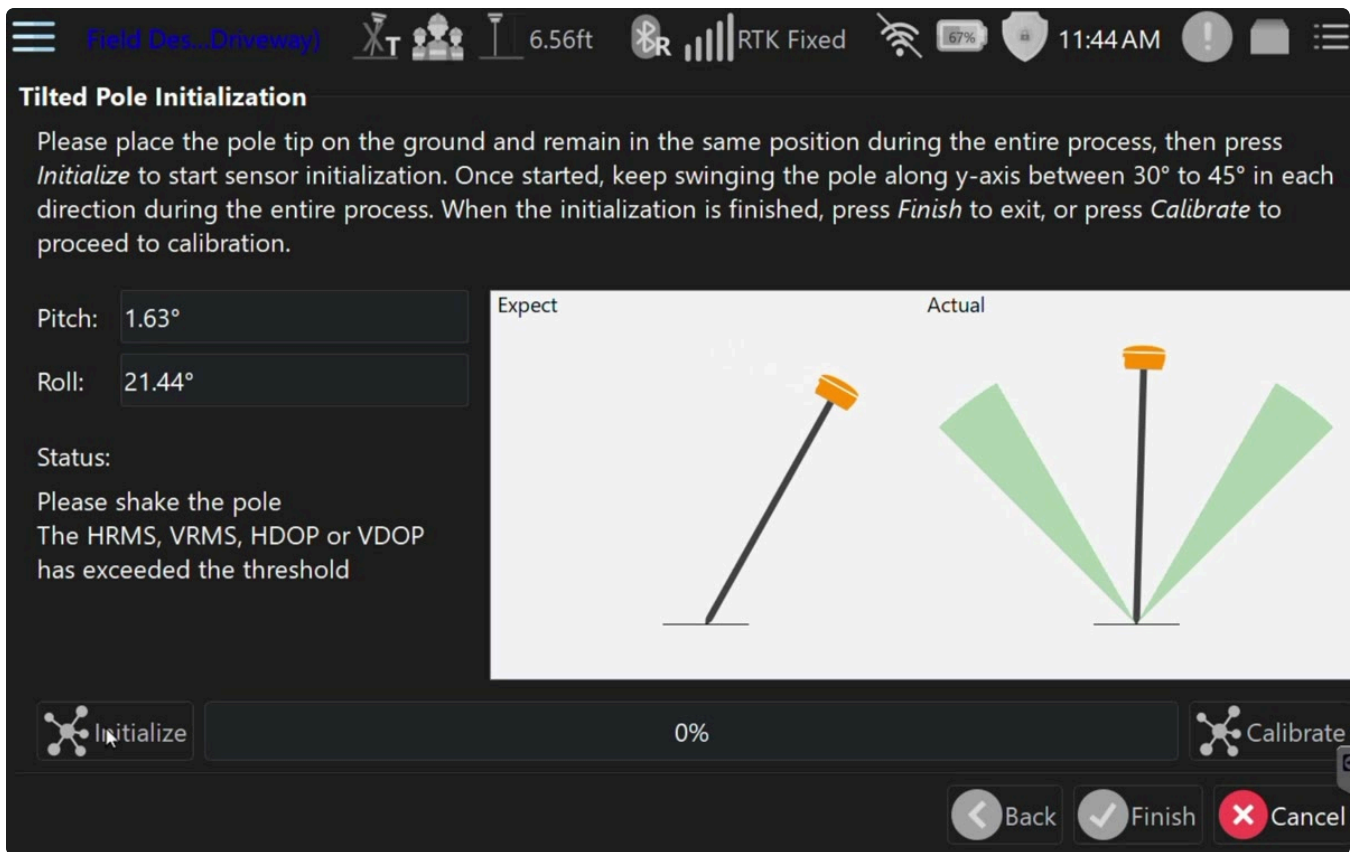


4. Watch **Status**:

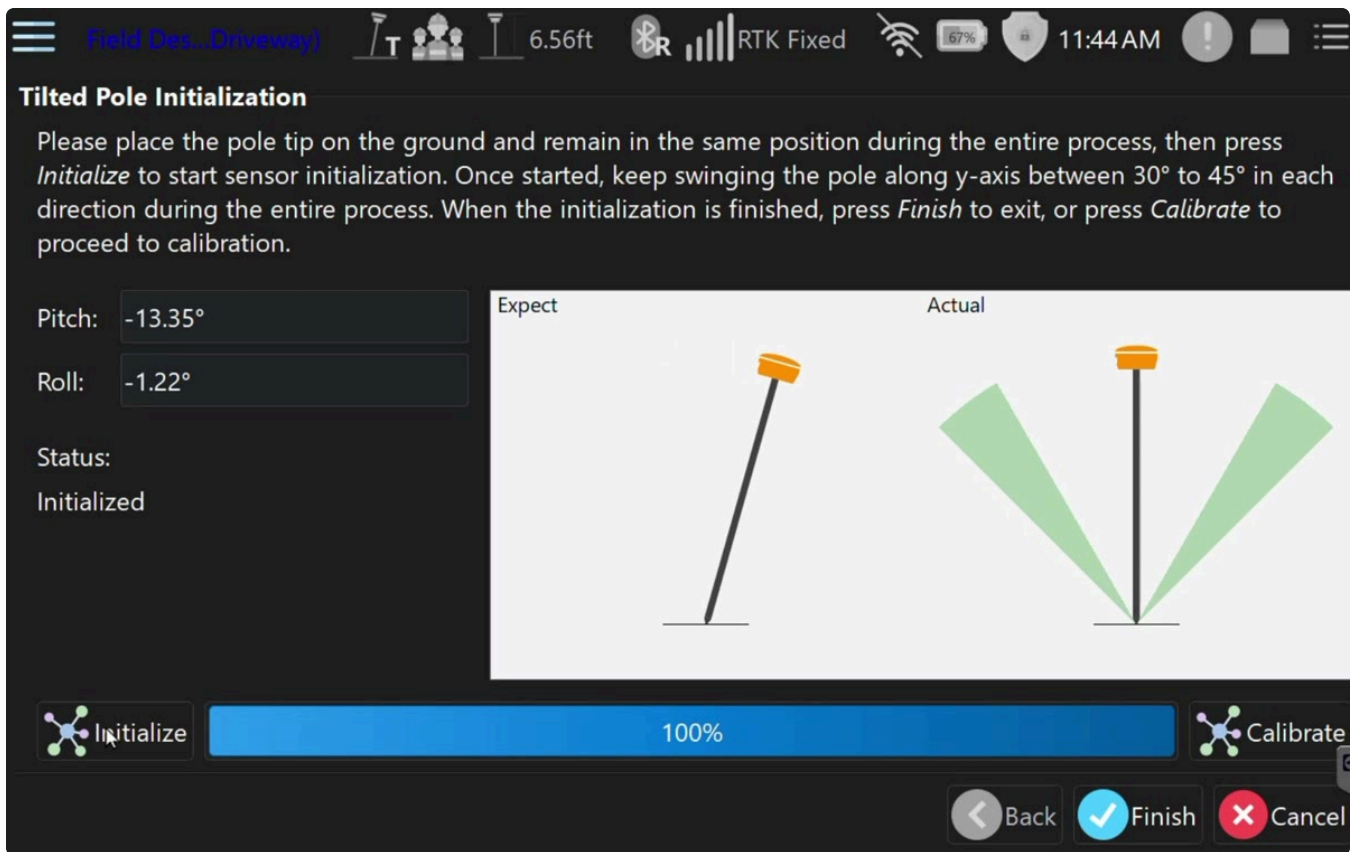
- Please shake the pole → keep swinging.



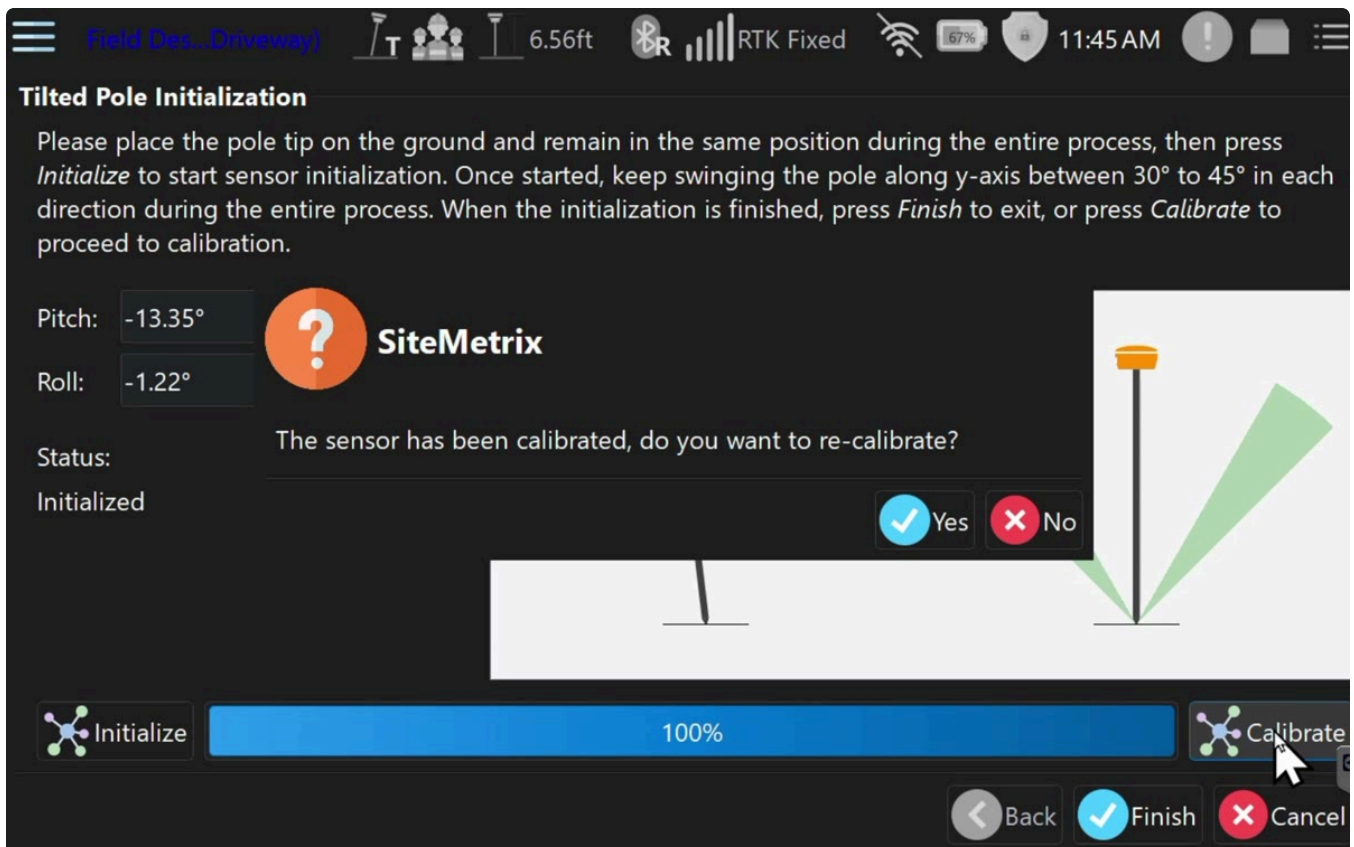
- The HRMS, VRMS, HDOP or VDOP has exceeded the threshold → GNSS quality is too low; wait for a better fix and keep going.



5. When the bar shows **100%** and Status reads **Initialized**, tap **Calibrate** to go on (or **Finish** to stop here).

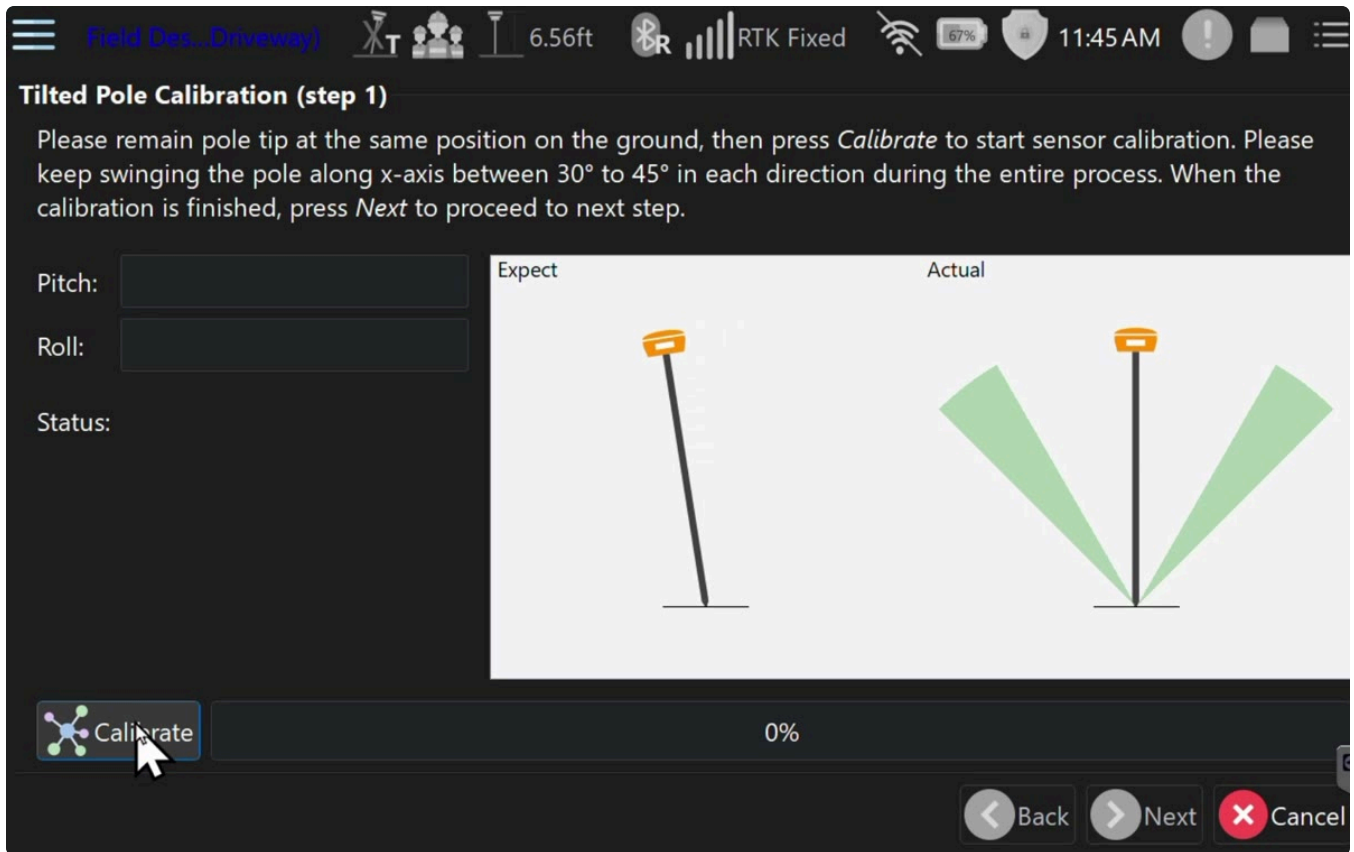


6. If the sensor was calibrated before, SMG asks whether to re-calibrate. Tap **Yes**.



3. Calibration step 1 (x-axis)

1. Keep the pole tip on the same spot and tap **Calibrate**.



2. Swing the pole along the **x-axis** (towards and away from you), 30°–45° each way.



3. The bar fills as you swing. At 100%, tap **Next**.

Field Des...Driveway) 6.56ft RTK Fixed 67% 11:45 AM

Tilted Pole Calibration (step 1)

Please remain pole tip at the same position on the ground, then press *Calibrate* to start sensor calibration. Please keep swinging the pole along x-axis between 30° to 45° in each direction during the entire process. When the calibration is finished, press *Next* to proceed to next step.

Pitch: -17.18°
Roll: -7.92°
Status: Initialized

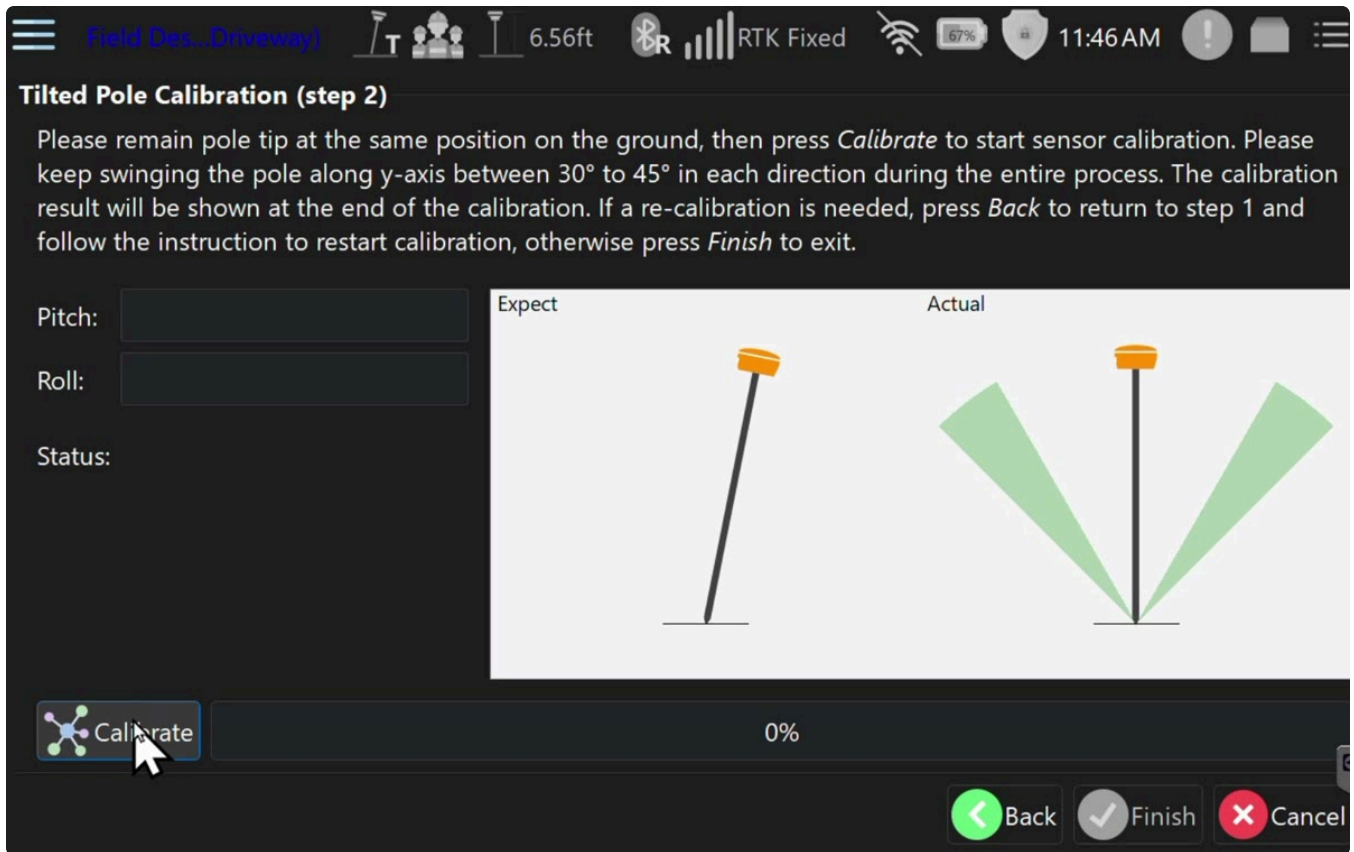
Expect Actual

Calibrate 61%

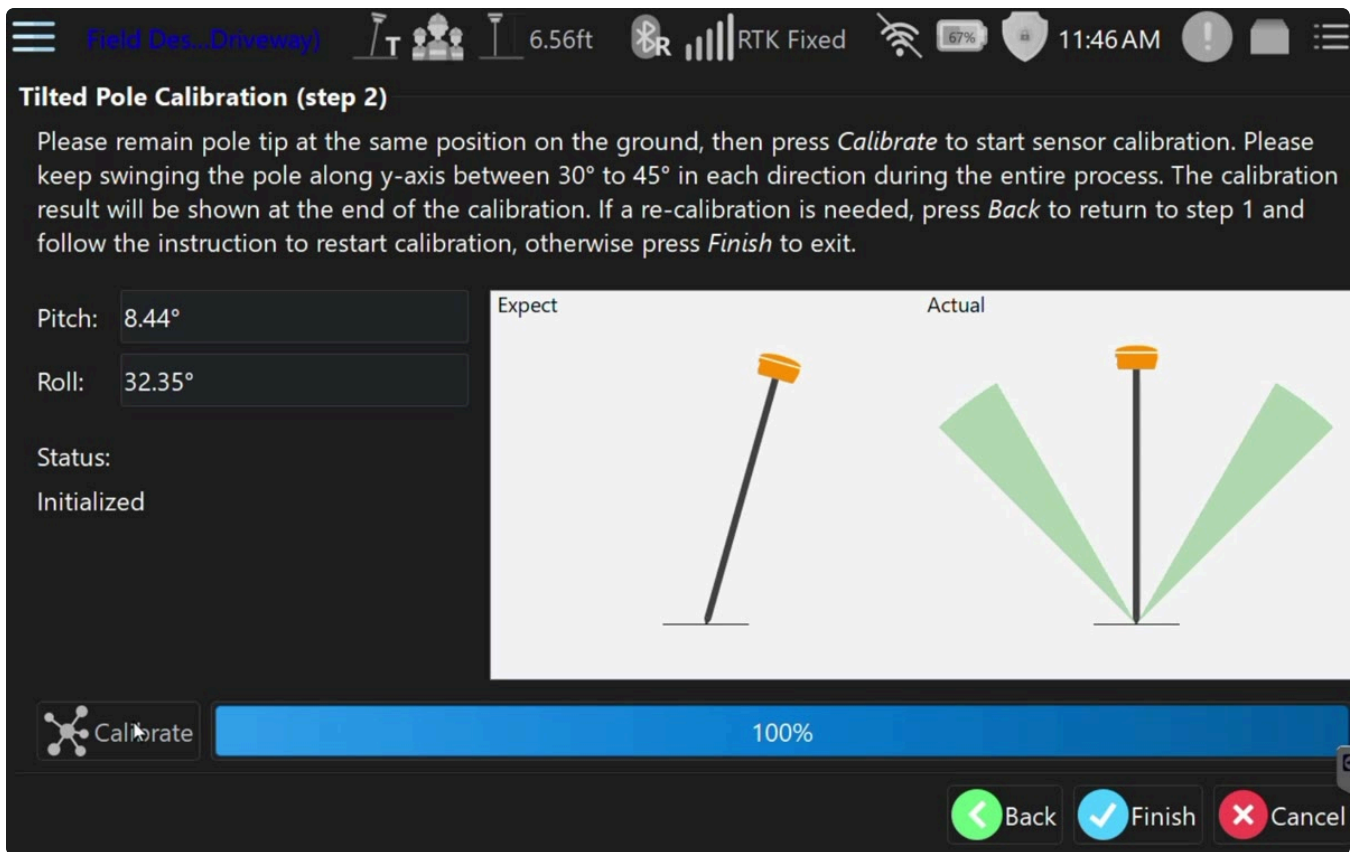
< Back > Next X Cancel

4. Calibration step 2 (y-axis)

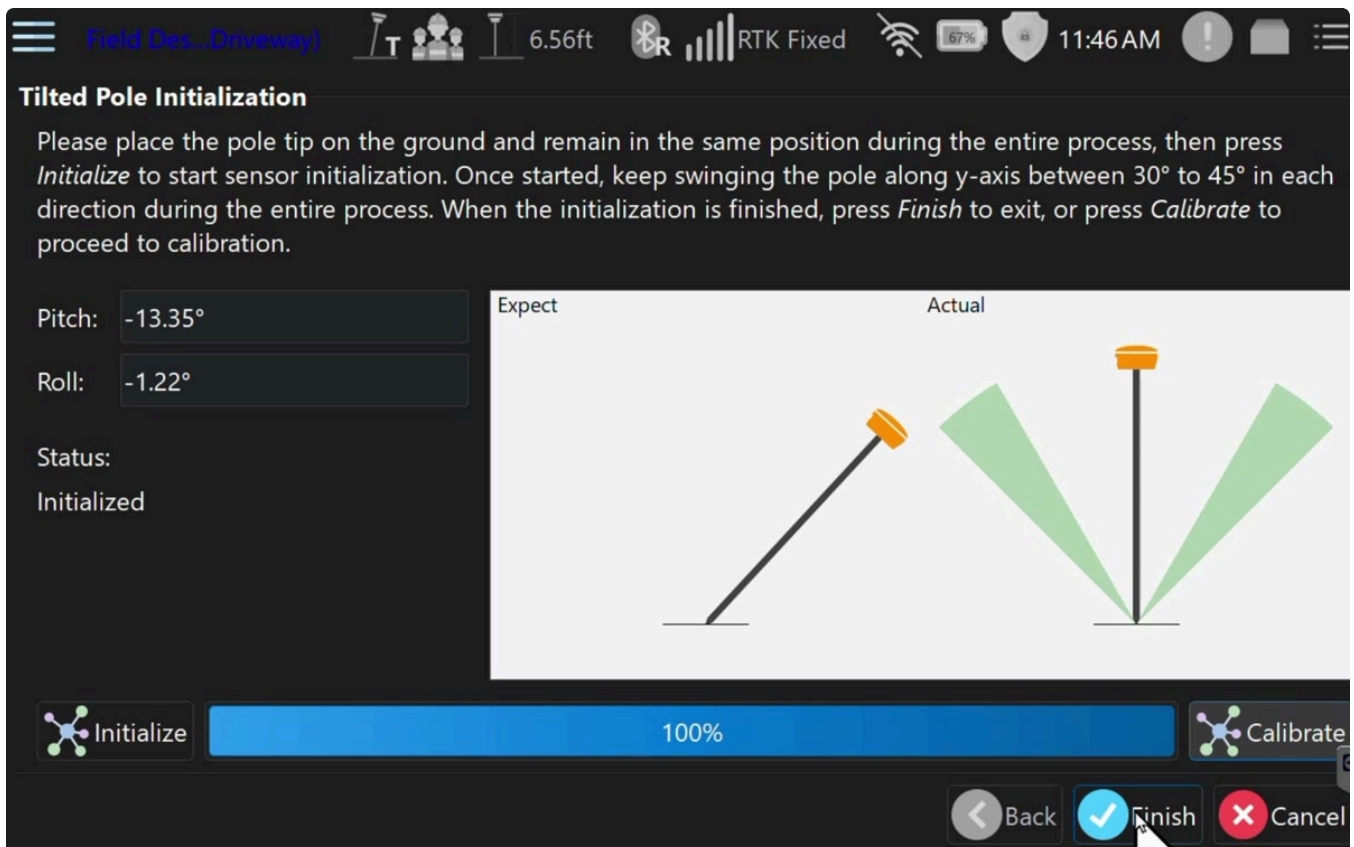
1. Keep the tip on the same spot and tap **Calibrate**.



2. Swing the pole along the **y-axis**, 30°–45° each way, until the bar shows **100%**. The result is shown at the end.



3. Tap **Finish**. If you need to redo it, tap **Back** to return to step 1.



Tips

- Never move the pole tip during any step. Only the top of the pole swings.
- Swing smoothly and steadily; don't go past 45°.
- Do the calibration with a good RTK fix. If the threshold warning keeps showing, move away from trees or buildings.