Universal Trail Assessment Process (UTAP)

Tool Function & Calibration
Tool Function & Calibration

Objectives

Identify each tool used for the UTAP & HETAP

Perform tool calibrations

Describe how each tool functions
Rolawheel

Length of Pace

Odometer Reset Knob
Compass

Dominant Eye
Calibrated Discrepancy for Compass Measurements

2nd Reading:
3 degrees discrepancy

3rd Reading:
4 degrees discrepancy

1st Reading:
5 degrees discrepancy

Average discrepancy: 4 degrees
Determining Your Eye Level Target
Inclinometer

- On/Off Button
- Calibrate Button
- % in/ft Button
- Hold Button
Calibration Check

Calibrating the Inclinometer
Additional Tools
HETAP – WISP Calibration

The grade, cross slope, and distance calibration should be checked before performing any trail assessment session.
HETAP – WISP Calibration

Calibration will need to be performed on a planar, smooth surface
Slopes - Start Position

“Check Grade” or “Select to Calibrate” and then “Start Position” to Begin
Rotate 180° in same space

“Check X-Slope” or “Calibrate Grade” to Continue

Tilt Sensor Calibration

Rotate the vehicle 180° so the rear wheels straddle the original front wheel location and the front wheel sits between the original rear wheel locations. The Grade should be 0.3% ± 0.3%. If it is, select [Check X-Slope]. Otherwise, select [Select to Calibrate].

Check X-Slope

Grade
-0.3 %

X-Slope
0.2 %

Select to Calibrate

Tilt sensor data from Sensor Instrumentation Package Label:

Ensure these numbers match your box!

X Axis
(35,079 mV/deg)

Y Axis
(34,812 mV/deg)
Roll Forward

“Finish Checking” or “Calibrate X-Slope” to Continue
Slopes Calibration Complete

Must always “Check” calibration before saving the new settings is allowed.

“Check Distance” or “Done” to save new settings.
Distance - Start Position

Enter the measured Distance in the Calibration Distance Box (25ft min)

Distance Calibration Verification:
1) Measure a known distance from the start line to the finish line.
2) Set the rear wheels on the start line.
Select [Start Position].

On Hold

Max. Dist. Range: 200
Calibration Distance: 50 Feet
Distance Traveled: -0.0
Select to Calibrate

Start Position

Magnet Count: 10 Whl. Dia. 1.25

Align Rear Wheel with Start Mark
Distance - Start Position

“Start Position” or “Select to Calibrate” then “Start Position” to Begin

Distance Calibration Verification:
1) Measure a known distance from the start line to the finish line.
2) Set the rear wheels on the start line.

Select [Start Position].
Distance – Finish Line

Select “Finish Line” when distance has been traversed (Verify Distance Traveled)

Align Rear Wheel with Finish Mark
Distance Calibration Complete

Must always “Check” calibration before saving of the new settings is allowed

“Done” to save new settings
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