

SurvCE - Setting Up a Job With a Total Station & Wireless Data Collector Setting the Azimuth Angle to North - SurvCE v1.50.xxx+

Laser Plummet on Total Station

- 1) Power up the total station.
- 2) Hit the **menu** button
- 3) Hit **F4** on the instrument to page down
- 4) Select **F3: Laser Plummet**
- 5) Hit **F1** to turn this feature on
- 6) You should see a laser beam on the ground underneath the instrument
- 7) Once you get your instrument level and over your point you may turn the feature off.
- 8) Hit **menu** to go back
- 9) Hit the **ESC**, you should see the Vertical and Horizontal angle screen on the station.

Setting Up a Wireless Total Station With a Data Collector Zeroed North

- 1) Double-tap **SurvCE**
- 2) Tap "**Select New/Existing Job**"
- 3) Type in the name of the job (note: the .crd extensions is not important)
- 4) Double check **Units tab** to make sure readings are configured to your liking
 - a. Recommended:
 - i. Zero Azimuth : **North**
 - ii. Vertical Obs : **Zenith**
 - iii. Distance Obs : **Slope**
 - iv. Angle : **Azimuth**
- 5) Tap "**OK**"
- 6) Enter the following for Coordinates
 - a. Point ID: **1**
 - b. Northing: **5000**
 - c. Easting **5000**
 - d. Elevation: **0**
 - e. Description: **sta**
- 7) Go to the "**File**" tab, then tap "**List Points**"
- 8) Now add the your TBM point information:
 - a. Point ID: **1**

- b. Northing: **blank**
 - c. Easting: **blank**
 - d. Elevation: **40.00**
 - e. Description: **TBM**
- 9) Tap **“OK”**
 - 10) Turn the total station to the north direction using your compass, and set the total station to zero once north is located.
 - 11) Now you can turn the total station to the TBM and sight on your prism. The horizontal angle on your total station will be your BS azimuth.
 - 12) Tap **“Equip”** tab
 - 13) Tap **2 Settings**
 - 14) Make sure **Course** is selected (radio button)
 - 15) Tap **OK**
 - 16) Tap **4 Comm Setup** (check the Port Number make sure it is on **“Com9”** & **Bluetooth device is checked.**) (If it is not follow Instructions on page 3)
 - 17) The Bluetooth receivers screen will appear. The receiver name that appears should be your total station. If not, tap find receivers. The data collector will search for your total station. Once it appears, highlight the total station and tap **“Connect”**.
 - 18) It will now establish the connection.
 - 19) Tap **“Surv”** tab
 - 20) Tap **“Sideshot/Traverse”**
 - 21) Enter the following on the **Instrument Setup** tab:
 - a. Occupy Point: **1**
 - b. Instr. Height: **whatever you measure**
 - c. Target Height: **whatever height the pole is**
 - 22) Enter Backsight Point: **90** and then hit **green enter key on data collector**
 - 23) Tap **“Use Azimuth”**
 - 24) Enter the following:
 - a. Backsight N Azimuth: **Enter the horizontal that was measured from 0 north to the TBM**
 - 25) Tap **“OK”** on data collector screen
 - 26) Tap **“Remote Benchmark”** Tab
 - 27) Enter **“90”** into Benchmark Pt box by picking from list icon or typing it in. **BM Elev.** Appears and is grayed out.
 - 28) Sight prism
 - 29) Tap **“Read”** button on data collector screen
 - 30) Tap **“Store”**

- 31) Tap "**Backsight**" on data collector screen, then tap "**continue**" on data collector screen
- 32) On this dialog box Check "**Set to BS azimuth**" to set total station to BS azimuth. Note: make sure pull down read screen shows "Set to BS azimuth", it is defaulted to "Use Current".
- 33) Tap "**Set angle and read**" button on data collector screen
- 34) Tap "**OK**" on data collector screen. **Don't** forget to change the description of the point.
- 35) You will see a Point Protect dialog box so Tap "**Overwrite**" button on data collector screen.

You are ready to survey!! Sight on your first shot and hit "**green enter button**" on data collector to read and save the shot. This will take a shot and the data will display on the screen. You will probably have to change the point number the first time (to 101) and type in your description.

SurvCE – Turning Points

- 1) Sight the next shot and tap "**R**" on the screen
- 2) Tap "**T**" on the screen
- 3) Enter the first point number for that setup (i.e. **200**)
- 4) Enter description (i.e. **sta**)
- 5) Tap "**OK**"
- 6) Tap "**Move Now**"
- 7) Turn everything off and move to the new setup
- 8) Once setup, turn everything back on and backsight the station you were just setup at and zero the instrument as you did in the first setup.
- 9) Tap "**Backsight**"
- 10) Tap "**Set Angle and Read**"
- 11) Tap "**OK**"

Continue your survey

WIRELESS OR CABLE CONNECTIONS

- 1) Double – tap **SurvCE**
- 2) Tap “**Equip**” tab
- 3) Tap # 4 “**Comm Setup**”
- 4) Pull down arrow at “Port Number” “**COM1**” is CABLE “**COM9**” is WIRELESS

Switching from Bluetooth to Cable Communication

Set Total Station first

1. Select **Menu**
2. Select **F 4** twice. This is the page down.
3. Select **F 2 Parameters**
4. Select **F 4** twice
5. Select **F 2 Com** (this is on pg 3/3 of menu)
6. Select **F 2 RS232C**
7. Press **Enter** button.

The *total station* will go to the **<set!>** mode

8. Press **ESC twice** (returns to measurement screen)

Set DATA COLLECTOR

1. Select **Main Menu**
2. Select **Equip Tab**
3. Select **4 Comm Setup**
4. Port Number should say **Com1**
5. Make sure Bluetooth port **is not checked**
6. Select **Ok**

If you are already in a survey go back to Sideshot/Traverse and Select **OK**.

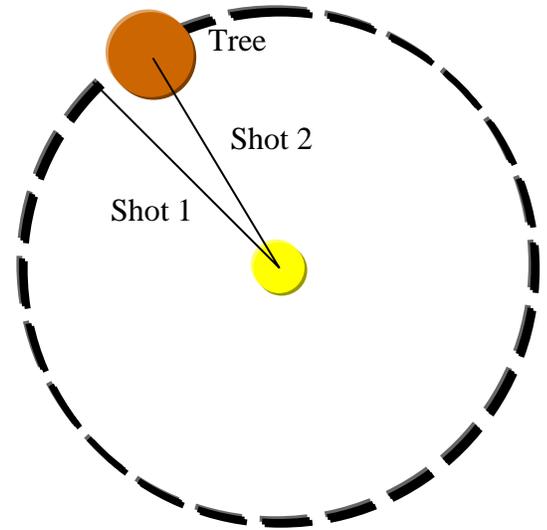
If you are not already in a survey you can start the setup steps.

If you wish to switch from Cable to Bluetooth reverse instructions above however still start with the Total Station.

Ranger – SurvCE – Offsets

Angle Offset:

This method takes two readings to get the actual point. The first reading takes the vertical angle and the distance to the point. If you wanted to locate the center of a tree this method would be acceptable. The prism would be setup beside the tree along a circle going through the tree with its center at the instrument. The second shot would be on the center of the tree without a prism for the azimuth angle only. The data collector combines both shots into one point.



1. Press the <O> bottom on the right side of the screen
2. Make sure the <Distance/Angle> tab is selected
3. Check <Distance Shot> on the record vertical angle from... line
4. Fill in the Description and Target Height at the bottom of the screen.
5. Sight the prism to the side of the object that you want to shoot.
6. Press <Read Distance>
7. The data from the last shot will display at the bottom of the screen.
8. Sight the prism on the center of the object
9. Press <Read Distance> again
10. The data from the second shot will display beside the original shot.
11. Press <Store> and the data collector will combine the shots into one point.
12. Press <Close> to return to the main screen