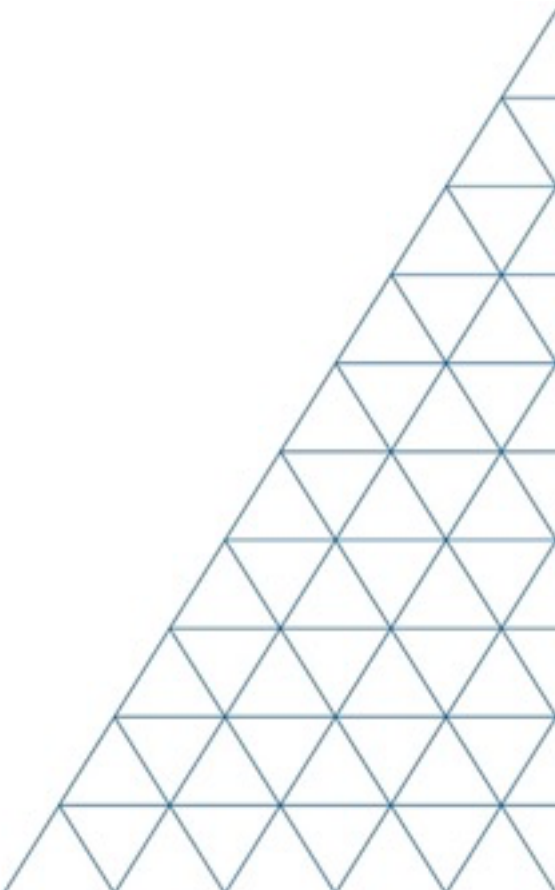
YOUR CONSTRUCTION TECHNOLOGY PROVIDER

Field Reference Guides

SITEWORKS GNSS 900MHZ VERSION 1.43

SITECH SOUTHWEST

SITECHSW.COM



Trimble®

Authorized Dealer

Siteworks GNSS 900MHz Version: 1.43

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TRAINING CHECKLIST

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Training Acknowledgement:

Customer Signature **Date** **SITECH Representative** **Date**

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Semi-Permanent Base Station Setup

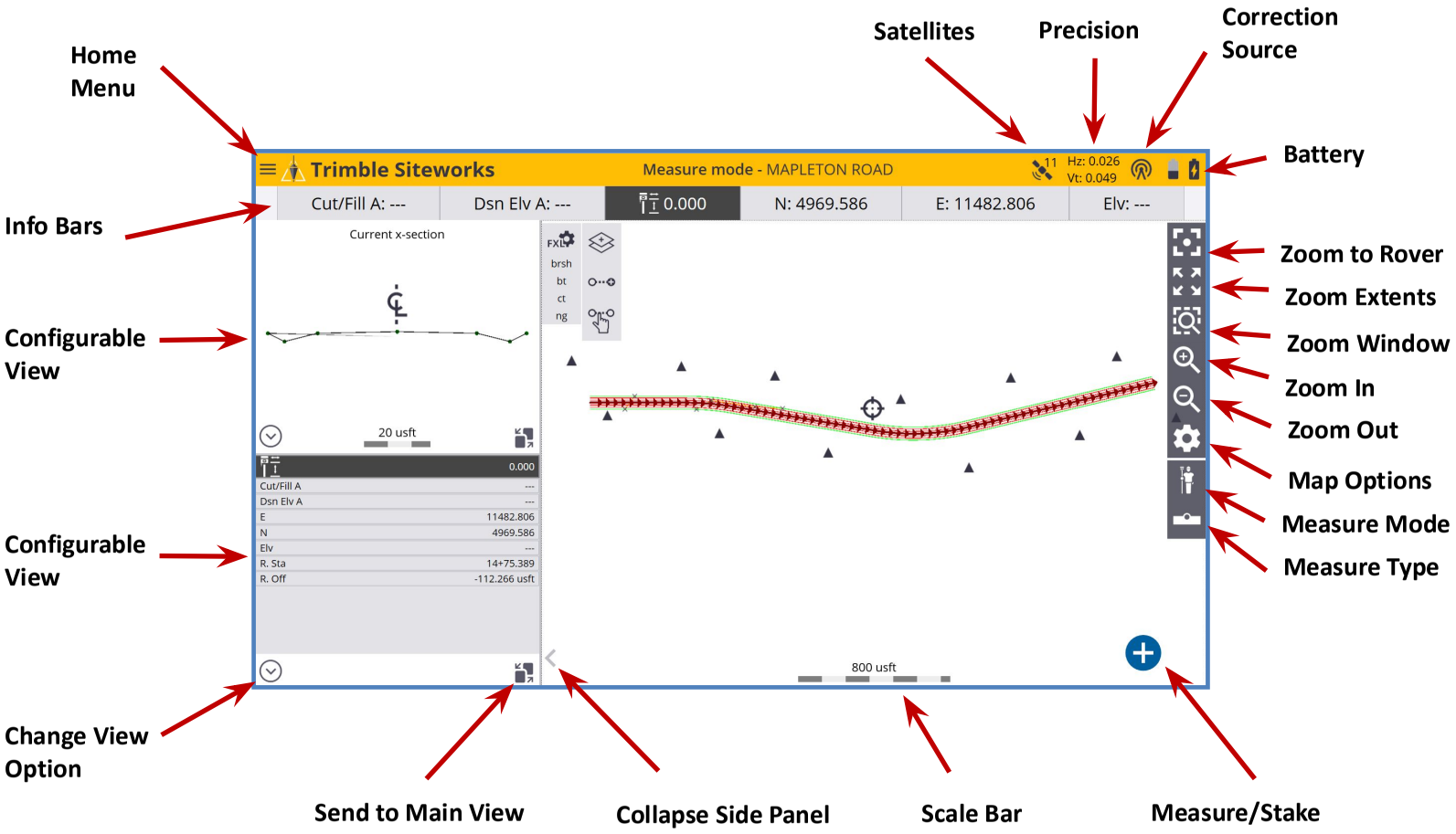
1. Material List
    - 4”x 4” x 8’ or 10cm x 10cm x 2.5m pressure treated wood post
    - 1ea. bag of cement
    - 1” x 1’ or 2.5cm x 30cm galvanized pipe
    - 1” or 2.5cm galvanized T
    - 1” or 2.5cm galvanized mounting plate,
    - 4” x 5/8” or 10cm x 1.587cm coarse bolt
    - 2ea. 5/8” or 1.587cm flat washers
    - 1ea. 5/8” or 1.578cm lock washer
    - 1ea. 5/8” 1.587cm coarse nut
    - 4ea. 2” or 5cm wood screws

2. Determine Base Station Location
    - Must be in a safe location outside of the work area
    - Should be centralized to the entire project
    - Should be at the highest possible elevation
    - No obstructions such as trees, building, vehicles, above the 15° Elevation Mask

Semi-Permanent Base Station Setup

1. Dig a hole approximately 2’ or 60cm deep and 10-12” or 25-30cm diameter
2. Mix the bag of cement
3. Plumb up the wood post and add the cement
4. Assemble the arm by screwing the T connector on one end of the pipe and the mounting plate on the other end.
5. Mount the arm on the wood post using the 4 wood screws. Ensure the T connector is plumb.
6. Place one flat washer on bolt; Insert the bolt (threads up) into the T connector; Place the 2nd flat washer, lock washer and nut on the bolt and tighten.
7. Attach the Zephyr Antenna to bolt, do not over tighten.
8. Use the Yellow GNSS cable to connect the Zephyr Antenna to the Base Station.
9. Setup the Base Station (See FRG Base Setup)

Main Screen Layout



Create a New Site / Work Order

1. **Power On** TSC7 Data Collector
2. Press **"Trimble Siteworks"**
3. Select " ⊕ " and **Enter Project Name** in the Project pull down menu
4. Select the desired units for "**Distance" "Angles**" **"Coordinate Order" "Grid coordinate" "Azimuth"** "**Stationing**" and Press **"Next"**
5. If a site map is available on the collector check the checkbox and **"tap to select file"**
6. If a calibration file is available on the collector check the checkbox and **"tap to select file"**
7. If a control point file is available on the collector check the checkbox and **"tap to select file"**
8. To define a coordinate system check the checkbox and select the desired coordinate system
    - If a site calibration is to be performed do not select a Coordinate System.
9. Press **"Finish"**
10. Select " ⊕ " to add a new **Work Order**
11. Enter **Work Order Name** and add instructions (optional) and Press **"Finish"**
12. Select **"(No design needed)"** if no design files are on the collector.
    - Select " ⊕ " if design files are on the collector. Name the design; check the checkbox for the design components you wish to include and **"tap to select file"** Press **"Finish"**
13. Press "**Accept**"

Create New Design from Hard Disk / USB

1. **Power On** TSC7 Data Collector
2. Press **"Trimble Siteworks"**
3. Select **"Project" and "Work Order"**
4. Select " " to add **New Design**
5. Plug Hard disk into USB port

   Note: Android Devices will prompt the user to establish permission for Siteworks to "Allow Access" and "Use this Folder" when importing from or exporting to a USB stick for the first time on the device.

6. Enter the Design Name
7. Check the box next to Select design file
8. Tap in the Box to Browse to the location on the USB that holds the design surface file
9. Highlight then tap "**Accept**"
10. Check the box next to Select design map
11. Tap in the box to Browse to the location on the Hard Disk that holds the design map file
12. Highlight then tap "**Accept**"
13. Check the box next to Select stakeout points
14. Tap in the box to Browse to the location on the Hard Disk that holds the stakeout point file
15. Highlight then tap "**Accept**"
16. Press "**Finish**"
17. Press "**Accept**"

Configure Information Bar / Panel

1. From the main Trimble Siteworks screen Press
2. Press **“Settings”**
3. Press **“Info Bar/Panel”**
4. Information Bar: Check the following boxes:
    - **Cut/Fill A**
    - **Design elevation A**
    - **Antenna/ Target height**
    - **Northing**
    - **Easting**
    - **Elevation**
5. Press - hold and Drag “ “ to match order above
6. Press Information Panel at the top of the screen: Check the following boxes.
    - **Cut/Fill A –**
    - **Design elevation A**
    - **Antenna/ Target height**
    - **Northing**
    - **Easting**
    - **Elevation**
    - **Reference Station**
    - **Reference Offset**
7. Press - hold and Drag “ “ to match order above
8. Press **“Accept”**

Start Base 900MHz before Site Calibration

1. **Power On** TSC7 Data Collector
2. Press **“Trimble Siteworks”**
3. Select **“Project, Work Order and Design”** Press **“Accept”**
4. Press
5. Select “**Project Setup**” then select “**Connect Device**”
6. Press
7. Select **“Base”** as **Mode** and “**Bluetooth**” as **Connection Type**
8. Select Model and SN of the Base or select “ ” if your device is not listed
9. Select Correction Method “**Radio in Receiver**”
10. Select Network ID for the base to broadcast on
11. Select the Base position “**Unknown position**”
12. Enter a Base name
13. Select the Antenna type of the antenna being utilized
14. Select the Measure method “**Bottom of antenna**”
15. Enter the Vertical height **“0.00 usft” or “0.000m”** and Press “**Accept**”
16. Set Elevation mask to 10
17. Select Corrections method “**CMRx**” and Press “**Accept**”
18. Review Info. screen then select “**OK**”

Start Base 900MHz after Site Calibration

1. **Power On** TSC7 Data Collector
2. Press **“Trimble Siteworks”**
3. Select **“Site, Work Order and Design”** Press **“Accept”**
4. Press
5. Press **“Project Setup”** , then **“Connect Device”**
6. Press
7. Select **“Base, Bluetooth”**
8. Select **Model and SN** of the Base or select to scan if your device is not listed
9. Select Correction Method “**Radio in Receiver**”
10. Select the **Network ID** of the Base Station
11. Allow the base station to scan the network to ensure nothing else is on the radio channel
12. Select the Base position “**Control point**”
13. Select the Point name from the map or Point name drop down list and Press **“Select”**
14. Select the Antenna type of the antenna being utilized
15. Select the Measure method “**Bottom of antenna**”
16. Enter the Vertical height **“0.00usft” or “0.000m”** and Press “**Accept**”
17. Set Elevation mask to 10
18. Select Corrections method “**CMRx**” and Press “**Accept**”
19. Review Info. screen then select “**OK**”

Start Rover Using Internal 900MHz Radio

1. **Power On** TSC7 Data Collector
2. Press **“Trimble Siteworks”**
3. Select **“Site, Work Order and Design”** Press **“Accept”**
4. Press
5. Press **“Project Setup”** then **“Connect Device”**
6. Press
7. Mode **“Rover”**
8. Connection type **“Bluetooth”** Press **“Select”**
9. Select **Model** and **SN** of the Rover
10. Select Correction Method **“Radio in Receiver”**
11. Select Base Station Broadcast Network ID
12. Select Base Station Name
13. Specify if using Quick Release
14. Specify if using tilt compensation
15. Enter Antenna height and Press **“Accept”**

Enter / Edit Control or Stakeout Points

1. From the main Trimble Siteworks screen Press **“Menu”**
2. Press **“Data Management”**
3. Press **“Point Manager”**
4. Press **“Enter/ Edit Control Points”**
5. To Add a control point, select “**Add**”

   - Select Type either “**1D, 2D, 3D**”
   - Enter “**Point name and code**”
   - Enter “**Northing and Easting**” if applicable
   - Select Point’s elevation Type either “**Key-in ,Extract from point or Extract from surface**” if applicable
   - Enter Elevation if applicable
   - Select “**Save**”
6. To Edit a control point, select **“Edit”**

   - Edit the desired element of the control point
   - Select “**SAVE**” when finished

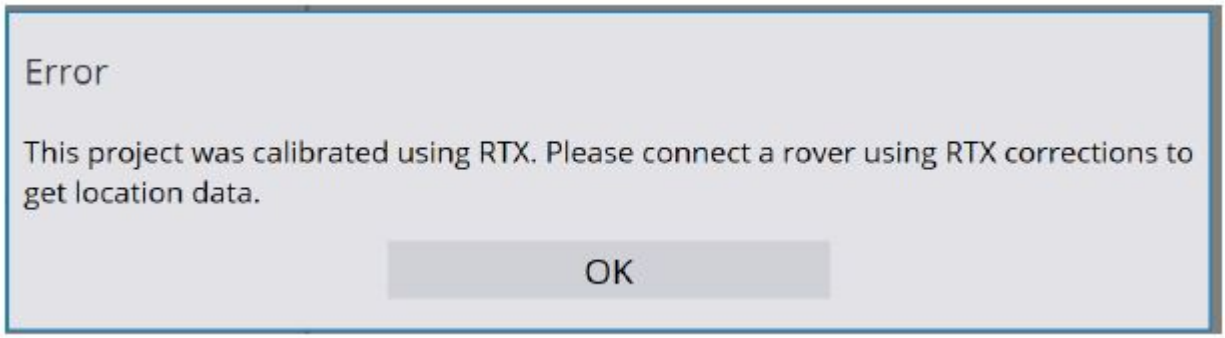
Site Calibration

1. Open the Site, and create a new work order
2. Connect to the rover
3. It will ask you “Rover setup is complete. Do you want to calibrate the site now?” Press **“Yes”**
4. Press to add point
5. Select the first point to be calibrated
   - Touch point on screen or
   - select from the list Press **“ Accept”** then Press **“Select**”
6. Select **Measurement method** and enter your **Vertical Height**
7. **Horizontal** and **Vertical Tolerances** should be set to “**0.082 usft or 0.025m**”
8. Enter your **Minimum measurement** time (15 Seconds is default)
9. Plumb the rod over the point using a bi-pod then press “**Start**”
10. After the point is measured **repeat steps 4-9** until all control points have been measured
    - ***After all points have been measured edit both the horizontal and vertical components of the points until the calibration is within the projects tolerances.***
11. Press “**Finish”** after editing is complete
12. Press “**Yes”** to **“Accept Calibration**”
13. Press “**Yes”** to **“Do you want to save the base station location as a control point?”**
14. To check the calibration utilizes the **recheck system** function. Ensure that you are checking on points that were not utilized during the calibration

Site Calibration with CenterPoint RTX

1. Open the Site, and create a new work order
2. Connect to the rover

   Note: if you are using CenterPoint RTX as your correction source, your site calibration will only be valid for other devices if they are also using CenterPoint RTX. This is due to the differences in datums utilized between a locally calibrated site, and the RTX satellite corrections. You can only use the resultant DC file with devices using CenterPoint RTX. If you use another correction



3. It will ask you “Rover setup is complete. Do you want to calibrate the site now?” Press **“Yes”**
4. Press ⊕ to add point
5. Select the first point to be calibrated
   - Touch point on screen then press **“Select”**
     - Or press the list icon ☰ to select a point from the points list
     - Press “**Accept**” then press “**Select**”
6. Select **Measurement method** and enter your **Vertical Height**
7. For CenterPoint RTX, set the GNSS tolerances as follows:
     - **Horizontal tolerance** “**0.082 usft or 0.025m**”
     - **Vertical tolerance** to “**0.164 usft or .050m**”

Site Calibration with CenterPoint RTX

Note: Tolerances will reflect project settings by default, which are RTK standards. To ensure your calibration is accepted, you need to change the tolerances to the RTX specifications.

1. Enter your **Minimum measurement** time (15 Seconds is default)
2. Plumb the rod over the point using a bi-pod then press "**Start**"
3. After the point is measured **repeat steps 4-9** until all control points have been measured

After all points have been measured edit both the horizontal and vertical components of the points until the calibration is within the projects tolerances.

4. Press "**Finish"** after editing is complete
5. Press "**Yes"** to **"Accept Calibration**"
6. To check the calibration utilizes the **recheck system** function. Ensure that you are checking on points that were not utilized during the calibration

Recheck System Setup

1. From the main Trimble Siteworks screen Press
2. Press “**Project Setup**”
3. Press “**Recheck System**”
4. Select control point to check by Pressing the point on the screen or selecting from list
5. Press “**Measure**”

6. Select Measure method that pertains to your setup
7. Enter Vertical height that corresponds with measure method selected
    - If unsure Press for more information
8. Set Horizontal and Vertical Tolerance **“0.082usft” or “0.025m”** (default)
9. Select Minimum measuring time “**15 Seconds”** (default)
10. Press “**Start”**
11. Check that all measured values for deviation from control are acceptable to your tolerances
12. Press “**Accept**”

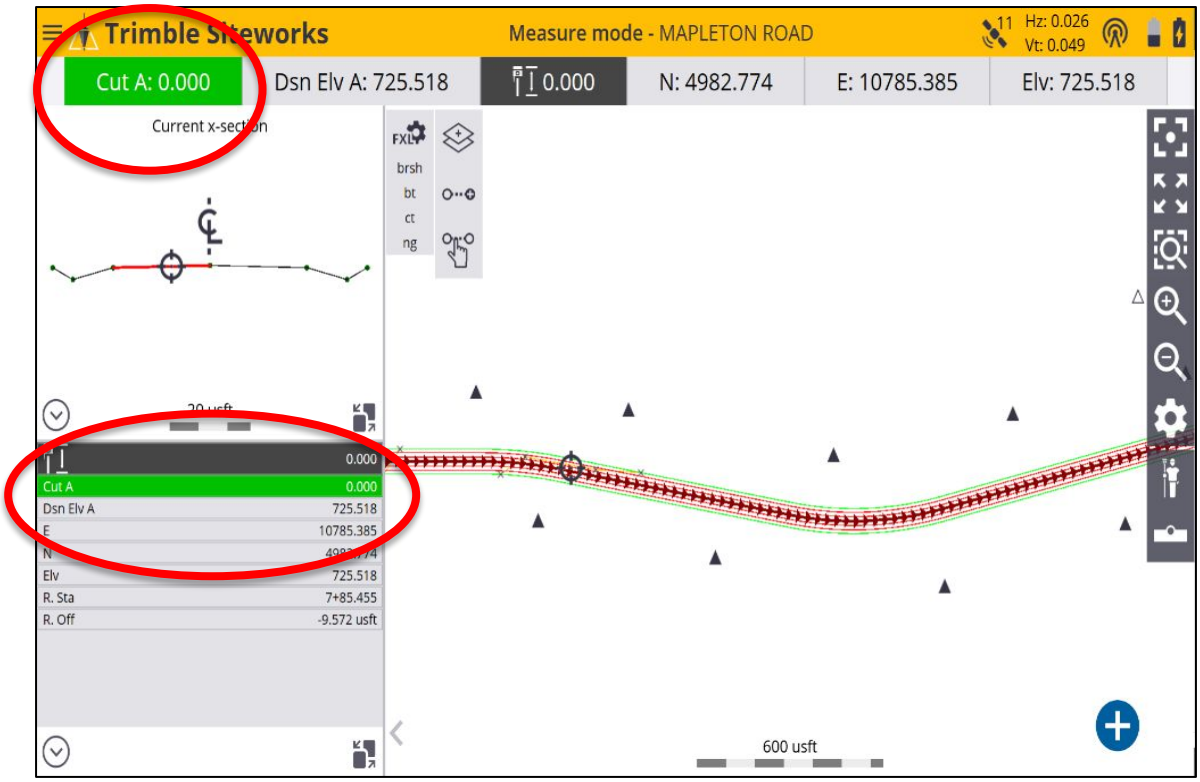
Measure New Control Points

1. From the main Trimble Siteworks screen Press
2. Press "**Measure**"
    - If menu closes Press **"Measure"** again
3. Press "**Measure Control Point**"
4. Plum the rod over the control point then Press to add point
5. Enter point name and code press "**Accept**"
6. Select Measure method that pertains to your setup
7. Enter Vertical height that corresponds with measure method selected
    - If unsure Press for more information
8. Set Horizontal and Vertical Tolerance "**0.082**" or **"0.025m"** (default)
9. Select Minimum measuring time "**15 Seconds**" (default)
10. Press "**Start**"

Check Grade

1. Connect to your device and load the design you would like to utilize to check grade.
   - Refer to previous reference guides for instructions
2. Plumb the rod over the spot in which you would like to check grade.
   - Must be within a roadway or site model to calculate Cut/Fill Values
3. Cut/Fill information will be located on the top left hand corner on the info bar or on the info panel

NOTE: To add Lightbar to side panel select ⌄ on either side panel then select **"Lightbar"**



Measure Point: Standing

1. From the main Trimble Siteworks screen Press
2. Press "**Measure**"
3. To select measurement method Press
4. Press "**Standing**"
5. Select if a Quick release is being used
6. Enter the Antenna Height and Press **"Accept**"
7. Navigate to the location you would like to measure and plumb the rod
8. Press to measure a new point
9. Define Point name (it is recommended to allow the system to name the point)
10. Define Point code
11. Select point type
    - Surface point is intended to be a point that will help define a surface
    - Feature is intended to be a point that defines a feature on your project
12. Define if you would like the dialog box to Show every time
13. Press "**Accept**"

Measure Point: Walking Distance

1. From the main Trimble Siteworks screen Press
2. Press “**Measure**”
3. To select measurement method Press
4. Press “**Walking**”
5. Select if a Quick release is being used
6. Enter the antenna Height: Height should be height of rod + distance held off the ground
7. Record Mode “**Fixed Distance**”
8. Enter Horizontal Interval at which you would like the points recorded
9. Enter Vertical change at which you would like additional points recorded and Press” **Accept**”
10. Navigate to the location you would like to start measuring and plumb the rod and Press
11. Define Point name (it is recommended to allow the system to name the point)
12. Define Point code
13. Select point type
    - Surface point is intended to be a point that will help define a surface
    - Feature is intended to be a point that defines a feature on your project
14. Show every time “**No**” and Press “**Accept**”
15. Walk the desired route in which you would like to collect points.
16. Press the to add a point in-between automatic shots
17. Press “**Stop**” when finished

Measure Point: Walking Time

1. From the main Trimble Siteworks screen Press
2. Press “**Measure**”
3. To select measurement method Press
4. Press “**Walking**”
5. Select if a Quick release is being used
6. Enter the antenna Height: Height should be height of rod + distance held off the ground
7. Record Mode “**Fixed Time**”
8. Enter the time interval at which you would like the points to record and Press “**Accept**”
9. Navigate to the location you would like to start measuring and plumb the rod and Press
10. Define Point name (it is recommended to allow the system to name the point)
11. Define Point code
12. Select point type
    - Surface point is intended to be a point that will help define a surface
    - Feature is intended to be a point that defines a feature on your project
13. Show every time “**No**” and Press “**Accept**”
14. Walk the desired route in which you would like to collect points.
15. Press the to add a point in-between automatic shots
16. Press “**Stop**” when finished

Measure Point: Measure When Level

1. From the main Trimble Siteworks screen Press
2. Press “**Measure**”
3. To select measurement method Press
4. Press “**Walking**”
5. Select if a Quick release is being used
6. Enter the antenna Height: Height should be height of rod + distance held off the ground
7. Record Mode “**Measure When Level**”
8. Set the **“Tilt Tolerance”** for the eBubble to initiate a Point Measurement.
9. Enter the minimum measurement time when level to accept for Point Measurement in the **“Time interval (seconds)”** field and Press “**Accept**”
10. Navigate to the location you would like to start measuring and plumb the rod and Press
11. Define Point name (it is recommended to allow the system to name the point)
12. Define Point code
13. Select point type
    - Surface point is intended to be a point that will help define a surface
    - Feature is intended to be a point that defines a feature on your project
14. Show every time “**No**” and Press “**Accept**”
15. Walk the desired route in which you would like to collect points, leveling the rod at the locations where you want to store points..
16. Press the to add a point in-between automatic shots.
17. Press “**Stop**” when finished

Measure Point: Vehicle Distance

1. From the main Trimble Siteworks screen Press
2. Press “**Measure**”
3. To select measurement method Press
4. Press “**Vehicle**”
5. Select if a Quick release is being used
6. Enter the antenna Height: Height should the distance from the ground to bottom of antenna or bottom of quick release
7. Record Method “**Fixed Distance**”
8. Enter Horizontal Interval at which you would like the points recorded
9. Enter Vertical change at which you would like additional points recorded and Press **“Accept**”
10. Press “**OK**” to the warning after reading
11. Navigate to the location you would like to start measuring and Press
12. Define Point name (it is recommended to allow the system to name the point)
13. Define Point code
14. Select point type
    - Surface point is intended to be a point that will help define a surface
    - Feature is intended to be a point that defines a feature on your project
15. Show every time “**No**” and Press “**Accept**”
16. Drive the desired route in which you would like to collect points.
17. Press the to add a point in-between automatic shots
18. Press “**Stop**” when finished

Measure Point: Vehicle Time

1. From the main Trimble Siteworks screen Press
2. Press “**Measure**”
3. To select measurement method Press
4. Press “**Vehicle**”
5. Select if a Quick release is being used
6. Enter the antenna Height: Height should the distance from the ground to bottom of antenna or bottom of quick release
7. Record Mode “**Fixed Time**”
8. Enter the time interval at which you would like the points to record and Press **“Accept**”
9. Press “**OK**” to the warning after reading
10. Navigate to the location you would like to start measuring and Press
11. Define Point name (it is recommended to allow the system to name the point)
12. Define Point code
13. Select point type
    - Surface point is intended to be a point that will help define a surface
    - Feature is intended to be a point that defines a feature on your project
14. Show every time “**No**” and Press “**Accept**”
15. Drive the desired route in which you would like to collect points.
16. Press the to add a point in-between automatic shots
17. Press “**Stop**” when finished

Stakeout Point

1. From the main Trimble Siteworks screen Press
2. Press "**Stake**"
3. Select the point to stake by either
   - Pressing the point on the screen
   - Selecting the list icon and selecting it from the list
4. Press "**Accept**"
5. If first time staking a point, set the Stakeout setting
   - Horizontal tolerance: Set to project tolerance **".082' or 0.025m"** (default)
   - Stake marking method: select from drop down "**Ground Surface"** (default)
     - For more information, Press
   - Working stake length: Length of stake above ground
     - For more information, select Press
   - Cut/Fill interval: Set to round number **"0.50usft or .150m"** recommended
   - Min bottom and top stake spacing: Set to round number **"0.50 usft or 0.150 m"**
6. Press "**Accept**"
7. Navigate to the point in which you have selected to stake
8. Once you are within the projects horizontal tolerances plumb the rod and Press
9. Review the Stake Report and Press "**Accept**" to accept or to reshoot the point
10. If "**Accept**" is Press the point will be stored

Measure and Compute Stockpile Volume

1. Open the Site, and create a new work order
2. Connect to the rover
3. Start the stockpile topo by shooting the base of the pile
4. Mark the start location of the stock pile base topo
5. Set Measure type to ‘New Line’ Line Type to ‘Volume Boundary’
6. Plumb the rod, press to record the points along the toe line
7. Show every time “**Yes**” and Press “**Accept**”
8. Walk the perimeter of the pile recording a point every 10’-15’ or 3-5m repeating **steps 6 and 7** until you are back near the starting point.
9. Change Measure Type to Point
    - Change the Point code to “**Top**”
    - Point Type to Surface
10. Measure points on the top of the pile by pressing the Button
11. After all points defining the top are measured press
12. Press “**COGO**”
13. Press “**Review & Edit Data”**

Cont. Measure and Compute Stockpile Volume

14. Press

15. Select the **Boundary** created in **step 8**

16. Press the top **Drop down caret** and select Stockpile.

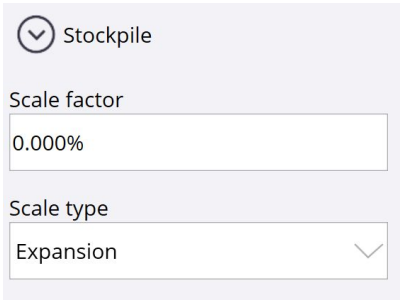
17. Add Expansion or Shrinkage by selecting the **drop down caret** under Scale Type

18. Enter the percentage of Expansion or Shrinkage under **Scale Factor**

19. Press “**Accept**”

20. Volume Calculations will be displayed

21. Save Volume Calculations enter **Description** and press “**Accept**”



Start IBSS Base before Site Calibration

1. **Power On** TSC7 Data Collector
2. Press **“Trimble Siteworks”**
3. Select **“Site, Work Order and Design”** press **“Accept”**
4. Select **“Base, Bluetooth”**
5. Select Model and SN of the Base or select to scan if your device is not displayed
6. Select Correction Method “**IBSS**”
7. Receiver internet option Select “**Other**”
8. Enter your Organization and Password
9. Select the Base position “**Unknown position**”
10. Enter Base name and Press **“OK”**
11. Transmit via radio select “**No**” and Press “**OK**”
12. Select the Antenna type of the antenna being utilized
13. Select the Measure method “**Bottom of antenna**”
14. Enter the Vertical height **“0.00 usft”** or **“0.000 m”** and Press “**Accept**”
15. Select Corrections method “**CMRx**” and Press “**Accept**”
16. Review Info. screen then select **“OK”**

Start IBSS Base after Site Calibration

1. **Power On** TSC7 Data Collector
2. Press **“Trimble Siteworks”**
3. Select **“Site, Work Order and Design”** Touch **“Accept”**
4. Select **“Base, Bluetooth”**
5. Select Model and SN of the Base or select to scan if your device is not displayed
6. Select Correction Method “**IBSS**”
7. Receiver internet option Select “**Other**”
8. Enter your Organization and Password
9. Select the Base position “**Control point**”
10. Select the Point name from the map or Point name drop down list and Press **“OK”**
11. Transmit via radio select “**No**” and Press “**OK**”
12. Select the Antenna type of the antenna being utilized
13. Select the Measure method “**Bottom of antenna**”
14. Enter the Vertical height **“0.00usft”** or **“0.000m”** and Press “**Accept**”
15. Select Corrections method “**CMRx**” and Select “**Accept**”
16. Review Info. screen then select **“OK”**

Start Rover using IBSS

1. **Power On** TSC7 Data Collector
2. Double Press **Trimble Siteworks**

3. Select **“Site, Work Order and Design”** Press **“Accept”**
4. Select **“Rover, Bluetooth”**
5. Select Model and SN of the Rover
6. Select Correction Method “**IBSS**”
7. Enter Organization and Password, Press **“Accept”**
8. Select IBSS base from pull down list, Press “**Accept"**
9. Specify if using **“Quick Release”**
10. Enable **“Tilt Compensation”**
11. Enter Antenna height and Press **“Accept”**

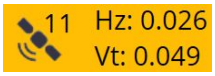
Start Rover using VRS

1. **Power On** TSC7 Data Collector
2. Double Press **Trimble Siteworks**

3. Select **“Site, Work Order and Design”** Press **“Accept”**
4. Select **“Rover, Bluetooth”**
5. Select Model and SN of the Rover
6. Select Correction Method “**Internet**”
7. Enter the VRS “**Server Address, Port number, User name, Server Password**
8. Select the Correction Type, Press “**Accept”**
9. Specify if using **“Quick Release”**
10. Enable **“Tilt Compensation”**
11. Enter Antenna height and Press **“Accept”**

Start Rover using RTX before Datum Shift

1. **Power On** TSC7 Data Collector
2. Double Press **Trimble Siteworks**

3. Select **"Site, Work Order and Design"** Press **"Accept"**
4. Select **"Rover, Bluetooth"**
5. Select Model and SN of the Rover
6. Select Correction Method "**Centerpoint RTX**"
7. Set horizontal and vertical precision to **".082"**
8. Specify if using **"Quick Release"**
9. Disable **"Tilt Compensation",** this must be disabled to perform a Datum Shift
10. Enter Antenna height and Press **"Accept"**
11. Select **"Yes"** to the prompt, **"A datum shift is required if your base position was not established using RTX. Would you like to measure a datum shift?"**
12. Select a control point to measure from the map view or the list
13. Press **"Measure"**
14. Verify **"Measure Method", "Antenna Height"**
15. Press **"Start"**
16. Press **"Accept"**
17. Press 

then press **"Settings"**
18. Press **"Enable Tilt Compensation"** select **"Yes",** press **"Accept"**

Start Rover using RTX after Datum Shift

1. **Power On** TSC7 Data Collector
2. Double Press **Trimble Siteworks**

3. Select **“Site, Work Order and Design”** Press **“Accept”**
4. Select **“Rover, Bluetooth”**
5. Select Model and SN of the Rover
6. Select Correction Method “**Centerpoint RTX**”
7. Set horizontal and vertical precision to **“.082”**
8. Specify if using **“Quick Release”**
9. Enable **“Tilt Compensation”**
10. Enter Antenna height and Press **“Accept”**

Start Rover using EM100

1. **Power On** TSC7 Data Collector
2. Press **“Trimble Siteworks”**
3. Select **“Site, Work Order and Design”** Press **“Accept”**
4. Mode **“Rover”**
5. Connection type **“EM100”** Press **“Select”**
6. Select Correction Method from the following EM100 compatible services:
   - VRS (~75cm)
   - IBSS (~75cm)
   - ViewPoint RTX (~50cm)
7. Antenna Type select **“EM100 Internal”**
8. Enter Antenna height and Press **“Accept”**

Start Rover using EM100 with External Antenna

1. **Power On** TSC7 Data Collector
2. Press **"Trimble Siteworks"**
3. Select **"Site, Work Order and Design"** Press **"Accept"**
4. Mode **"Rover"**
5. Connection type **"EM100"** Press **"Select"**
6. Select Correction Method from the following EM100 compatible services:

   Accuracies when used with external antenna (GA830) and Precise Rover Code

   - VRS (H: 8mm + 0.5 ppm V: 15mm + 0.5ppm)
   - IBSS (H: 8mm + 1ppm V: 15mm + 1ppm)
   - Centerpoint RTX (H: 4cm V: 12cm)
7. Antenna Type select **"GA830"**
8. Enter Antenna height and Press **"Accept"**

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