Smart Aligner – Troubleshooting and Tips Course

Topics Covered

Troubleshooting

Topics Covered

Tips

Wi-Fi Connection with Android Phones

1. With rapid advancement and multiple variations of Android operating systems, there may be some occasions when the Smart Aligner Tool has difficulty connecting to the phone. This section deals with various settings and procedures in order to start and maintain connection. If none of these suggestions work, using the optional USB Data Cable is an alternative until a Wi-Fi fix is available.

2. When installing the app, **grant any permission requested**. In particular, Location must be turned on to allow and maintain the Wi-Fi connection to the Tool Hotspot.

Wi-Fi Connection with Android Phones

3. Most newer operating systems try to be vigilant in making sure that the Internet is accessible. The Smart Aligner app does not require Internet access, but there are different ways to disable this warning, depending on what version of Android is running.

4. If problems exist, it is recommended to **Forget Network** and use the following tips to establish a working connection. If the Smart Aligner Tool is not showing up as a network, turn it off and on again to reset the Wi-Fi module. Also, make sure that other phones in the area, that have had a previous connection to the Tool, have their Wi-Fi turned off.
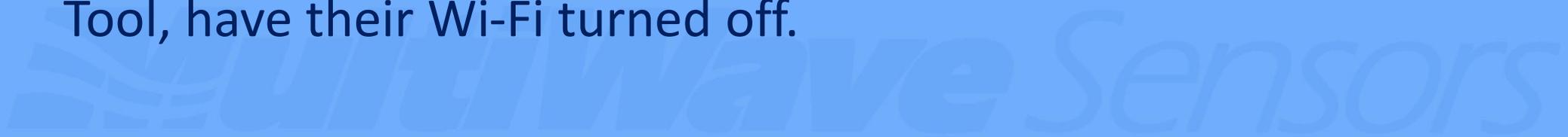
Wi-Fi Connection with Android Phones

5. Android versions 8 and lower don't seem to have Internet warnings. Android 9 and 10 users may need specific responses to ensure proper working operation.

6. For Android 9, if you get the following message as shown on the left, wait until it disappears (do not answer).

7. For Android 9, if you see the message as shown on the right, choose *Keep Wi-Fi connection*.
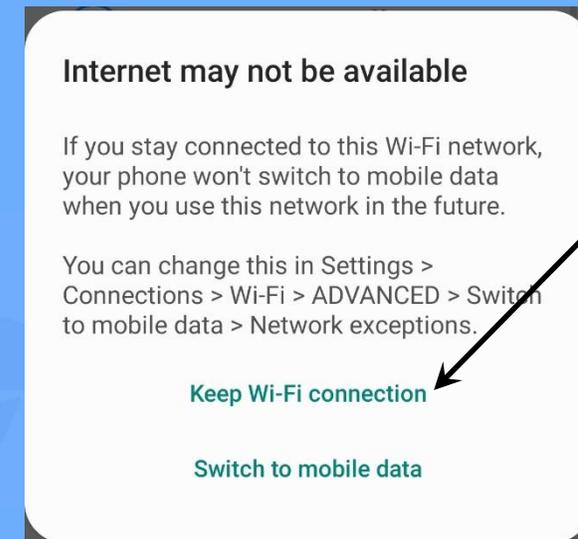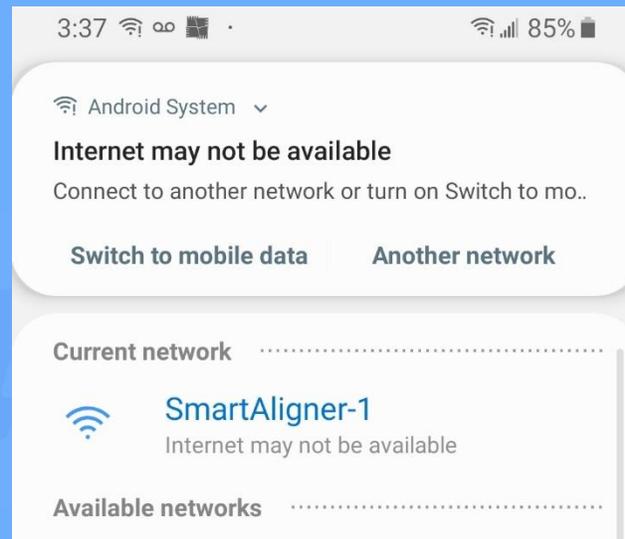
Wi-Fi Connection with Android Phones

8. For Android 10, if you get the following message box as shown on the left, Tap the message box within 5 seconds.

9. The message box as shown on the right will appear. Select Don't ask again for this network, and then Yes.
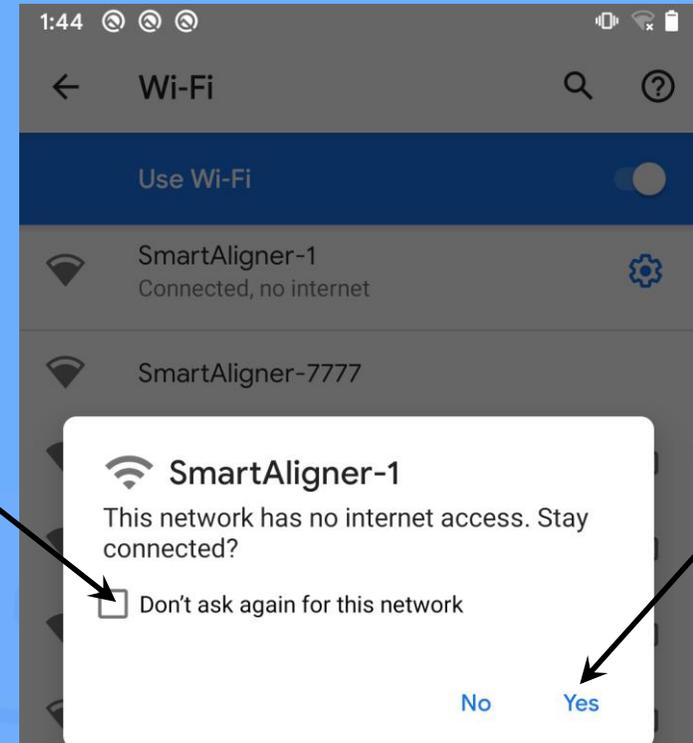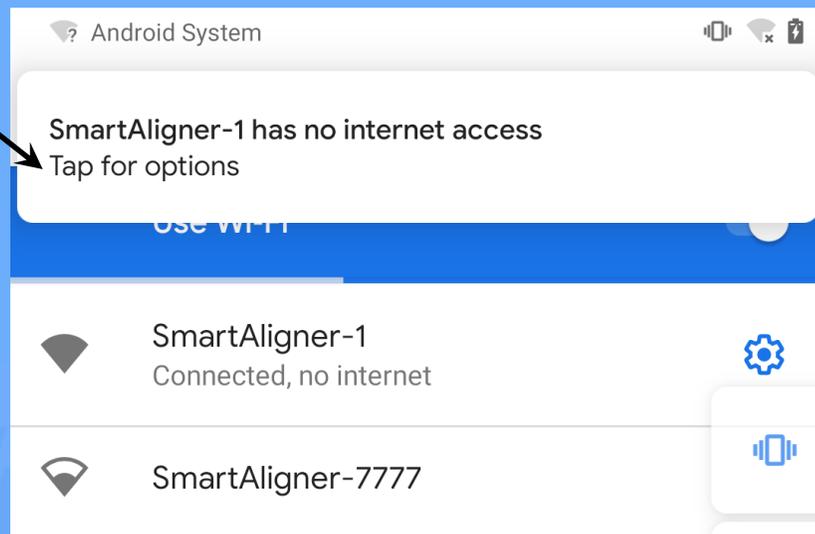
Wi-Fi Connection with Android Phones

10. Summary of things to try:

a) Delete the app and reinstall it, granting all permissions requested.

b) Ensure that all other phones that have connected to the Tool, previously in the area, have Wi-Fi turned off.

c) Turn the Tool off and power it again.

d) Establish the Wi-Fi partnership using responses from Slides 5 and 6.

11. If the above steps are not successful, here are some suggestions:

- Switch wireless communication to BT (newer or upgraded Tools only)

- Use the optional USB Data Cable (Android phones only)

- If you have an older Smart Aligner Tool, you may need to have the Wi-Fi firmware updated. Please contact MultiWave in that event.

Wi-Fi Not Remembering Tool Name (Android)

1. This section deals with eliminating the need to reselect the Tool name during every Wi-Fi connection.
2. The reason that this is happening repeatedly is that the phone's operating system is trying to find a better Wi-Fi connection that has internet. Then it will connect to the Tool. This could take 10-30 seconds.

Tip: Look for the Wi-Fi connection icon before going into a measurement screen (Align or Quick Measure)
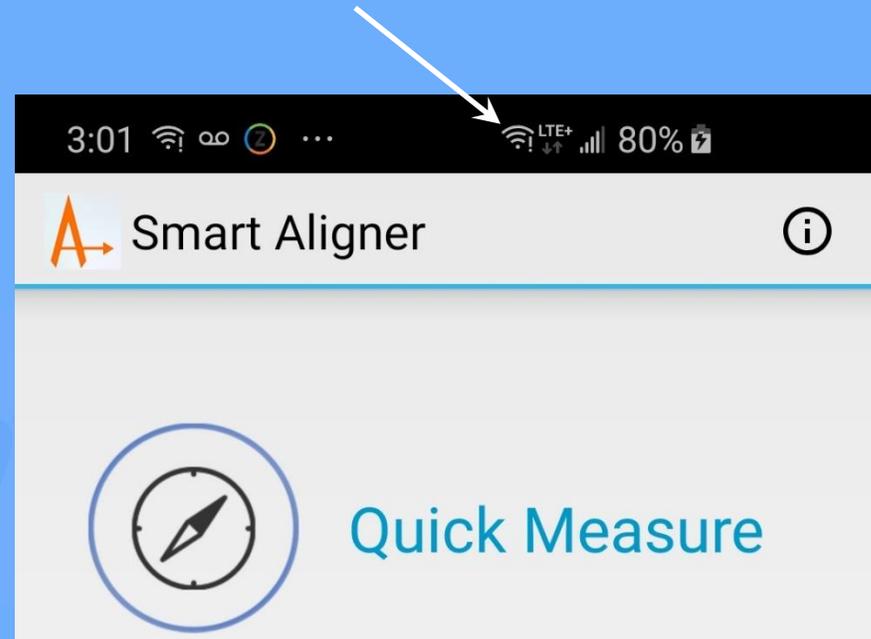
Problems with Numeric Keyboard Entry (Android)

1. When making a numeric entry, such as the Azimuth Target, the app may claim that it is an invalid number. Some Android operating systems may be utilizing spell check and are trying to convert the number to a word, thus causing an input error. Solution: disable Android Spell Checker.
2. When making a numeric entry, such as the Azimuth Target, the app may truncate or change the value entered from the keyboard. This is a result of using a non-standard keyboard. Solution: change the keyboard to the Google keyboard.

Wi-Fi Connection with Apple Phones

1. There are no known connection issues with Apple (iOS) phones. It is recommended to grant any permission requested when installing the app in order to avoid problems.
2. If you have an older Smart Aligner Tool, you may need to have the Wi-Fi firmware updated. Please contact MultiWave in that event.

First BT Connection to a Tool

1. The Tool needs its Wireless setting, in the User Menu, set to BT.
2. The app needs the Wireless setting to be set to BT.
3. The Measurement Screen will have a message box as the screen on the left.
4. Select List BLE Devices.
5. The middle screen will appear. Choose the new Tool (SA-XXXX).
6. The app will connect to the Tool and remember it for future connections until a different Tool is connected via BT.
7. If changing phones to the same Tool with BT and it will not connect, turn the tool off and on again.
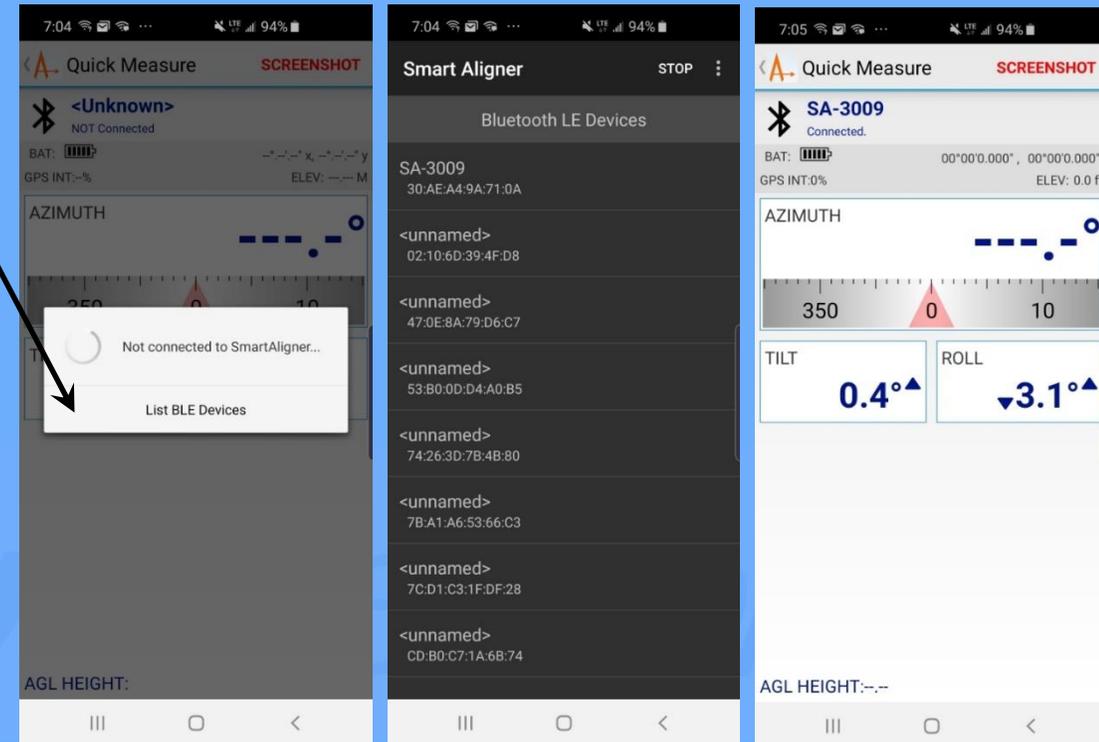
Waiting for Data Stream Message

1. When connected to the Tool and performing an alignment, the information should be automatically streaming to the app. If the data is interrupted, you will see the message *Waiting for data stream*:

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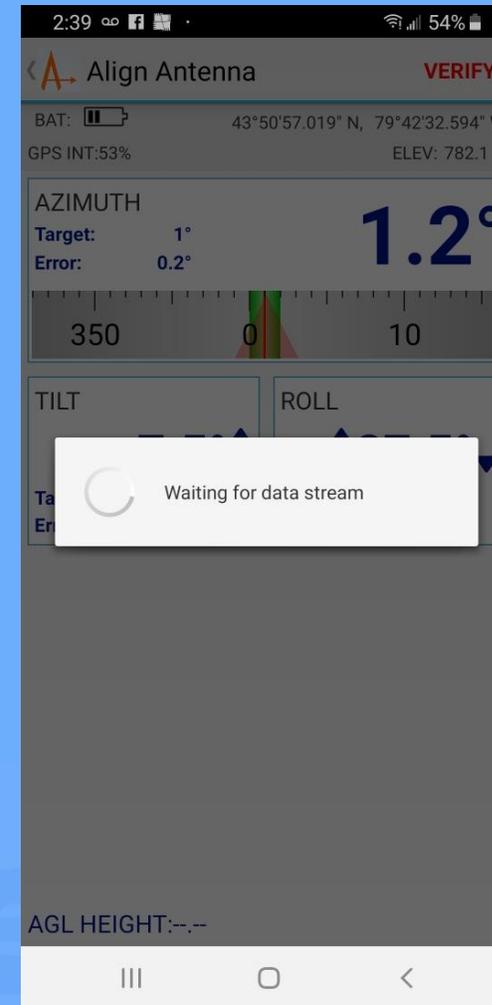
Waiting for Data Stream Message

3. If this message is appearing intermittently, then the Wi-Fi is being affected, but an alignment can still be performed.
4. The Wi-Fi Antenna is installed in the Short Arm. If the Short Arm is in the path of RF (live antenna), then it can affect the communication. The Tool/Arms can be rotated out of the RF path. See the Advanced Tool Deployment section in the Advanced Tool Course.
5. If the Data Stream message persists, it may be due to substantial RF in the area, such as an urban rooftop site. For environments like this, you can store the survey on the Tool (Advanced Tool Course) or use the optional USB Data Cable (Miscellaneous Options Course).
6. If your Tool is older, contact MultiWave to enquire about a Wi-Fi firmware upgrade.

GYRO Warning on Tool's Measurement Screen
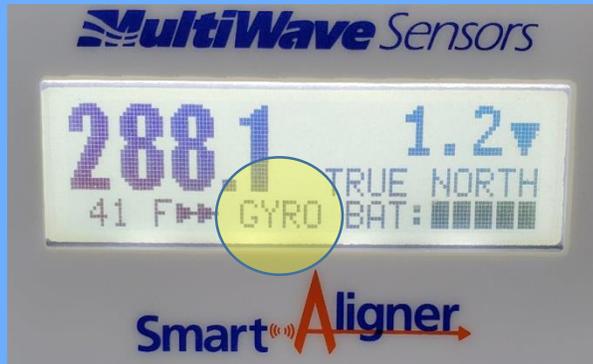
1. If GYRO appears on the Tool's measurement screen, it has lost the GPS compass solution. While the internal Gyro helps maintain a solution in this event, the azimuth measurement will not be accurate.
2. The most common cause of the Gyro warning is that the Tool has not been turned off prior to removal from the Bracket and the two GPS antennas in each arm are not facing upwards. This causes the GPS solution to be lost. Always turn the Tool off before removing from the Bracket.
3. Another possible reason is that GPS/GLONASS coverage is extremely poor. If this is the case, wait until a GPS solution is created (GYRO disappears).
4. Make sure that nothing is covering the GPS antennas.

Cannot Email a Report from an Apple Phone

1. The Smart Aligner app utilizes the iPhone Email Client. To check whether or not it is installed on your phone, go to the App Store.
2. Go to *Search* and type Email.
3. Scroll down the list until you see Mail Productivity icon. If it has *Get* beside it, it is not installed.
4. Select *Get*. Reports should be able to email now.
5. If you see *OPEN*, then go to Settings→ Passwords & Accounts→ Accounts and make sure that your account is turned on. The Mail toggle should be green.

Report not Sending from RAD Center

1. The Smart Aligner is connected to the phone via Wi-Fi. Most phones will not use data to email when Wi-Fi is active because it assumes that the Internet is available through Wi-Fi.
2. If you have completed your surveys and want to email the reports for confirmation that no other work is needed, turn the Tool off and the Wi-Fi will not be connected. The phone will now use data for the email.
3. If you wish to keep the Tool on, go to Settings on your phone, turn Wi-Fi off and then email your reports.

Site Import CSV File not Associating with App

1. New Sites can be automatically imported as learned in the Advanced App Course.
2. If the Smart Aligner app does not come up when the CSV file is selected, then another app, such as Excel, has been previously associated with the CSV file by default.
3. To remove a previously associated app, so the Smart Aligner app can use the CSV file, go into the phone's Settings→ Apps→ *Other App Name(e.g. Excel)*→Set as Default→ Clear Defaults.
4. You should now be able to open the CSV file with Smart Aligner now.

CSV Importing as Winmail.dat File

1. If the CSV file that is emailed appears as a Winmail.dat file, then the tower hand cannot open it with Smart Aligner.
2. The easiest way to solve this problem is to change the output format of the emailing computer to Plain Text rather than Rich Text.
3. To do this, for example in Outlook, Select File→ Options→ Mail→ Compose messages in this format: (as seen on the right).
4. Choose *Plain Text*.
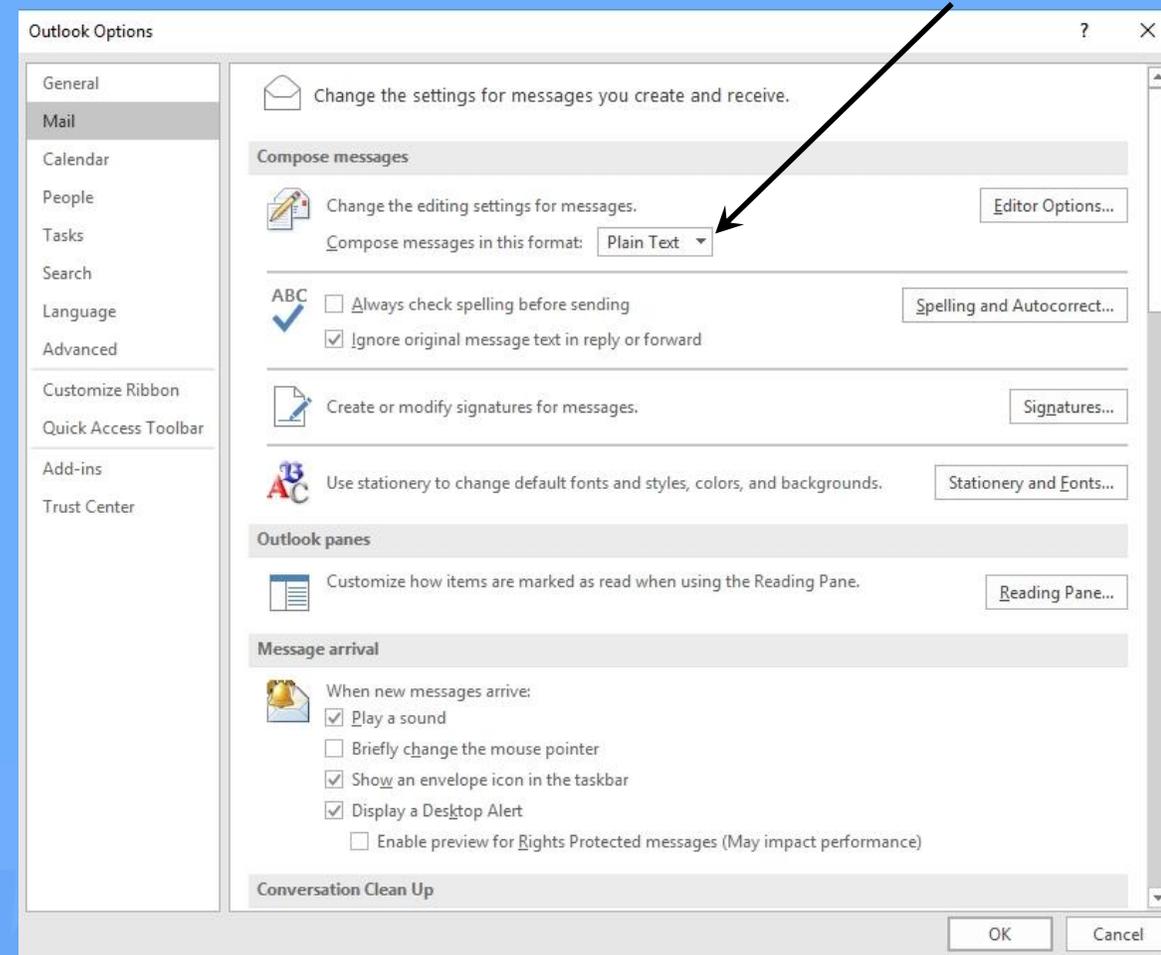
Tips

1. The Smart Aligner app is free to download (iOS and Android). If you have purchased a Smart Aligner System or if you are considering a purchase, download the app and practise with the app in Simulation Mode (it downloads in this mode).
2. When arriving at a new site, you can enter the antenna profiles and save them before climbing. This saves time at the RAD center and it is easier to do on the ground than in the air.
3. Before climbing, especially a long climb, it is recommended that a Ground Test be performed to ensure that the system is in perfect working order before ascending the tower. Follow the procedure on the next slide:

Tips

Ground Test

a) Rotate the Short Arm to the forward position.
b) Place the Tool on top of a vehicle roof that is parked away from any buildings or structures. Turn on.
c) While the Tool is developing an azimuth solution, start the app.
d) Use Quick Measure to connect to the Tool. Verify that you can see live data from the Tool. Check the battery level of the Tool and phone.
e) This procedure verifies that the Tool is working, the phone is working, they are communicating with each other and you have enough battery life for the day. If the performance is not the same at the RAD center, it is due to RF interference or multipath. For more information, see Advanced Tool Deployment in the Advanced Tool Course.

Tips

4. It is not recommended to put the Bracket and Tool in the same Tool Pouch as this causes weight unbalance for climbing and damage to the Tool. Some tower hands prefer using an additional Tool Pouch for storing the Bracket while climbing. It is recommended that the second pouch be on the opposite side from the pouch containing the Tool. This balances the weight properly. An optional Tool Pouch can be ordered from your local distributor.

Course End

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