Prosurv cEZ.NET™

Version 1.0

Installation & Quick Start Guide For Windows Mobile 2003SE

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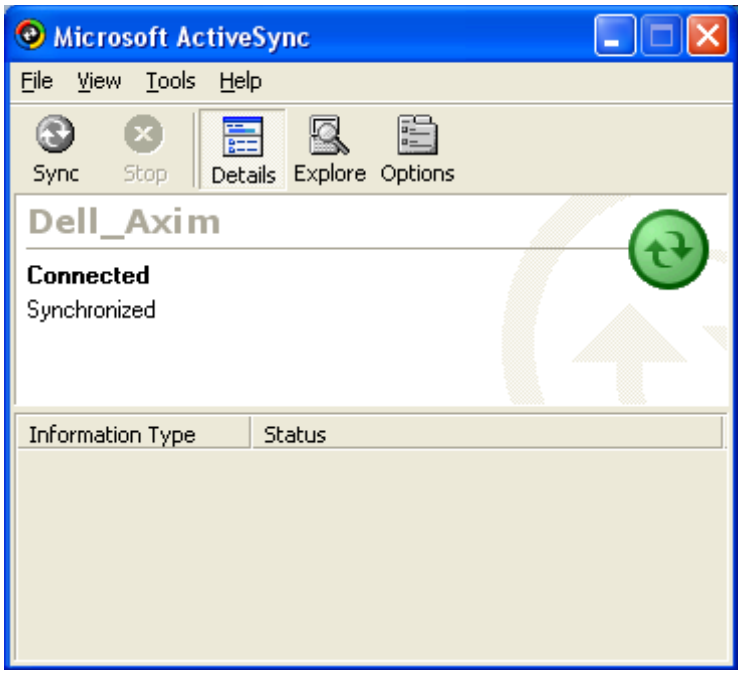
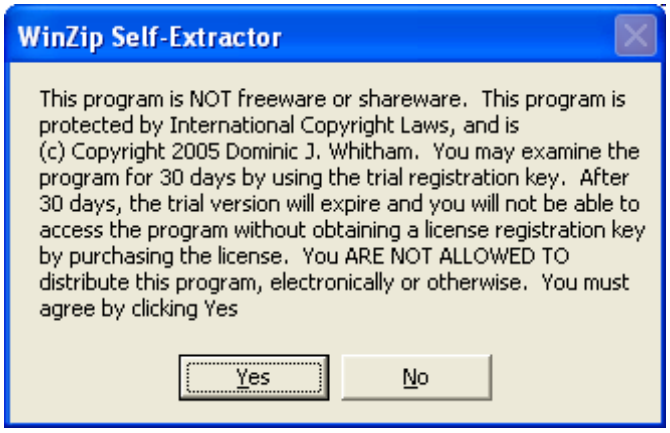
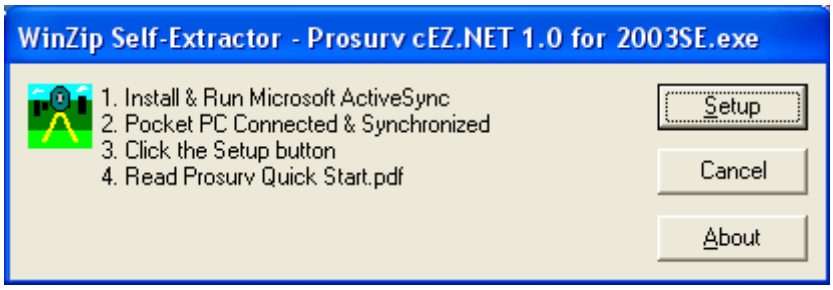
Before installing the Prosurv software, make sure that your Microsoft ActiveSync® program is running, and that it displays "Connected" and "Synchronized":

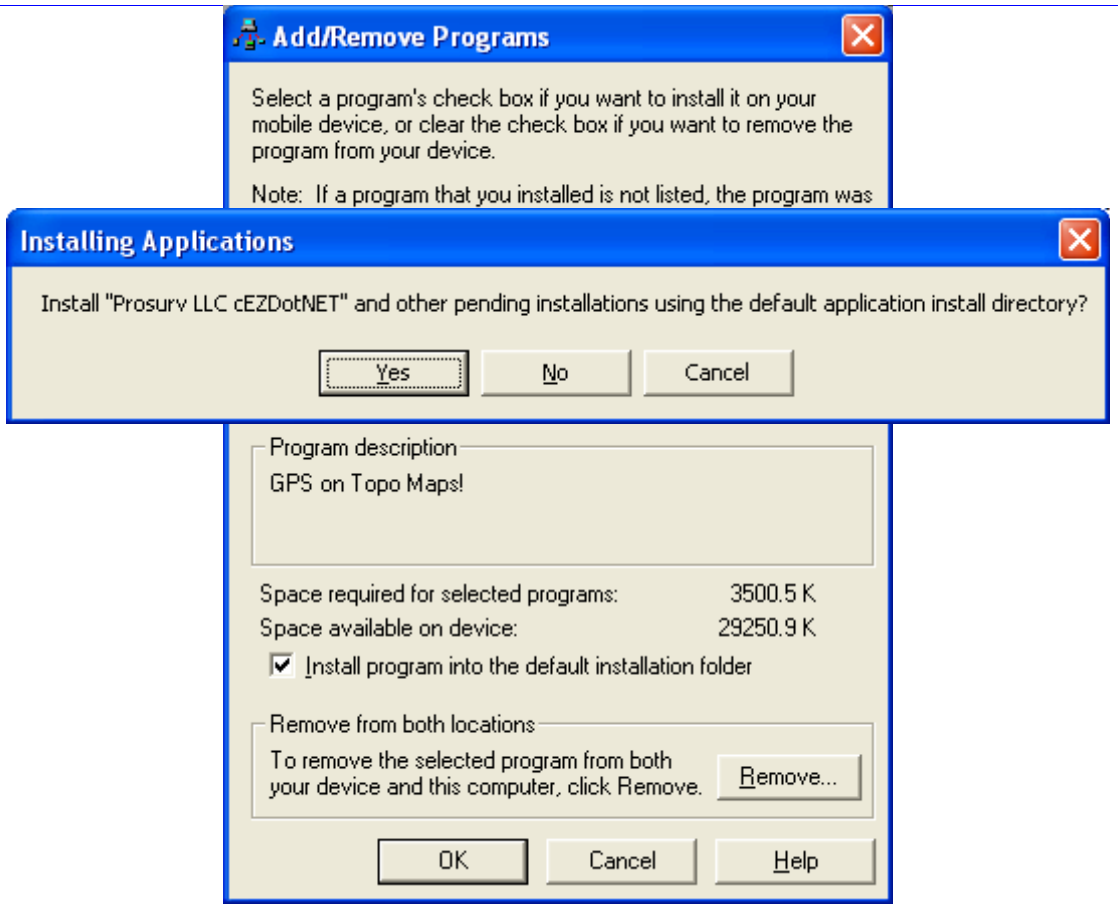


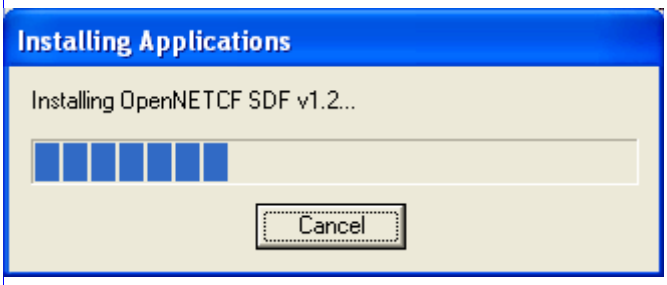
Double-click the software file that you downloaded for installation:



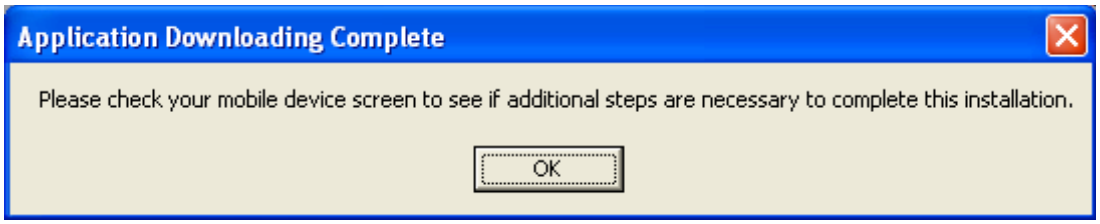
You must agree to the terms shown above by clicking Yes. The self-extracting software is now ready to install. Tap the Setup button to continue:





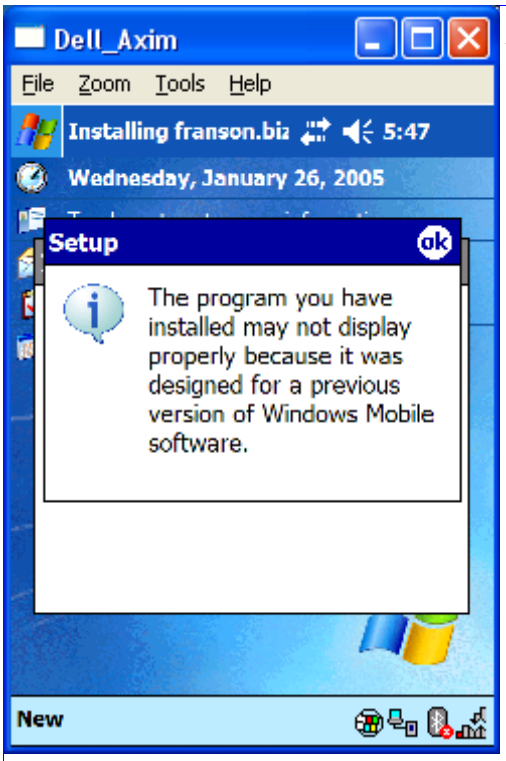


The application and supporting files are now being installed…



The programs have now been copied over to your Pocket PC.
Click the OK button on your PC.

Important NOTE! If you are installing to a Windows Mobile 2003 Device, such as the HP iPAQ 2215, the latest .net Compact Framework will be installed along with Prosurv cEZ. NET. After the installation has completed, you will be asked if you want to OVERWRITE several files. You MUST SAY YES TO ALL, so that the latest .netcf files are installed.

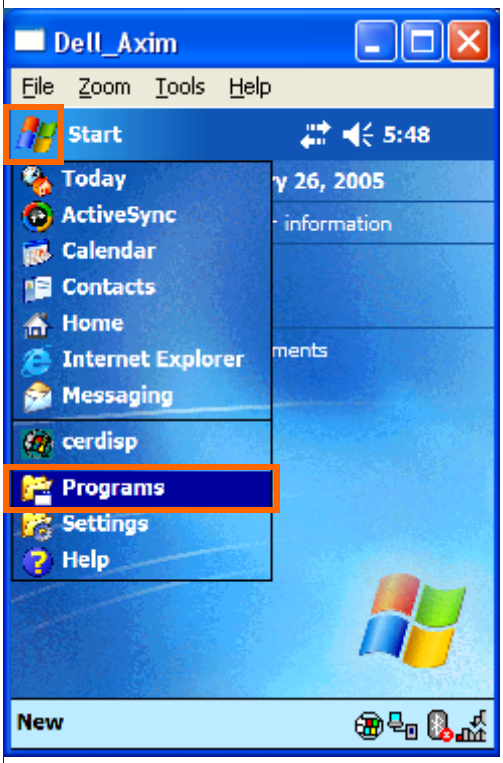


Nothing to worry about.

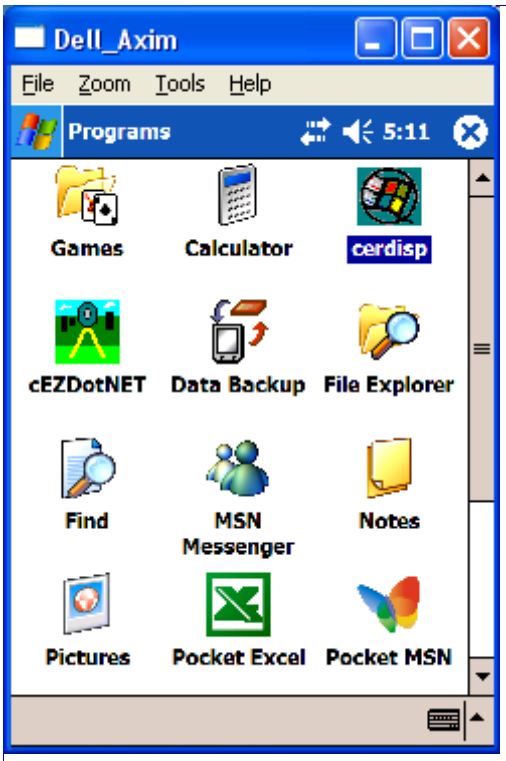
This message is shown during the installation of a supporting program on Windows 2003SE (second edition) Pocket PC's only.

Why am I seeing this screen? **One of the supporting programs required for Prosurv cEZ.NET may not have been specifically compiled for installation onto 2003SE machines, while Prosurv cEZ.NET has. That's why you may see this screen during installation. According to Microsoft: "This dialog is to advise the user that the application they are about to use may not be aware of square screens or screen rotation, and may not display properly in landscape mode".**

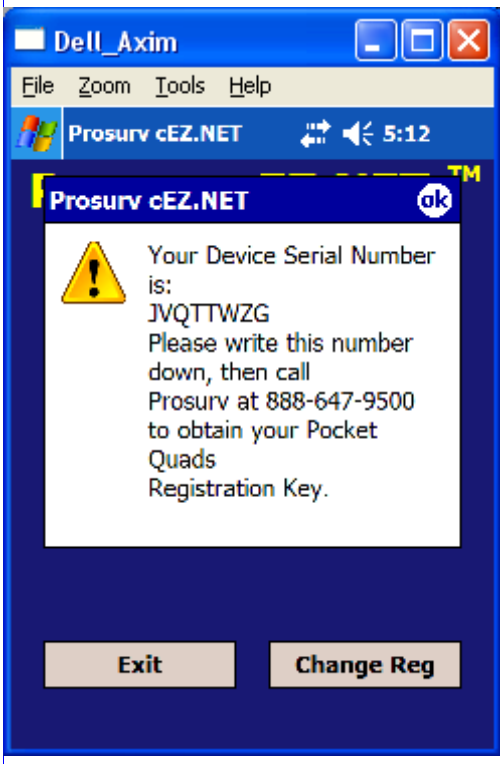
Since the supporting programs required for Prosurv cEZ.NET do not have any screen-related functions, you can simply ignore the screen(s) shown.



Click on the *Start* button to activate the pull-down menu. Then, click on *Programs*.



Tap the cEZDotNET icon to start the Prosurv cEZ.NET application.



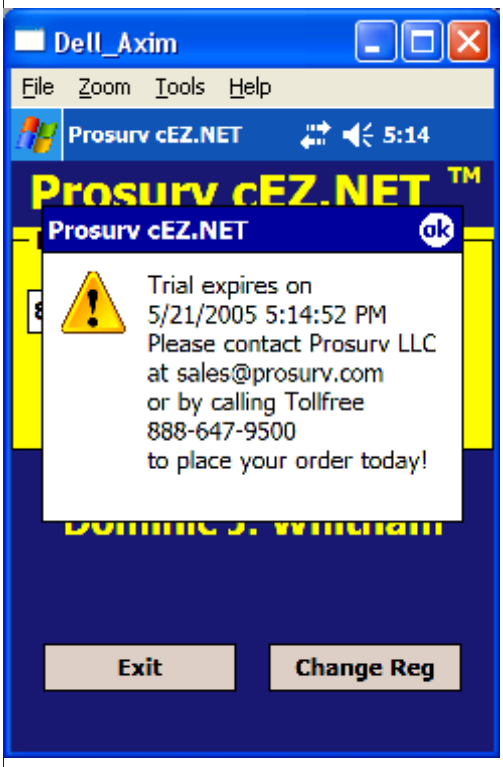
Prosurv will display a new, random Device Serial Number. Write this number down for later reference. If you are going to use the Prosurv software on a 30 day trial basis, check your e-mail box for a special 30 day trial key.

If you have purchased a license for Prosurv cEZ.NET, please contact Prosurv LLC at sales@prosurv.com with your random serial number, or, call Toll-free 888-647-9500 and be ready with your random device serial number. Then, we will give you a non-expiring key that matches your device serial number.

NOTE: Once you have installed the Prosurv software and received and entered your key, you should perform a Full Backup of your Pocket PC using Microsoft ActiveSync®. This will ensure that your key is not permanently lost in the event of a complete loss of data on your Pocket PC.

Enter your Registration Key or your 30 day trial key.

Then tap the *Register* button.

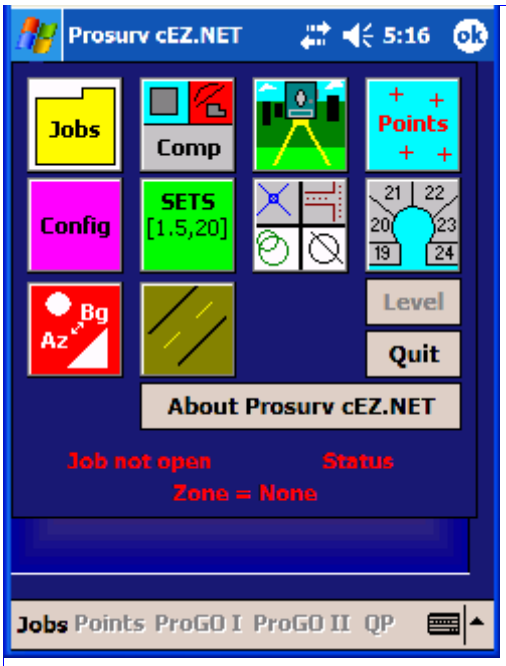


If you have entered a trial key, a screen similar to the one shown here will appear each time you run the Prosurv software. Once the expiration date has passed, you will not be able to run Prosurv cEZ.NET.

Click OK to continue loading Pocket Quads.NET.

By purchasing a full license, you will be able to re-activate your Pocket Quads.NET software.

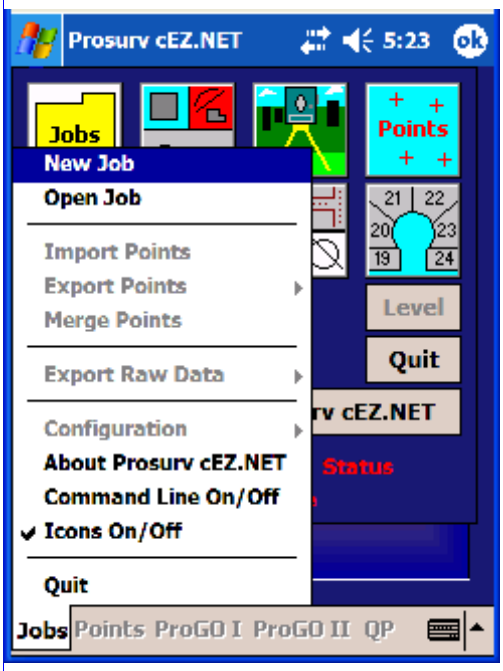
That's it! Pocket Quads.NET is now up and running!



Prosurv cEZ.NET allows you to select functions by using the Icons, or by selecting from the Menu. Those familiar with Prosurv cEZ will recognize the icons, since they are the same.

The menus make it easier for those not familiar with Prosurv cEZ to get around in the program and find the functions that they need.

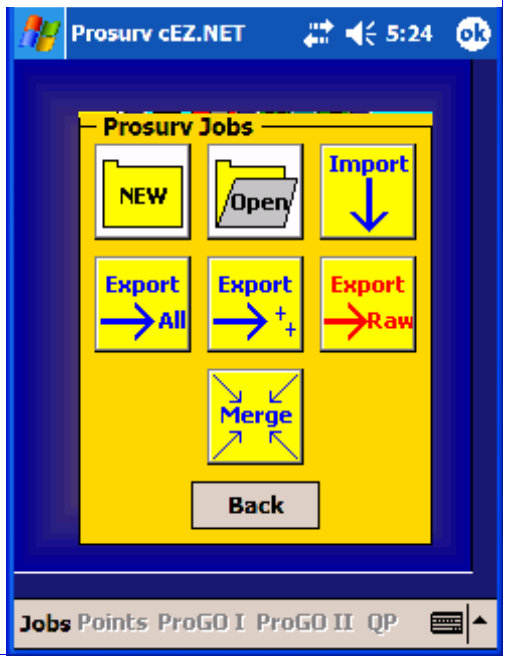
First, we need to create a new job in order to use most of the routines in Prosurv cEZ.NET.



To create a new job file, you can select New Job from the Jobs Menu, or, you can tap the Jobs icon. Both will take you to the same place.

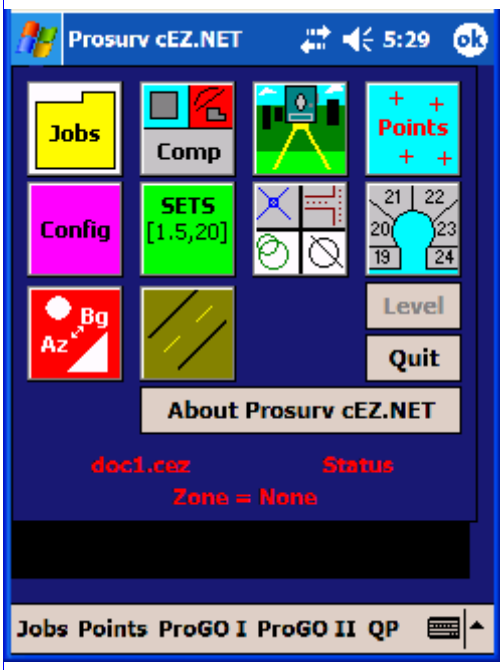
OR, If you tap the Jobs icon, a window will appear that displays all the Prosurv Jobs icons. Then, tap the New icon to create a new job.

Note that Icons are ON by default when you start the program. Tap the Icons On/Off menu item to turn the icons OFF. This will display the full graphics screen. You could then access Prosurv routines by using the Menu.

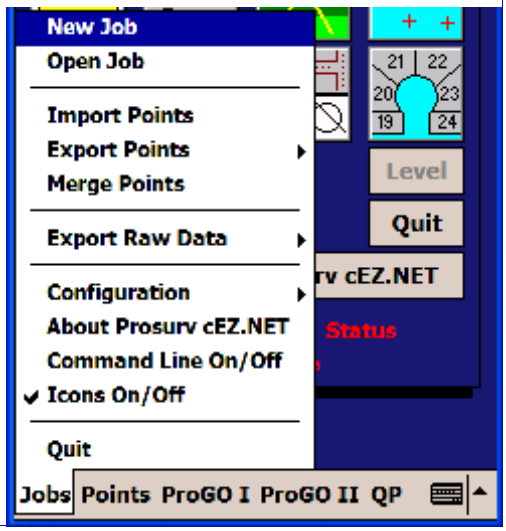


Enter the name of your new job file. ***By default, job files will be stored in the \My Documents\ folder of your Pocket PC.***

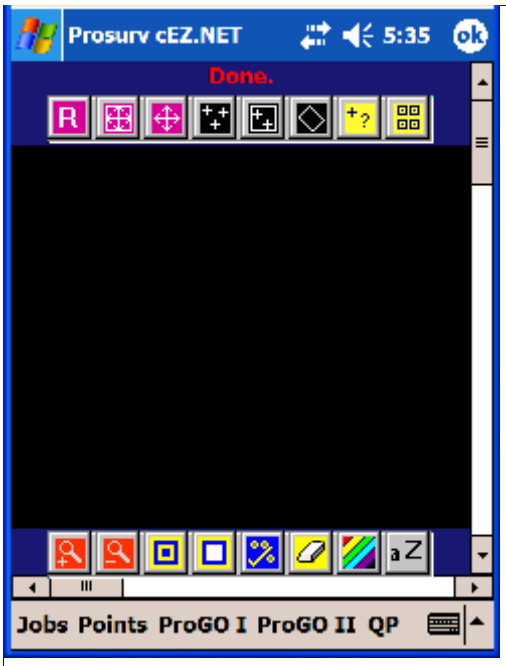
Tap OK to create the new job file.



All of the Prosurv cEZ.NET functions are now available.



Tap the Icons On/Off menu item to activate the graphics display.



The Prosurv cEZ.NET Plotting Screen.

The Plotting icons shown above, from left to right are:

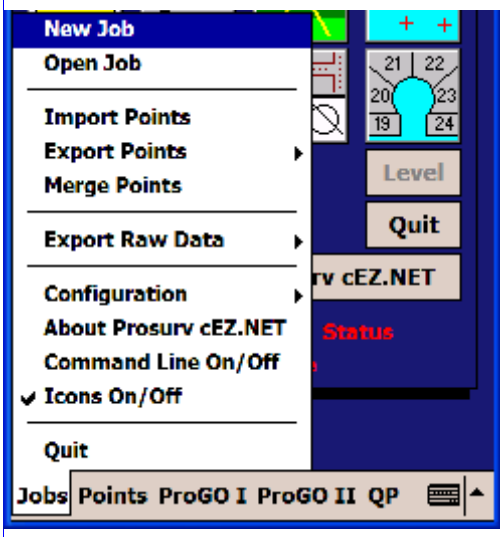
- **Regen**
- **Screen Limits by SET**
- **Screen Limits by all the points in your job file (Zoom Extents)**
- **Plot a Range of Points**
- **Plot Points in SETS**
- **Draw SETS ('connects the dots' of the points in the SETS)**
- **Locate Point (disabled in Version 1.0)**
- **Settings**

The Plotting icons shown above, from left to right are:

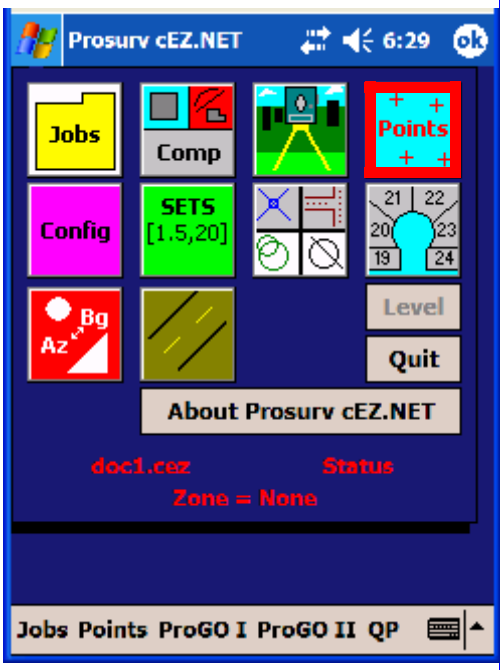
- **Zoom +**
- **Zoom -**
- **'Finish' a SET. Tap this when you're done selecting points on the screen by tapping on them. This only applies if 'Create SETS' is selected in the QP Menu.**
- **'Clear' points that have been selected for storing as a SET.**
- **Quick Pick (QP) settings**
- **Clear the Drawing**
- **Select a Color used for drawing the points and lines. Only applies to points and lines that will be drawn next (doesn't change the color of existing points and lines on the screen).**
- **Select a Font size and whether to use Bold or Italic fonts.**

Getting Started

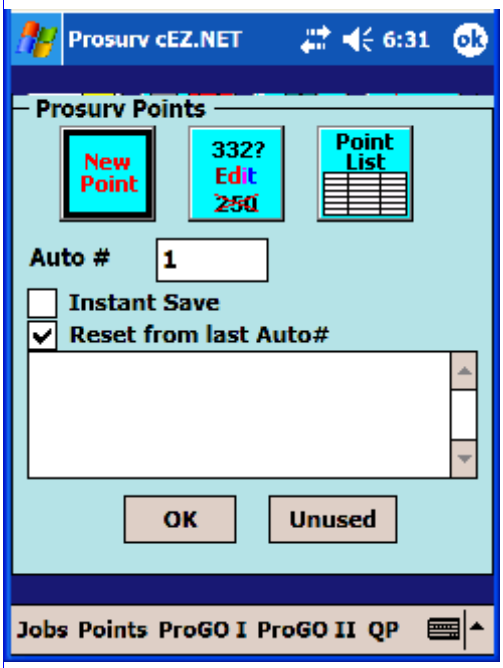
First, let's start by creating some points and displaying them on the screen.



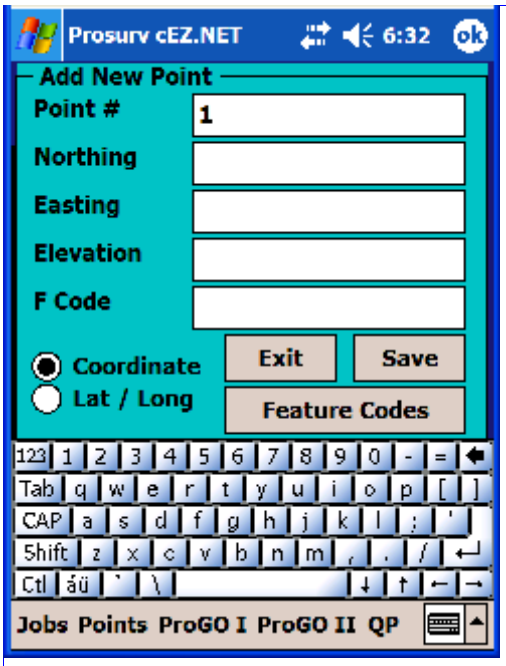
We'll turn the Icons back ON and use the Icons to activate the routines we need.



To Enter (Add New) Points, tap the Points icon.



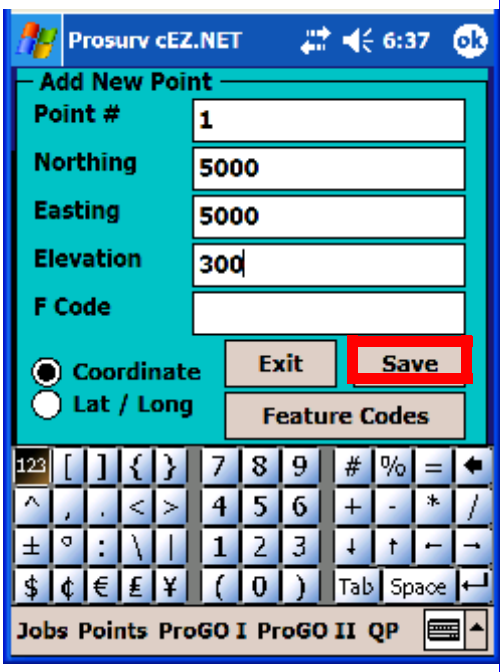
Tap the New Point icon.



The auto# appears in the Point# text box. Let's enter the following coordinates, not worrying about any descriptors at this time:

- **1 = 5000N, 5000E, 300 Elevation**
- **2 = 5000N, 10280E, 300 Elevation**
- **3 = 2360N, 10280E, 300 Elevation**
- **4 = 2360N, 5000E, 300 Elevation**

To use the built-in Numeric keypad, simply tap the 123 button located in the upper left-corner of the QWERTY keyboard.

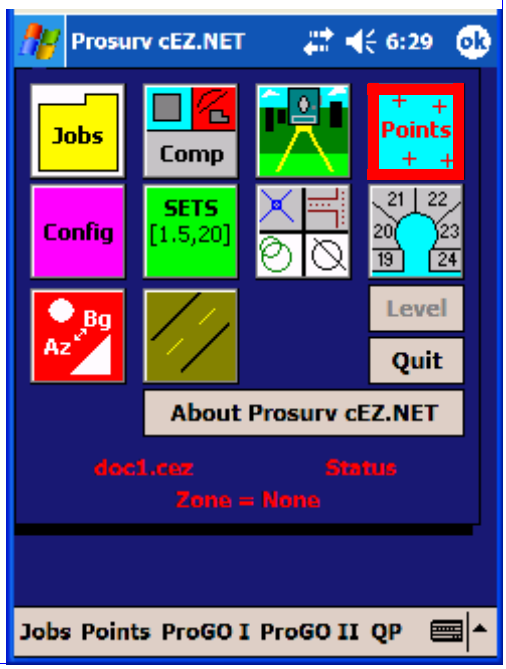


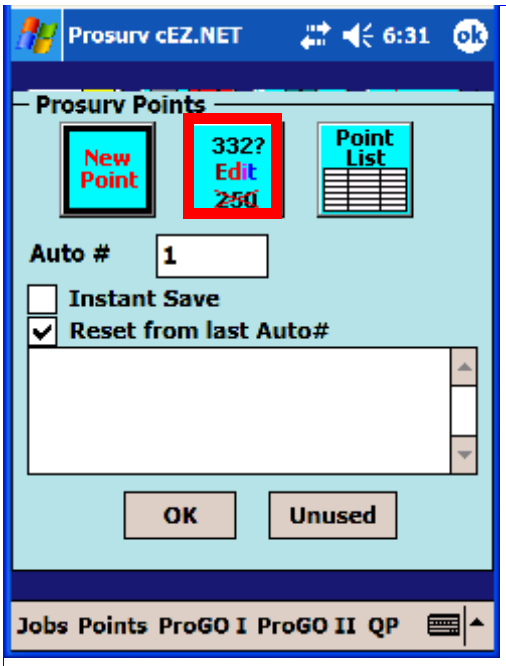
Enter the coordinate and tap the Save button.
Note: In Prosurv cEZ.NET, the first point stored (after starting the program) will take a few seconds. After that, storing points is virtually instantaneous.

After storing the point, the point # is automatically changed to #2, and the coordinate boxes are cleared so you can enter the next coordinate. *If you want to change the autopoint# on-the-fly, simply enter a negative point number. For example to use 100-103 instead of 1-4, you'd just enter the first point as –100. After saving the point, the auto# will be 101.*

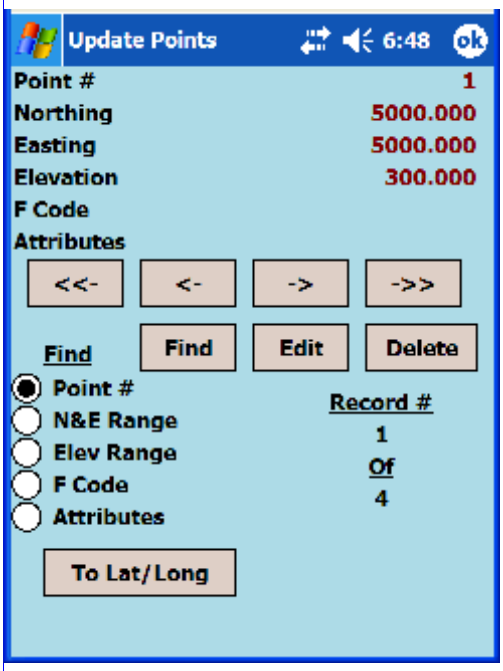
After entering and saving all 4 points, tap the Exit button.

Now, let's see the points that we've created. Tap the Points icon again.



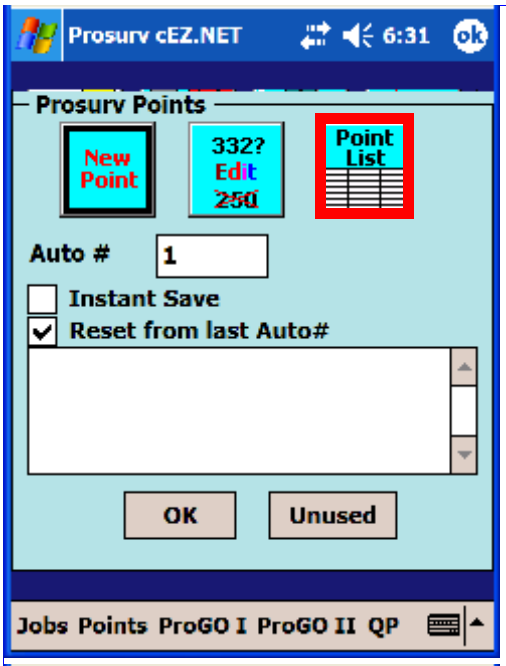


There's two ways to view your points. First, you can tap the "Edit" icon to view your points one by one, in *record* order. Second, you can view your points in a numeric point list.

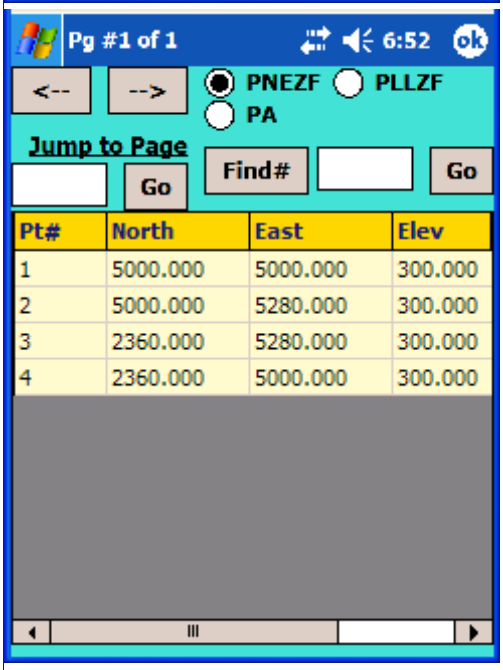


Tap the "Edit" icon to view the points one at a time. This routine is called "Update Points".

Use the Arrows to move between your records. Tap the OK button in the upper right corner to exit.



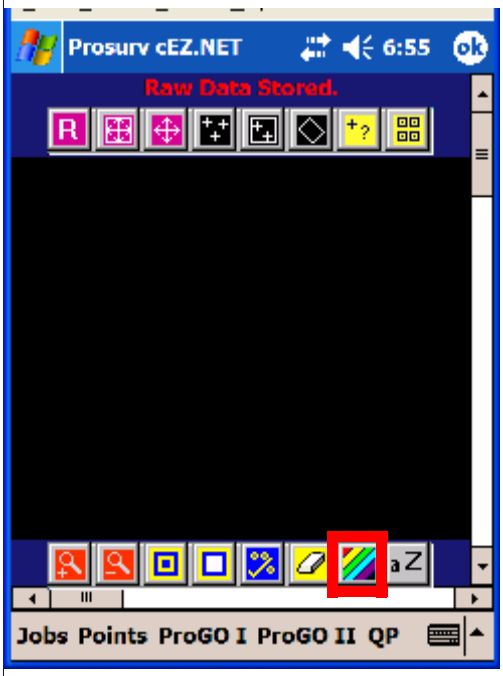
Tap the Point List icon to view your points as a list, 10 to a page, in numeric order.



Tap on a row to view/edit the point. Tap the OK button in the upper right corner to exit.

Now let's plot the points on the screen!

Once again, go to Jobs—>Icons On/Off and tap the menu item. This will bring up the graphics display (actually, turning Icons Off makes the Icons screen go away).



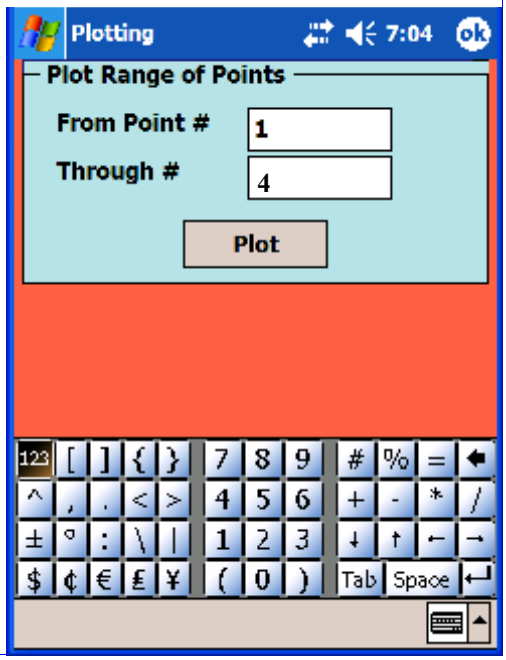
First, let's select a color to use for plotting the points. Tap the Color icon to select a new color.

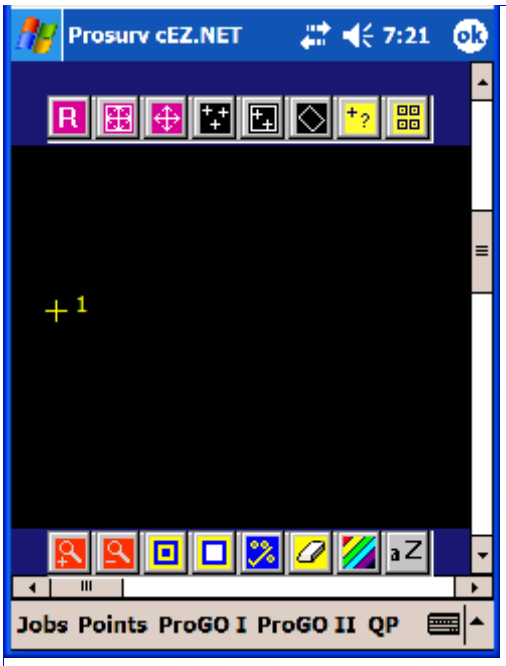
Use the 'Limits by Entire File' (Zoom Extents) icon to set the screen limits. When you tap the button, Prosurv cEZ will set the screen limits by using all the coordinates in your job file.

Next, let's plot a range of points. In this case, we want to plot points 1 through 4.

Select the Plot Range of Points icon, shown above.

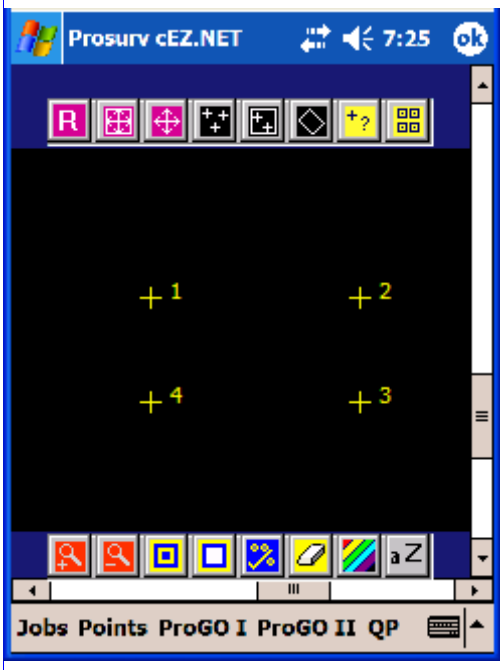
Enter the point numbers of the range of points to be plotted. Then tap the Plot button.





Scroll down to see point #1. The actual plotting screen is much larger than the viewable area. That's why there's a horizontal and a vertical scroll bar. In fact, at this time, the plotting screen is 600x600.

So, by using the 'Zoom Extents' button, the 4 plotted points will be at the 'edges' of the plotting screen. In other words, scroll down to see point #4. Scroll right to see point #2, and scroll down and right to see point #3.

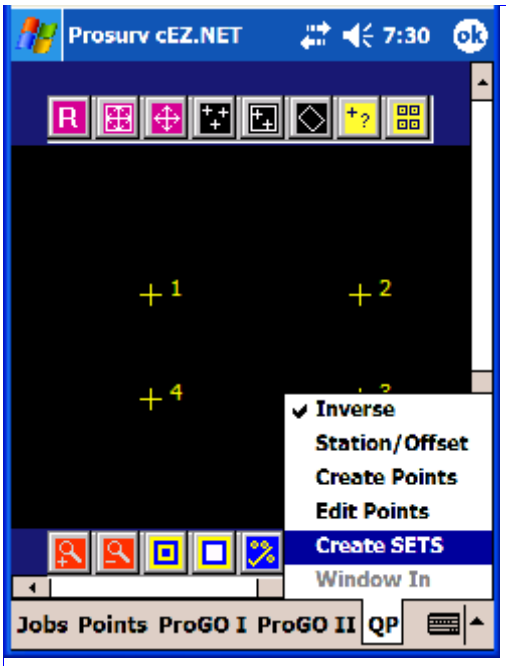


Tap the Zoom— button to "zoom out" 2 or 3 times. Then scroll to the area showing the 4 points. You can change the "zoom factor" by tapping the Zoom Settings button (last button on the top row).

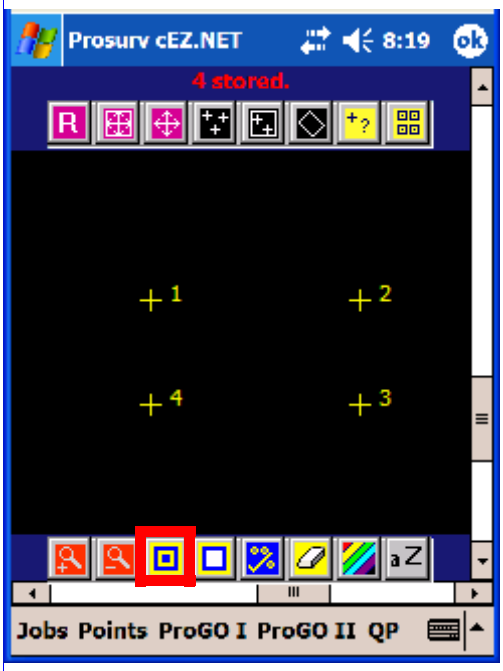
Now you might be asking "OK, but how do we connect the dots?"

In Prosurv cEZ.NET, lines are drawn between the points by using the Draw SETS button. A SET is nothing more than a point list, like 1.5 (the dot means through). So, you could create SET#1 and enter the point list as 1.4.

However, there's an easier way. Just use the Quick Pick routines to create the SET for you. To do this, tap the QP menu item.

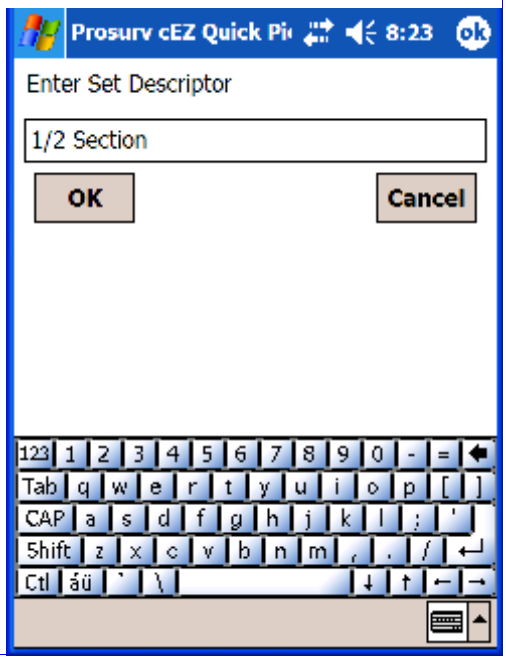


Tap the Create SETS menu item, so that it's checked.



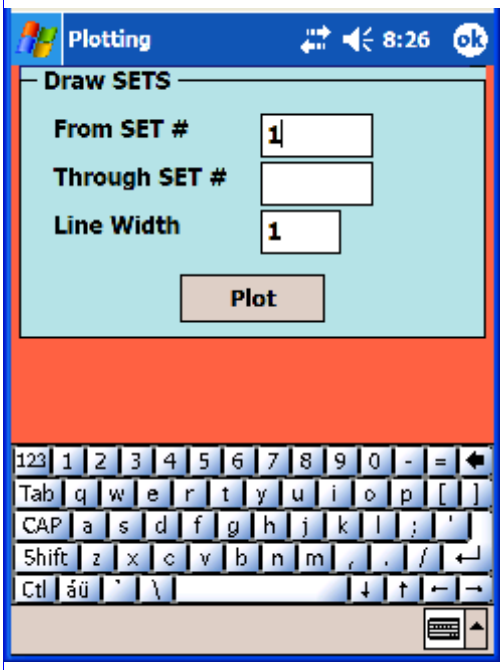
Now, just tap each point that's shown on the screen, starting with point #1. Then tap #2, #3, and #4 in that order.

Now, tap the 'Finish SET' icon.

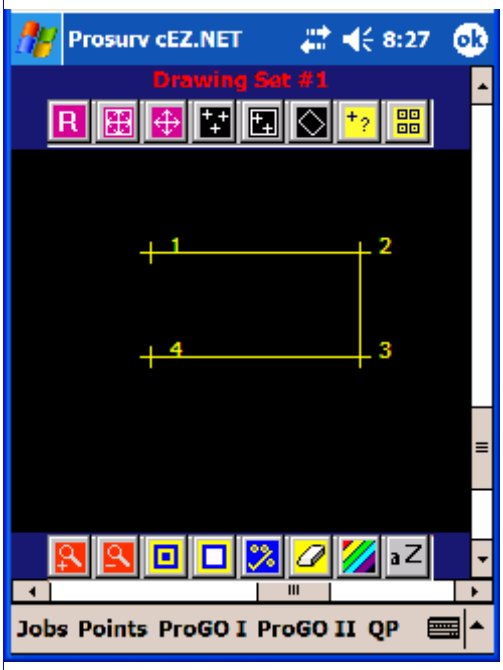


You're now prompted to enter a description of the SET. Enter a description, then tap OK. You can turn off the SET descriptions in the QP Settings.

Tap the Draw SETS button to draw the SET that we just created.



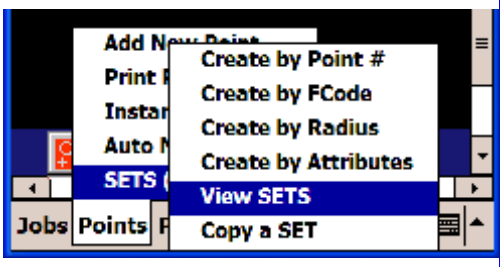
Enter 1 for the 'From SET#' and then tap the Plot button.

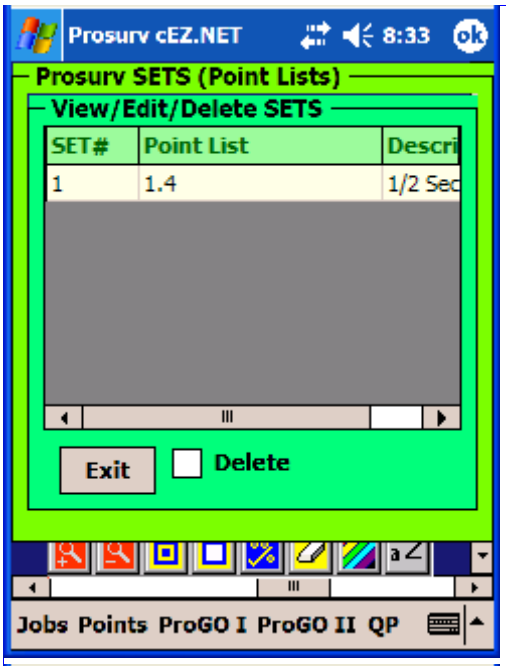


Scroll up or down to view the plotted SET. Notice that the box isn't finished, or in other words, we didn't tap point #1 after tapping #4 to complete the picture.

There is a setting in the QP Settings (5th button from left to right on the bottom group of plot buttons) that let's you choose whether duplicate points are allowed when creating SETS by tapping.

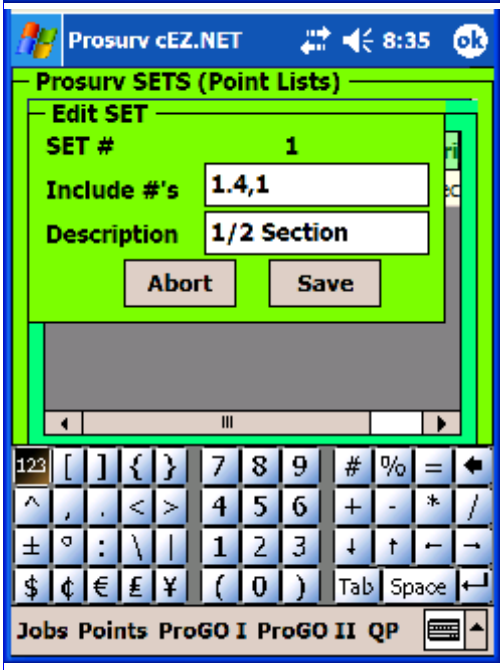
We can edit the SET so that it also includes 'wrapping back' to point #1. To edit the SET, go to Points—>SETS—>View SETS.





You can create up to 2000 SETS (point lists) per job. A numeric listing of the SETS is displayed in 3 columns. The first column is the SET #. The second column is the actual point list for the SET, and the third column is a description of the SET.

To edit the SET, simply tap the first row.



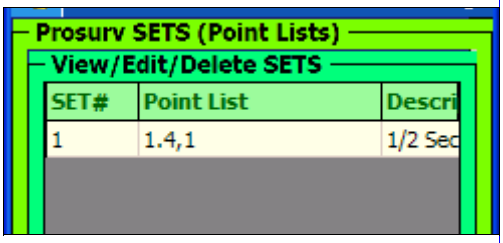
The "Include #'s" box lets you enter a point list. Point lists use a period (.) meaning 'through', and a comma (,) meaning 'and'. Valid point lists are:

- **1,5,12.33,155.158,10000**
- **1000.980**
- **697.699,705.713**

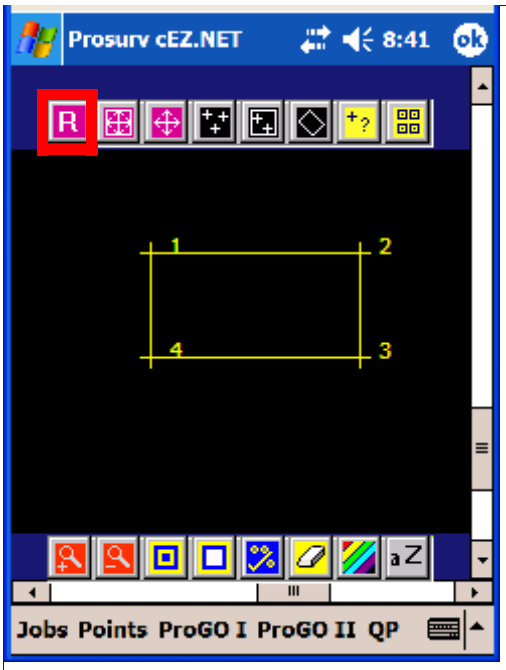
Note as in the second example, point ranges (using a period) can go down or up.

For our example, enter a comma after the 4 and then tap 1 so that the point list is: 1.4,1

Tap the Save button to save the edited list.



Now, tap the Exit button, then the next Exit button to exit SETS completely.



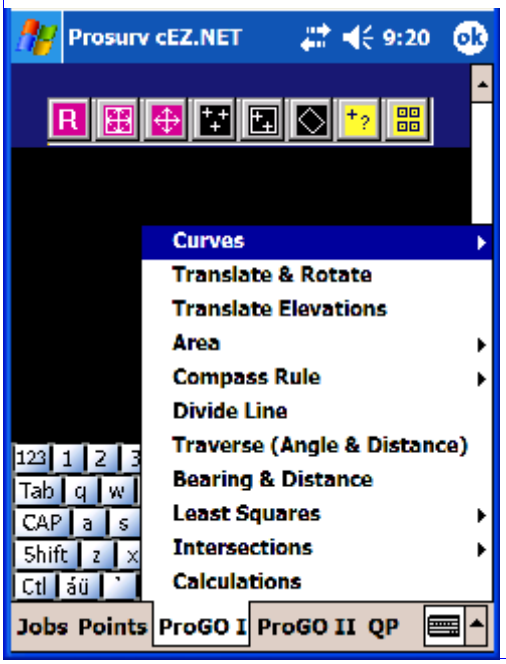
Now, just tap the Regen button to redraw the SET. Voila! The 'box' is now complete, and we didn't have to plot any new points.

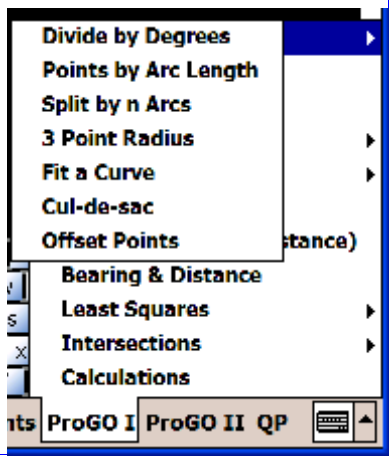
That's the great thing about SETS. If your coordinates of a point change, or you change the point list for the SET, all you have to do is a Regen and the plotting is done automatically.

When importing points, you can have Prosurv cEZ.NET create a SET automatically. For example, you might be importing some points for Lot #25 of a subdivision. When importing, just check the 'Store pts in SET' box. The filename is used for the description of the SET, and the points being imported are stored in the SET. Then, you can quickly plot the SET on the screen. When it comes time to Stakeout the points (to set the corners of the Lot), you just stakeout the SET by entering *2 (or whatever the SET # happens to be). SETS can also be used for Reports, such as the Inverse Report. Just enter *2 to Inverse around the SET. You can use an ASTERISK, COLON, or SEMI-COLON to indicate that you want to use a SET.

<u>OK, But what about Curves?</u>

There are many curve routines in Prosurv cEZ.NET. Some are for computing points along, around, or offset from a curve. Some compute a radius point based on 3 or more known points. There's a Fit Curve to Two Tangents routine that creates the PC, PT, PI, and RP for you. Vertical curves and even Spiral curves are included in Prosurv cEZ.NET. And, finally, there's a curve *calculation* routine where you enter two known curve dimensions to find the other three. The main place for finding curve routines is in the Curves Menu.





The Curve Alternative: Using Baselines

Baselines are Prosurv cEZ.NET's Horizontal & Vertical Geometry routines. When creating the Horizontal geometry, you simply enter the Radius of a curve and it's Arc length (or Delta), and the points (RP and PT) *are created for you, automatically!*

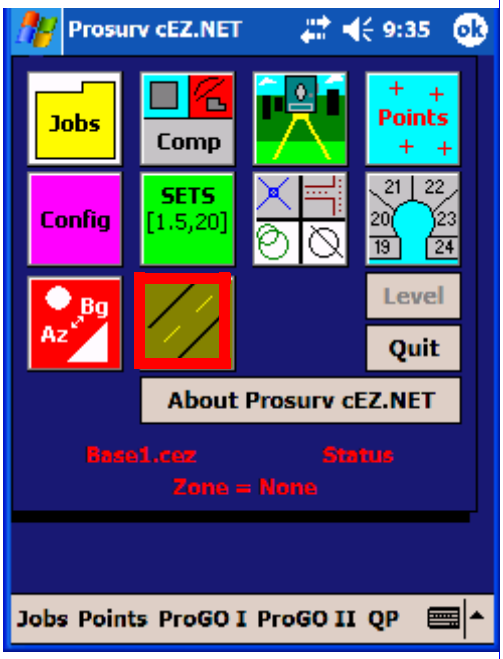
Yes, you can also use Prosurv Baselines for "Roading". Many people cringe at the thought of setting up roading software in Data Collection. However, Prosurv Baselines are so quick and easy to use, that you can even use them just for going around a Plat of Subdivision!

Let's say you have a simple tangent-curve-tangent. Within just a few minutes, you can set up the Horizontal Geometry for the Baseline and then create points, on offset, automatically.

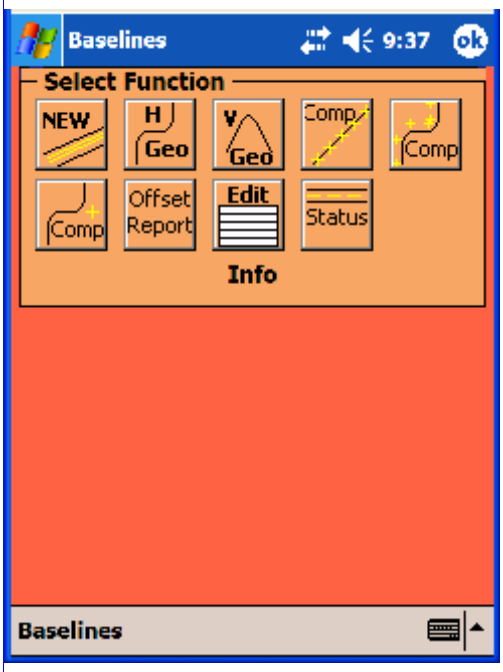
So, let's start from scratch and see how easy it is to use Baselines. First, we have the CL defined as:

- **Tangent at NE25.1510 (D.MMSS) @ 1252.85'**
- **Curve with Radius = 2800.54', Length of Curve (L) = 789.22'**
- **Tangent at NE 41.2357 @ 990.12'**

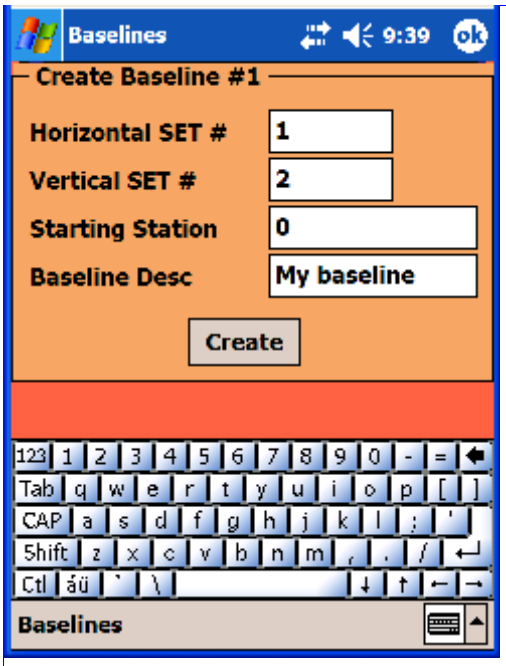
Next, create a new job, called Base1. It doesn't have any points yet, but that's OK. With the Icons turned ON, you'll see the following screen:



Tap the brown Baseline icon to enter the Baseline routines.



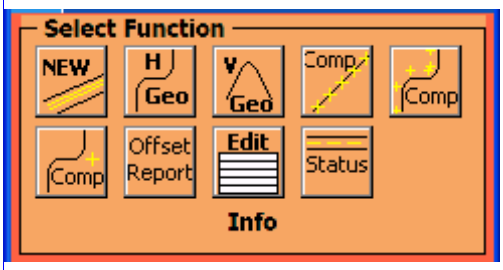
Tap the NEW Baseline button.



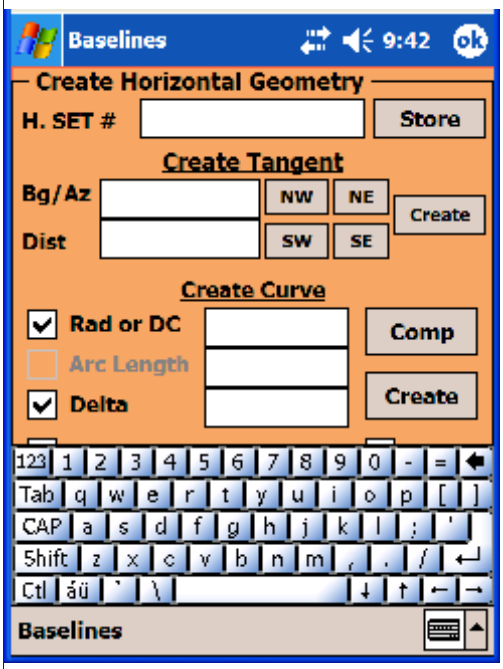
Baselines use two SETS. The first SET contains the points that define the Horizontal Geometry. The second SET contains the points that define the Vertical Geometry.

In this example, we'll use SET#1 for the Horizontal, and SET#2 for the Vertical. There's nothing in the SETS at this time, and in fact, we don't need to do anything with the SETS at all.

Tap Create to create our Baseline.

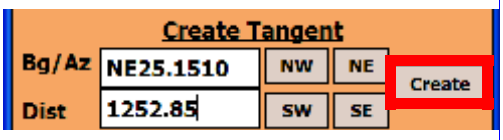


Now that the Baseline has been created, we'll define the Horizontal Geometry. Tap the H Geo button.

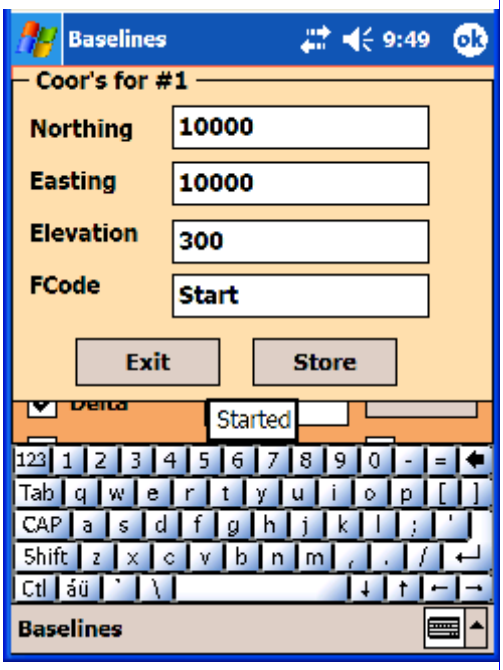


The top box shows the points that are in the SET, and there's no points yet, so the box is empty.

What we would like to do is create the Tangent-Curve-Tangent that's defined on our plans. To do this, you simply enter the starting tangent information. You can tap the NE button to make the letters NE appear in the Bg/Az text box. Then finish typing in the bearing (D.MMSS) and distance. Then tap the Create button.



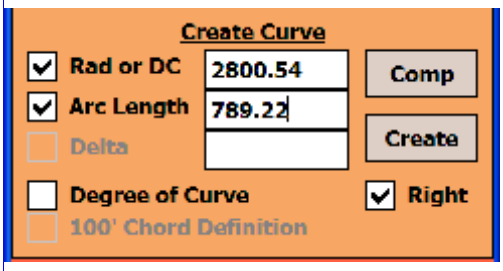
We don't have any points yet, so a dialog pops up asking about using an existing point. Answer NO, because we don't have any points yet in the job.

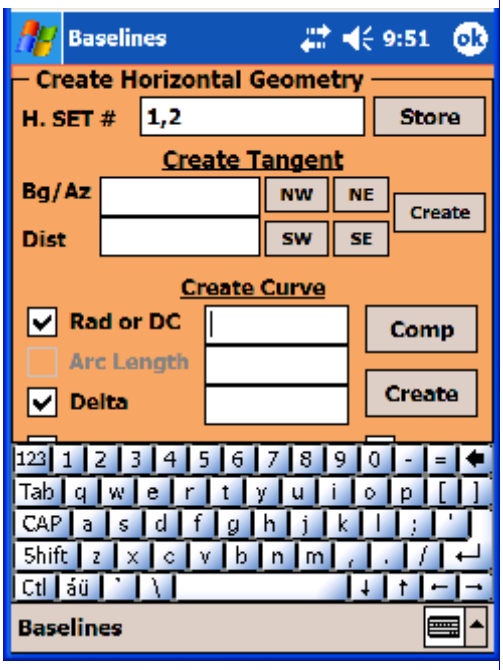


Now, Prosurv asks for the coordinates for point #1. Enter the coordinates as shown and tap Store.

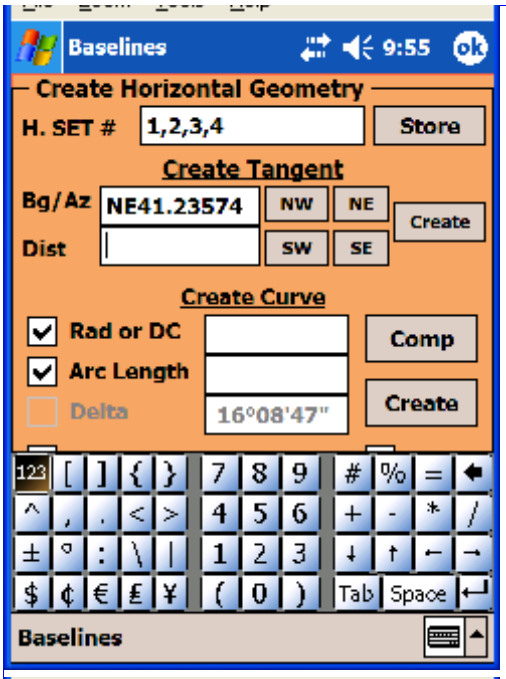
Two new points are stored automatically. The first is point #1, and the second is the computed coordinate at the end of the Tangent, #2. Note how they are automatically place into the H. SET text box as 1,2.

Then, the cursor jumps down to the Curve box. Enter the Curve data as shown, then tap the Create button:



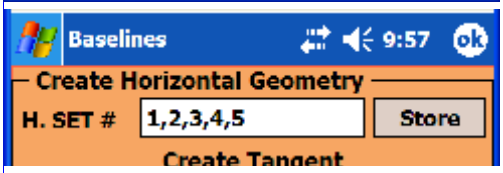


Note that the Curve Right check box is behind the pop-up keyboard. Tap the keyboard icon to make the keyboard go away so you can access the Left/Right checkbox.

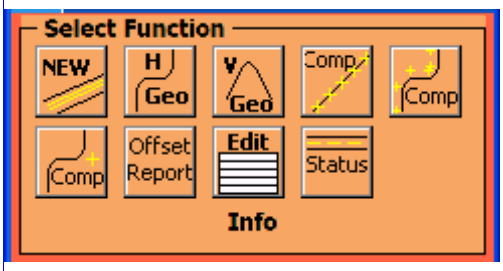


Points 3 and 4 (RP and PT) are computed automatically and displayed in the H. SET box.

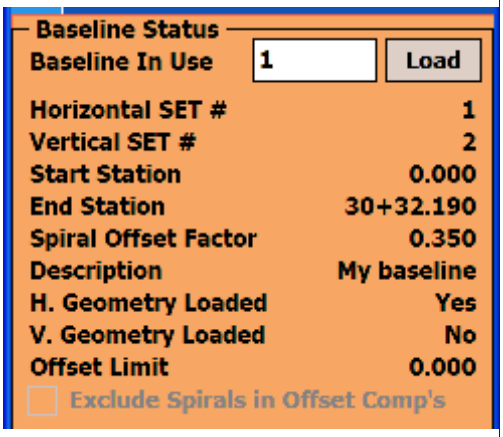
Note the *automatic* Bearing out computation shown in the Bg/Az box. This serves as a good check against the plan's tangent bearing out of the curve. Prosurv cEZ.NET is now ready for the ending (or next) tangent. Simply enter the distance and tap the Create button.



The SET is now complete. Tap the Store button to store the completed SET and exit the Horizontal Geometry routine.



Tap the Status button to view the status of the current Baseline:



The Status shows that the ending station is at 30+32.190'.

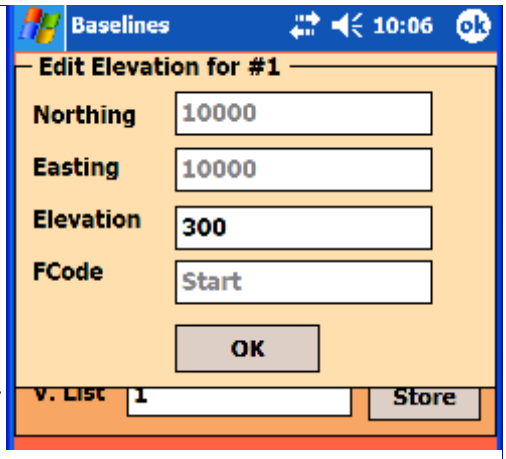
cEZ.NET has a routine in Baselines that will create the major points (PC's, PT's) offset from the CL. Just enter an offset amount, such as 50' or –50' and the PC's and PT's throughout the entire Baseline will be computed for you at the given offset. This routine doesn't need any vertical geometry to be created.

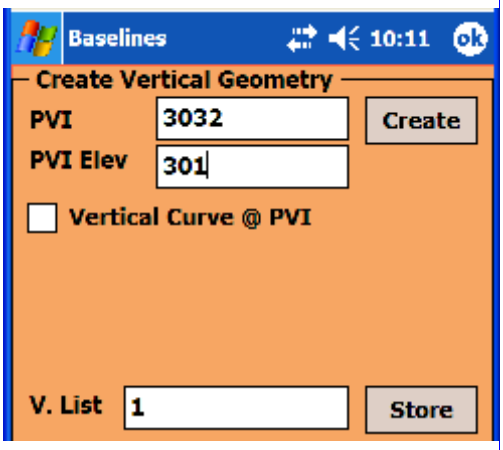
If you basically don't need any vertical, but you want to create offset points (or CL points), simply create a vertical geometry with just two points: your starting point, and an ending point.

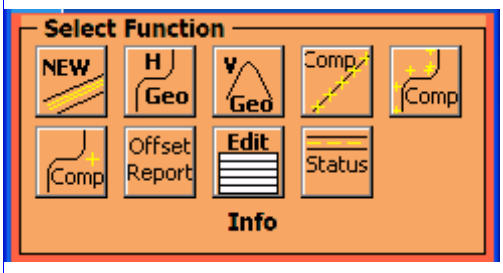
Here's how to do that:

1. **Tap the V Geo button in Baselines**
2. **The first point of the Horizontal Geometry is displayed, allowing you to edit the Elevation of the point. Tap OK to accept the point. *The only point that needs to be "common" between the H & V geometry is the starting point. No other common points are needed, since the Vertical geometry is treated completely separate from the Horizontal geometry.***
3. **We know that the ending station is 30+32.19, so we'll enter a PVI Station at 3032, dropping off the .19 (it's always a good idea to end the vertical just short of the end station to avoid rounding errors). Then enter 301 for the PVI Elevation.**
4. **Tap the Create button to create the point. Note that the V. List now contains points 1 and 6 (1,6).**
5. **Tap the Store button to store the vertical SET.**

Your geometry is now complete!







You can now use the powerful point-creation routines in Baselines to create points virtually *anywhere* throughout the geometry, at any given offset horizontally *and* vertically!

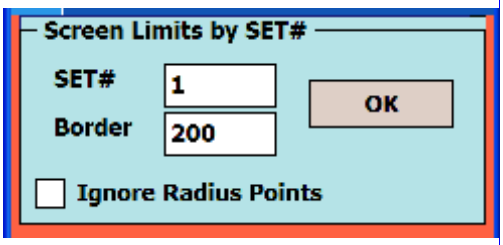
There are 3 point-creation routines available:

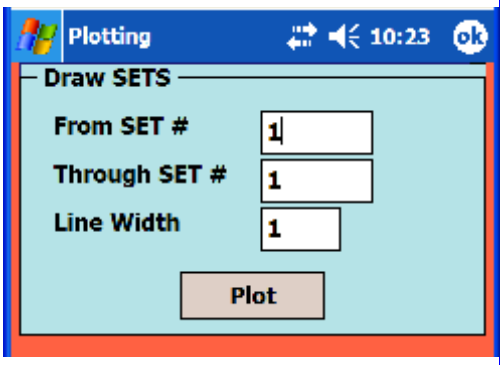
- **Compute Multiple points on offset. Enter a starting station, ending station, interval (say every 25'), offset, and vertical offset and the points are computed automatically!**
- **Compute Major points (PC's, PT's, and Angle Points) at a given offset**
- **Compute a Single Point. Great for a manhole that's given as a station and offset on a set of plans. You can have Prosurv compute the elevation based on the CL Vertical geometry, or, you can enter an elevation (ie a Rim Elevation).**

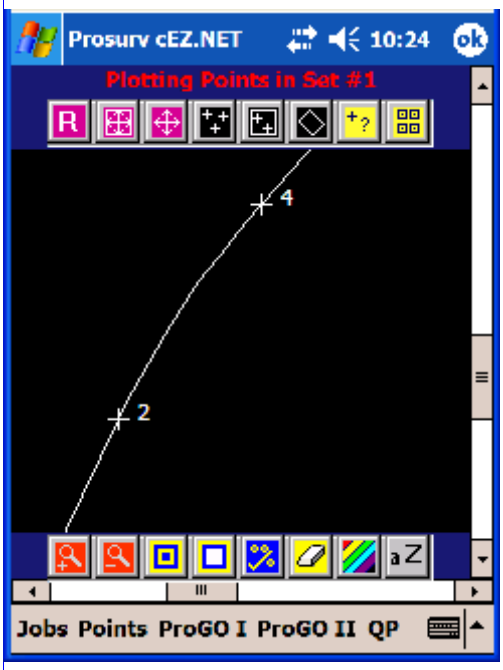
Tap OK to leave the Baseline routines.

OK, let's see a picture of the Baseline we created.

- **Back in the Main screen, turn off your Icons so you can view the Plotting screen.**
- **Tap the Color button and select a color for the Baseline, such as White**
- **Tap the 'Limits by SET' button. This defines the screen limits using the coordinates within the SET. In this case, this is SET #1.**
- **We can plot the points of the Horizontal geometry by tapping the "Plot Points in SETS" button, and plotting SET #1.**
- **Use the Draw SETS routine to draw the lines *and curves* of the geometry.**



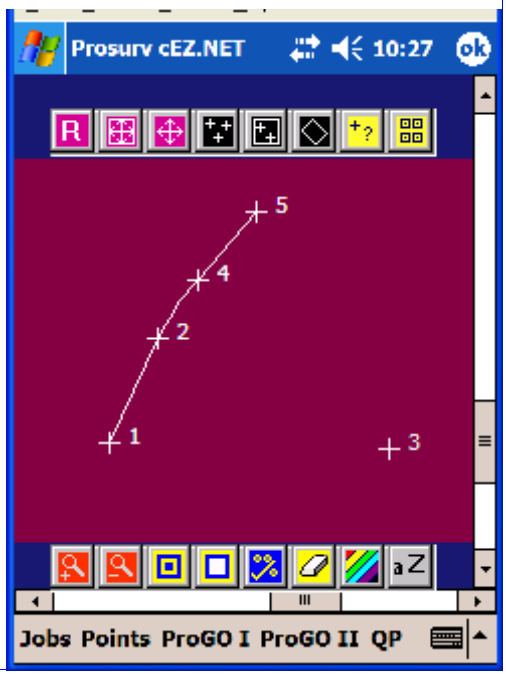




Scroll to see the portion of the geometry that you're interested in. Use the Zoom- button to zoom farther out.

You can even change the Background Color using the Plot Settings routine. Be sure to do a Regen after changing the Background Color.

Check out the other Quick Pick tap functions, such as Inverse, Station/Offset, and Edit points. These functions are located in the QP menu selection.



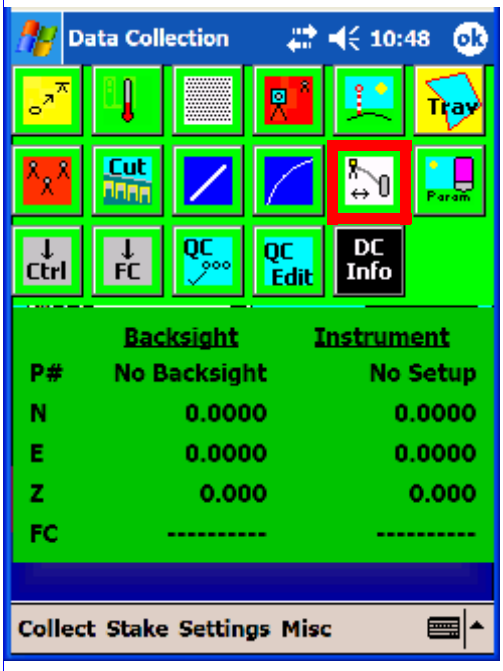
So, what about Data Collection?

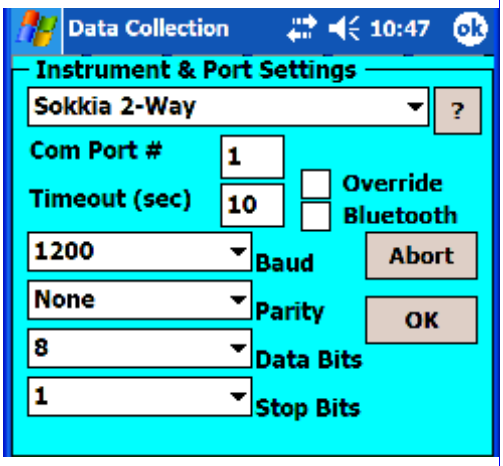
Included in Prosurv cEZ.NET Data Collection are:

- **Bring Elevation From a Point**
- **Setup by point number or backsight azimuth, with or without shooting to the backsight**
- **Topo with 8 different types of shots, with Automated Cross Sectioning (auto-sequencing of feature codes when cross-sectioning a road, ditch, or anything)**
- **Traverse by closing the horizon, up to 8 sets of angle & distance shots per point**
- **2 or 3 point resection with 3D capability**
- **Radial Stakeout by point list, sequential (up or down), or by SET with auto-descriptors and auto-cut/fill recording**
- **Stake to a Line 2D or 3D, with direct-stake capability (angle and distance to station/offset)**
- **Stake to a Curve 2D or 3D**
- **Feature codes and attributes**
- **Pop-up Quick codes**
- **Much, much more...**

The first thing you need to do is make sure your communication settings are correct. In the past, you'd simply select the instrument that you're using from a drop-down list. These days, however, even different models from the same company can have different baud rates, parity and other comm settings.

Prosurv cEZ.NET gives you two ways to set up your communication parameters. The first is to go into Data Collection in your job and select and set the parameters in the easy to use dialog box shown here:



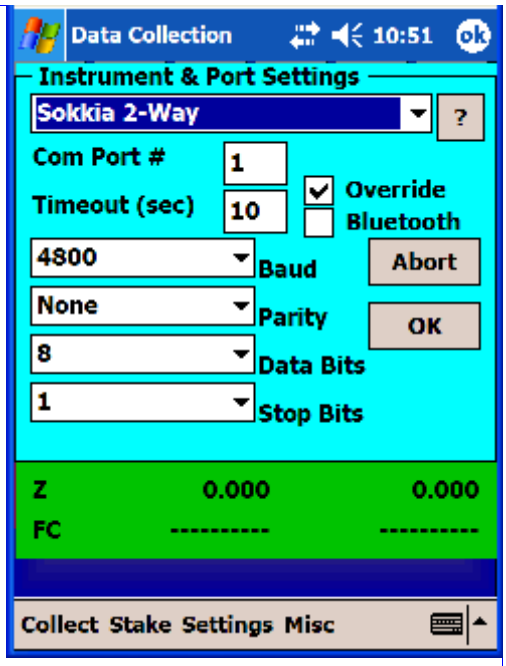


By selecting Sokkia 2-Way, the *default* Sokkia comm settings are used, such as 1200 Baud, None, 8 and 1. Selecting Sokkia tells Prosurv two things. First, it says "use the default Sokkia comm parameters", and Second, it says "Use the Sokkia commands to activate the instrument and retrieve the data".

If you check the "Override" box, then you can change the *Comm* settings while still using the *Sokkia Commands*.

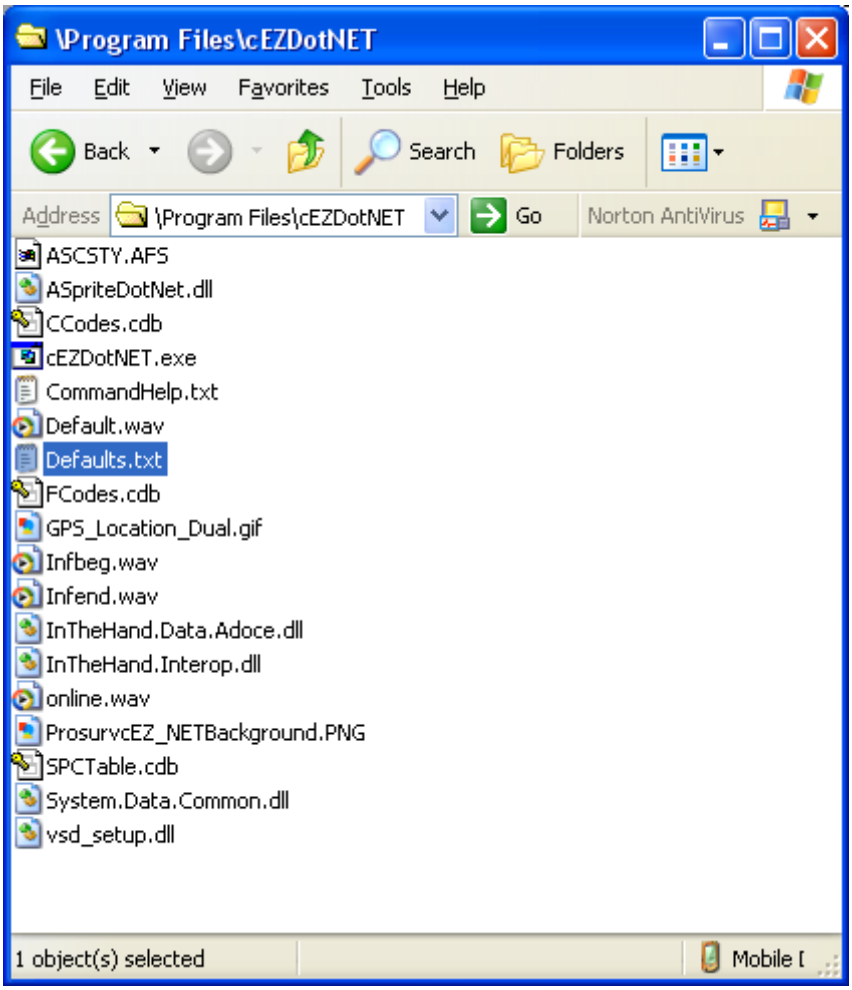
Once you tap OK, the com port will be opened with the settings that you selected. These settings are 'remembered' by your job when you exit Prosurv or when you open or create a different job.

So, this is how you change instruments and settings *on a job by job basis.*



The Recommended Method for Setting Up Your Instrument

Every time you create a new job, Prosurv reads a text file, called *Defaults.txt*. This text file is located in the \Program Files\cEZDotNET\ folder of your Pocket PC (given a normal installation):



By setting your instrument defaults in the Defaults.txt file, you just have to change the file once and forget it. To do this, first, quit Prosurv, then use ActiveSync to copy the Defaults.txt file to your desktop. Then, edit the file using Notepad. Save the file, then copy it back to the folder shown above, overwriting the existing file. *The next time you run Prosurv cEZ.NET, create a new job. This new job will use the default parameters of the Defaults.txt file.*

You can also change an existing job to use the defaults in the Defaults.txt file by going into Jobs—>Configuration—>Decimals/Units/SPC and checking the "Reload Original Defaults" check box.

The following is a complete listing of the current Defaults.txt file. The most important items, such as instrument and comm settings are shown in Red:

DefaultFolder=\My Documents\Jobs
Instrument=4
DAL=1
DALTolerance=0.003
ComPort=1
ComOverride=1
Baud=1200
Parity=None
DataBits=8
StopBits=1
CoarseFine=1
HTolerance=5
VTolerance=5
DCScale=1.0
Elevations=On
Units=3
DecimalsCoor=3
DecimalsAngle=0
DecimalsDistance=3
Stations=1
Target=5.0
FCPopUpNumber=16
FCPopUp=1
FCSep=_
CCSep=
FCAutoStore=2
FCAttributes=2
SDMSChr=18
FCPopUpCode=XYZ
FCPopUpCode=TC
FCPopUpCode=FL
FCPopUpCode=EG
FCPopUpCode=DTCH
FCPopUpCode=BL
FCPopUpCode=EC
FCPopUpCode=CL
FCPopUpCode=EBS
FCPopUpCode=EB
FCPopUpCode=FBW
FCPopUpCode=BM
FCPopUpCode=MON
FCPopUpCode=LOT
FCPopUpCode=RR
FCPopUpCode=CP
StakeoutAutoCode=None
StakeoutAutoCode=Hub
StakeoutAutoCode=Hub & Tack
StakeoutAutoCode=Lath
StakeoutAutoCode=Stake
StakeoutAutoCode=Rebar
StakeoutAutoCode=Rebar & Cap
StakeoutAutoCode=Monument

StakeoutAutoCode=Alum Cap
StakeoutAutoCode=Brass Cap
StakeoutAutoCode=Iron Pipe
StakeoutAutoCode=Nail
ACS=Road1:XYZ,FLG1,EB1,CL1,EB2,FLG2,XYZ
ACS=Road2:FBW1 XYZ,FLG1,EB1,CL1,EB2,FLG2,FBW2 XYZ
ACS=Break1:BL1,BL2
ACS=Break2:BL1,BL2,BL3
ACS=Ditch1:XYZ,BL1,FLG1,BL2,XYZ
ACS=Ditch2:XYZ,BL1,FLG1,FLG2,BL2,XYZ
ACS=Headwall1:XYZ,HDWL1,HDWL2,XYZ
MainF1=2
MainF2=20
MainF3=22
MainF4=12
MainF5=13
MainF6=23
MainF7=24
MainF8=34
MainF9=4
MainF10=65
DCF1=9
DCF2=10
DCF3=14
DCF4=5
DCF5=8
DCF6=6
DCF7=17
DCF8=20
DCF9=11
DCF10=27
SpiralStep=0.35
SDMSCMOutput=0
Bluetooth=0
ACS=easytest:FL1,FL2,FL3
SaveTimer=4

DefaultFolder= Defines where your new jobs are stored. It's good practice to store jobs directly to flash media, such as CF or SD, since they are non-volatile memory and are safer to use than storing to internal RAM memory.

Instrument= Set this equal to the instrument # indicated by the instrument list shown on the **following page**.

ComPort= This is the com port # to use for input/output of data. Normally this is always 1 on most Pocket PC's. However, when using a Bluetooth Communication solution, this may need to be set to 7 or 8. If you're unsure which Bluetooth port to use, try setting it to the **Outbound** COM port indicated by your Pocket PC's Bluetooth Settings (Advanced).

ComOverride= The com override determines whether the "default" instrument settings will be used, or if the instrument settings indicated here (such as Baud, Parity) will be used instead. Default instrument settings refers to the manufacturer's statements of their default instrument settings. For example, Sokkia's defaulted to 1200 baud, while Nikon's defaults where 4800, None, 8, and 1. Today, many instruments differ in their communication settings, even from the same manufacturer. So, it's best to look at the actual instrument settings and match these in Prosurv. Then, the "protocols" or command structure for the instrument will be correct (ie Sokkia, Nikon, Topcon, Leica), while the comm settings can be set to whatever is needed. **Therefore it's best to set the ComOverride=1, and enter your instrument's comm port settings in this defaults file. This gives you a "set it and forget it" solution.**

Baud= Set this to the Baud Rate of your instrument. Acceptable Baud Rates for use with Prosurv cEZ.NET Data Collection are:

- 1200
- 2400
- 4800
- 9600
- 14400
- 19200
- 28800
- 38400
- 56000

Parity= Set this to the Parity used by your instrument. Normally this is None, however it can be set to Even or Odd.

DataBits= Acceptable range is 4,5,6,7, or 8. Normally settings are 7 or 8, depending on your instrument.

StopBits= Normal range is 1 or 2. Set this to match your instrument's setting.

Bluetooth= 0 is Off, 1 is On. If set to 1, then the com port will automatically be set to 8. This may not be correct depending on your Pocket PC. Instead, you should use the ComOverride= and ComPort= method of setting your com port. This parameter may be altered in the next release to compensate for newer devices that are not using Com 8 by default for Bluetooth communication.

Supported Instrument List

1. **Manual Mode**
2. **Lietz Set**
3. **Topcon GTS series**
4. **Sokkia or Nikon in 'Set' emulation**
5. **Sokkia 2-way communication**
6. **Wild T-2000 (not supported)**
7. **Nikon**
8. **Leica**
9. **Zeiss R45/50/55**
10. **Pentax PTS-V/600**
11. **Pentax PCS-200/300/DA**

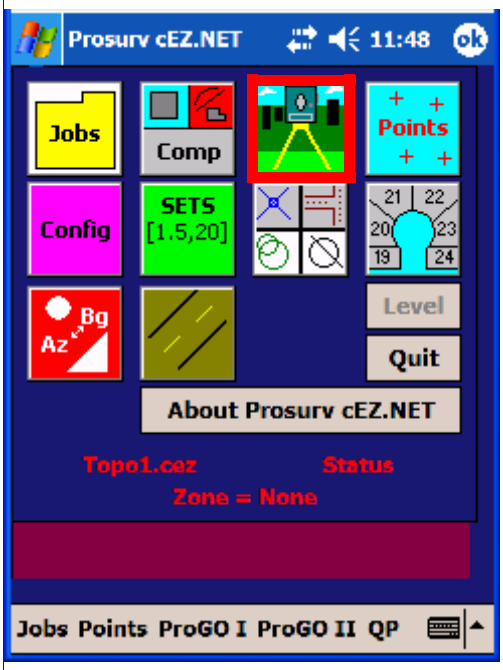
Digital Auto Levels

1. **Sokkia**
2. **Topcon**
3. **Leica**
4. **Leica DNA Models**

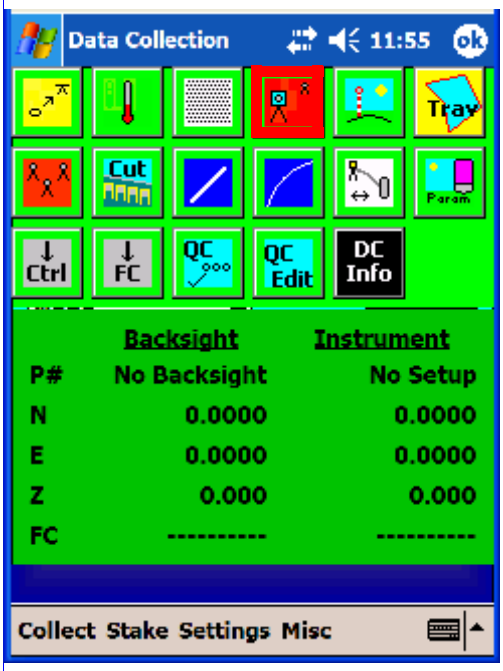
"I need to do a Topo!"

OK, let's start with a new job. From the main menu, go to Jobs—>New Job. Enter the Job Name as Topo1.

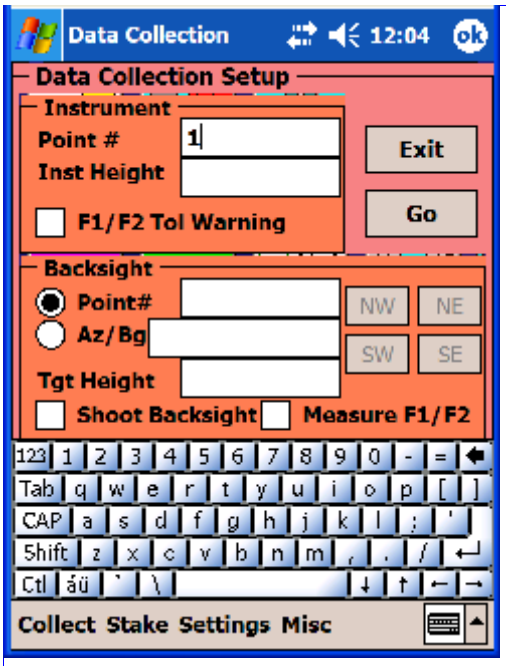
The job has now been created, but has no points.



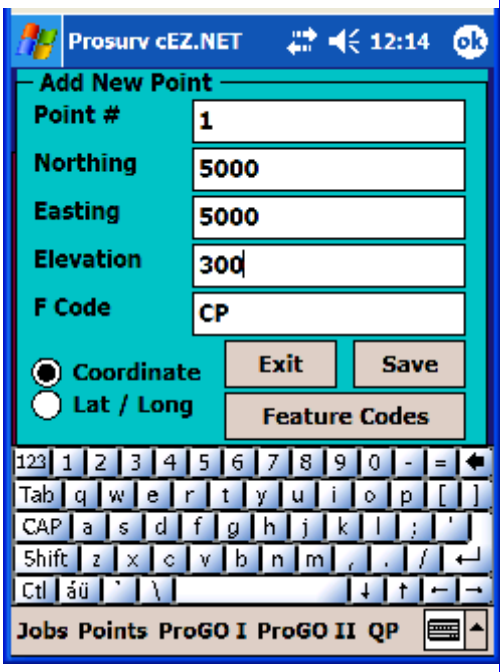
From the Main Menu Icons, tap the Data Collection button.



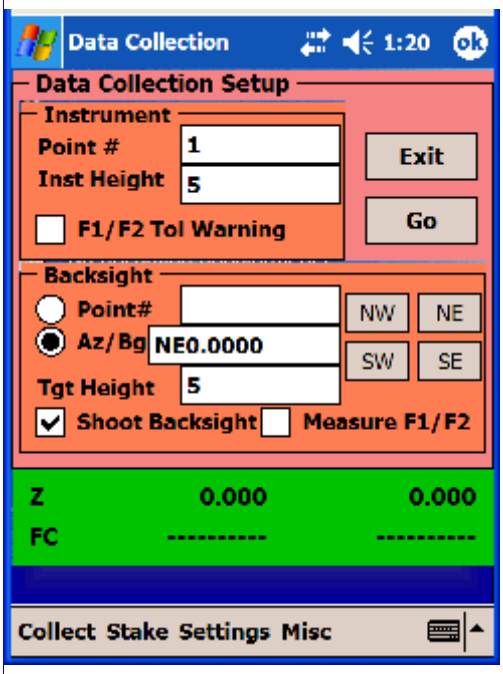
Tap the Setup icon to perform a new Setup. Setups are used to define your Occupied (Instrument) point and Backsight point.



In the Setup routine, you can enter a point that doesn't exist. Then, when you leave the textbox, cEZ.NET will search for the point. If it doesn't find it, you'll be prompted to enter that points' coordinates.



Enter your instrument as point #1, then enter the Instrument Height. If you're not using elevations, just enter a bogus instrument height and target height, such as 5.



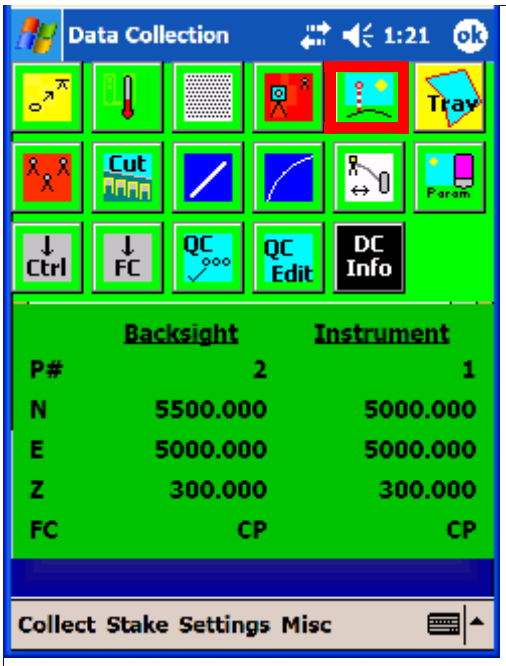
We've setup a backsight tripod and prism on our backsight point, but we don't have any coordinates for the point.

Prosurv lets you shoot to the backsight using a Bearing or Azimuth. The Bearing is used with the measured distance to create a backsight point automatically.

If you can't shoot to your backsight, simply uncheck the "Shoot Backsight" box and a bogus distance will be used to compute a coordinate at your backsight.

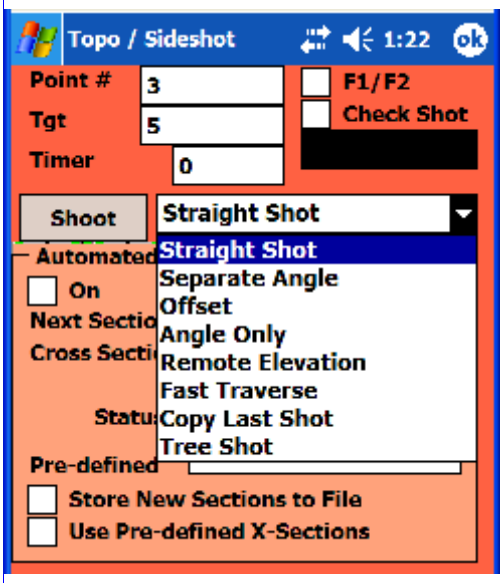
Or, if you have a known coordinate for the backsight, you can enter the point number for that point. If a measurement to the backsight is made ("Shoot Backsight), then Prosurv will display a comparison of the shoot coordinate to the known (entered) coordinate.

Once you're ready, tap the Go button to record the Setup (and shoot to the backsight, if selected). Prosurv will compute and display the Setup information.



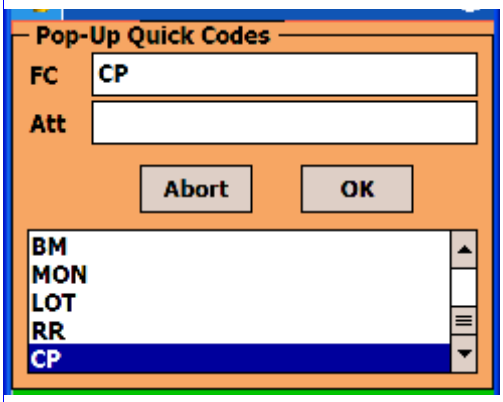
The Instrument and Backsight coordinates are displayed. You're now ready to begin your topo!

Tap the Topo icon to begin.



8 Different types of shots are available in the Topo function. A 'Straight Shot' is your normal topo shot, where the rod and prism represent the location that you're shooting.

Just tap the Shoot button to take a Topo shot.



You can select codes during or after the shot. Prosurv displays your Quick Code list by default. This is a list of your 16 favorite or most-used codes. You can select from the list, or you can just enter a Feature Code (FC) and/or Attributes.

Tap OK to proceed, or, you can tap the Abort button to bring up the full feature code list.

Both lists are fully user-definable. The Pop-Up Quick Code list can be edited in your job, and you can predefine this list, by default, using the Defaults.txt file located in installation folder.