

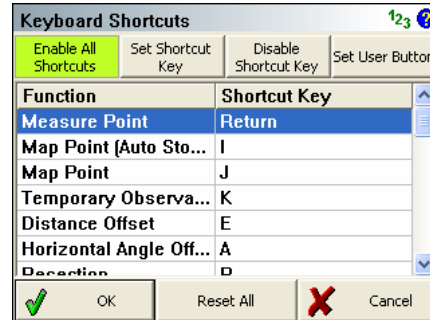
New Features

NEW - Keyboard Shortcuts - You can now assign command shortcuts to keys on your data collector.

For our users who have data collectors with a keyboard, you can now assign commands to your keys.

For example, while you are in the Map screen you can press “A” to start the horizontal angle offset command, or type “T” to open the target height screen.

The shortcut definitions are stored in the msurvey.ini file so they’re portable to your other data collectors if you’ve defined a custom layout.



Another great feature is that the EDM modes supported by your instrument can have shortcut keys assigned. You will find these listed towards the bottom of the list. For example, users of reflectorless instruments can program two keys, one to switch the EDM mode to prism, and one to switch the EDM mode to reflectorless. Imagine the time you will save!

The shortcut keys are only available from the MAP screen.

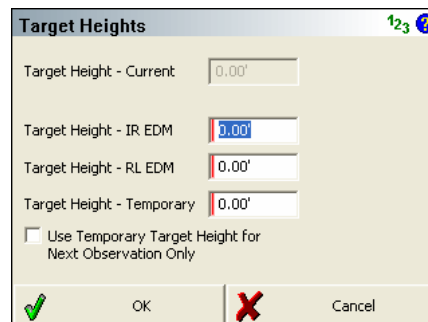
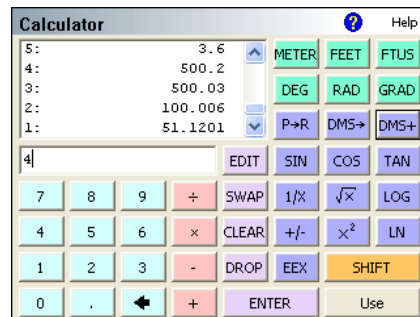
NEW RPN Calculator – A powerful calculator is now built-in to Evidence Recorder.

The calculator is RPN (Reverse Polish Notation) and can be found in the calculations menu.

Special functionality is built into EVR so that the calculator is conveniently available where you need it, such as in edit fields that require a number. All edit fields now support “extended edit” functionality.

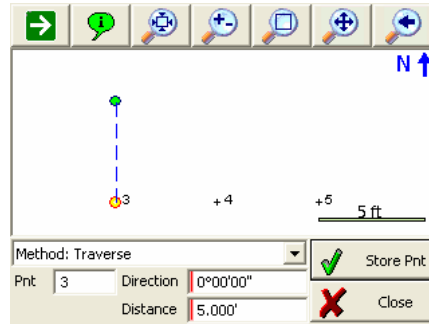
The red vertical bar on the right side of the input field indicates that if you double click it, the calculator will automatically appear. You can then make a calculation and press the **USE** button. This will automatically copy the value in the bottom of the stack back to your input field.


Note: you can adjust the double tap timing on your data collector if this calculator is appearing too often or disable this functionality all together.



NEW Traverse / Intersect toolbar - A new tool is available to help you compute complex geometry points at your scene. Need to compute coordinates for a baseline, or for grid points at your scene? These types of computations can be easily done with the new traverse toolbar.

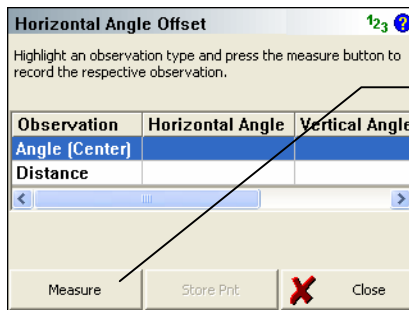
In the following example a point is computed 5 feet north of point three.



NEW  The cursor button when using a total station now controls re-centering the map onto newly observed points. This option is available on the instrument toolbar. If you connect to a robotic instrument, this still controls the cursor tracking.

NEW Evidence Recorder will now do a memory check before memory intensive operations are started such as importing points, or viewing the raw file. A warning message will appear if you're running low on available memory.

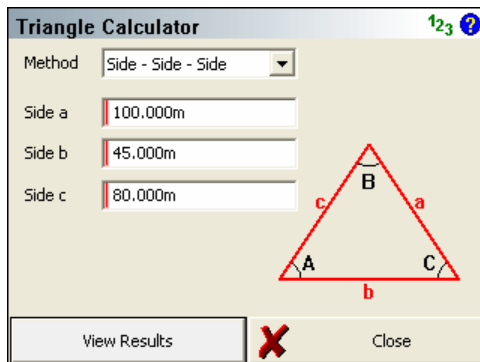
NEW Quick Measure Mode – in the program settings you can turn on a “Quick Measure Mode”. On screens such as resections, horizontal angle offsets etc., when this feature is turned on, pressing the measure button will immediately trigger your instrument to take a shot.



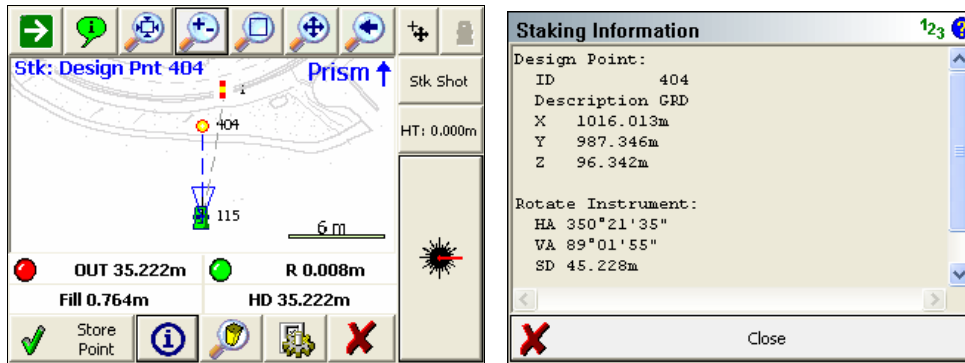
This new feature affects this measure button. All screens that have this button will be affected by this change.

NEW South Instrument – A driver for the South NTS – 320 instrument was added to this version.

NEW In the calculation menu there is now a new Triangle Calculator.



NEW  The staking toolbar has been updated and now includes an Information button.



When the information button is pressed it will display the stake point coordinate information as well as other important stakeout information.

NEW **Leica Disto A6** – New support for the Disto A6 measuring device. You can now send measurements from the Disto to distance fields in the Traverse toolbar, Baseline Offset toolbar, Trilateration routine, and Tape Measure toolbar.

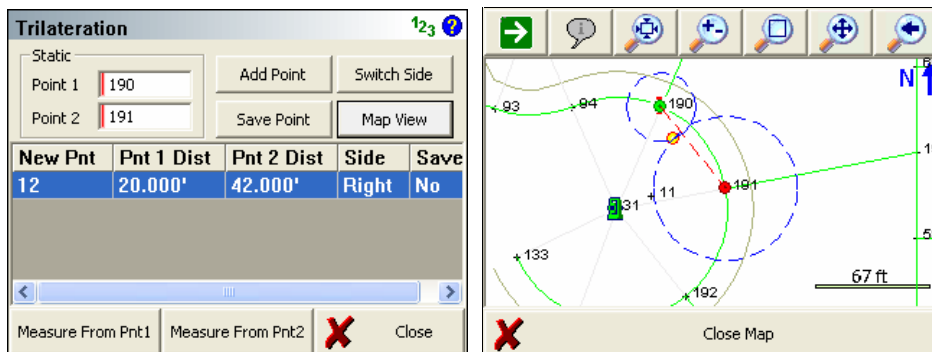
This can be selected in the Leica Total Station settings.

NEW **Traverse / Intersect** – Distance fields in the traverse toolbar can now accept distances from the Leica Disto. When connected to the Disto, simply double tap the distance field which will display an option “Measure with Disto”. See the EVR 4 manual for more information.

NEW **Tape Measure Tool** – If a Leica Disto is connected to Evidence Recorder, the user can control the directions using the toggle keys on the Disto, plus send measurement back to Evidence Recorder.

This is perfect for those who want to measure the exterior or interior of a building using Evidence Recorder and a Leica Disto.

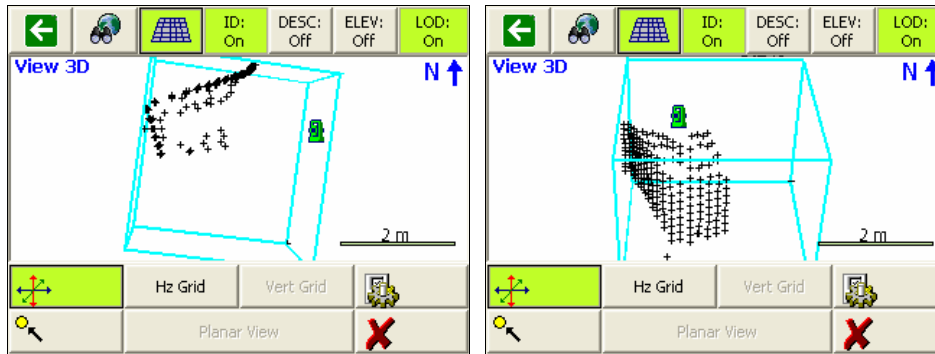
NEW **Trilateration** – A new routine has been built that allows you to define a baseline between two points which allows the user to compute the positions of new points using distance | distance intersections.



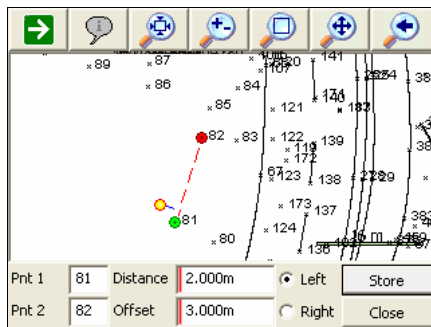
NEW Raw File Encryption – Evidence Recorder now includes an option that will force Evidence Recorder to encrypt the raw file. Currently, only Evidence Recorder can read and use encrypted raw files. At the time of the application being released, no desktop software programs can read or use these encrypted raw files. Future versions of MicroSurvey inCAD, MSCAD, and MapScenes will be able to read Evidence Recorder encrypted raw files.

Encrypted raw files ensure that users can not accidentally or intentionally edit their raw files with text editors, or other un-authorized software.

NEW Point Scanning – Evidence Recorder now has a point scanning routine that allows you to collect a point cloud of points. This routine currently only works when reflectorless robotic or servo driven instruments are connected to Evidence Recorder.



NEW Baseline Offset – New routine to help you with your baseline offset calculations. Not only does it accept manual entry of your measurements, it accepts distances from the Leica Disto.

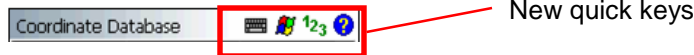


NEW 3D Arcs and Splines in DXF – The DXF export now creates 3D splines and arcs when the Export DXF command is used.

NEW Landscape Pocket PC Devices – Devices such as the new Ranger would not display Evidence Recorder properly and many fields were cut off or covered up by other buttons. There is a new option in the Program Settings called “Enable Full Screen” which will force Evidence Recorder to occupy the entire screen.

Description	Value
Display	
Display Type	Colour
Enable Full Screen	<input type="checkbox"/>

NEW Pocket PC Quick Keys – The Pocket PC build now include quick keys to common functions like the virtual keypad, calculator and Windows start menu.



NEW Coordinate Database Editor – New **Add** function available to add new points into the point database.

NEW Coordinate Database Editor – New **Find** function available to help you do advanced searches. You can now search by point range, coordinate range and by description.

NEW Coordinate Database Editor – New **Statistics** function will display a summary of the points in the database such as total points, points range used and point range un-used.

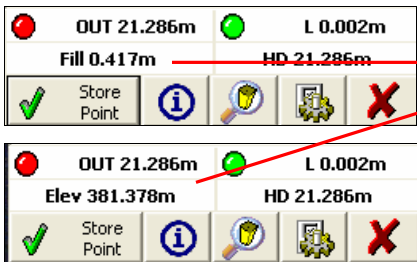
NEW Coordinate Database Editor – New **Map** function allows you to preview points in the map based on the rows you have highlighted in the coordinate list.

NEW Coordinate Database Editor – When sorting columns by clicking on the column header, an arrow will appear in the column to indicate the sorting order.

NEW Coordinate Database Editor – Icons are now displayed for your current setup and current backsight point, as well as control points and points that have been staked.

Point ID	X	Y	Elevation
1	100.000'	100.000'	10.000'
2	100.000'	153.303'	12.904'
4	107.071'	107.071'	10.000'
100	91.970'	148.886'	12.586'
101	79.520'	169.474'	12.401'
102	55.855'	154.471'	12.210'
103	58.817'	150.097'	12.228'
104	70.256'	158.013'	12.120'

NEW Point Staking – You can now toggle between computed cut / fill or current rod elevation on the staking toolbar. Simply tap the cut/fill field to toggle between them.



You can now toggle this field.

NEW Default Measure Mode – You can set the default measure mode in Evidence Recorder to either Map Point or Map Point (Auto). This is done in the Program Settings menu.

NEW EDM Mode Display – Your current EDM mode is now displayed on the measure button.

NEW Geodimeter – Added a second version of the Auto Trigger driver. This version has improved communication with the Geodimeter 600. Auto Trigger version 1 should be used for the Geodimeter 500 series instruments.

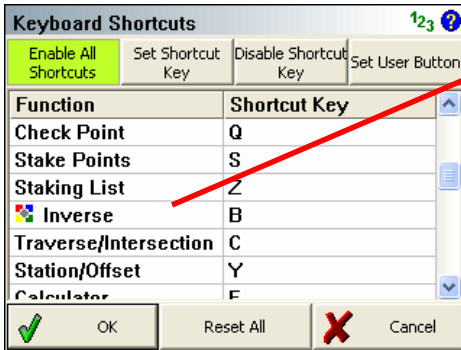
NEW Zoom Previous – Added a zoom previous button to the main interface. You can now zoom back up to 10 previous views.



NEW User Defined Button – Added a customizable user button on the main interface.



You can assign a function to this button by using the “Set User Button” option in the Keyboard Shortcuts menu.



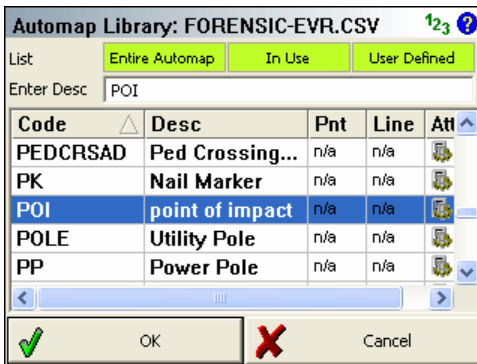
The icon next to the Inverse function indicates that this item is assigned to the User button.

NEW Windows Mobile 5.0 – Installation files now available for Windows Mobile 5.0.

NEW Windows CE.NET 5.0 – Installation files now available for Windows CE.NET 5.0.

NEW Coordinate Calculator – A coordinate calculator is now available to help you convert Latitude and Longitude coordinates to Grid coordinates.

NEW Automap Library Code Descriptions – The Automap Library now displays a description column which is used to describe each code. For example, the “POI” code shown below is described as a Point of Impact.



Improved Features or Functions

IMPROVED Point Staking – The staking toolbar has been improved to display a red circle when you have not met your staking tolerance, and will display a green circle when you do. These visual cues are now always displayed.

IMPROVED Point Staking – During stakeout, Evidence Recorder will now continue to display the current navigation distances for the left/right and in/out distances even when these distances are within the staking tolerance.

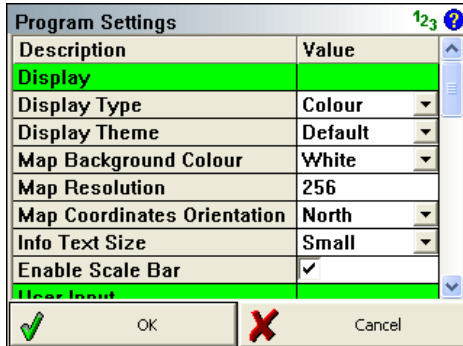


IMPROVED Map Location Toolbar - A new option is available to stop the map location toolbar from appearing when you select an empty part of the map screen.



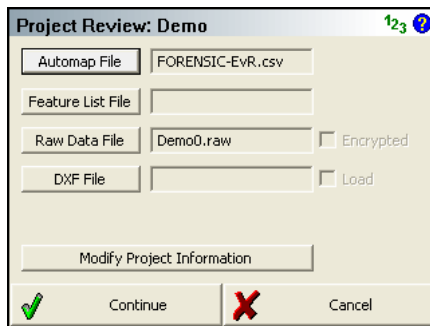
IMPROVED DXF Export – When a DXF file is created with Evidence Recorder, it will now place the figures and points on the layers defined in the AutoMap library. It will also color the linework and point nodes based on the color settings in the AutoMap library. Please review the EVR manual for more information.

IMPROVED Program Settings – This section of the program is now separated into groups for easier viewing.



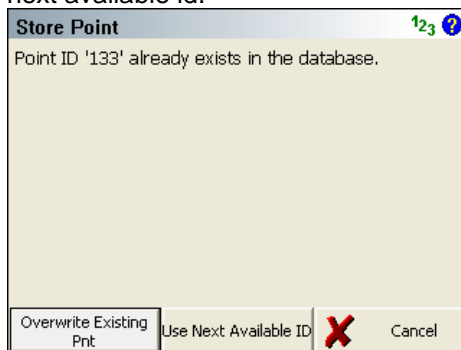
The different groups are highlighted in green.

IMPROVED Modify Project Information – This is now available on the Project Review screen, previously it was located in the Settings Menu.



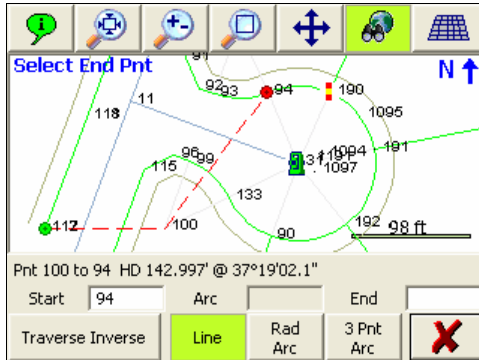
IMPROVED Instrument Connection – The instrument connection prompt will now display the total station model currently selected in the instrument settings.

IMPROVED Duplicate Point Prompt – This has been updated so the user can now exit and return to the previous screen. Previous versions forced you to overwrite the point id, or use the next available id.

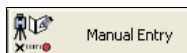


IMPROVED Inverse Toolbar – Several changes have been made to the inverse toolbar to make inverting as simple as possible.

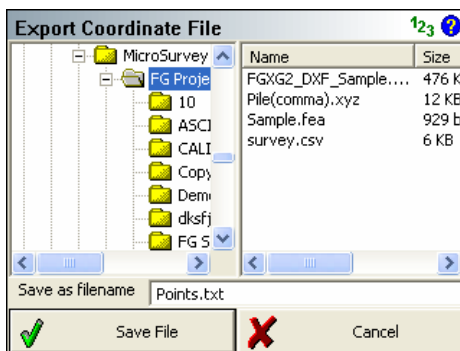
1. Point Chooser no longer needed to pick a point from the map.
2. Inverse information now displayed on the inverse toolbar.
3. Total distance inversed and enclosed area can be viewed in the information toolbar.



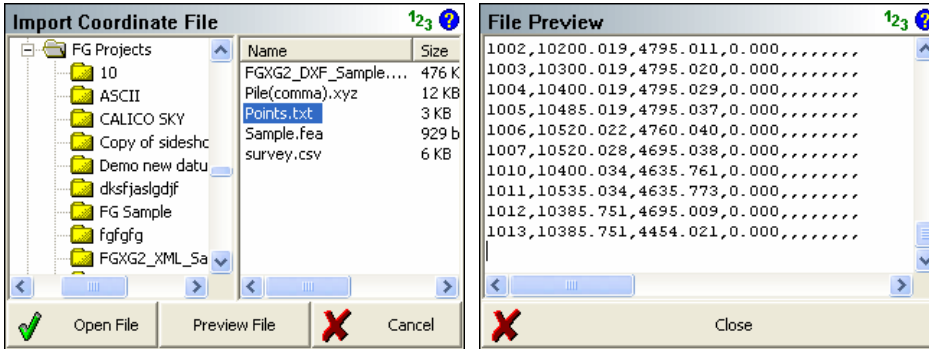
IMPROVED Manual Entry – Older versions of Evidence Recorder (pre 2004) used to have a “Use Previous Measurement” function. This functionality was removed from the product but we have now introduced similar functionality. When connected to a total station, the Manual measurement mode will now always display the last measurement values recorded by Evidence Recorder. To store a new point using the information from the last shot, simply select the Manual Entry measurement mode and press the measure button.



IMPROVED Export File – All functions that allow you to export a file now allow you to browse to all directories on your data collector. Previous versions only allowed you to export to the current project directory.



IMPROVED Import File – Import file routine now allows you to preview the file before import. For example, the Points.txt was previewed using the Preview File option.



IMPROVED Topcon APL-1A: Removed Topcon robotic setting of tracking speed (survey) which now forces the user to control this on the instrument instead.

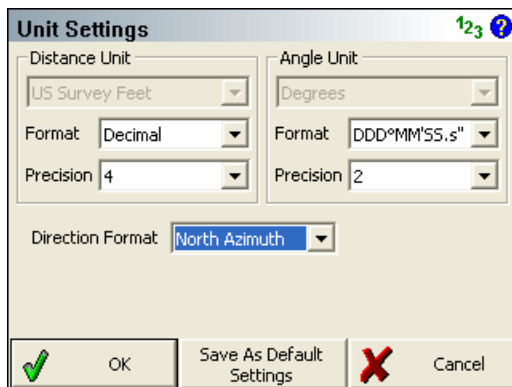
IMPROVED Project Loading – Improved speed when opening existing projects. There is a huge speed improvement on larger projects.

IMPROVED Raw File Viewer – Increased the speed of loading the raw file into the raw file viewer.

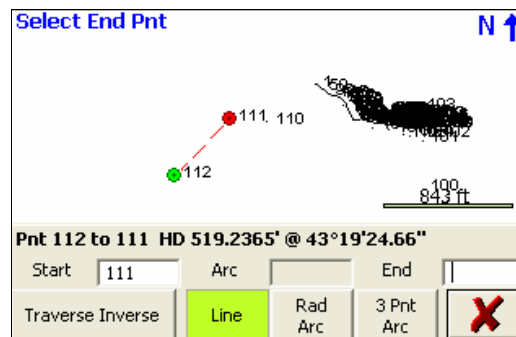
IMPROVED Memory – Older versions of Evidence Recorder would test the available memory available on the data collector. If not enough memory was available, Evidence Recorder would not start. This has been modified so only a warning message appears, but Evidence Recorder is allowed to start.

IMPROVED Occupy Point – Changed labels so they are more generic; azimuth replaced with direction.

IMPROVED Unit Settings – Evidence Recorder now allows the user to specify format and precision values for distance and angular units. Support is included for Feet and inches and decimal degrees.



Notice below how the distance is displayed to 4 decimal places and the azimuth to two decimal seconds.



IMPROVED Inverse Toolbar - Results are now shown in a bold font for the inverse toolbar (landscape devices only).

IMPROVED Project Manager – The sorting of projects by Date has been improved. Also some general enhancements were made to the appearance of this menu.

IMPROVED Extended Edit Fields – If an extended edit field contains data such as a direction or distance, when the field is double tapped the value will automatically be copied into the calculator.

This functionality stopped working with the latest Leica firmware. This issue is now resolved and you will require GeoCom Version 1.00 and Software Version 4.10 for this to work correctly with Evidence Recorder 4.0.0

FIXED Tape Measure Toolbar – The deflection option is now disabled if the user didn't select a line before starting the command.

FIXED Delete Point on Spline – Deleting the last point of a spline figure would cause the entire figure to be deleted. Now it will only delete the last segment of the spline.

FIXED File Name with Dots – Using dots in your filename could cause problems with opening the project after your current session was ended. Dots are now not accepted in the filename and an error message is displayed.

FIXED ASCII File Import – Evidence Recorder would not ignore the empty spaces for point ids when importing files with fixed width and comma delimiters.

Important Changes

Math Operators - In this version you can no longer perform advanced distance or direction recall functions that include math operators. For example you can no longer enter values like $3..4+2$. We are now expecting the user to use the calculator to apply mathematical operations to distances or directions. Just remember that in the new version double tapping any field that has a value in it will automatically be copied into the calculator.

Angle Recall – Angle recall is no longer supported. For example $1..2..3$ is no longer supported.

Quadrant Codes – Using numeric quadrant codes are no longer supported. You are now required to enter NE, SE, SW and NW before or after the angle. See the "Direction Entry & Recall" section in the Evidence Recorder 2007 manual for more details.

Visibility Toolbar – On previous versions there used to be a VIS "visibility" button on the main Evidence Recorder interface. This button has been replaced by a new User Definable button. Most of the visibility functions have been moved to the display toolbar. The Scale, Lines and Point options are now located in the Program Settings menu.

Important Notes about 4.0.0

Evidence Recorder 4.0.0 Tablet Edition

The Desktop Emulator is now called **Evidence Recorder Tablet Edition**. If the Tablet Edition has no activation code it will run in demo mode.

No Activation Code (Demo Mode)

- Only ten points can be stored per session.
- User defined settings are not saved to the msurvey.ini file meaning you have to reconfigure Evidence Recorder every time it is started.
- All modules are activated - Standard, Robotic, GPS and Advanced.
- Instrument Connection allowed in the Landscape, Portrait and Desktop modes.

When you purchase a copy of Evidence Recorder for your data collector you are entitled to an activation code for a desktop version. Activated desktop versions can not be connected to an instrument or GPS equipment because this functionality is disabled once an activation code is entered.

Activated for Standard

- Unlimited points can be stored.
- User defined settings are saved to the msurvey.ini file.
- Instrument connection is disabled in landscape, portrait, and desktop modes.

What is new for the 4.0.0 version is that we can now issue a special **Desktop Observation** activation code that enables instrument connections. The desktop observation mode is not **free**, contact your Technical Sales Representative for more information.

Activated for Desktop Observation

If you purchase the Desktop Observations module you will be able to connect your Tablet or Desktop computer to a total station or GPS receiver via the computer's COM port.