



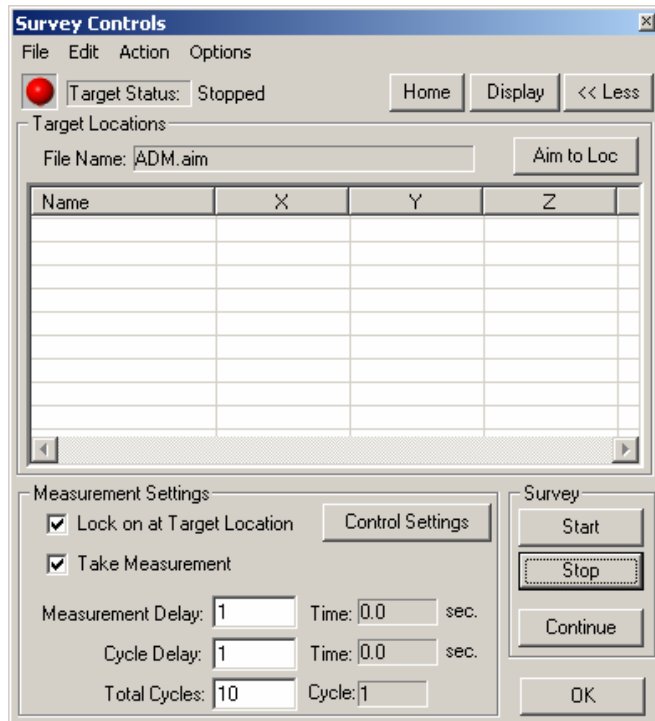
Verisurf Auto-Survey Tool Reference™

Table of Contents

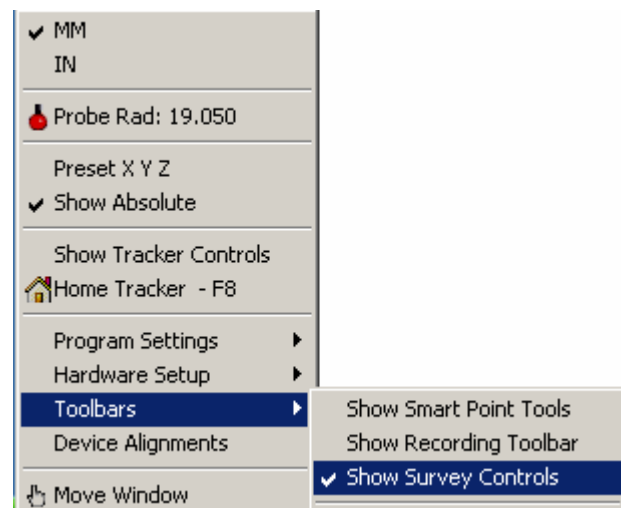
| | |
|--|-----------|
| INTRODUCTION | 2 |
| SURVEY CONTROLS MENU..... | 3 |
| FILE DROP DOWN MENU | 3 |
| EDIT DROP DOWN MENU | 4 |
| ACTION DROP DOWN MENU | 4 |
| OPTIONS DROP DOWN MENU | 5 |
| CONTROL SETTINGS PANEL IN OPTIONS | 5 |
| SURVEY REPORT SETTINGS IN OPTIONS..... | 7 |
| TARGET LOCATIONS WINDOW | 9 |
| MEASUREMENT SETTINGS..... | 9 |
| PRIMARY SURVEY BUTTONS..... | 10 |
| ALTERNATE POINT GATHERING METHOD- ADM.DLL | 11 |

Introduction

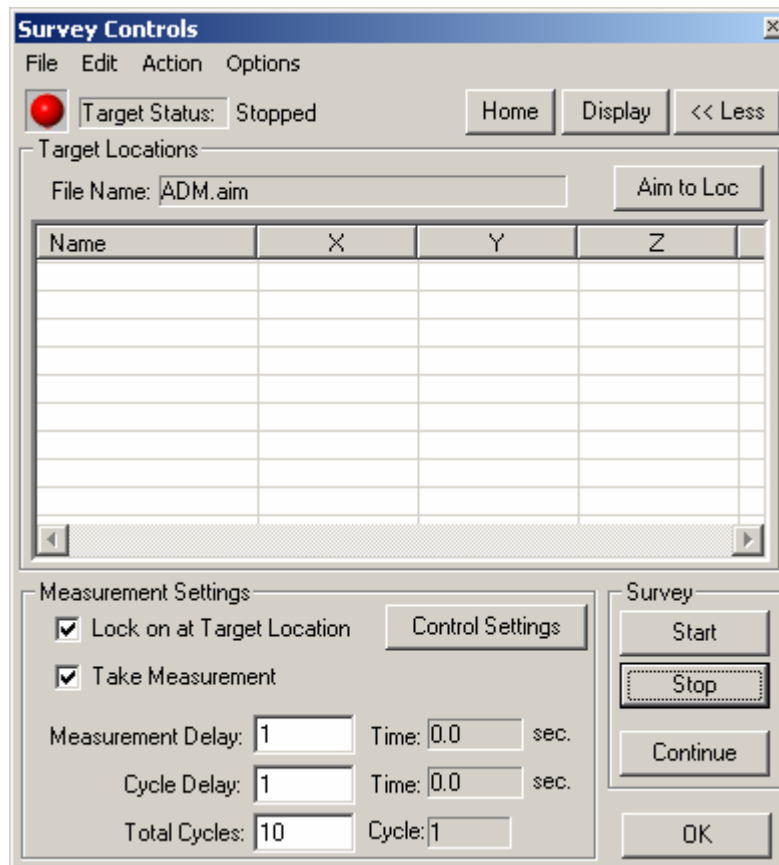
Verisurf Survey Tool is used to examine the repeatability of a group of known points measured. This group of points can then be measured automatically using the auto-survey tool and a report generated on the repeatability. The primary menu screen used to develop this report is shown here.



It is accessed by going to the VDI menu and choosing **Toolbars > Show Survey Controls**.



Survey Controls Menu



File drop down menu

The File dropdown menu will allow routine operations associated with most programs.

New – Clears all points that are currently in control table and begins recording.

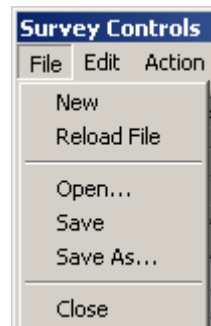
Reload File – Can be used to load previously recorded points if some are accidentally deleted.

Open – Opens a previously saved file of known points.

Save – Will overwrite the current point file to the current file name.

Save As – Will write the current point to a file name of your choosing.

Close – Will close the Survey Tool.



Edit drop down menu

The edit drop down menu will allow editing functions on the points in the survey table.

Cut – Allows the cutting of a point that can then be pasted in a different order in the table.

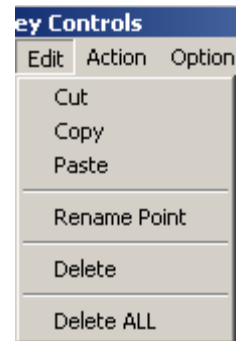
Copy – Used to copy a point from the table.

Paste – Used to paste a Cut point back into the table in the order of your choosing. To paste highlight the point that will be above the pasted point.

Rename point – To change the name of the point. This only applies to the name in the table.

Delete – To PERMANANTLY delete a point from the table.

Delete ALL – To PERMANANTLY delete all points from the table.



Action drop down menu

The Action drop down menu will allow verifying that the device goes to the correct point. It allows the gathering of your survey points to the database. It allows the gathering of points to a table through the recording of points.

Aim to Location – Highlight a point in the table and then you can aim the device to that location.

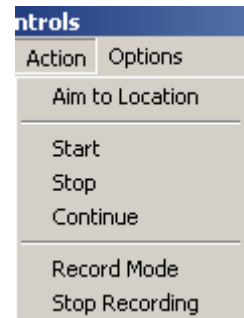
Start – Starts the survey.

Stop – Stops the survey.

Continue – Continues the survey from the stop point.

Record Mode – Allows the recording of points into the survey table.

Stop Recording – Stops the recording of points into the table.



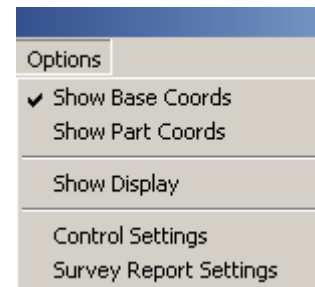
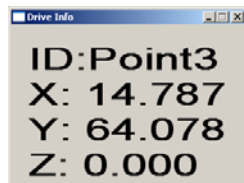
Options drop down menu

The Option drop down menu allows a wide range of settings to customize your survey.

Show Base Coords – If display is active the recording of points will be in base (device) coordinates.

Show Part Coords - If display is active the recording of points will be in part (model) coordinates.

Show Display – Activates the survey display which is similar to the DRO. See below.



Control Settings Panel in Options

Double click on list to Aim Tracker – With this option selected you can double click to aim the tracker.

Start Measurements when called from Verisurf – Future enhancement.

Start Tracking when motors are switched on – Future enhancement.

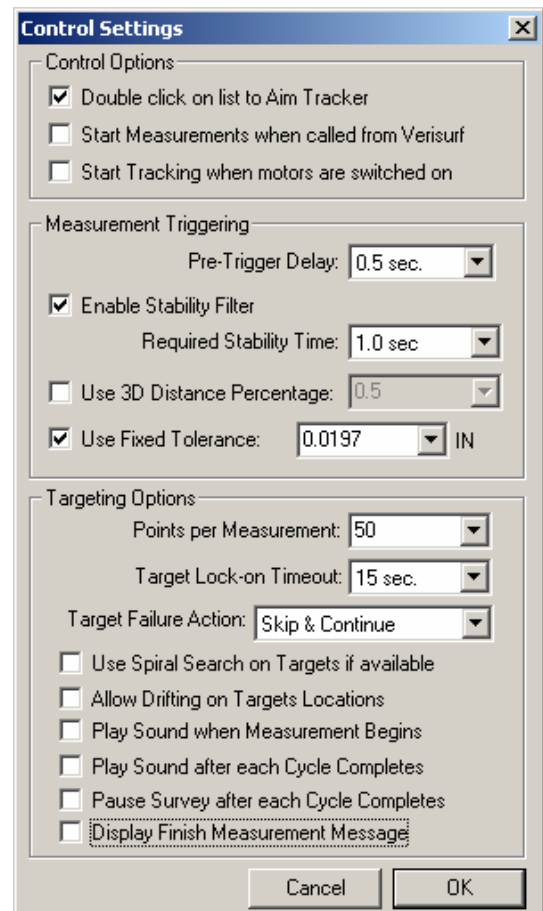
Pre-Trigger Delay – The amount of time after acquiring target before a point can be triggered.

Enable Stability Filter - This filter will collect and average a collection of points that are within the specified tolerance. The number of points it will average is specified in the "Points per Measurement" box in the Targeting options section. The points collected are continuously averaged and checked against the tolerance. Once the tolerance is stable for the amount of time specified by "Required Stability Time" then an average measurement is taken.

Required Stability Time – This is the amount of time required for the data to be stable within the 3D distance percentage or fixed tolerance.

Use 3D Distance Percentage – this filter takes the current location and creates a tolerance based on a percentage of the distance to the device 0,0,0. Value is measured in %.

Use Fixed Tolerance – This value is checked against the current location in the averaging filter.



Targeting Options

Points per Measurement – This is the amount of points the tool will use that are averaged together to determine the final out measurement.

Target Lock-on timeout – This is the amount of time the device will search for a target before failing and doing what the Target Failure action dictates.

Target Failure Action – These are the 3 choices if the device fails to lock-on to a target.

| | |
|--------------------|---|
| Skip & Continue | Skip this target and go to next target. |
| Display Message | User can either Continue or Abort. |
| Abort & Play Alarm | Stop the survey and sound an alarm. |

Targeting Options

Points per Measurement: 50

Target Lock-on Timeout: 15 sec.

Target Failure Action: Skip & Continue

☐ Use Spiral Search on Targets if available

☐ Allow Drifting on Targets Locations

☐ Play Sound when Measurement Begins

☐ Play Sound after each Cycle Completes

☐ Pause Survey after each Cycle Completes

☐ Display Finish Measurement Message

Cancel OK

Use Spiral Search on Targets if available – Some tracking devices are equipped with a spiral search to locate targets. If there is a failure the device will search for target using a spiral search.

Allow Drifting on Targets Locations – This is a future enhancement.

Play Sound when Measurement Begins – A sound will play when the survey cycle begins.

Play Sound after each Cycle Completes – A sound will play when each cycle completes.

Pause Survey after each Cycle Completes – The survey will pause between cycles. This allows the operator to cycle the machine, if applicable, and continue the survey.

Display Finish Measurement Message – A message will pop-up indicating the survey is complete.

Survey Report Settings in Options

Excel Settings

Enable Excel Reports – This option checked will allow data to pass to an Excel spreadsheet.

AutoStart Excel – If checked Excel will automatically start. You can then watch Excel while the survey runs. It will start excel once the first target location is sampled.

Excel File Name – Specifies the Excel file name to open and use to report the survey to.

Excel Sheet Name – To change the sheet name where your data will export.

Starting Column – The location of the sheet where you want to begin the export of the data.

Starting Row – The location of the sheet where you want to begin the export of the data.

Group Data by Cycle Iteration – This will format the data differently. Not checked the data will export in the order taken. Checked the data will export the data grouped by target number. This will group data by number of Iterations. (Number of cycles")

Add report header to every new cycle – Having this option checked will add a new header between each cycle.

Reset Row button – Resets the row pointed to in excel to match the "Starting Row" value

File Export Settings

Enable Text File Reports – Outputs survey data to a text file (this can be used with /or independently with excel)

Reset File button – Clears the contents of the file.

Save as – Specifies the text file to save the data to.

Overwrite file on Start Survey – This option will clear the contents of the file every time the survey is "Started".

Prompt to overwrite file – Prompts the user before overwriting the text file to avoid data loss.

Add report header to every new cycle – Having this option checked will add a new header between each cycle if you are sending data to a text file.

Data Format Separator – Specifies how the data is separated and formatted in the text file.

General Settings

Export Data with Verisurf Alignment – Runs the XYZ Data through Verisurfs current alignment so that it is in the same Model Coordinate system.

Add Point count on each line – Adds another item to the data that specifies what point it is.

Add Cycle # to each new cycle in Report – Adds another Line of data between cycles to separate the data between cycles.

Export Time with each point – To allow a date to be posted to data.

Date Format – To set the formatting of the date if used.

Export Stability with each point – To allow stability to be posted to data.

Export 3D Deviation with each point – To allow a 3D deviation to be posted to data.

Export Temperature with each point - To allow a temperature to be posted to data.

Target Locations Window

Target Locations

File Name: Untitled.aim Aim to Loc

| Name | X | Y | Z |
|--------|---------|--------|-------|
| Point1 | -60.435 | 49.720 | 0.000 |
| Point2 | 14.787 | 64.078 | 0.000 |
| Point3 | 51.648 | 10.287 | 0.000 |

File name – The name of the survey file that contains the list of points.

Aim to Loc button – A quick button to do the same as the Action drop down. Highlight a point and hit this button and the device will try to lock onto target.

The **point table** is used to display the nominal values of the points being surveyed.

Measurement Settings

Measurement Settings

☒ Lock on at Target Location Control Settings

☒ Take Measurement

Measurement Delay: 1 Time: 0.0 sec.

Cycle Delay: 1 Time: 0.0 sec.

Total Cycles: 10 Cycle: 1

Lock on a Target Location – Device will lock on to target when acquired. If not checked, device will find target and move to next target.

Take Measurement – Device will take a point once locked on. If not checked, device will find target and move to next target. This can be used to test that survey will find all targets prior to actually running the survey.

Control Settings button – This button takes you to the Control Settings menu discussed in previous chapter.

Measurement Delay – The amount of time after a point is taken until device moves to next target.

Cycle Delay – The amount of time after a cycle completes until next cycle begins.

Total Cycles – The amount of iterations the survey will complete before the survey is complete.

Primary Survey Buttons

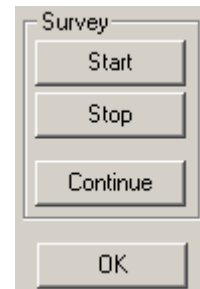
Quick buttons that will do the same as the Action drop down.

Start – Begins the survey from the beginning.

Stop – Stops the survey.


Continue – Continues the survey from the stop point.

OK – Closes the survey window.



Alternate Point Gathering Method- ADM.dll

The Survey tool can also load points into a table through the use of a C-hook named ADM.dll. This point gathering method can be used if you have points from a nominal file or if you have physically measured the points using Verisurf > Measure > Point.

The C-hook can be accessed two different ways. You can click on the icon  or by pressing Alt-C to get to the C-hooks directory and choosing ADM.dll from the list of files.

Once you have accessed ADM.dll you can choose your points from the screen and those nominals will load into your survey table.