



These notes describe the interfacing of 12d version 8 with the Trimble surveying instruments.

1) Installing Trimble link

Trimble link must be installed prior to attempting to upload or download data to the Trimble controller. The user will need to have access to the internet and have administrator rights

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1 Trimble link

1.1 Installing Trimble link (Administrator rights needed)

Insert the 12d v8 installation cd

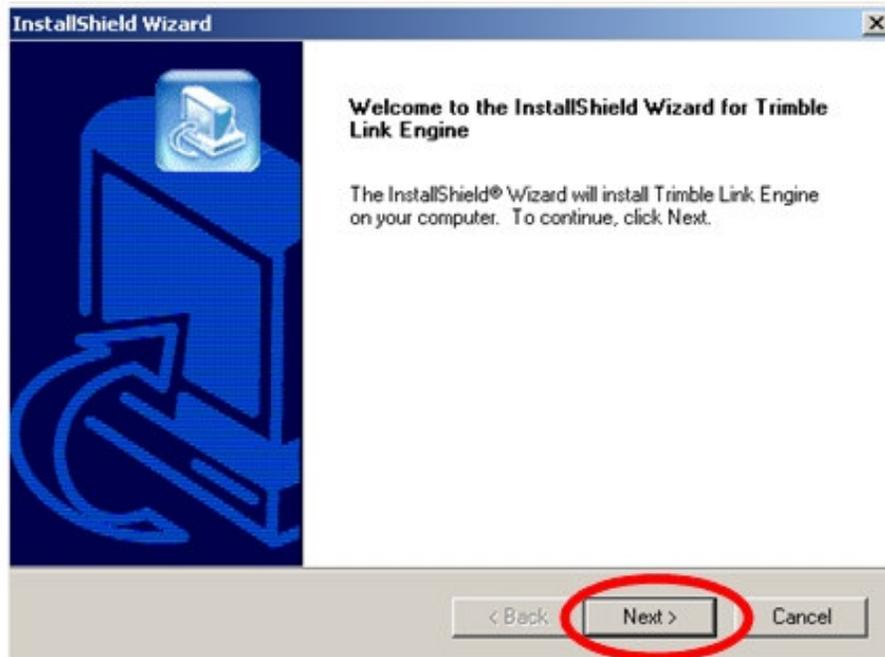


Select the **Other Software** tab

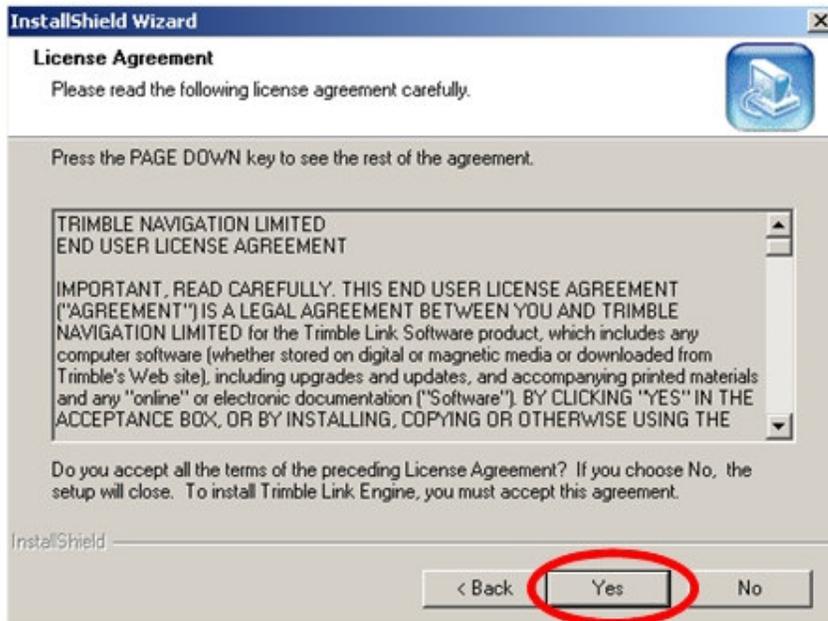




Select **Install** to begin the install process



Select **Next**



Select **Yes** to accept the licence agreement



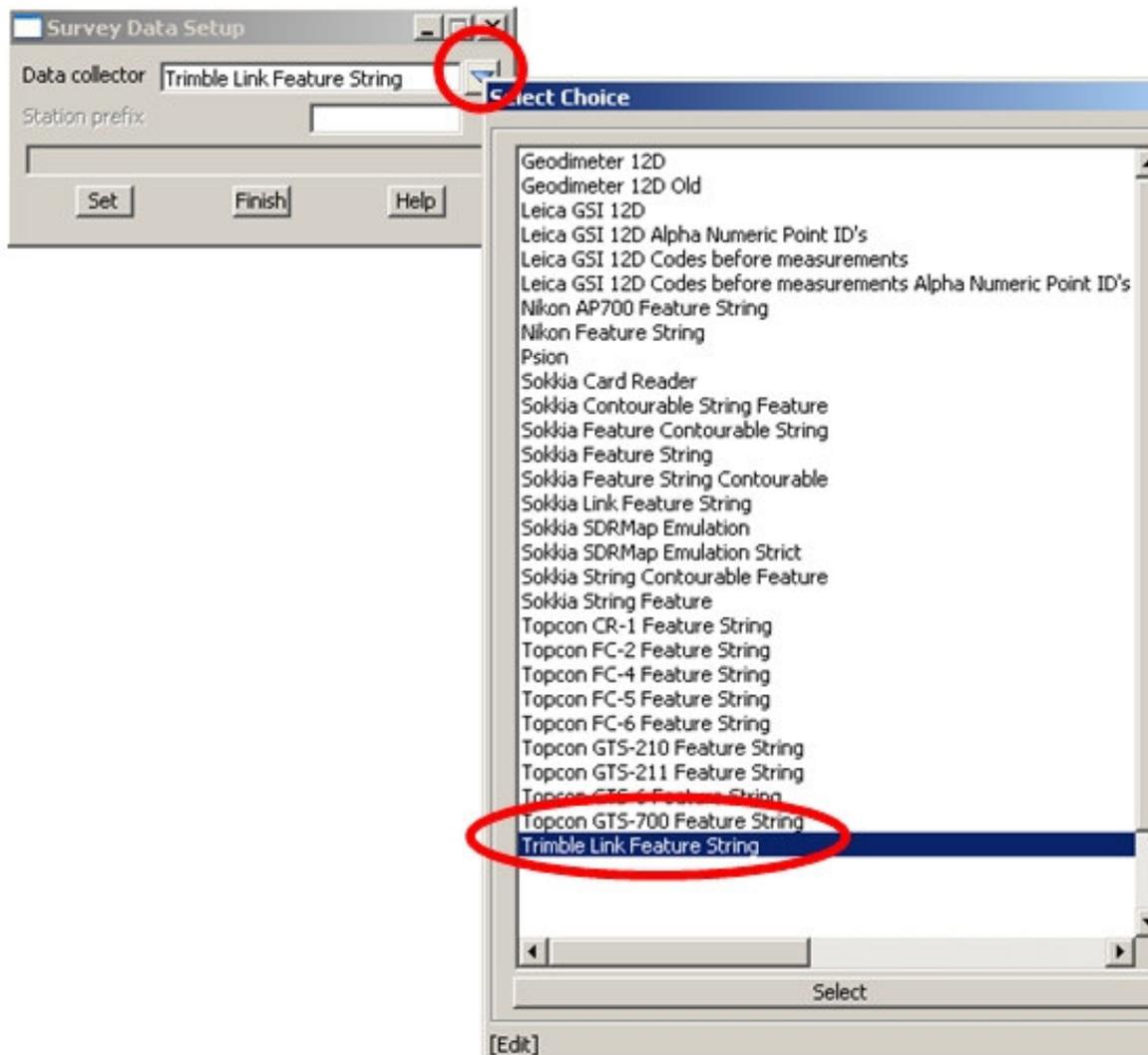
Select **Finish** to end the install

1.2 Registering Trimble link

The first time Trimble link is run you need to register the software. Ensure you are connected to the internet

In 12d select option **Survey=>Setup** to select the data collector type

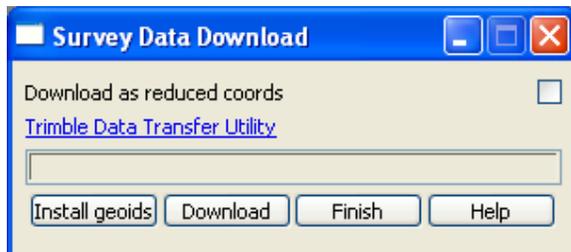
Select the data collector choice icon then select **Trimble Link Feature String**



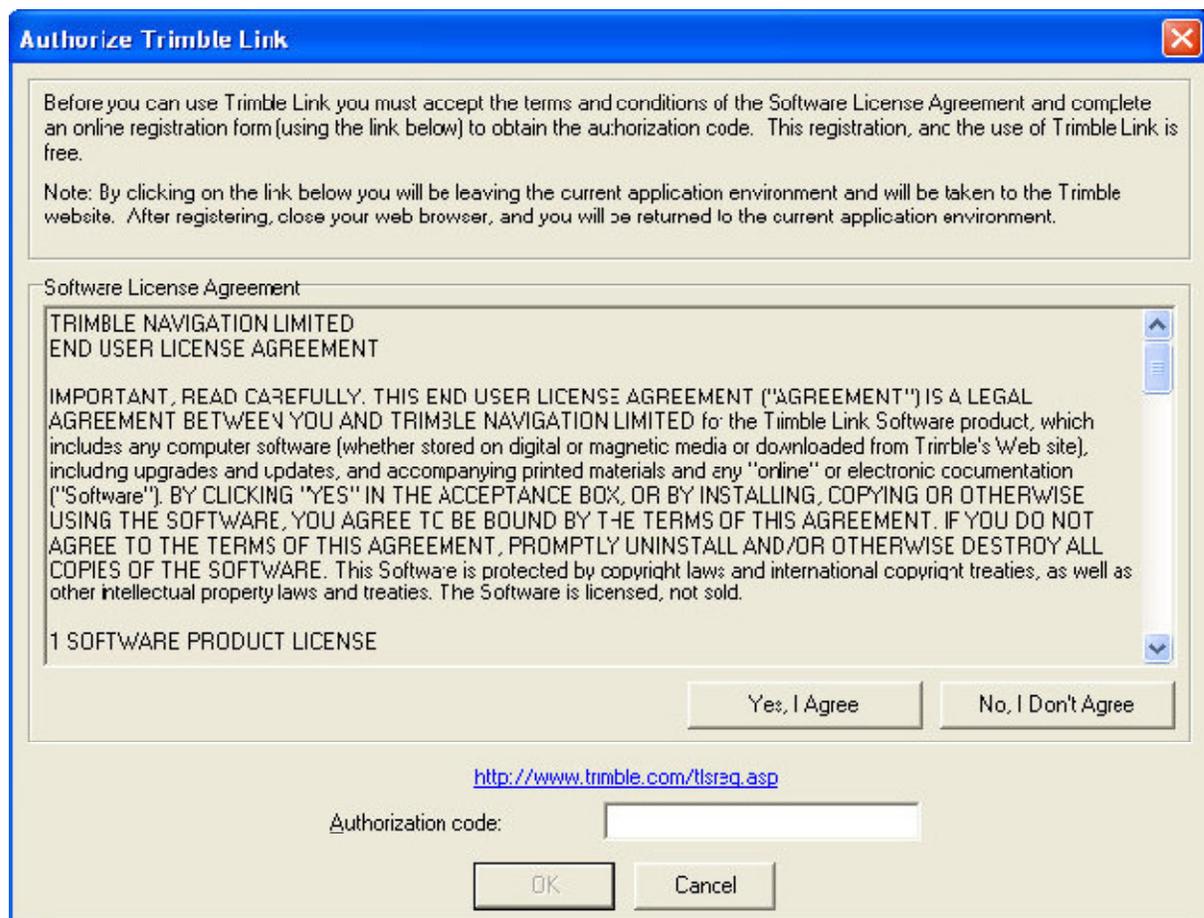
Select **Set** then **Finish**



Select option **Survey=>Download Raw**

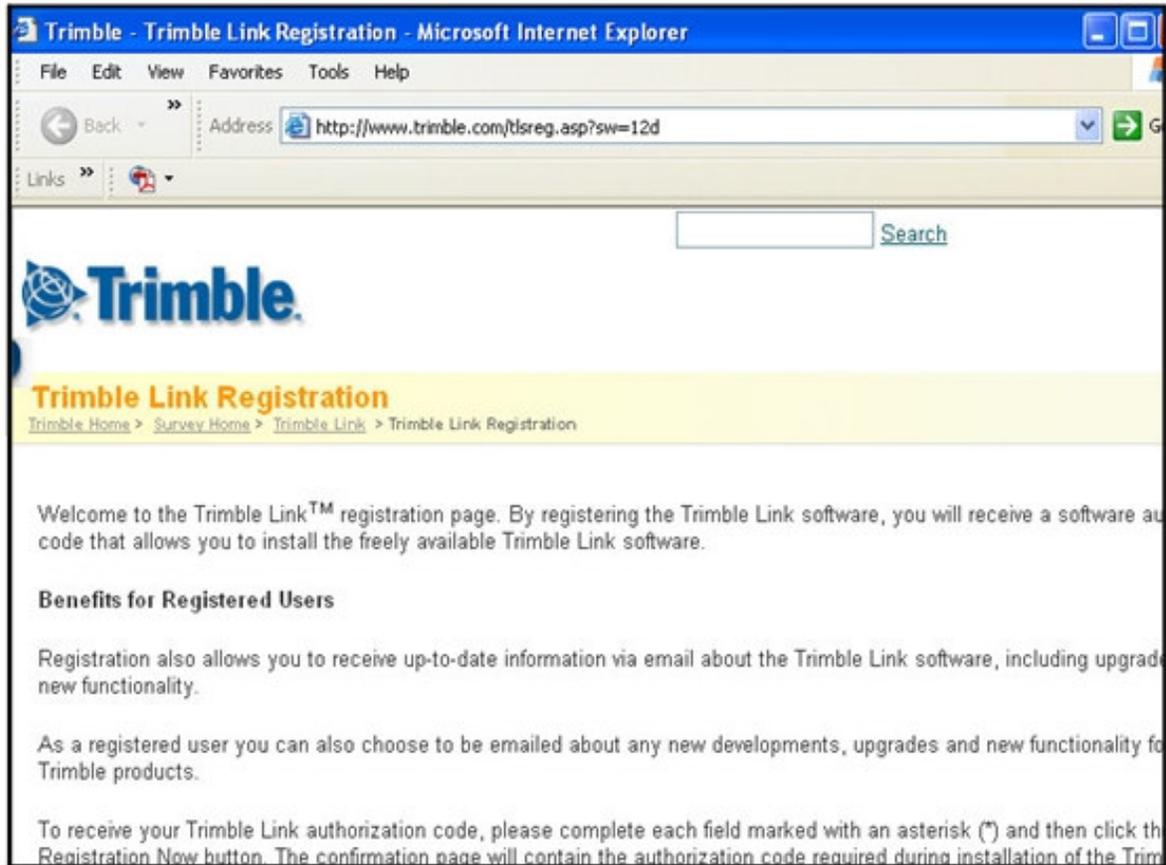


Select **Download**



An authorisation code is required. To register click on the link to the Trimble web page





The registration page appears. Scroll down to the bottom of the page and fill in your details. Select **Send Registration Now**



A registration number will be sent straight away. Record this number for entry into the Registration panel

Exit the panel and return to the Registration panel

Type in the Registration number, Select **Yes, I Agree** to accept the licence then select **OK**

Select **Close** to exit the Tips panel

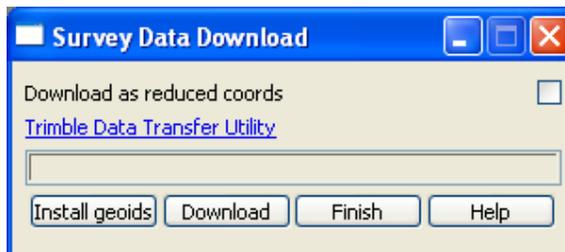
Trimble Link is now registered. Proceed to the relevant chapter to upload / download data

1.3 Updating Data Transfer software

As the data transfer software is provided by Trimble any updates need to be downloaded from the Trimble Web page link below

<http://www.trimble.com/datatransfer.shtml>

or by selecting [Trimble Data Transfer Utility](#) in the Survey Data Download panel



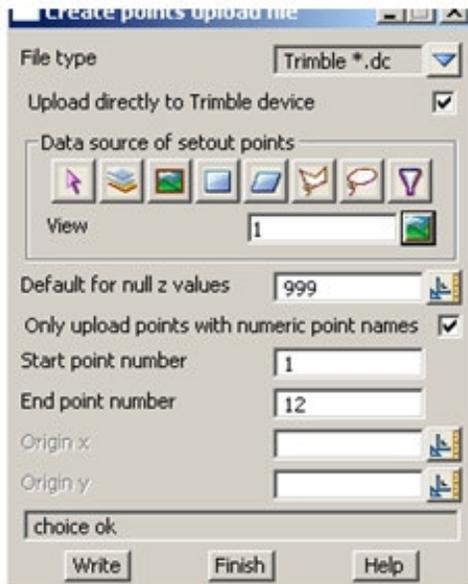
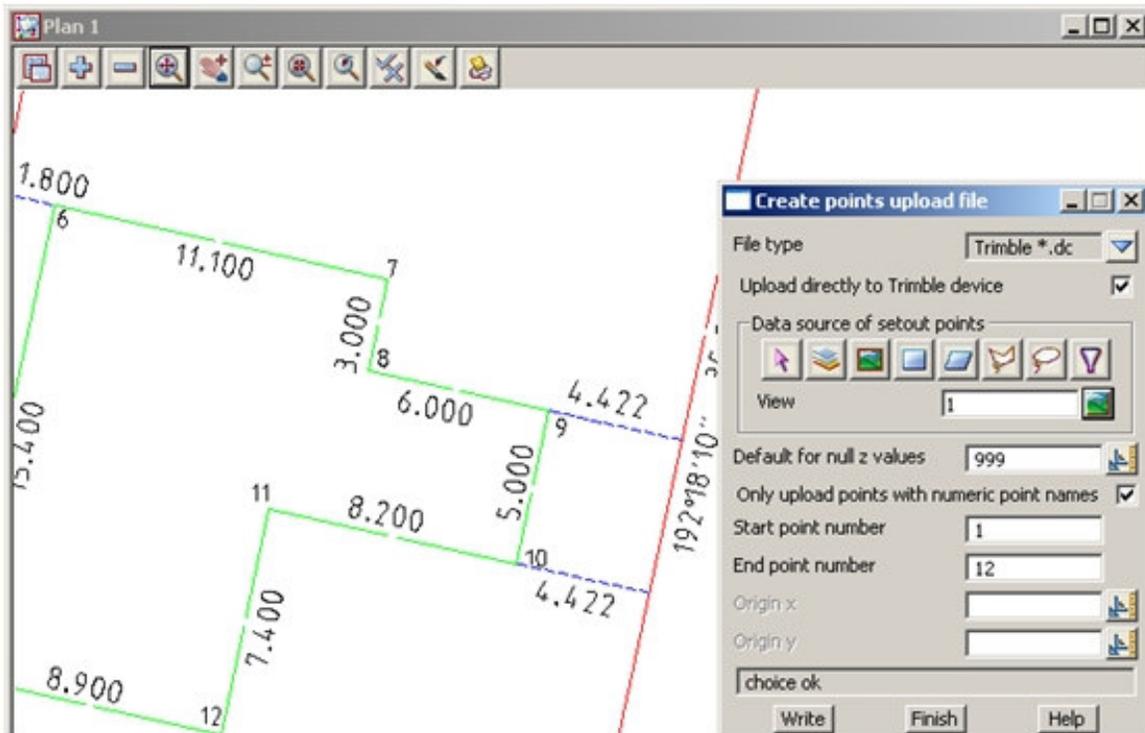
Installation instructions are included on the Web Page

2 Uploading from 12d to the Trimble controller

2.1 Point coordinates (Job file)

Create the point numbers for the setout points as per the **Getting Started For Surveyors** manual chapter 11.1.5

Connect the controller to the computer by an approved method then select option **Survey=>Upload=>Create points upload file (new)**



Tick the check box to upload directly to the controller

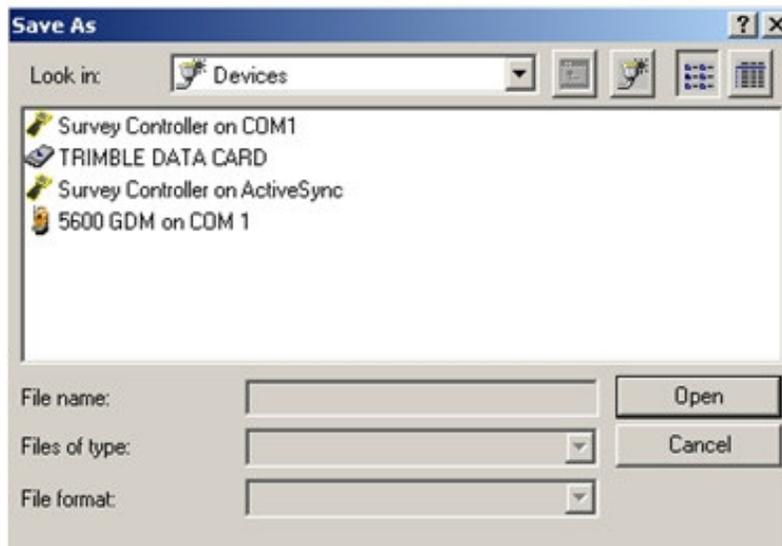
Select the data to upload using one of the source box options

Tick the check box to only upload numeric point numbers if you have no letters in the point numbers. This allows you to edit the number range

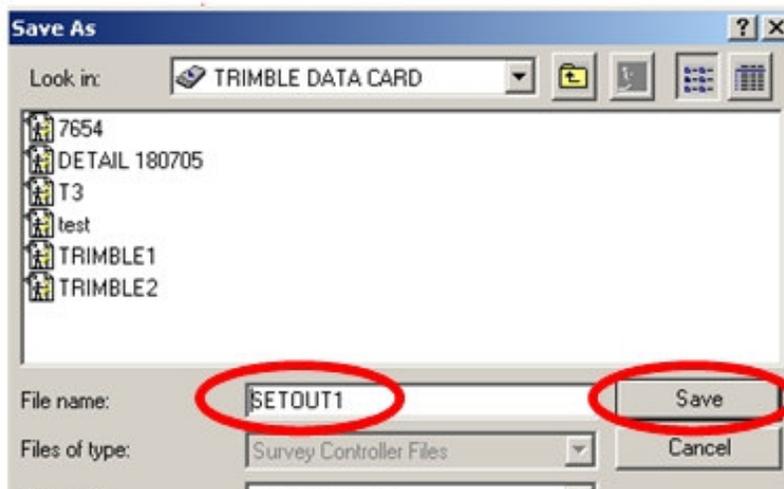
Select **Write**



Select **OK** to accept the warning regarding the coordinate system

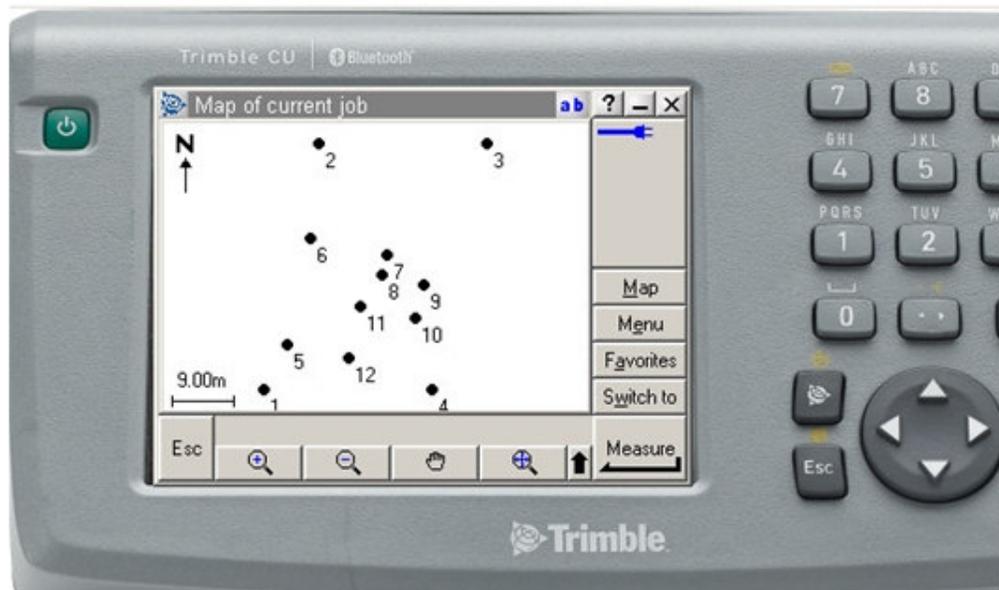


Select the controller for uploading then select **Open**

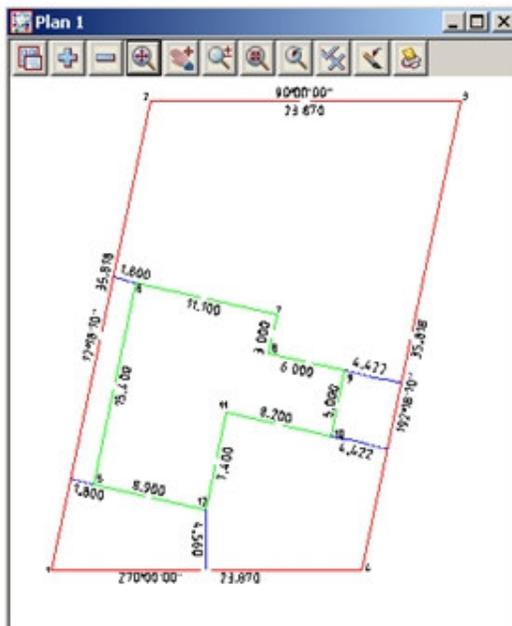


Type in the file name to create then select **Save**

The file can now be opened and viewed in the controller



To create an upload of strings or to have the shape of the house along with the text see sections on creating string uploads and dxf file uploads



2.2 Point coordinates (Linked file)

A linked file of coordinates can be created and uploaded to the controller for setout. The benefit of a linked file is that it is not included in the download of points from the controller.

Create the point numbers for the setout points as per the **Getting Started For Surveyors** manual chapter 11.1.5

Create comma delimited (csv) file of point coordinates

Select option **File I/O=>Data Output=>Write xyz general**

Select data to list

Type in file name

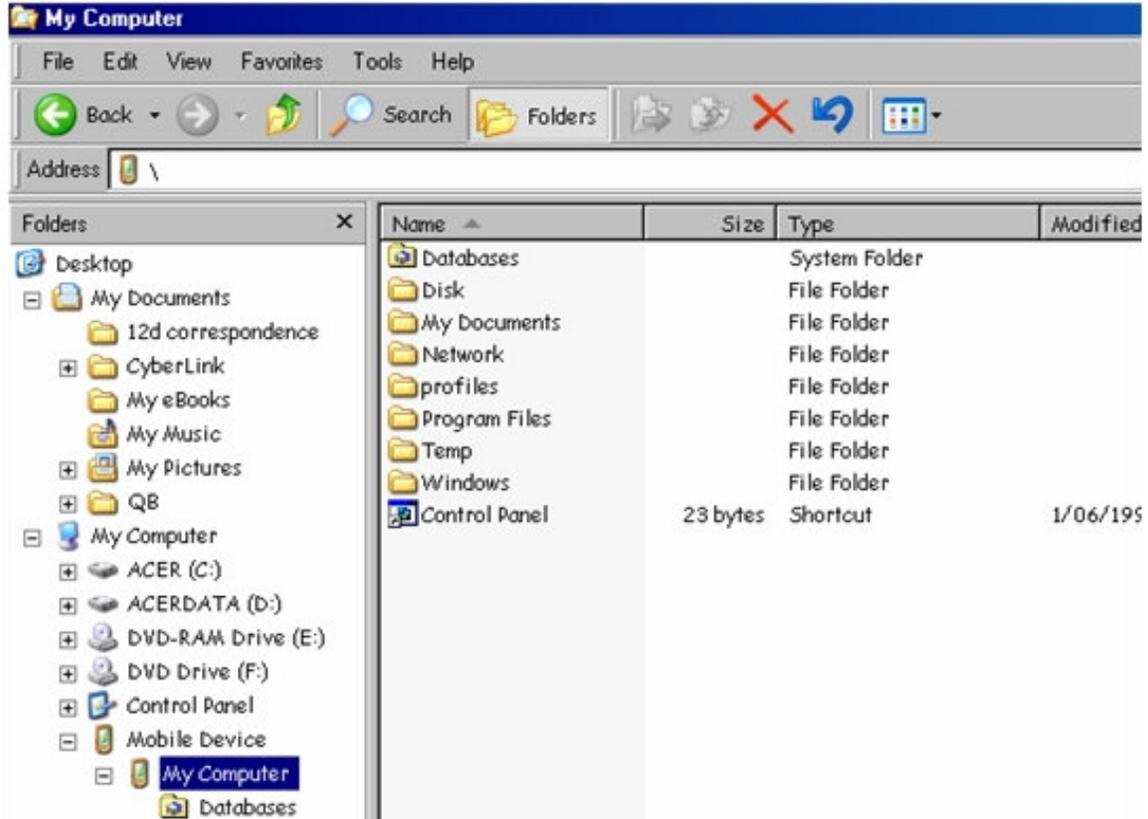
Set Delimiter to **comma**

Set up order of data

Select **Write**

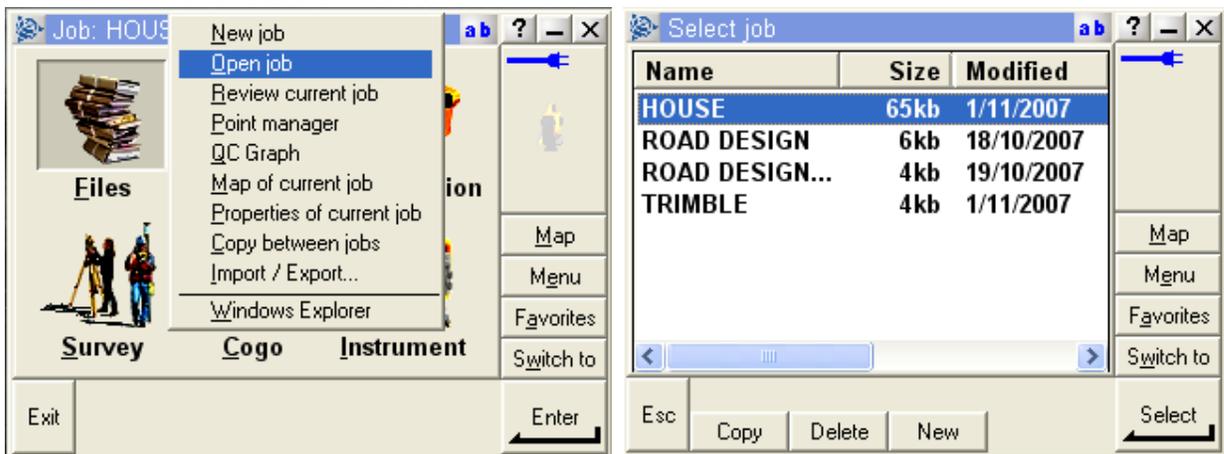
Copy the csv file to the controller using Active Sync and Windows Explorer.

Refer to Trimble documentation for target location of file



On the controller open the job to setout

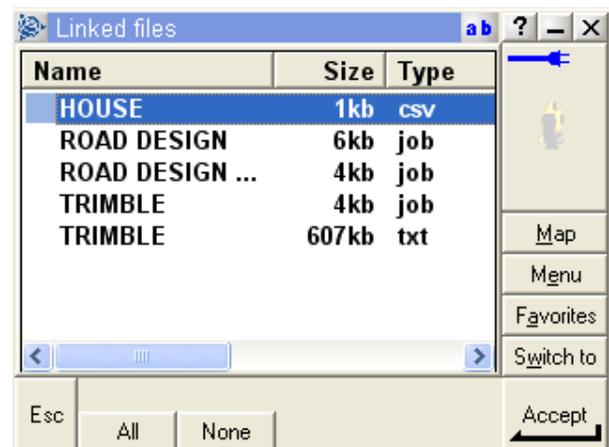
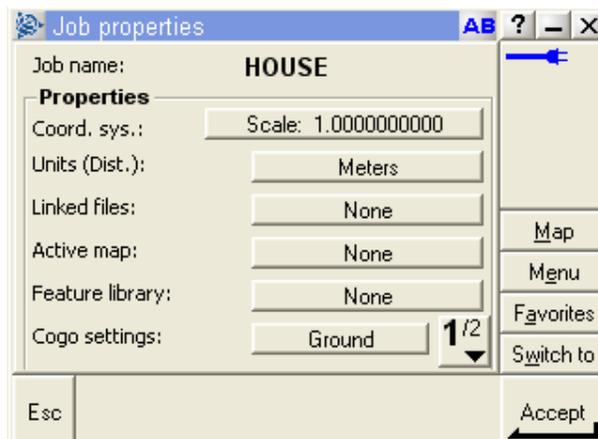
Select **Files=>Open Job** then pick the required job



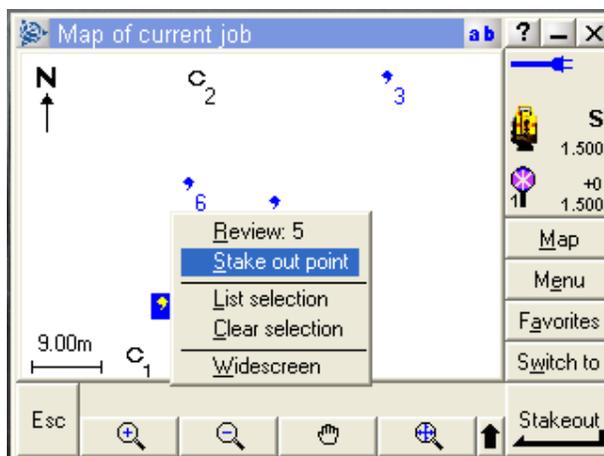
Select **File=>Properties of current job**



Select **Linked files** then select csv file to link



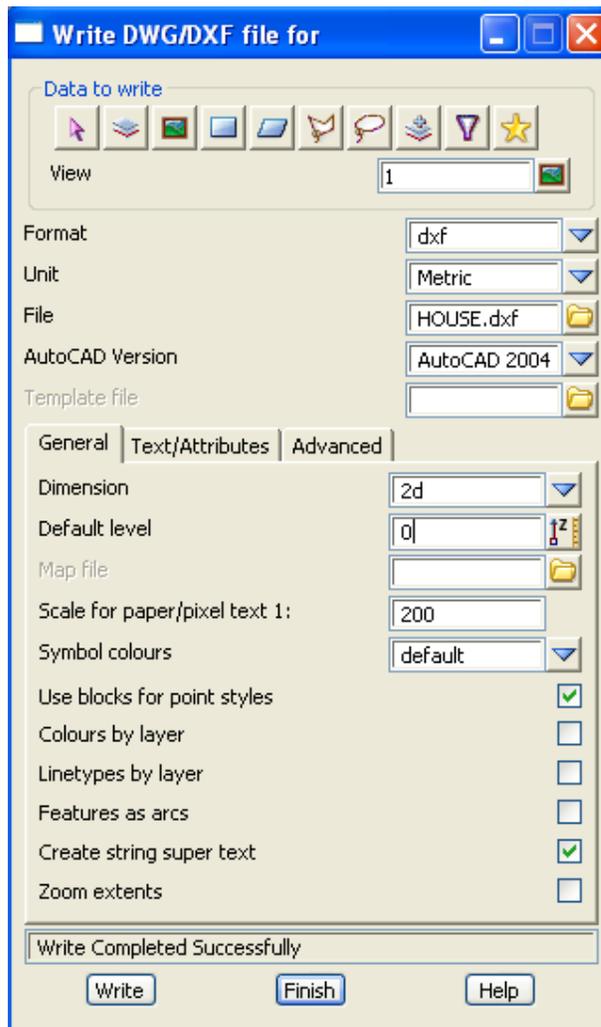
These points can then be set out in the stakeout menu



2.3 DXF file for background

A dxf file can be used as a background on the controller

Select option **File I/O=>Data Output=>DWG/DXF/DXB**



Select data to list

Select **dxf** as format

Type in file name

Set version **Autocad 2004**

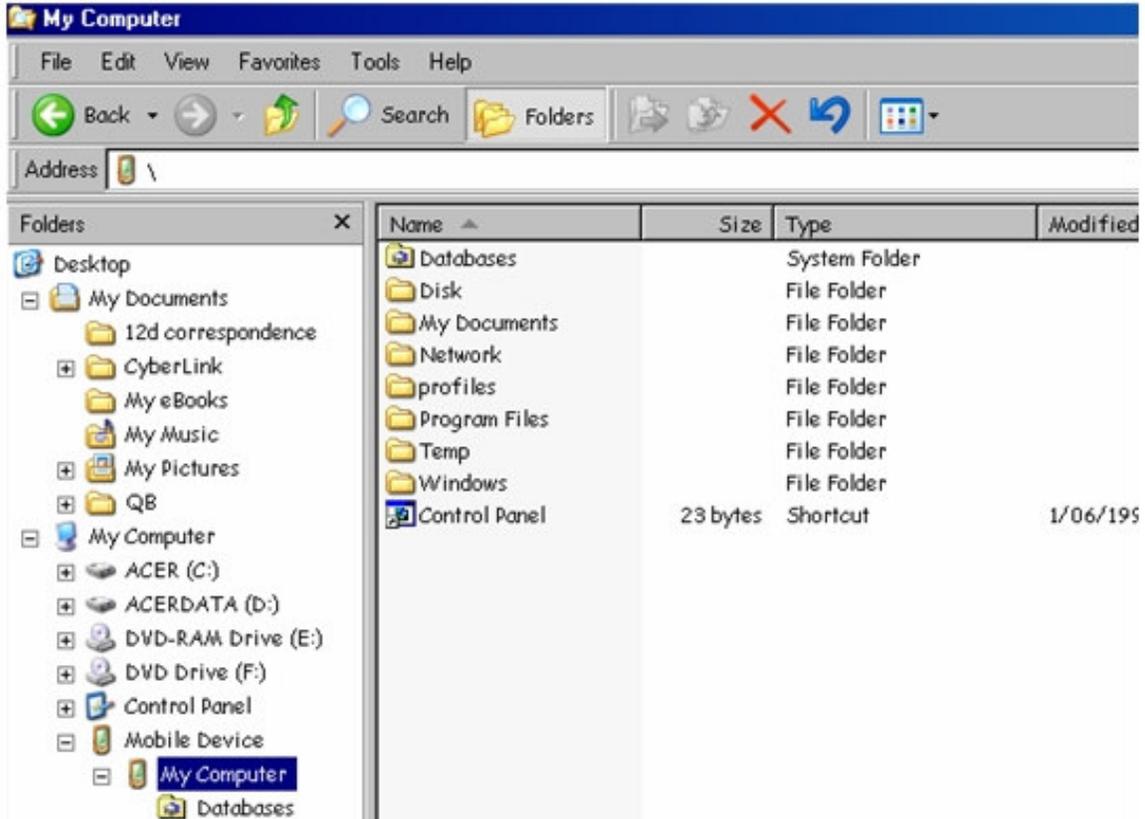
Select **2d**

Type in scale for text appearance

Select **Write**

Copy the dxf file to the controller using Active Sync and Windows Explorer.

Refer to Trimble documentation for target location of file



On the controller open the job to setout

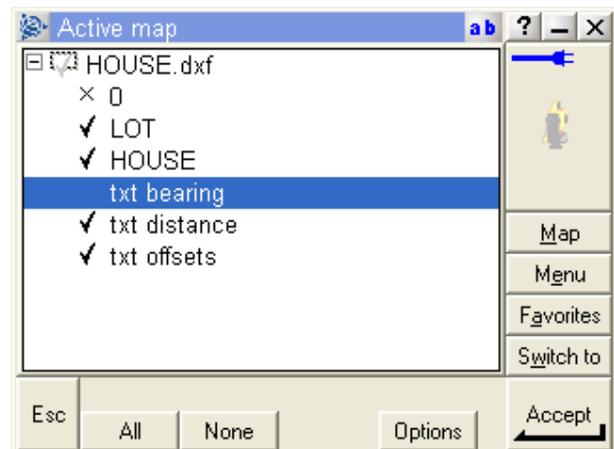
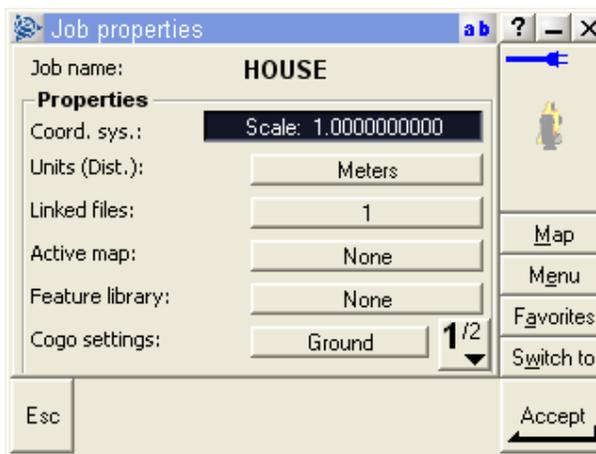
Select **Files=>Open Job** then pick the required job



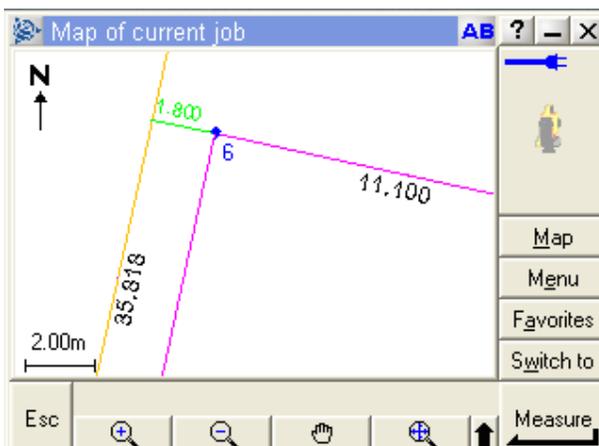
Select **File=>Properties of current job**



Select **Active map** then select dxf file. The layers can be then toggled on or off



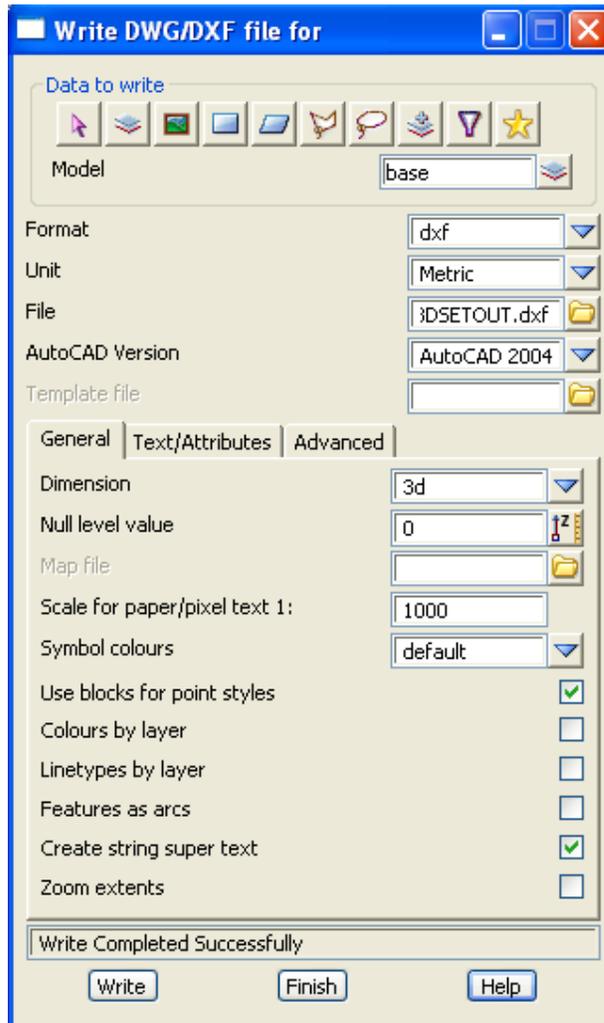
The strings and text can then be seen in the display along with the setout points



2.4 DXF file for setout

A dxf file can also be used for setout of strings

Select option **File I/O=>Data Output=>DWG/DXF/DXB**



Select data to list

Select **dxg** as format

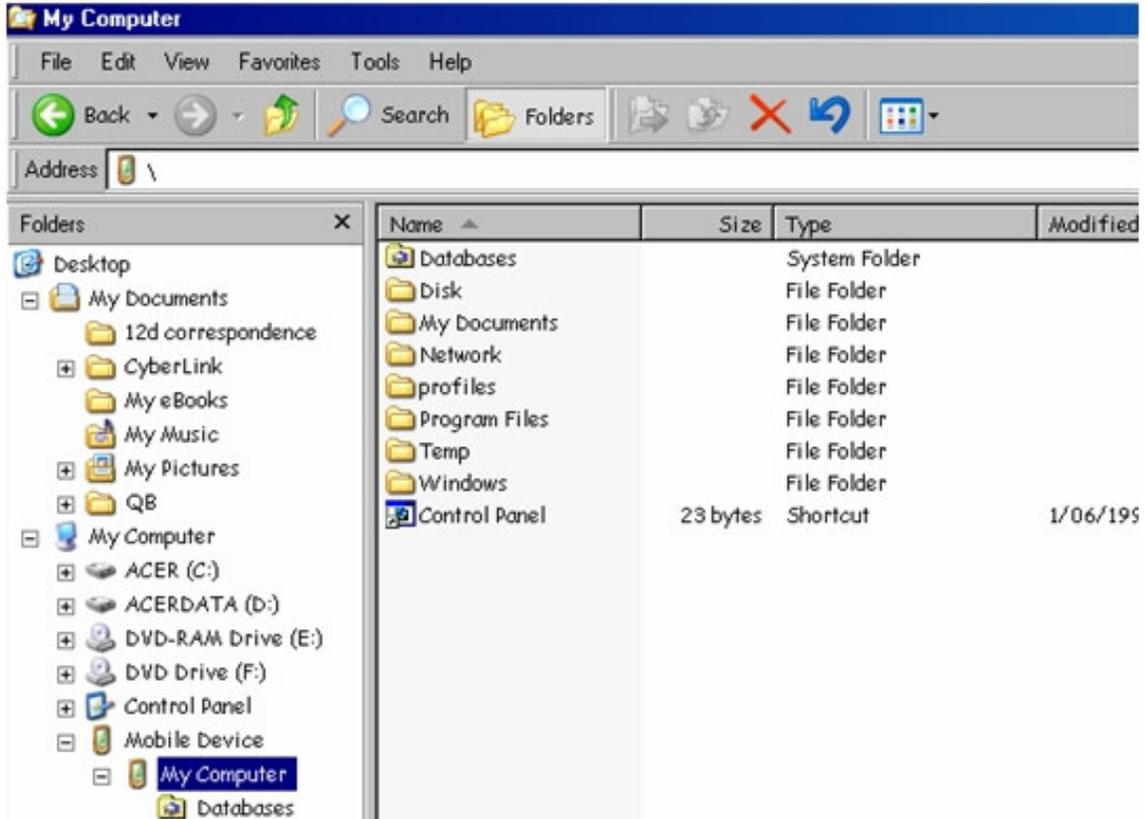
Type in file name
Set version **Autocad 2004**

Select **3d**

Select **Write**

Copy the dxf file to the controller using Active Sync and Windows Explorer.

Refer to Trimble documentation for target location of file

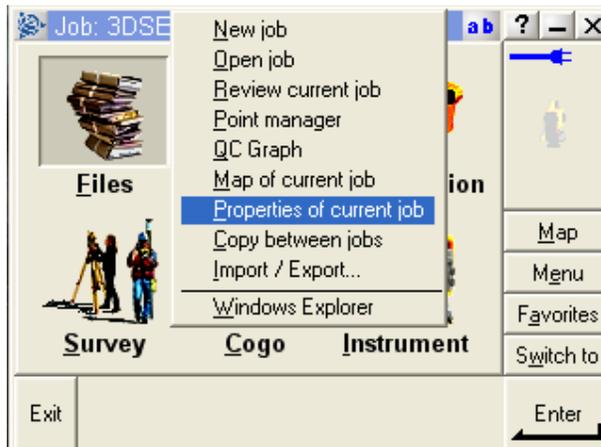


On the controller open the job to setout

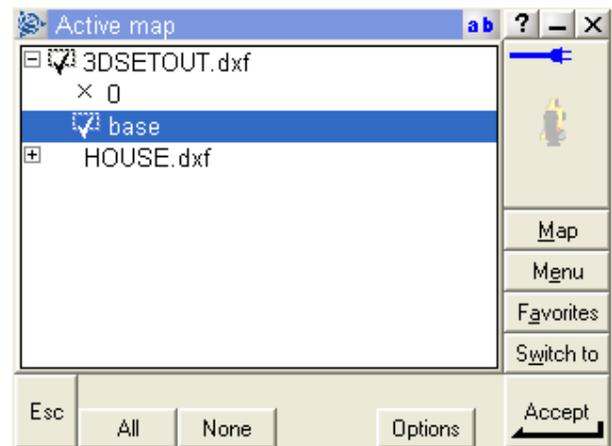
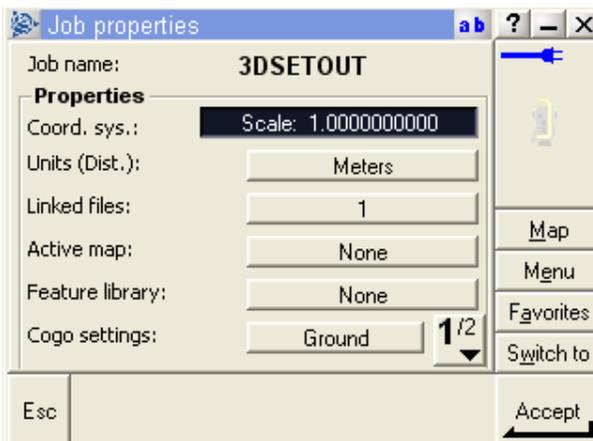
Select **Files=>Open Job** then pick the required job



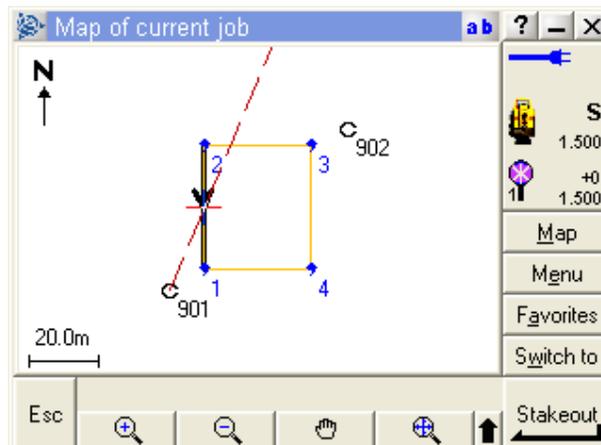
Select **File=>Properties of current job**



Select **Active map** then select dxf file. The layers can be then toggled on or off



The strings can then be seen in the display and used for 2d / 3d setout



2.5 TIN upload

Select option **Survey=>Upload=>Create triangle upload file**



Select File Type **Trimble binary *.ttn**

Tick the check box to Use Trimble Link

Tick check box to **Upload directly to Trimble device**

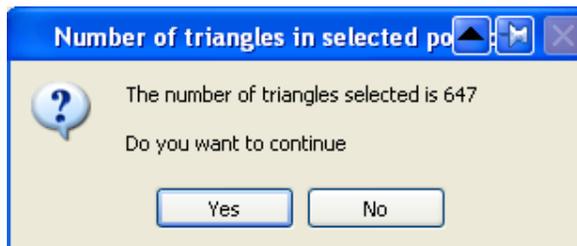
Type in a TIN name to create on the controller

Type in the TTM output file name

Select the TIN

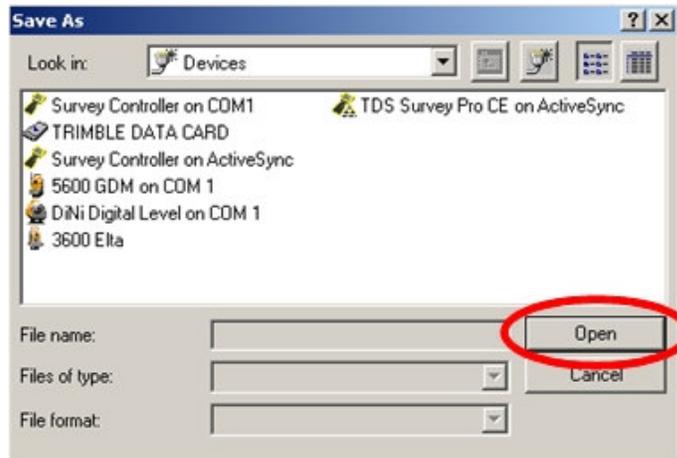
Select the polygon around the edge of the TIN

Select **Write**

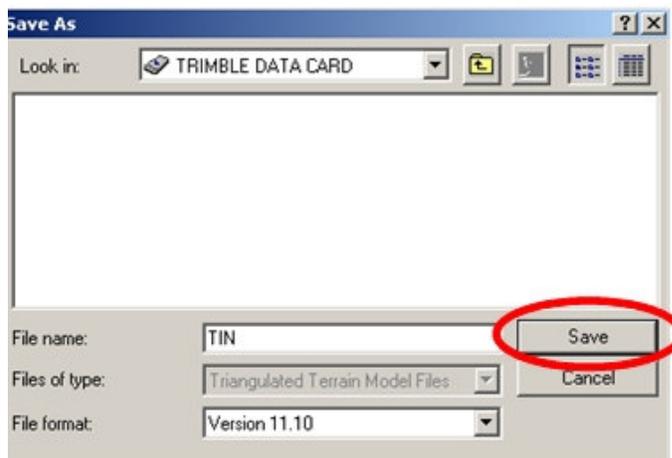


Select **Yes** to confirm the number of triangles

Select the controller then select **Open**



Type in the file name and select appropriate file format version if applicable



Select **Save**

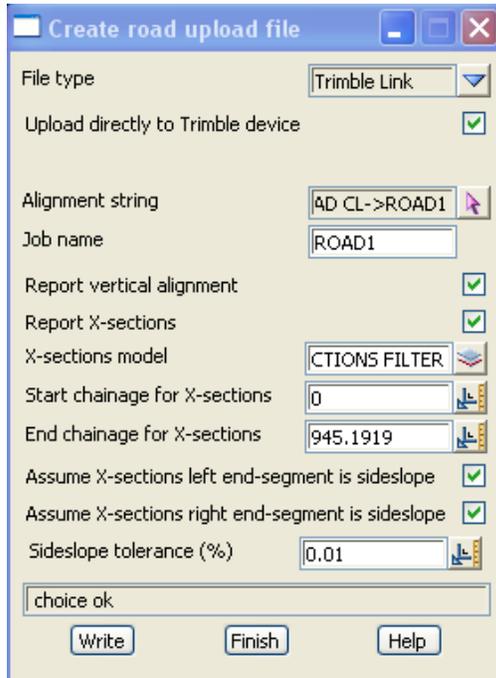
The TIN can now be used for height when setting out using the controller



2.6 Road sections and strings (Simple road)

Create upload file for road alignment and associated sections

Select option **Survey=>Upload=>Create Road upload file (new)**



Select File Type **Trimble Link**

Tick check box to **Upload directly to Trimble device**

Select the Alignment string

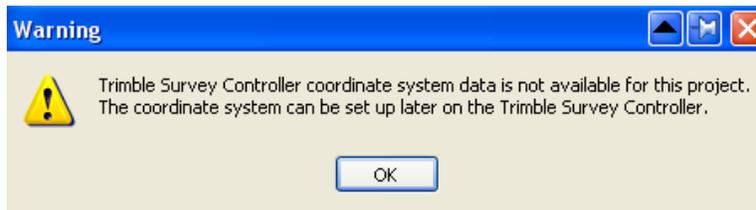
Type in the road name

Tick check box to Report vertical alignment

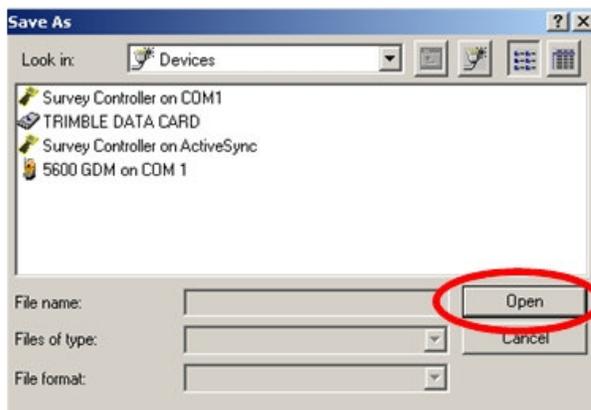
Tick check box to Report X-sections

Select the model for the cross sections

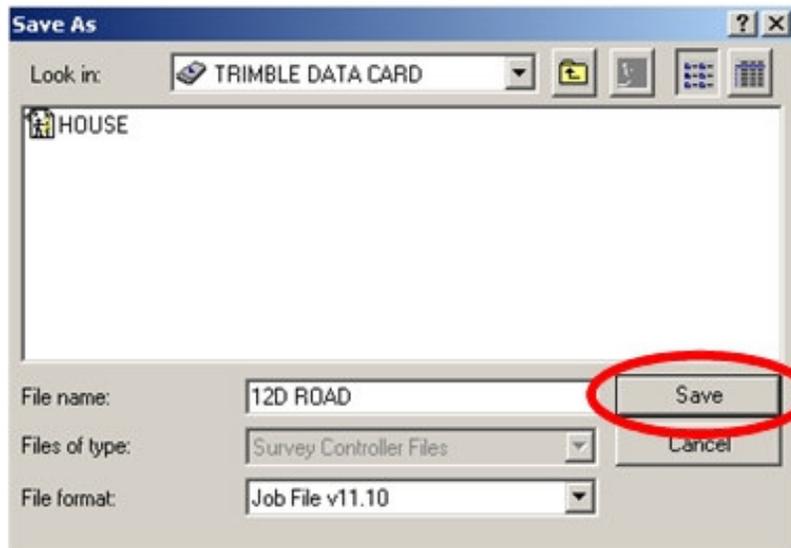
Select **Write**



Select **OK** to accept the warning



Select the controller then select **Open**



Type in the Road name to create then select **Save**

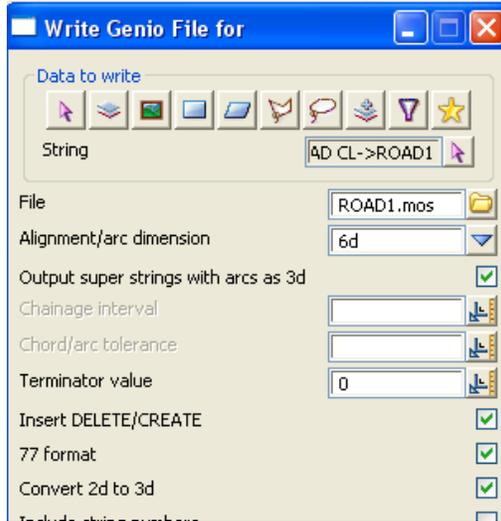


The road can now be set out using the controller

2.6 Road strings (Complex road)

The genio format is used to create an upload file with alignment strings and design strings. This is done in two parts

Create genio file of alignment



Select alignment string

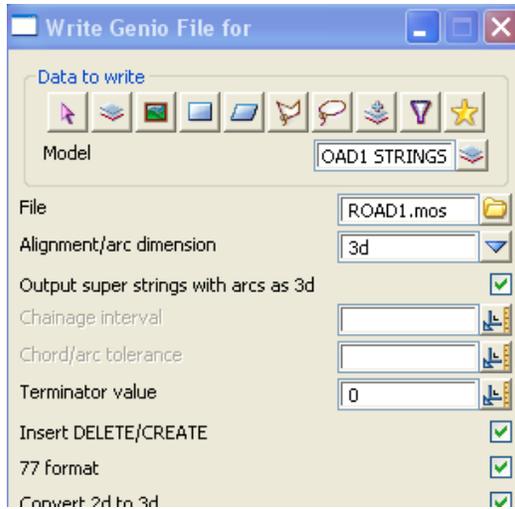
Type in file name

Change alignment/arc dimension to **6d**

Tick check box for 77 format

Select **Write**

DON'T FINISH PANEL YET!

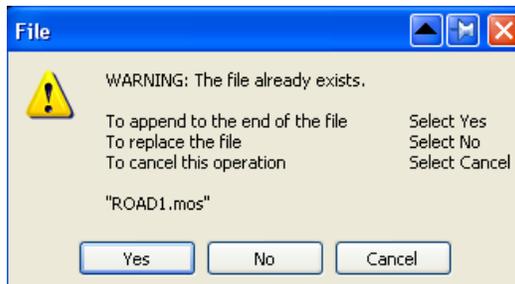


Select model for road strings

Keep previous file name

Change alignment/arc dimension to **3d**

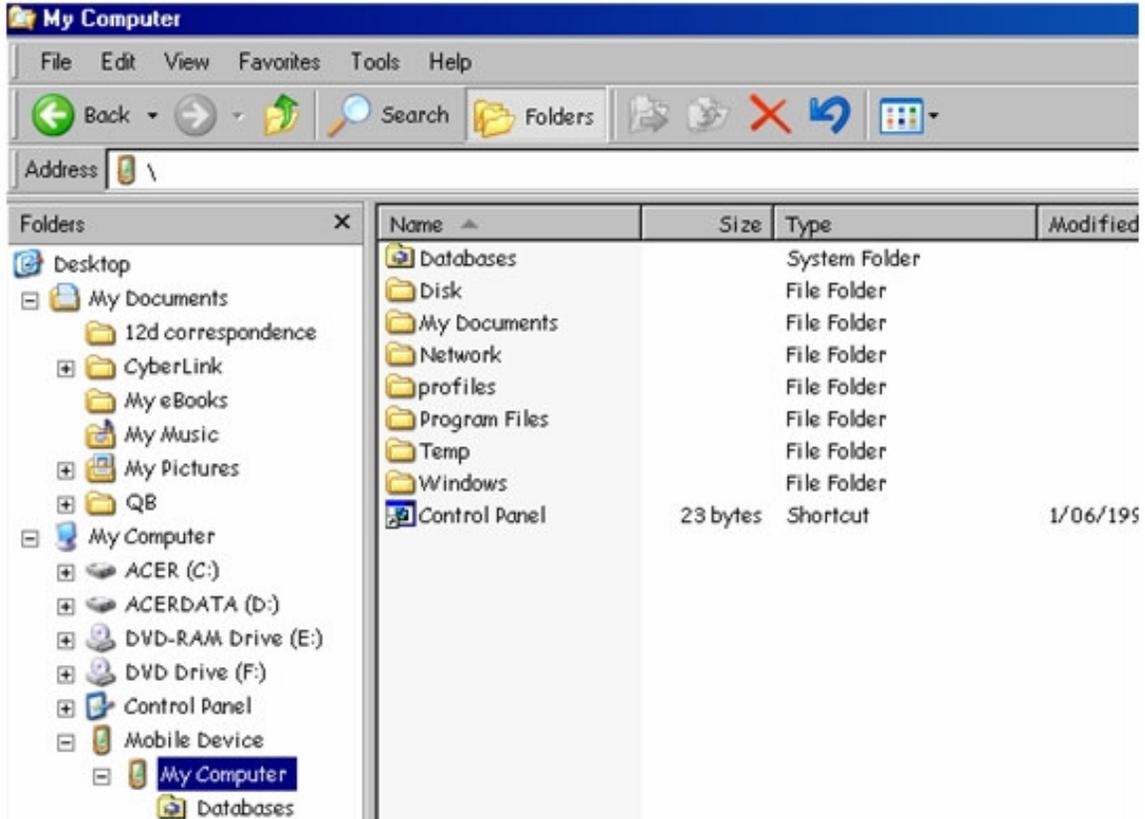
Select **Write**



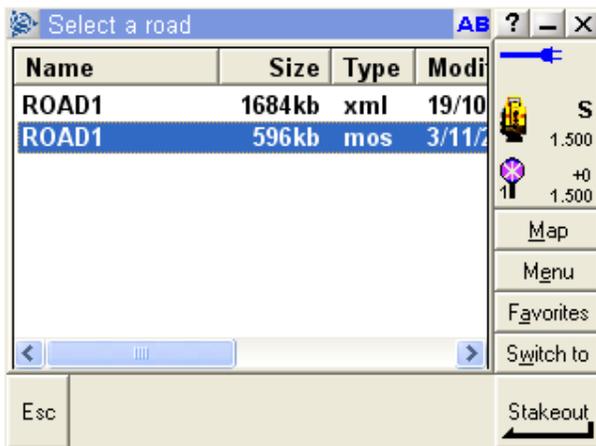
Select **Yes** to append to the existing file

Copy the genio file to the controller using Active Sync and Windows Explorer.

Refer to Trimble documentation for target location of file



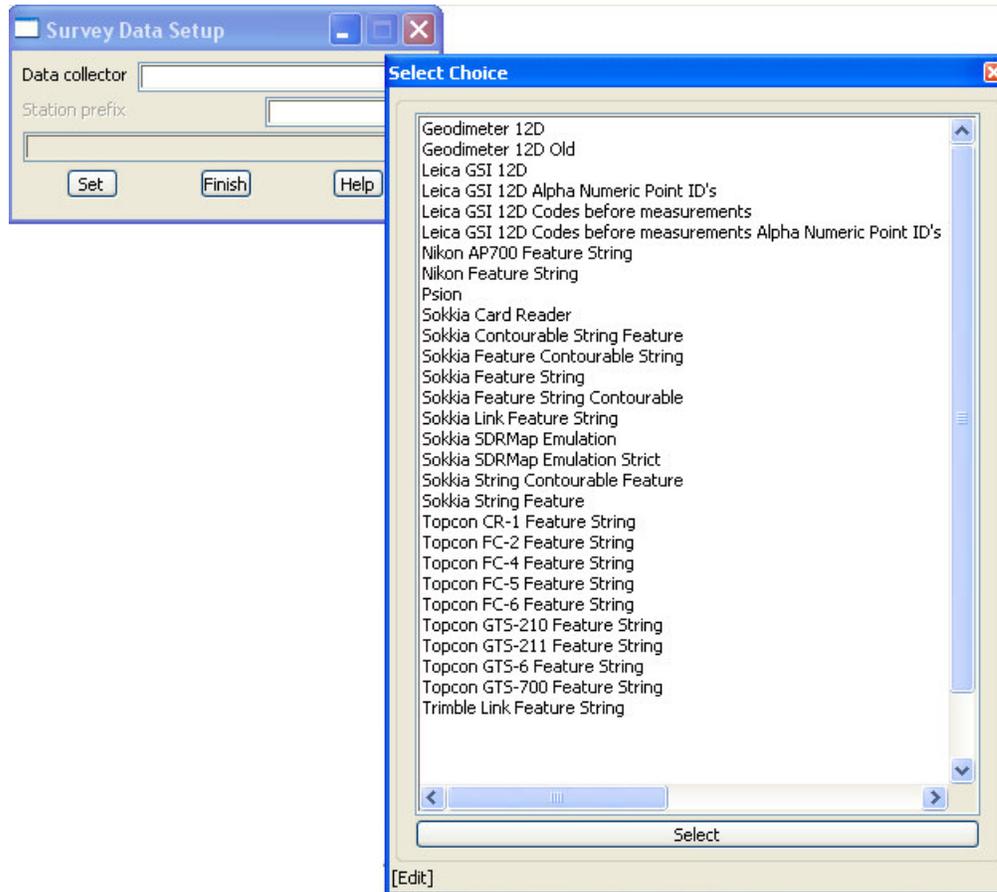
On the controller the genio file can be selected when in the Roads Stakeout menu



3 Downloading

3.1 Setting up data collector

Select option **Survey=>Setup**

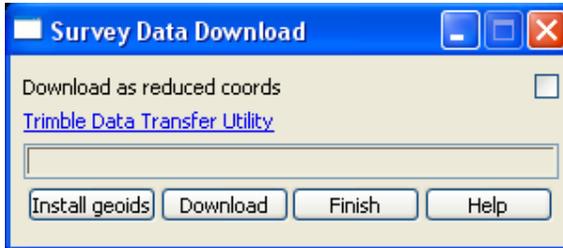


Select the Data collector choice icon then select **Trimble Link Feature String**

Select **Set** then **Finish**

3.2 Downloading raw data

Select **Survey=>Download raw**



If downloading data from gps file the data can be reduced as vectors from the base station or by ticking the “Download as reduced coords” are reduced as coordinates

The advantage of downloading as vector observations is the ability to change target heights

If the controller software has been recently updated the Trimble link software should also be updated.

To do this click on the hyper link [Trimble Data Transfer Utility](#) to go to the Trimble web page and follow the instruction

Trimble [Trimble Worldwide](#) [Search](#)
[Popular Searches](#)

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Trimble Data Transfer Utility
Trimble Home > Survey Home > Trimble Data Transfer Utility

See Also

- ▶ Trimble Geomatics Office
- ▶ Trimble Total Control
- ▶ Terramodel
- ▶ GPS Pathfinder® Office

Trimble Data Transfer Utility

The Trimble Data Transfer software transfers data from a range of devices to your PC. You can then import the data into the [Trimble Geomatics Office™](#), [Trimble Total Control™](#), [Terramodel®](#), [GPS Pathfinder® Office](#) software, or [Trimble Link™](#), or the [GPS Analyst™](#) extension for ESRI ArcGIS software.

Devices that you can download data from include:

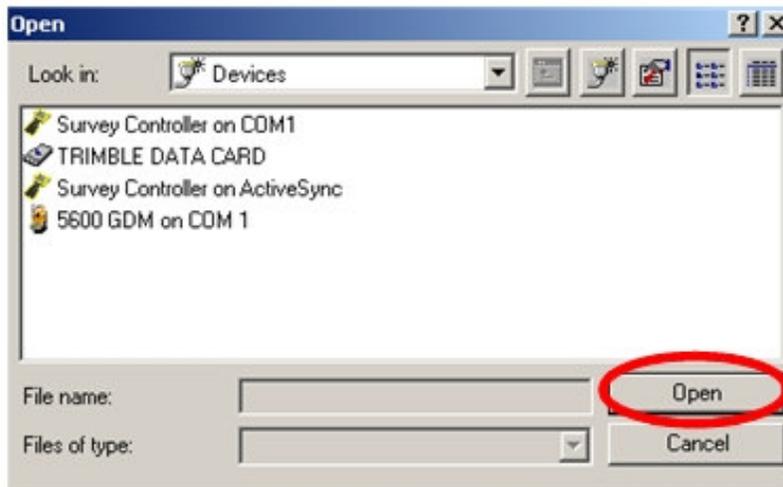
- ◆ Trimble Survey Controller
- ◆ Trimble Series 4000 and R/5000 receivers
- ◆ Trimble 3300
- ◆ Trimble 3600 (Elta, Geodimeter, TDS)
- ◆ Trimble 5600 (Elta, Geodimeter, TDS)
- ◆ Trimble Digital Fieldbook
- ◆ DiNi Digital Level
- ◆ Trimble Survey Pro
- ◆ All Mapping and GIS data collectors
- ◆ Nikon total stations (serial connections)

The Trimble Data Transfer software is free to download:

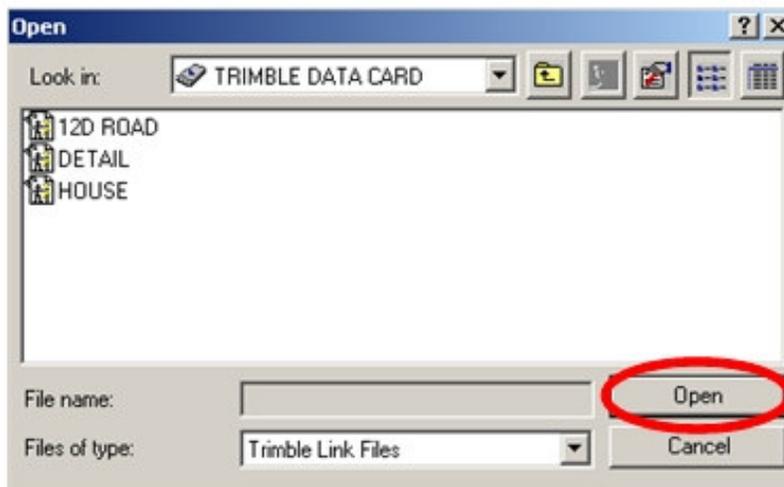
- ▶ [Trimble Data Transfer V1.36 One-Click Install for Microsoft Windows NT/2000/XP Users](#)
- ▶ [DataTransfer136.exe \[.exe 43MB\] for Microsoft Windows VISTA Users](#)

Instructions

Select **Download** to start the download process



Select the Survey Controller then select **Open**



Select the detail survey file then select **Open**

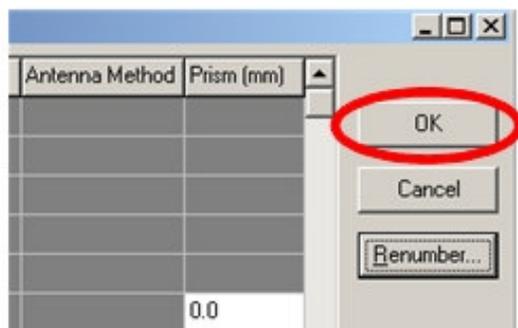
The raw file can be edited here prior to creating the field file



The 'Check In' dialog box contains a table with the following data:

Order	Type	Name	Feature Code	Height	Antenna Type	Antenna Method	Prism (mm)
1	NEZ	901	STN				
2	PLR STN	901	STN	0.000			
3	POLAR	902	STN	0.000			
4	STN	901	STN	1.615			
5	BS	902					
6	F1	902	STN	1.600			0.0
7	F1	1002	CHK905	1.600			0.0
8	F1	1003	01T8R	1.600			0.0
9	F1	1004	01T8R	1.600			0.0
10	F1	1005	01T8R	1.600			0.0
11	F1	1006	01T8R	1.600			0.0
12	F1	1007	01T8R	1.600			0.0
13	F1	1008	01T8R	1.600			0.0
14	F1	1009	01T8R	1.600			0.0
15	F1	1010	02FE	1.600			0.0

To finish the editing and convert to a field file select **OK**



The procedures for reducing the field file are given in chapter 9.4.5 of the Getting Started For Surveyors manual