

12d Model Course Notes

```

specials = {
  1324.3792
  1304.3792
  1307.8792
  1317.8792
  1297.8792
}
hinge_modifier = {
}
left_side_modifier = {
  width "lok" 245.6 306.5 4 8 ab
  width "lok" 306.5 321.5 8 8 ab
  width "lok" 321.5 341.3138 8 4
  insert "dd" "magenta" 4 unknow
  width "lok" $null $null "bus b
  xfall "lok" 1277.9408 1367.879
}

```

Fixed Width to String

Link name:

Start chainage:

End chainage:

Interval:

String:

Side to search:

Extra start:

Extra end:

Comment:

Active:

OK Apply Finish Help

Perspective OpenGL 3

SUMMARY

Trimble Geomatic Office (TGO) and Trimble Survey Controller Software are no longer supported by Trimble.

Trimble Business Center (TBC) and Trimble Access are now Trimble's new and only supported software. EXDS doesn't have a Trimble Access Emulator as Trimble require you to be a current user and to register your equipment to use Trimble Access.

Trimble Business Center (TBC) can be downloaded off the Trimble website http://www.trimble.com/construction/heavy-civil/software-solutions/Business_Center-HCE_download.aspx

Note this is the Heavy Construction version (HCE), which is free, and a lite version that does most basic functions.

If you're a Trimble client and are doing a lot of Network Adjustments and Static GPS reduction you should then consider purchasing Trimble Business Center (TBC).

Codelists

- Codelists can be created a number of ways for the Trimble. Codelists created in Trimble Business Centre (TBC) and Trimble Access on the instrument are now the same file. This file is known as Feature Definition File (.fxl).
- Codelists created in Trimble Geomatic Office software (TGO) (this software is no longer supported) are called Feature and Attribute Library Files (.fcl).
- Codelists created on the instrument in Survey Controller Software are called Feature and Attribute Library Files but with a (.fal) extension. These files are more basic as you **cannot** add attributes when creating a codelist on the instrument using Survey Controller Software.
- Codelist makes it easy to code, free coding (multiple coding) and to code attributes (tree size, species etc).
- EXDS has sample codelist and map files – which use tree size attribute to scale the symbol.

Format Files

- Trimble **DOES NOT** require Format Files like the Leica instruments.



Download

- Downloading from your Trimble Instrument can be achieved a number of ways.
- There are three routes to converting the data from the card into useful info:
 - o Using Trimble Link (direct downloading), which is downloaded for free from the Trimble Website. This software is like Windows 7 Mobile (Active Sync) and your Survey Controller with your data needs to be connected to your PC or Laptop so the data can be downloaded directly to 12d.
 - o Setting your data recorder to Trimble Feature String in 12d and the using the convert raw function to convert your Trimble Link Job File (.tlk) to a Field File (.fld).
 - o The last way is to use the export function on your Trimble to export to a format which can be used by 12d, which then the file can be copied over by USB or by using Windows 7 Mobile (Active Sync). These file formats can include the following file types: .csv, .dat, .txt, .sdr etc....

Upload

- Upload by copying files directly onto your instrument by using Trimble Link or by using a USB to copy the files. Also Windows 7 Mobile (Active Sync) can be used to transfer files directly.
- Points upload by creating a csv file **File I/O => Data Output => xyz => xyz general** and copied to the instrument using the above options. Points can also be upload using Trimble Link using the 12d option called **Survey => Trimble => Create Points Upload File**. In 12d v9 it can be found under *Survey => Upload => Create Points Upload File (new)*.
- Strings can be copied by creating a dxf file and copying it to your Trimble Data folder.
- Triangles (T.I.N.) Upload by **Survey => Trimble => Write TTM File**. In 12d v9 it can be found under *Survey => Upload => Create Triangle Upload File*.
- Trimble Roding Files using Cross-Sections are uploaded by using **Survey => Trimble => Trimble Link Roads**. If you are using Strings then using the option **File I/O => File Output => Genio** is used. This option is best for complex roads. . In 12d v9 it can be found under *Survey => Upload => Create Road Upload File (new)*.










CODELISTS

EXDS has codelists (and associated map files) for use on all Trimble Instruments (J:\SURVEY\Trimble\Codelists).

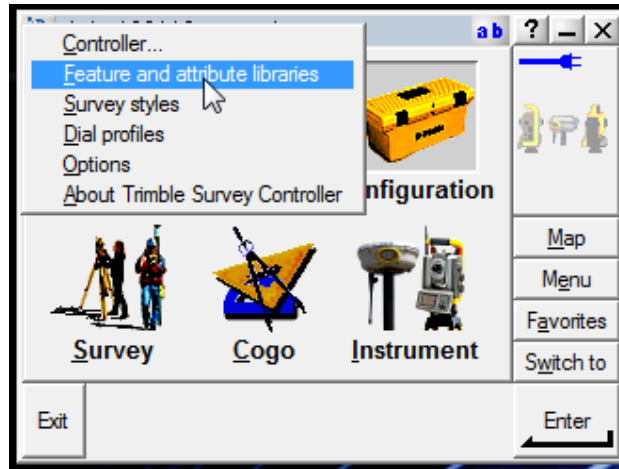
The codelist for all Trimble Instruments are the same, if created in Trimble Geomatic Office the .fcl file can be converted in Trimble Business Centre to create a .fxl file to use with Trimble Access.

They can be created in Trimble Geomatic Office (TGO) under the CAD tab then go to Feature and Attribute Editor and the codelist file is given the extension .fcl. Then the codelist is exported from TGO using **File => Export** and copied to the Trimble Data folder on your instrument.

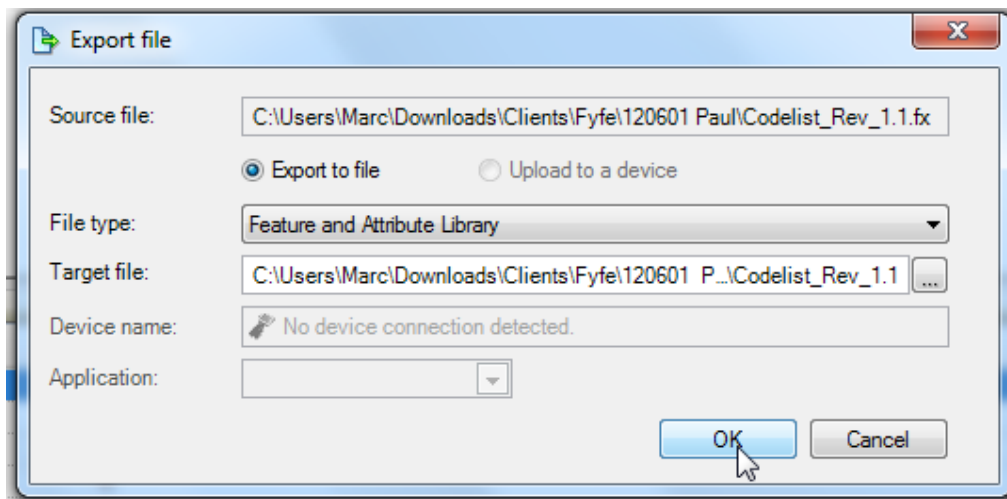
Name	Date modified	Type	Size
 Clean_Skin_Trimble.fal	20/02/2009 12:44 ...	FAL File	20 KB
 Clean_Skin_Trimble.fcl	6/05/2009 10:19 AM	Feature and Attrib...	17 KB
 code list.fcl	20/02/2009 12:32 ...	Feature and Attrib...	23 KB
 DTEL.fal	4/06/2010 12:23 PM	FAL File	20 KB
 EXDS.fcl	16/01/2009 8:27 AM	Feature and Attrib...	22 KB

They can be also created on the instrument under the Configuration icon then Features and Attributes Libraries but you **cannot** add attributes like Tree spread, diameter and species etc. This codelist is given the extension .fal.



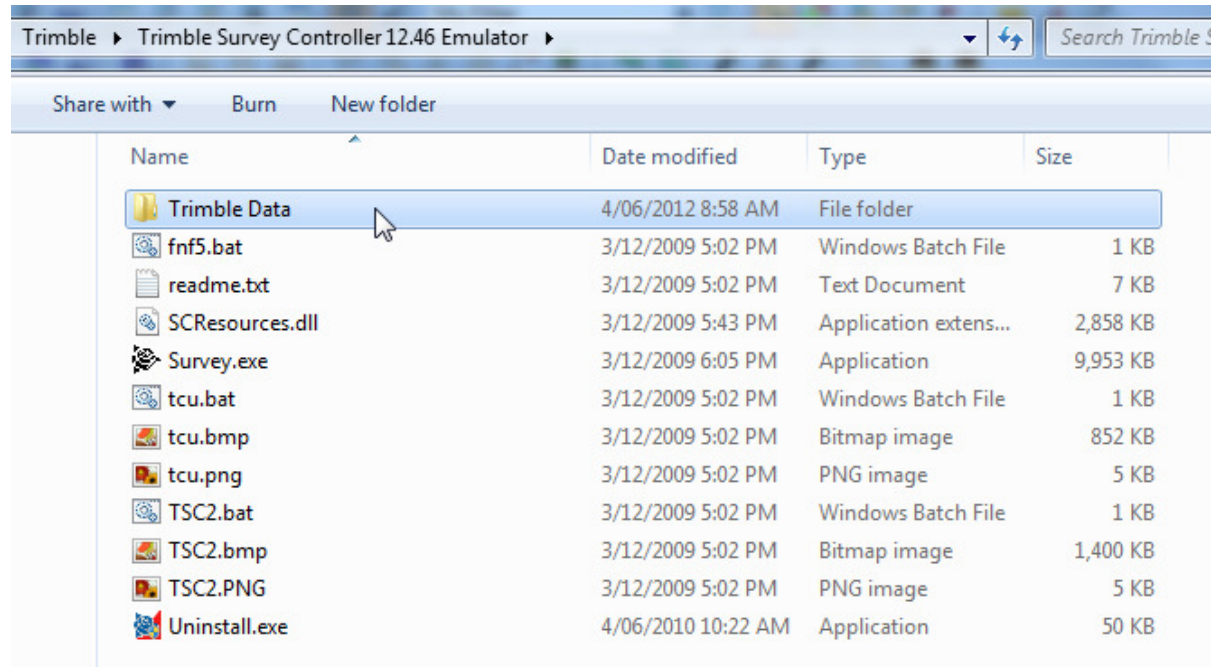


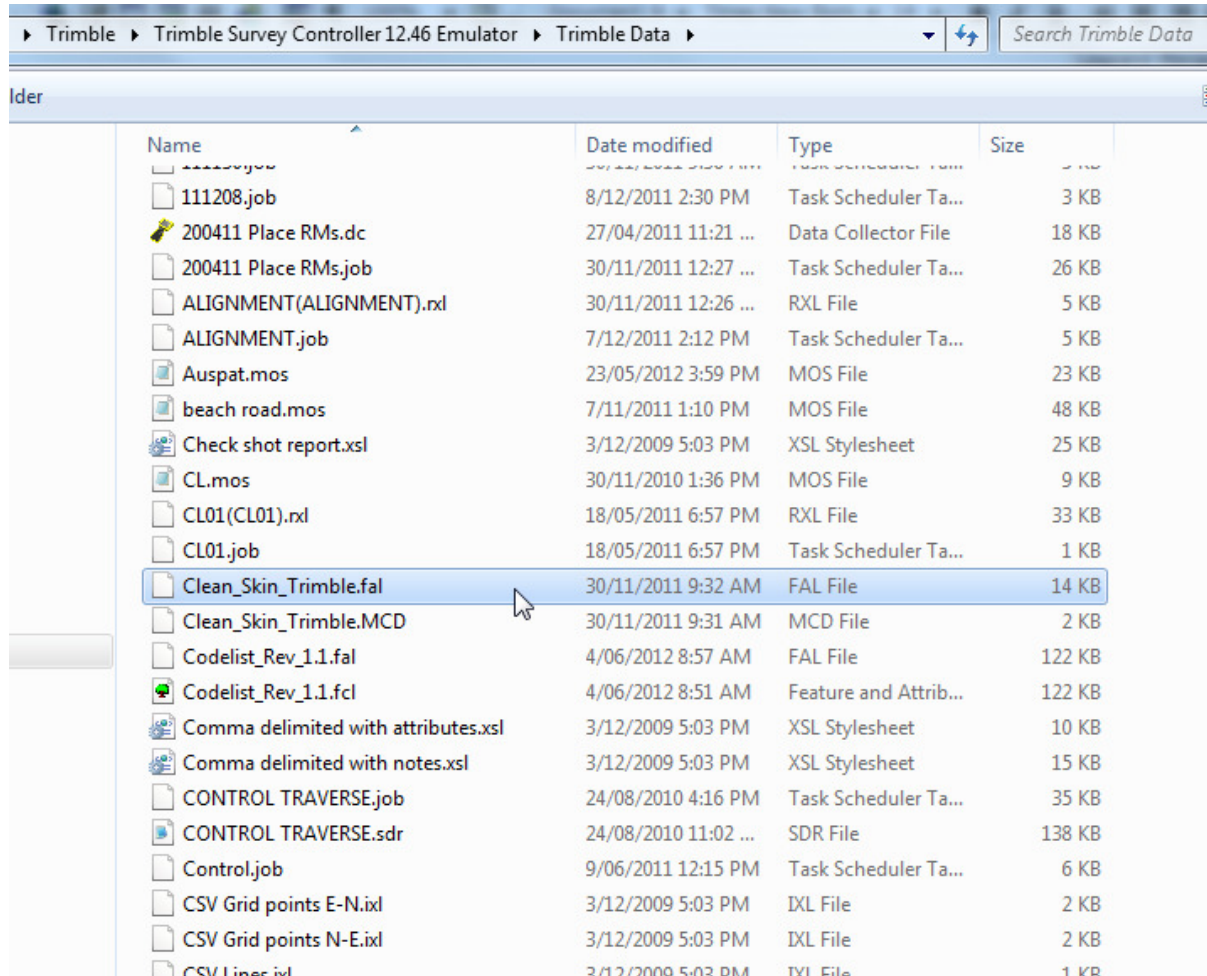
If you are using the more modern Trimble Business Centre (TBC) then you create your codelist under **Tools => Feature Definition Manager**. This will create a codelist file with an .fxl extension. Then under **File => Export** you can export your codelist to a specified folder usually your Trimble Data folder on your instrument.





All codelist are copied to the Trimble Data folder on your instrument.





Trimble > Trimble Survey Controller 12.46 Emulator > Trimble Data > Search Trimble Data

Name	Date modified	Type	Size
111208.job	8/12/2011 2:30 PM	Task Scheduler Ta...	3 KB
200411 Place RMs.dc	27/04/2011 11:21 ...	Data Collector File	18 KB
200411 Place RMs.job	30/11/2011 12:27 ...	Task Scheduler Ta...	26 KB
ALIGNMENT(ALIGNMENT).rxl	30/11/2011 12:26 ...	RXL File	5 KB
ALIGNMENT.job	7/12/2011 2:12 PM	Task Scheduler Ta...	5 KB
Auspat.mos	23/05/2012 3:59 PM	MOS File	23 KB
beach road.mos	7/11/2011 1:10 PM	MOS File	48 KB
Check shot report.xsl	3/12/2009 5:03 PM	XSL Stylesheet	25 KB
CL.mos	30/11/2010 1:36 PM	MOS File	9 KB
CL01(CL01).rxl	18/05/2011 6:57 PM	RXL File	33 KB
CL01.job	18/05/2011 6:57 PM	Task Scheduler Ta...	1 KB
Clean_Skin_Trimble.fal	30/11/2011 9:32 AM	FAL File	14 KB
Clean_Skin_Trimble.MCD	30/11/2011 9:31 AM	MCD File	2 KB
Codelist_Rev_1.1.fal	4/06/2012 8:57 AM	FAL File	122 KB
Codelist_Rev_1.1.fcl	4/06/2012 8:51 AM	Feature and Attrib...	122 KB
Comma delimited with attributes.xsl	3/12/2009 5:03 PM	XSL Stylesheet	10 KB
Comma delimited with notes.xsl	3/12/2009 5:03 PM	XSL Stylesheet	15 KB
CONTROL TRAVERSE.job	24/08/2010 4:16 PM	Task Scheduler Ta...	35 KB
CONTROL TRAVERSE.sdr	24/08/2010 11:02 ...	SDR File	138 KB
Control.job	9/06/2011 12:15 PM	Task Scheduler Ta...	6 KB
CSV Grid points E-N.ixl	3/12/2009 5:03 PM	IXL File	2 KB
CSV Grid points N-E.ixl	3/12/2009 5:03 PM	IXL File	2 KB
CSV Line ixl	3/12/2009 5:03 PM	IXL File	1 KB

Now your codelist is ready to be used on your Trimble Instrument, no other steps required.





REDUCING TO 12D

Trimble Link

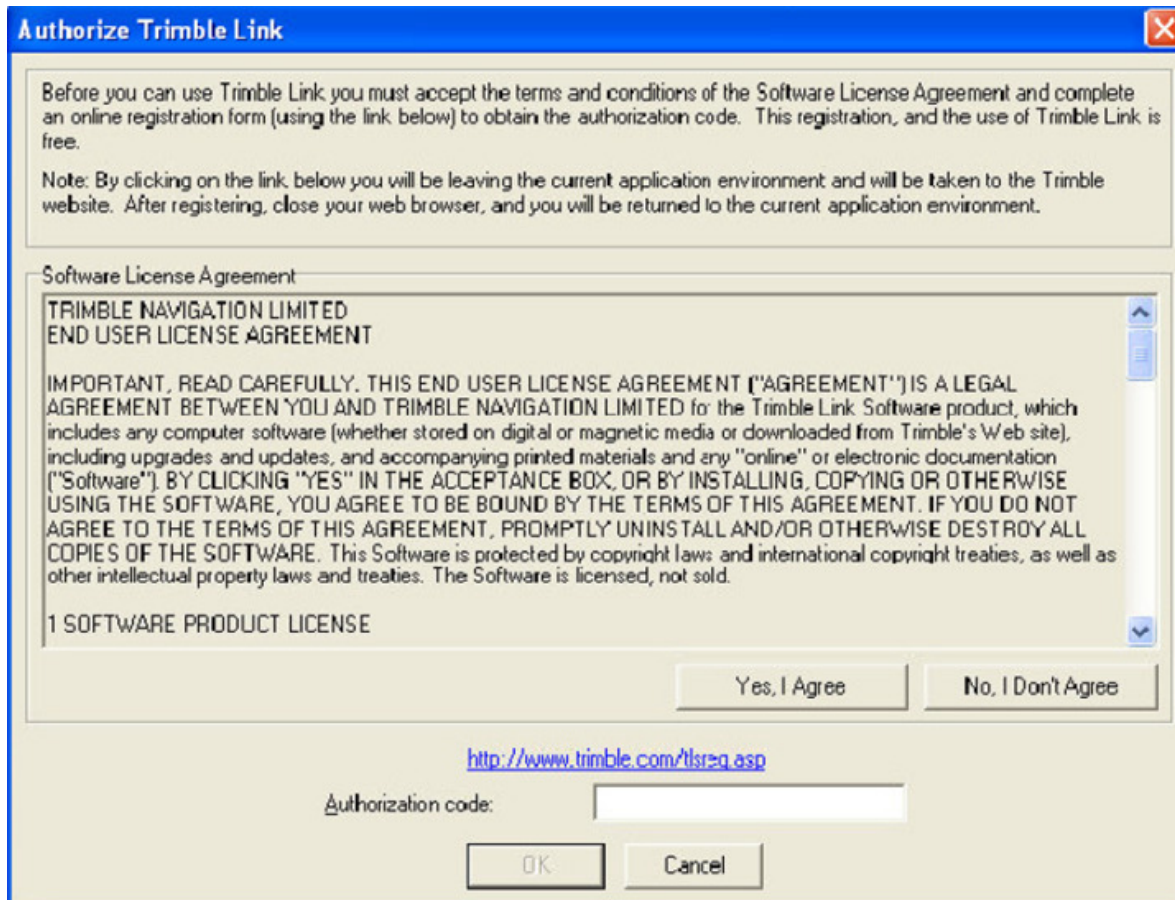
There are a number of ways to reduce your data from Trimble instruments to 12d. The best way and most direct way is to use Trimble Link, which will reduce your data directly to 12d and create a field file (.fld).

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.

Trimble Link can be found on your 12d installation DVD under the other software tab or contact your local Trimble distributor. To install just run the .exe file and follow the prompts.

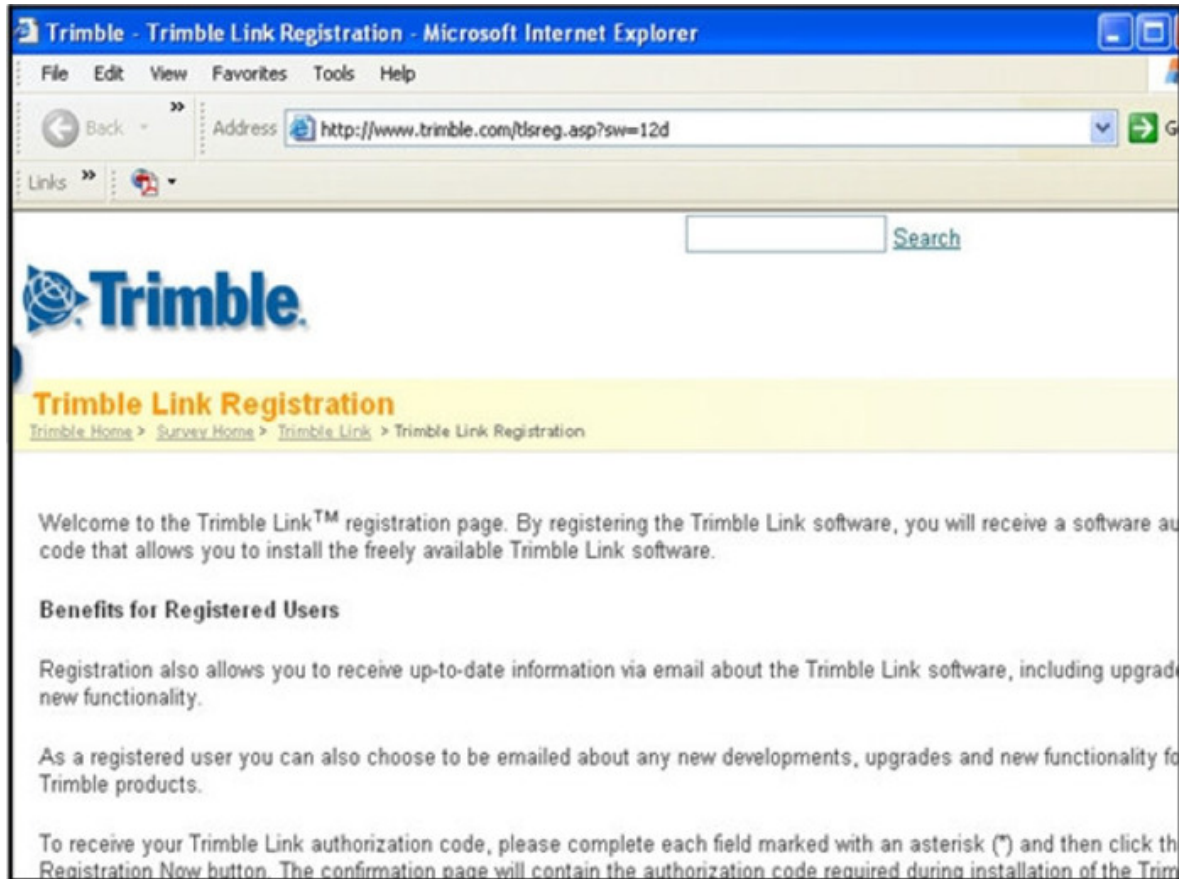
When running Trimble Link for the first time with 12d you will need register the software with Trimble. Please ensure you are connected to the Internet when doing this.





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





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 download your data.





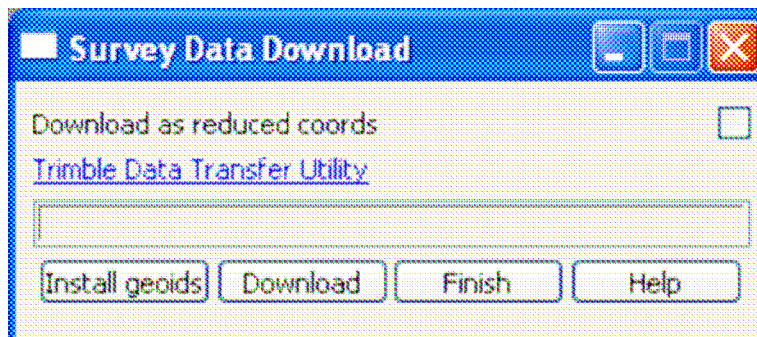
Trimble Data Transfer Utility Software

Trimble Data Transfer Utility Software is free software provided by Trimble for Data Transfer between Instruments and Controllers to their CAD software on the users PC.

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.

It is very important that Trimble Link, Trimble Data Transfer Utility and Trimble Access Installation Manager are updated regularly.

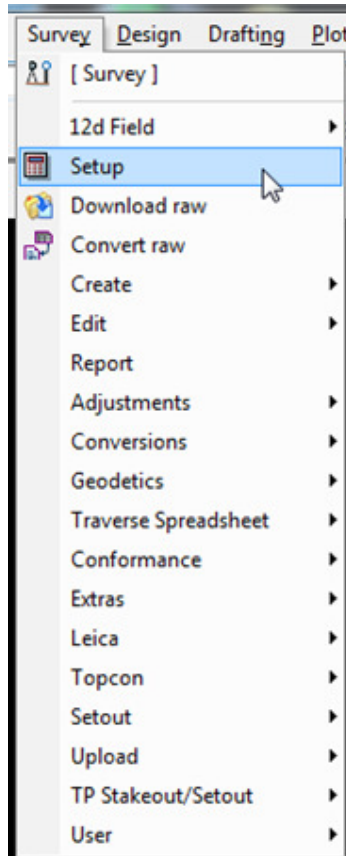




Downloading To 12d using Trimble Link

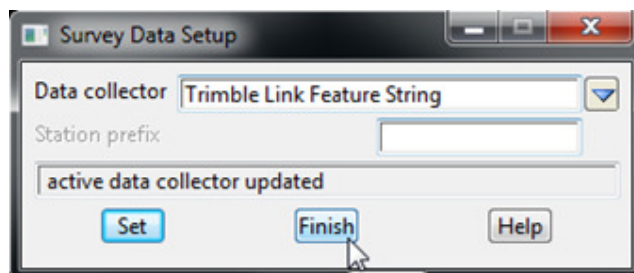
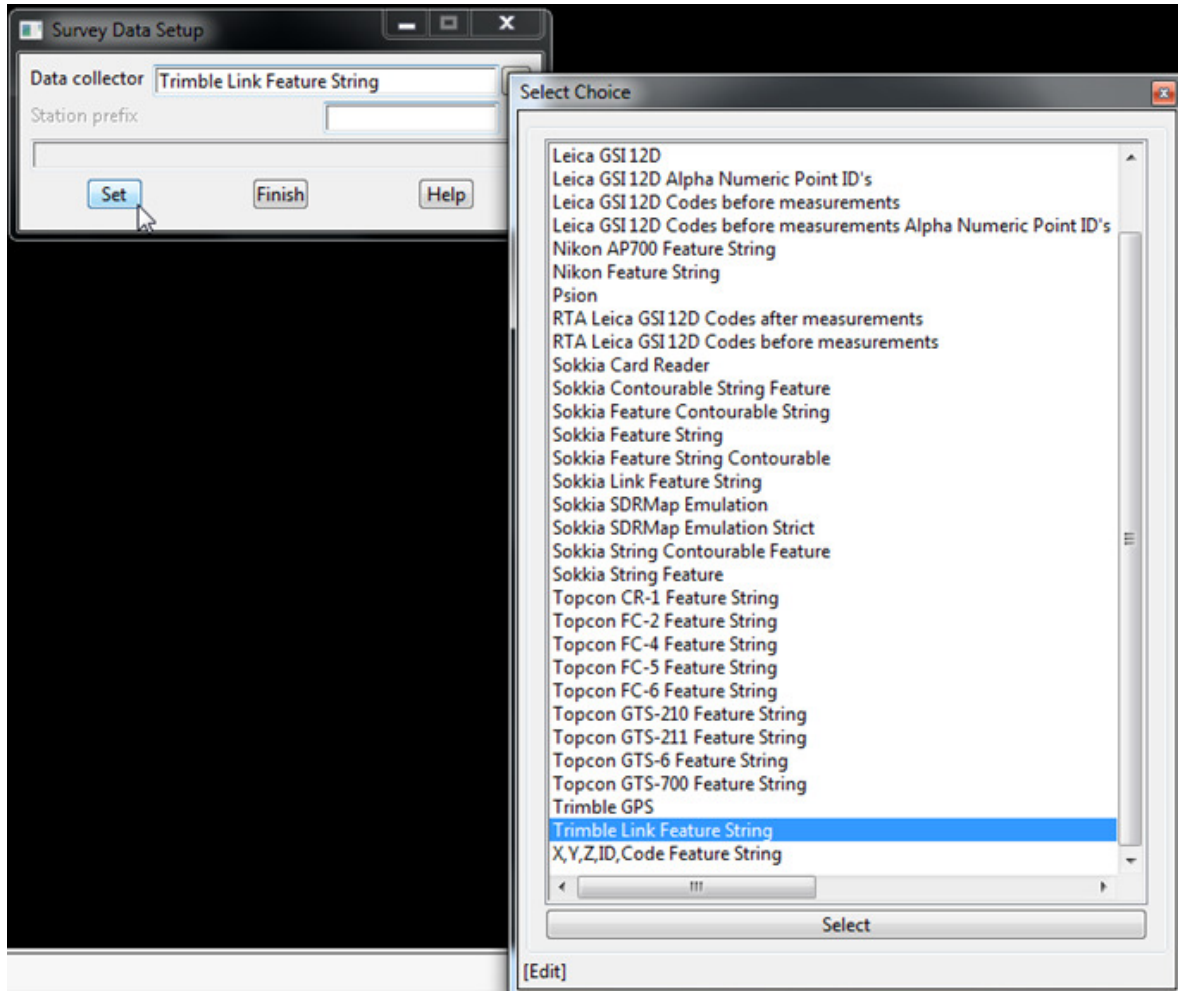
Once your Trimble controller is connected to your PC using a USB cable or the Trimble Survey Controller docking station, you can then to proceed to download your survey data into 12d following these steps below.

Survey => Setup



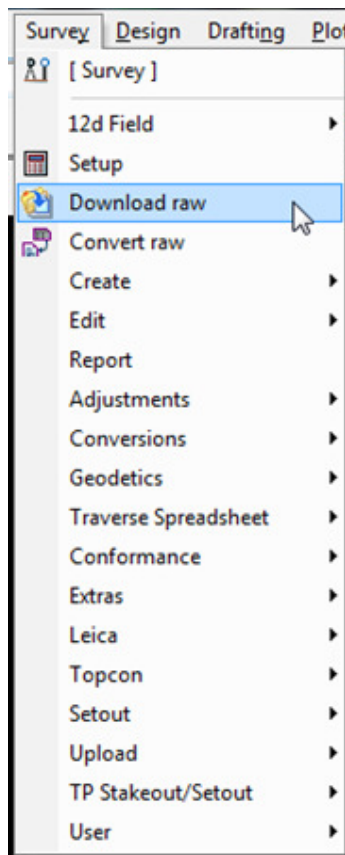
Then select the Data collector called **Trimble Link Feature String** as shown below and then press **Set** and then **Finish**.



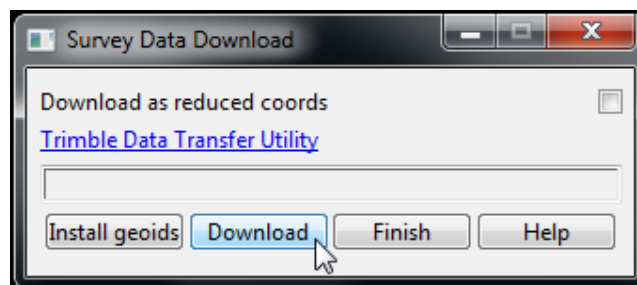




Now go to **Survey => Download Raw**



Then select **Download**.



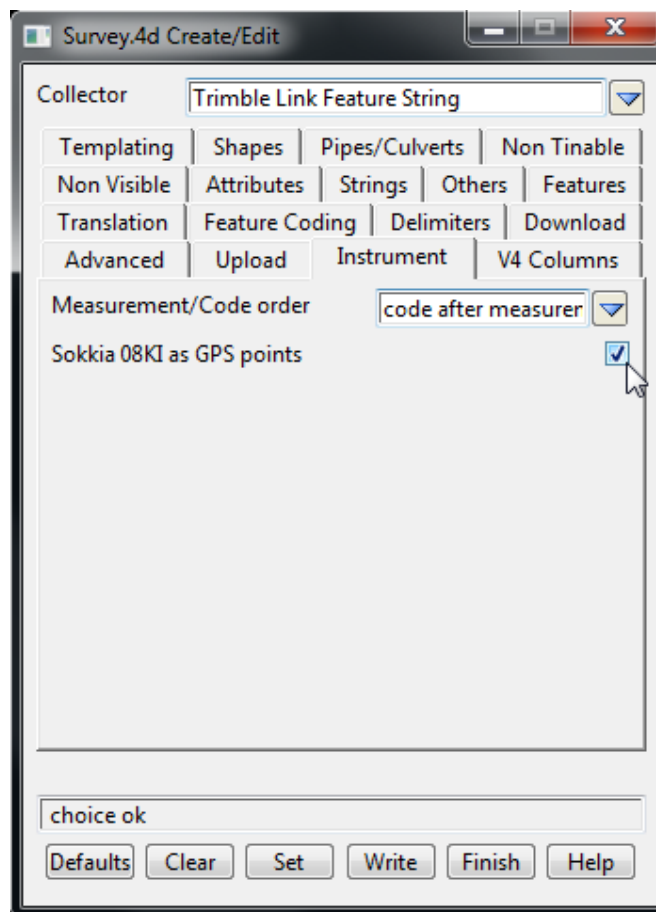


WARNING: You only want the Download as reduced cords boxed ticked if your survey is a GPS pickup using code with NO ATTRIBUTES.

This also reduced the GPS reading as Vectors so you can edit instrument if a mistake is made in the field.

As having this box ticked stops attributes from reducing.

If you are downloading a GPS survey with attributes make sure on the Trimble Link Feature String Data collector under the Instrument tab that Sokkia 08KI as GPS points is ticked on and then select **set** then **write** as shown below.

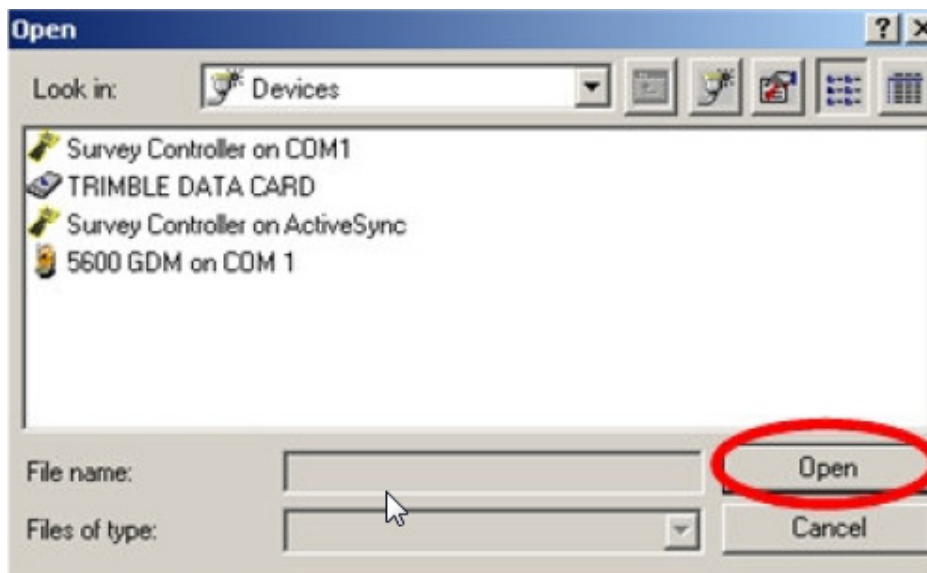




Now once you select the Download icon. You should get a panel pop up with some information as shown below. Just untick the box on the lower left corner if you don't want to see the message again, and then select **Close**.

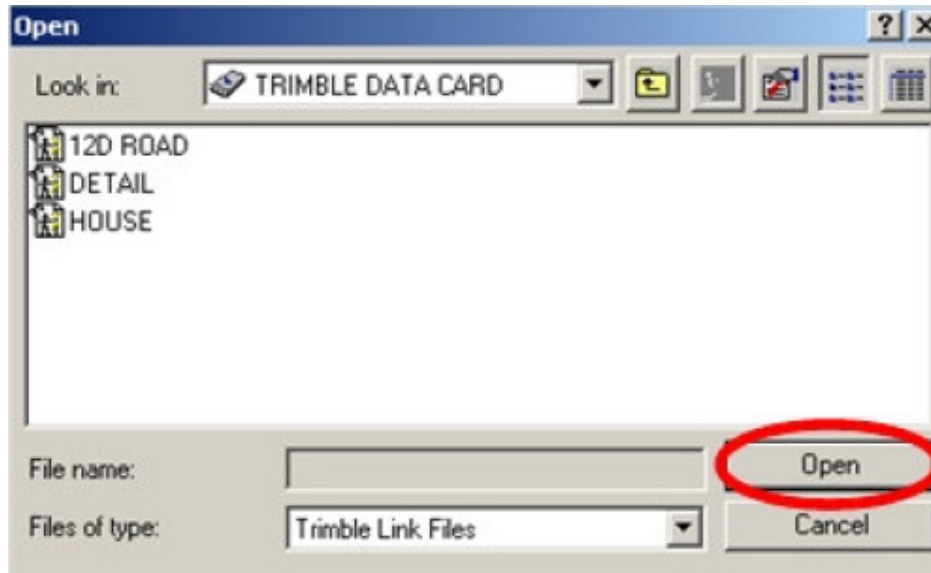


Now select your Trimble Controller from the list on your Devices as shown below. If your using Trimble access you will have a General Survey device possibly called Trimble Access.

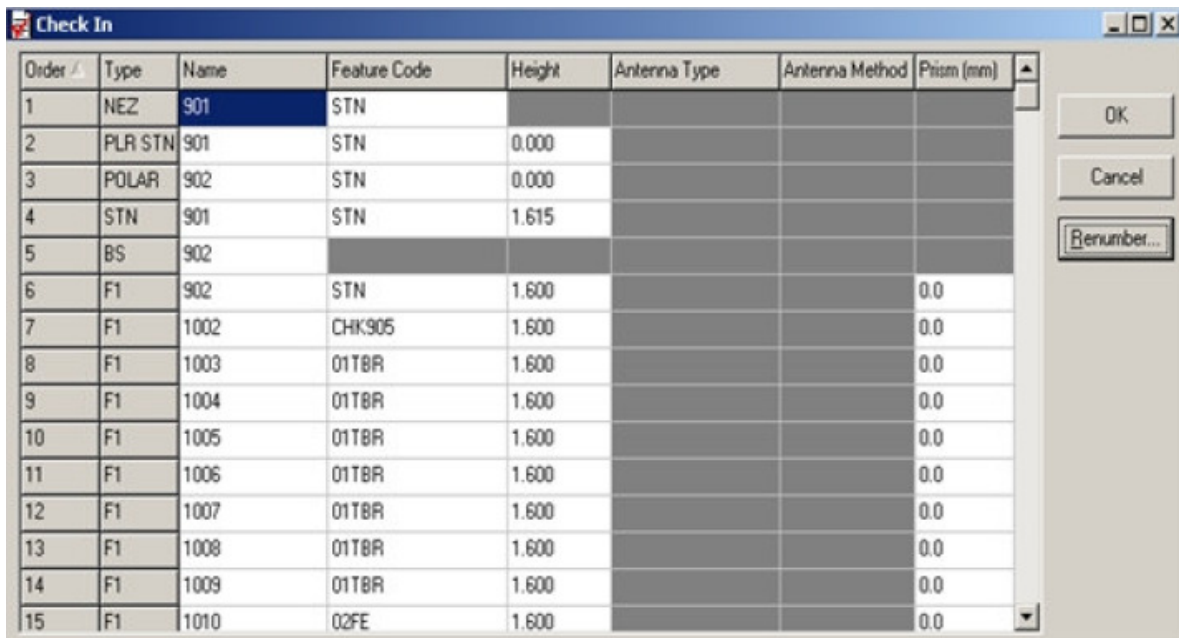




Then select open and it should connect to your chosen device and display all the files held on that device as shown below.



The raw file can be edited here prior to creating the field file as shown below.



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	01TBR	1.600			0.0
9	F1	1004	01TBR	1.600			0.0
10	F1	1005	01TBR	1.600			0.0
11	F1	1006	01TBR	1.600			0.0
12	F1	1007	01TBR	1.600			0.0
13	F1	1008	01TBR	1.600			0.0
14	F1	1009	01TBR	1.600			0.0
15	F1	1010	02FE	1.600			0.0

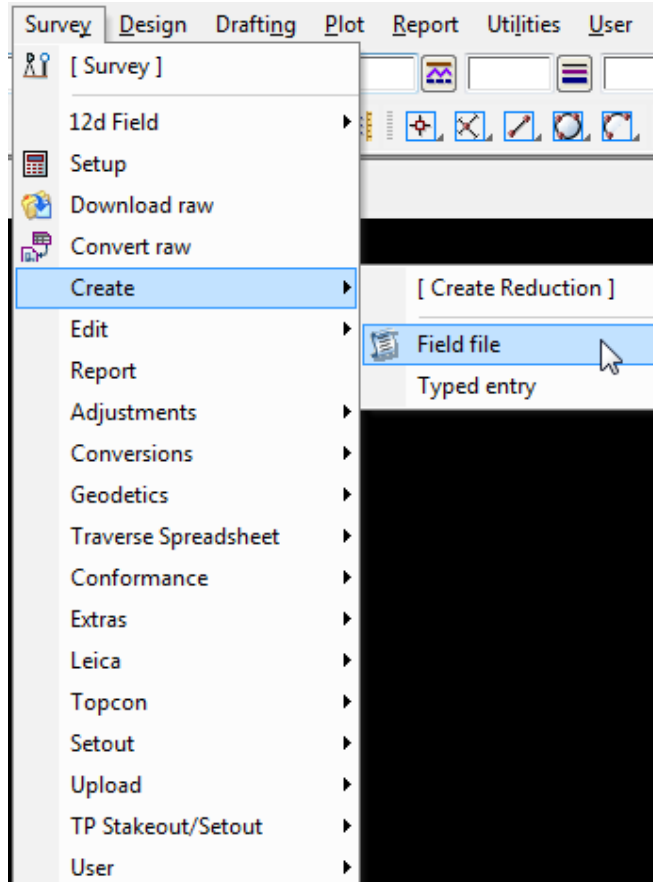




To finish the editing and convert to a field file select **OK**.
Once OK is pressed a Field File is created in your 12d job directory.

Now you can import the Field File as you normally do by using

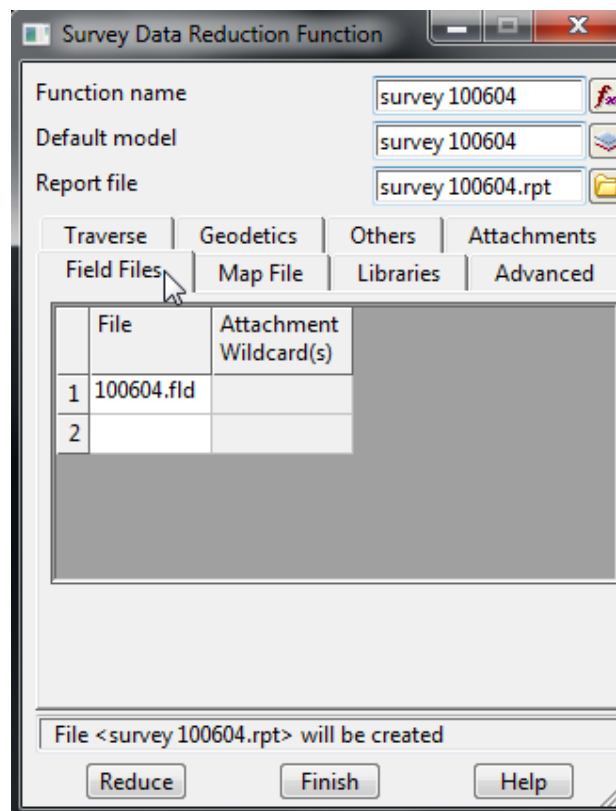
Survey => Create => Field File





Then file in the panels as shown below, filling in the Function name, Default model and Report file by manually typing in what you want to call it (Usually your job number or name with a date).

Then on the Field File tab where the cursor is, should be automatically populated by your newly created Field File. If not right click in the cell and browse for your Field File.



You can also go to the Map File tab and use a Mapfile to apply the correct colours, linestyles and symbols to your survey.

The others tab can be also used to tick on a box called “Show Check Measurements”.

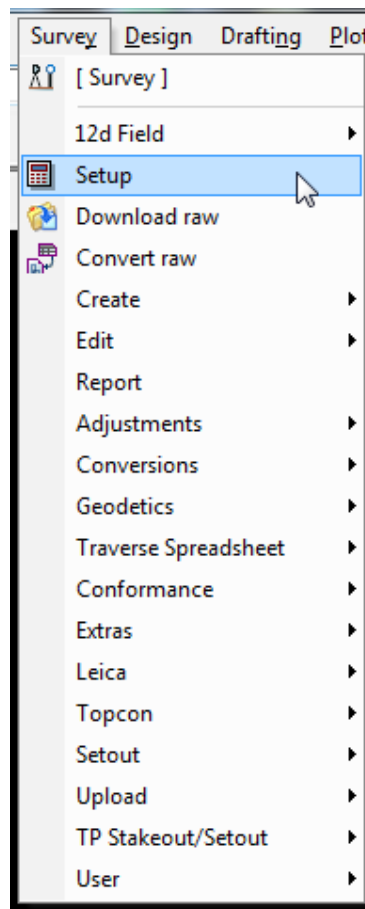




The second way to reduce data from the Trimble is by using the **Survey => Convert Raw** option, which converts your raw Trimble Link Files (.tlk) to a field file.

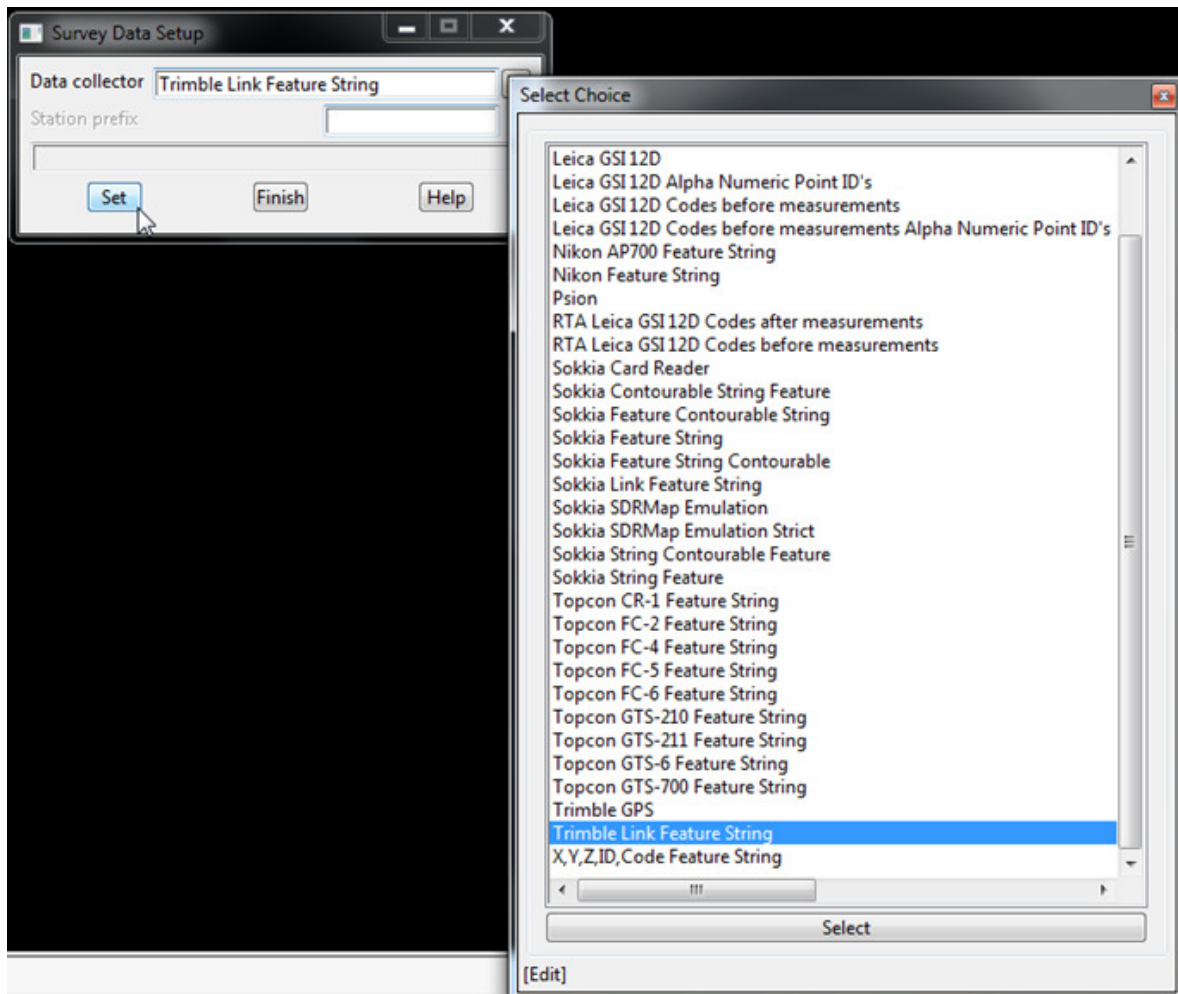
To use this option you must first select the Trimble Link Feature String from your Data Collector list.

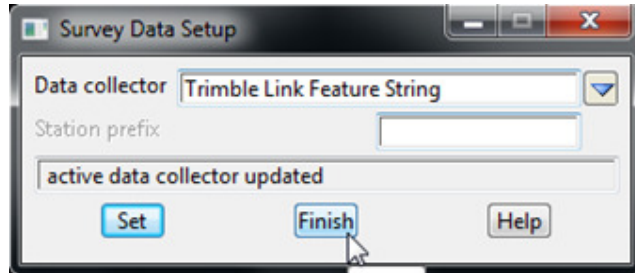
Survey => Setup





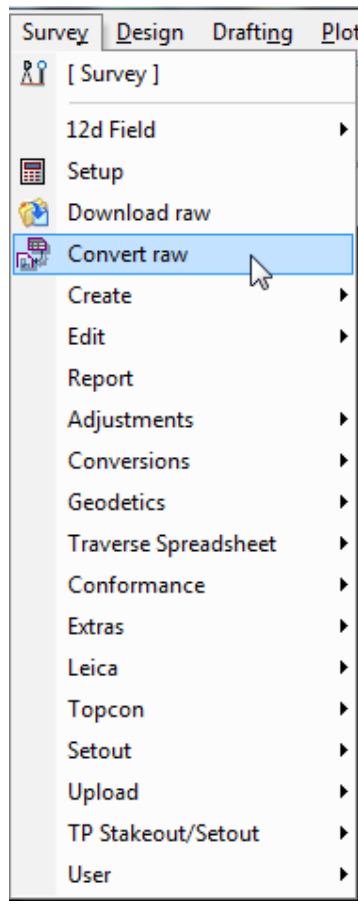
Then select the Data collector called **Trimble Link Feature String** as shown below and then press **Set** and then **Finish**.





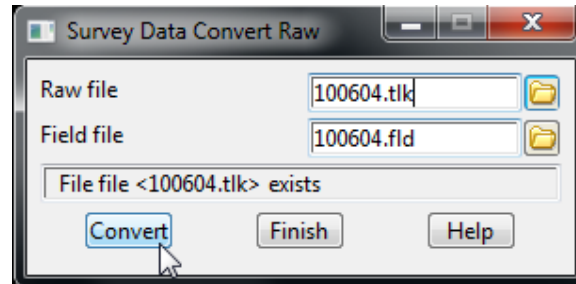
Now once the data collector is set we can convert the Trimble Link File (.tlk) to a Field File (.fld) by following the steps shown below.

Survey => Convert Raw





Now you need to select your Trimble Link File (.tlk).



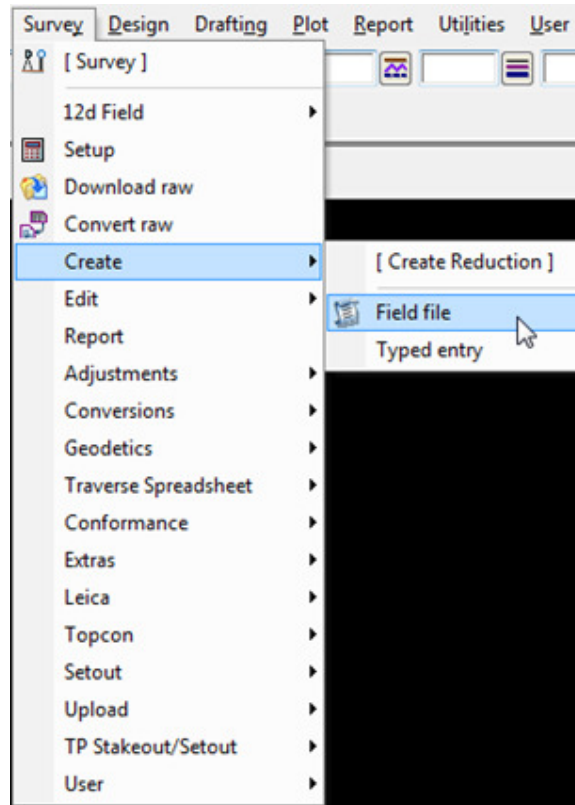
Use the folder icon on the right of the panel to browse for the location of your (.tlk) file. Once the .tlk file is selected the Field file panel is automatically created with the Trimble Link (.tlk) file name as shown above.

Now press Convert and Finish.

You can now reduce the data as you normally do using the field file.

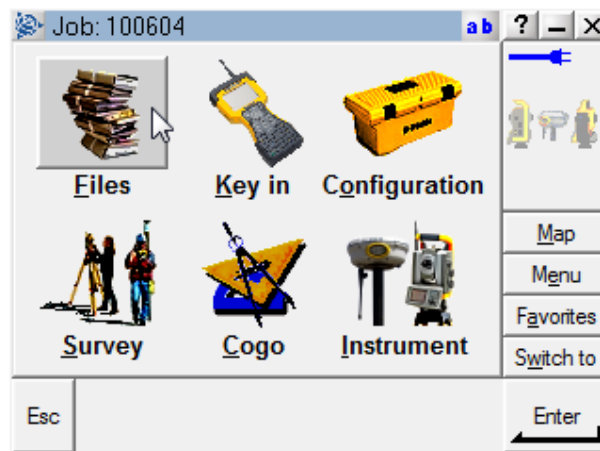
Survey => Create field file





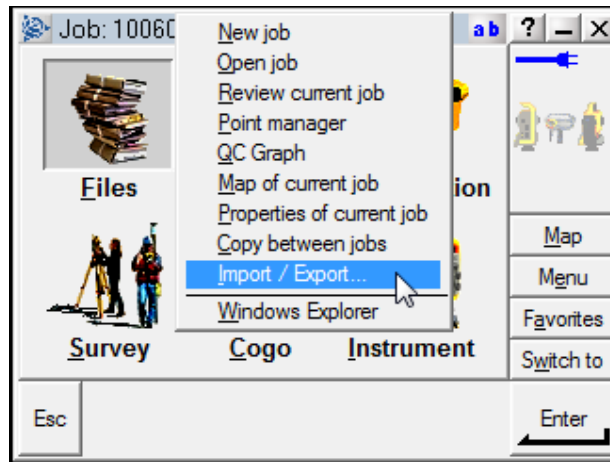
Downloading SDR Files to 12d

Firstly on your Trimble Controller you need export your data to a .sdr file. This is done by clicking on the **Files** icon as shown below.

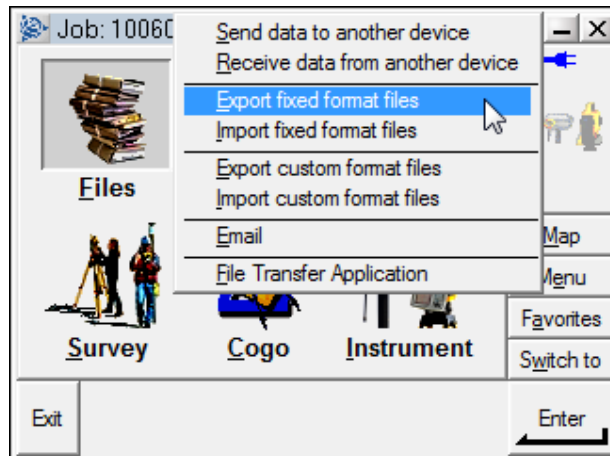


Then select **Import / Export...**



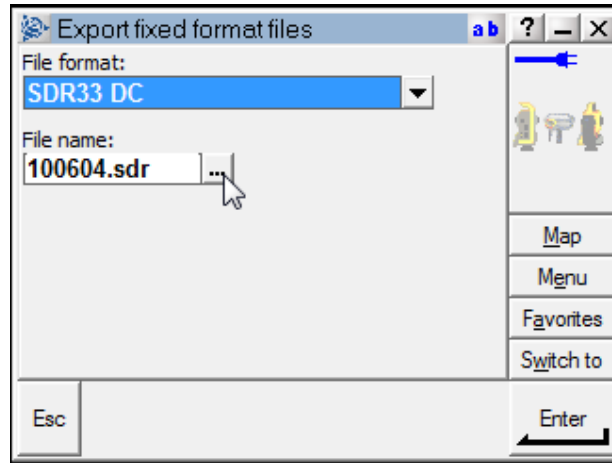


Then select **Export fixed format files**



Now use the pull down arrow to select SDR33 DC as the file format.
Also under File name click on the square box with three dots to browse to the correct directory where you wish to store the file.





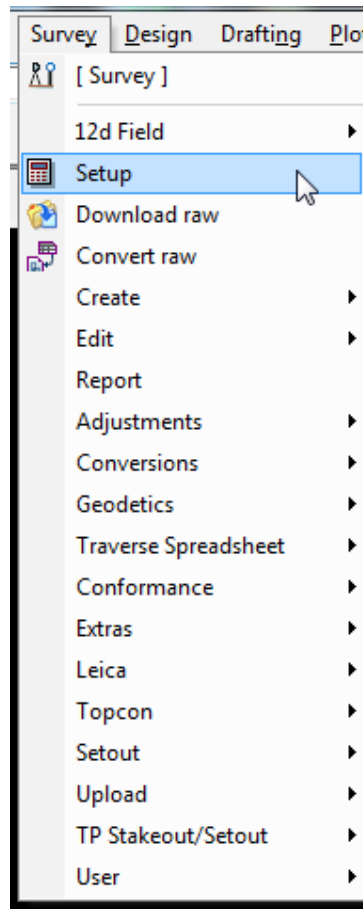
Then press **Enter**.

Now you are ready to import your newly created SDR File (.sdr) into 12d.

Firstly you need to set the correct Data Collector to import the SDR File (.sdr) into 12d.

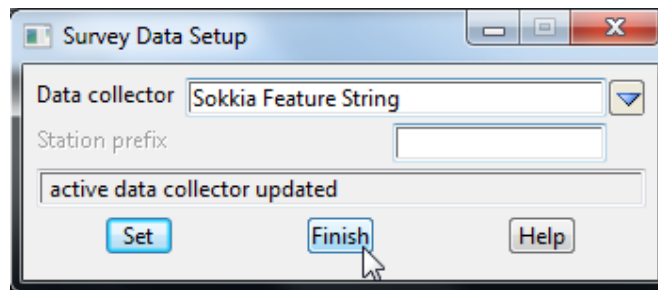
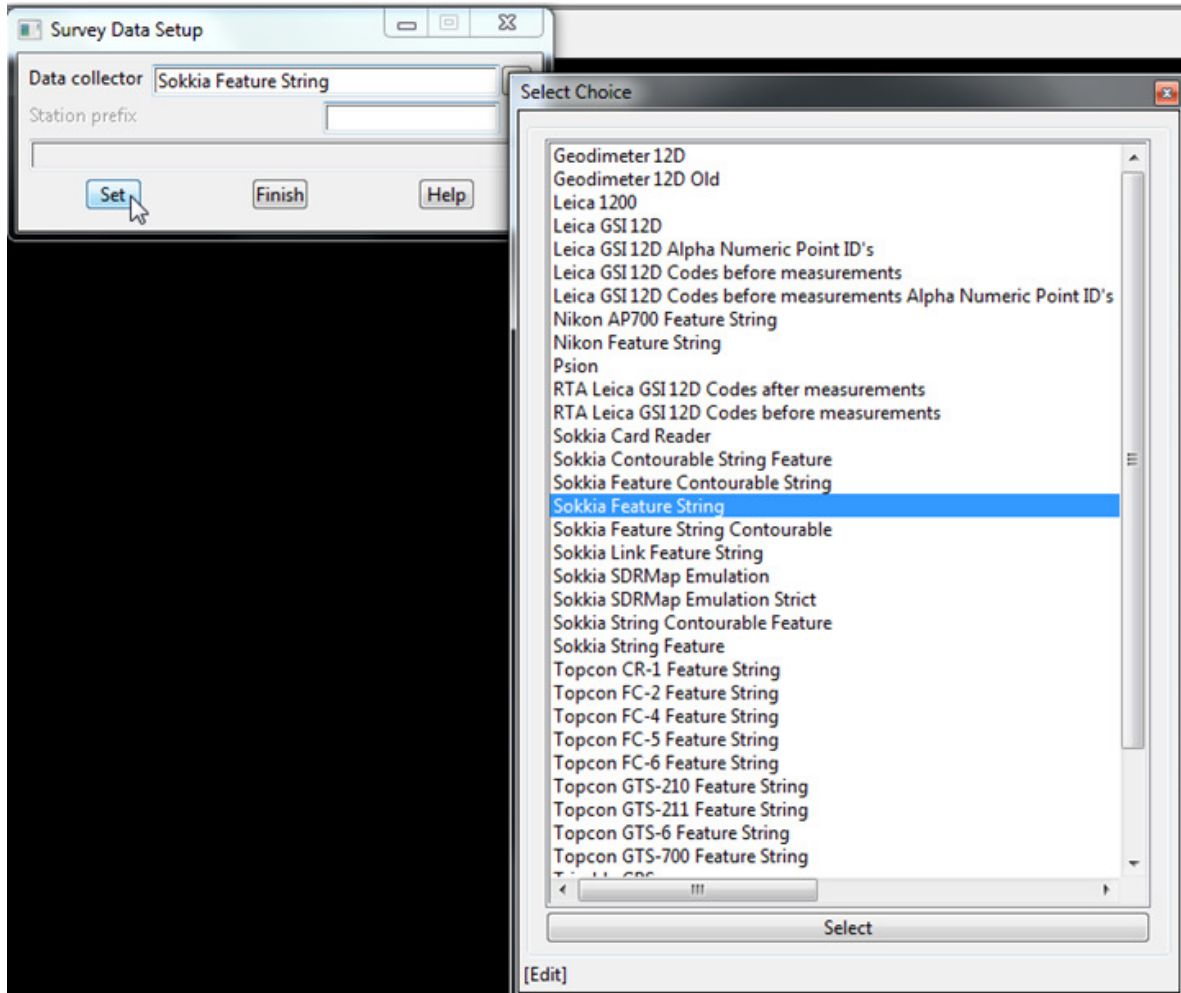
Survey => Setup





Then select the Data collector called **Sokkia Feature String** as shown below and then press **Set** and then **Finish**.

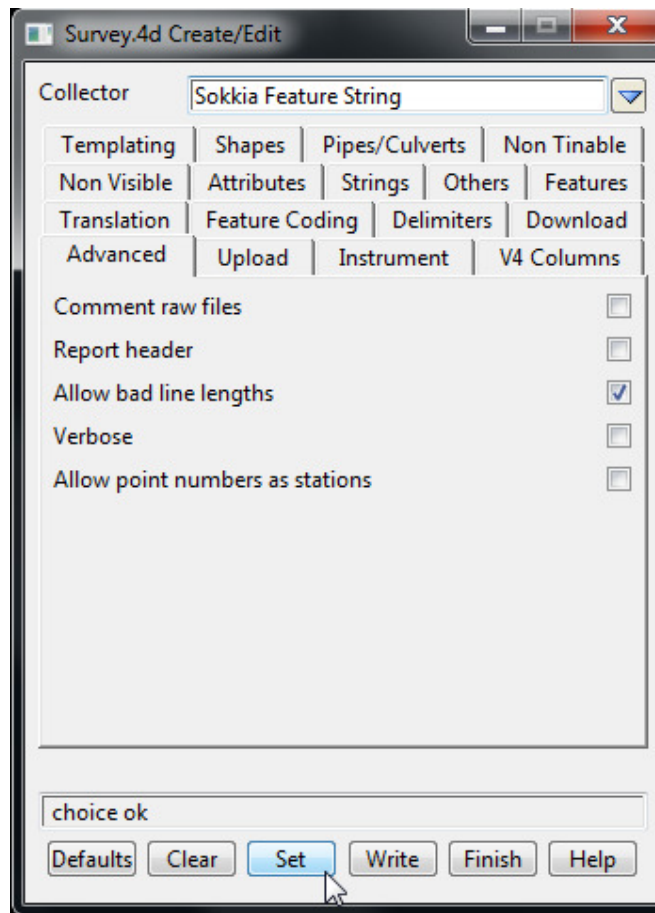






WARNING: You need to tick the box under the Advanced Tab called “Allow bad line lengths” so your SDR File can reduce into 12d without any errors.

This option is found by selecting the [edit] icon on the lower left of the Data Collector Panel.

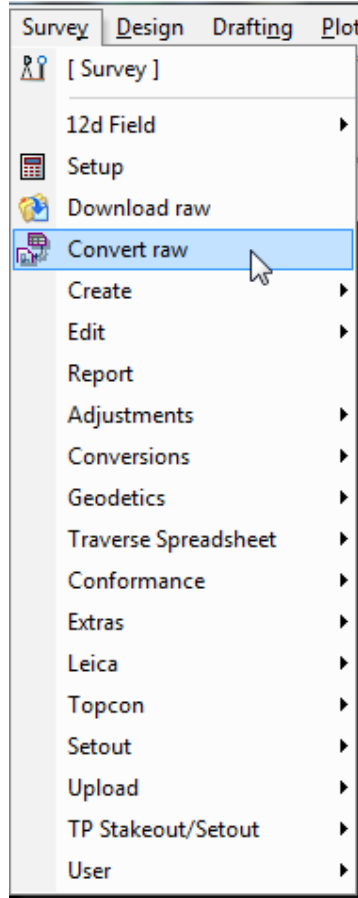


Now once the data collector is set we can convert the SDR File (.sdr) to a Field File (.fld) by following the steps shown below.

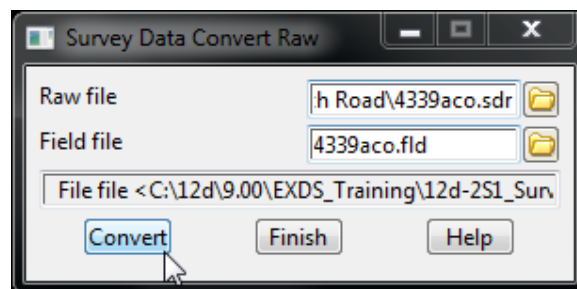




Survey => Convert Raw



Now you need to select your SDR File (.sdr).





Use the folder icon on the right of the panel to browse for the location of your (.tlk) file. Once the .tlk file is selected the Field file panel is automatically created with the Trimble Link (.tlk) file name as shown above.

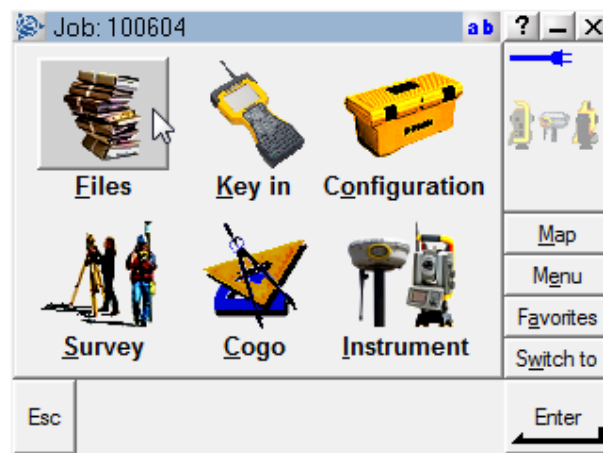
Now press Convert and Finish.

You can now reduce the data as you normally do using the field file.

Survey => Create field file

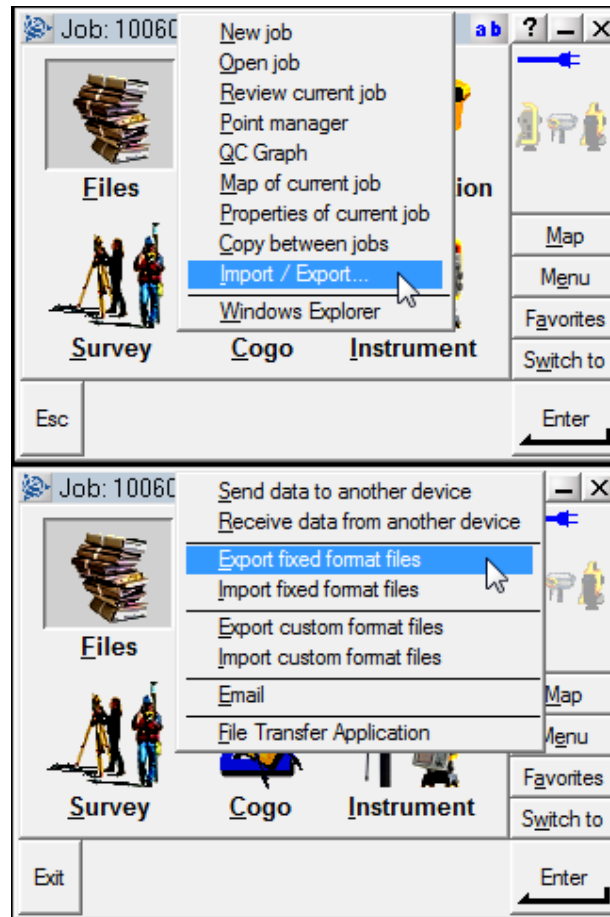
Downloading CSV files to 12d

Firstly on your Trimble Controller you need export your data to a .csv file. This is done by clicking on the **Files** icon as shown below.



Then select **Import / Export...**



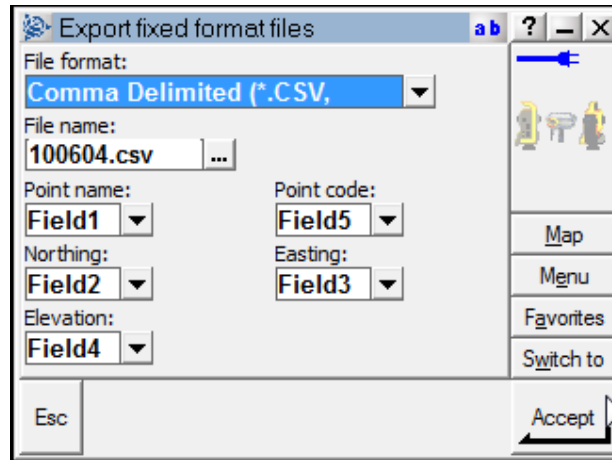


Now use the pull down arrow to select Comma Delimited (*.CSV, *.TXT) as the file format.

Also under File name click on the square box with three dots to browse to the correct directory where you wish to store the file.

Also select what data you would like in each field (column) of the file as shown below.



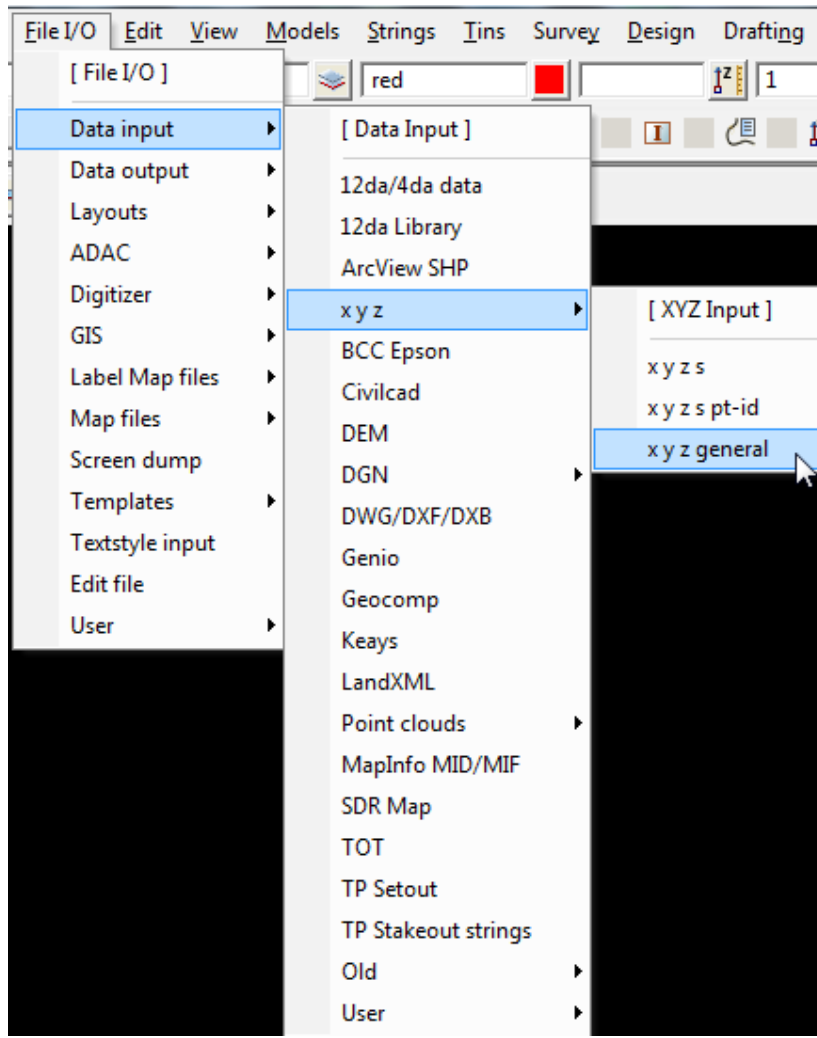


Then press **Accept**.

Now you are ready to import your newly created SDR File (.sdr) into 12d.

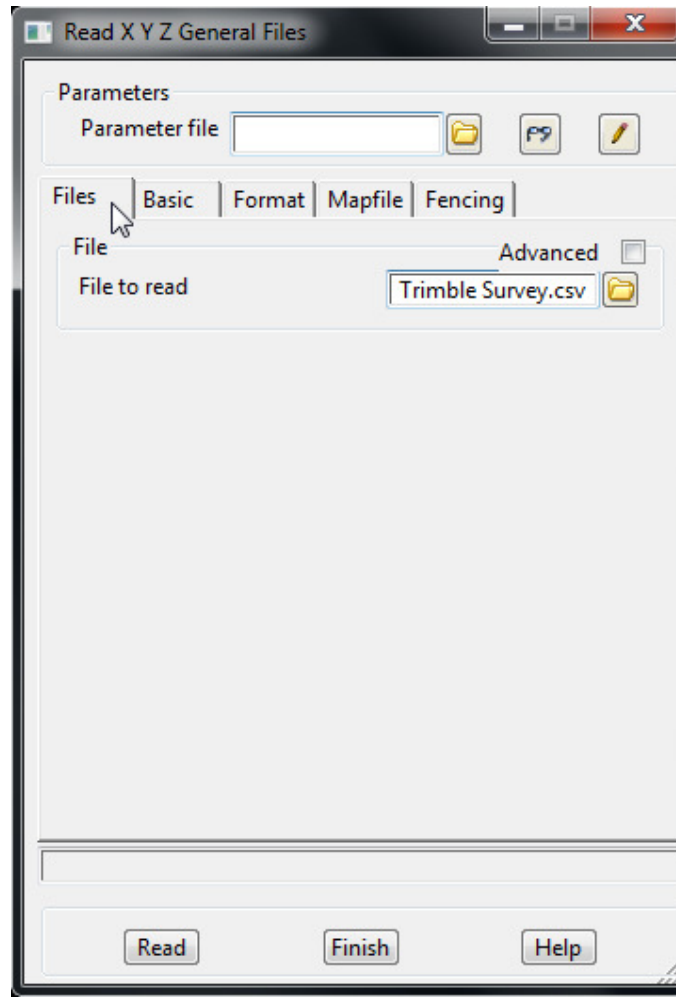
To import a CSV file into 12d we use the following procedure.

File I/O => Data Input => xyz => xyz general



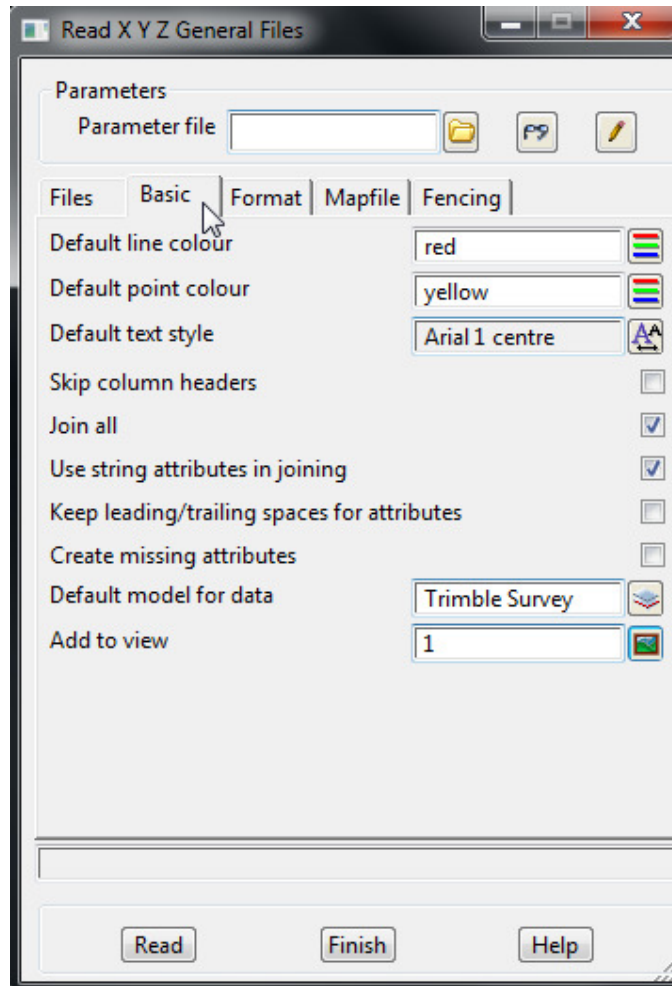
Now you should have a Read X Y Z General Files panel open as shown below. Now under the Files tab select your newly created CSV File by selecting the folder icon and browsing to the correct location.





Now fill out the Basic tab as shown below. You must select a Default linestyle by select the Text Symbol (A). You also need to type in a default model for data to be added to a selected view.



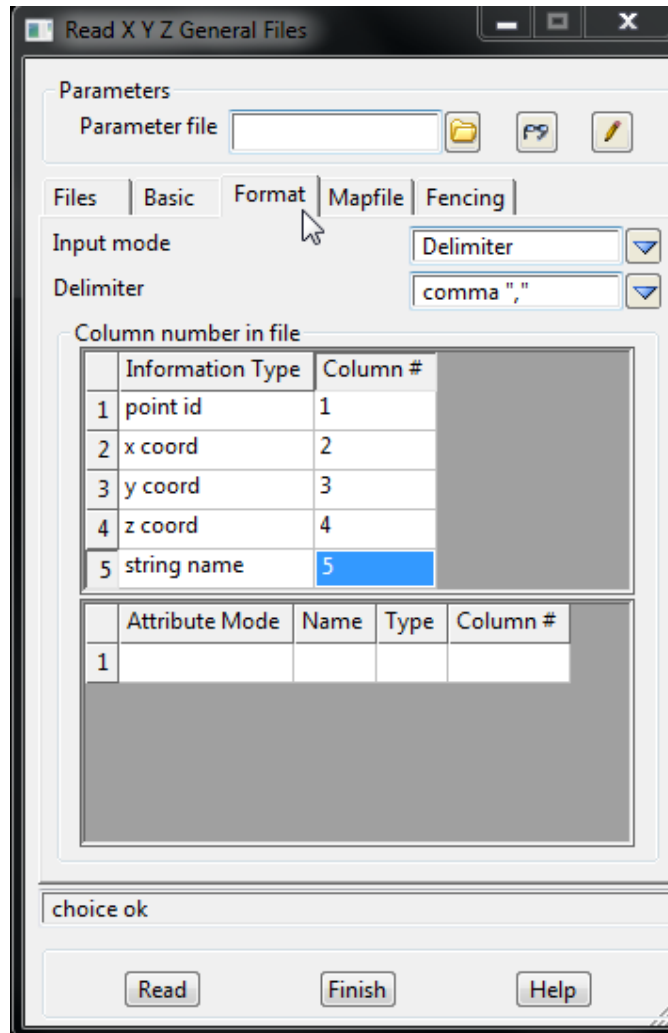


Now fill out the Format tab as shown below. You must change the Delimiter to a comma “,” as shown below. This is the Delimiter in the CSV File that separates the values.

Now in the Column number in file information table you need to select the correct value types to the correct columns as shown below.

This MUST be the same as when you exported from the Trimble controller.





Then select the Mapfile tab if a Mapfile is to be used to give your survey the correct linestyles, colours and symbols.

If you will use this same format all the time, you can write a file name in the Parameter file panel and select write (pencil icon).

Then once you finished select **Read**.

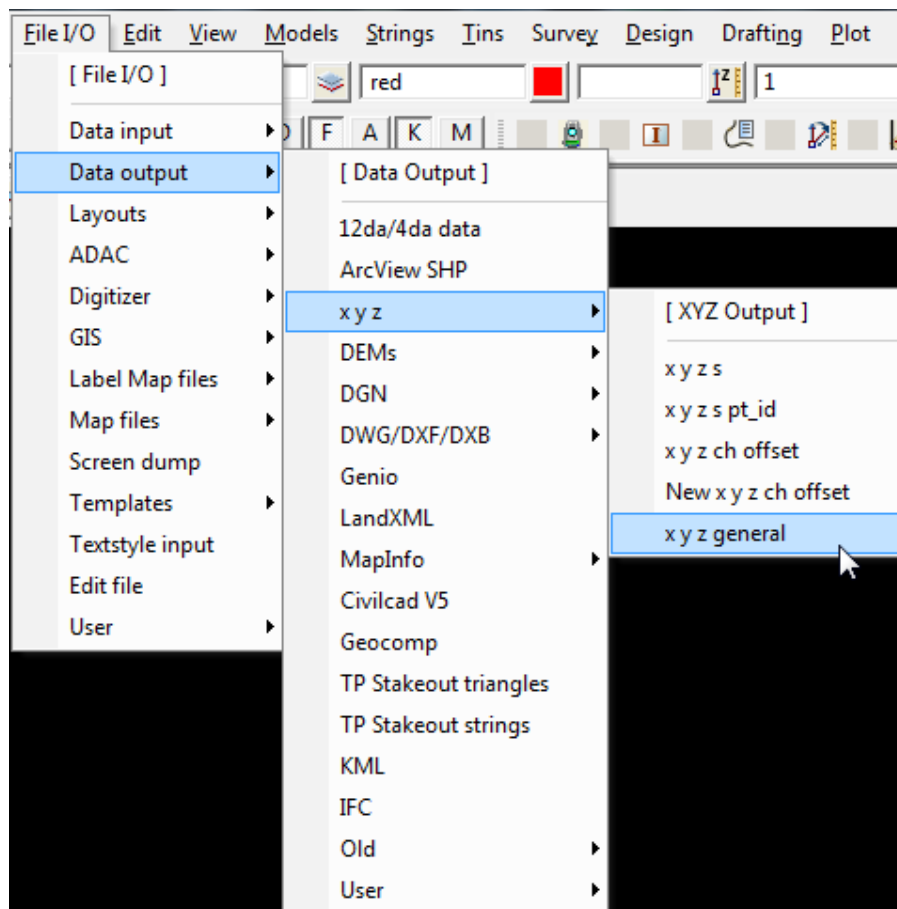




UPLOADING FROM 12D

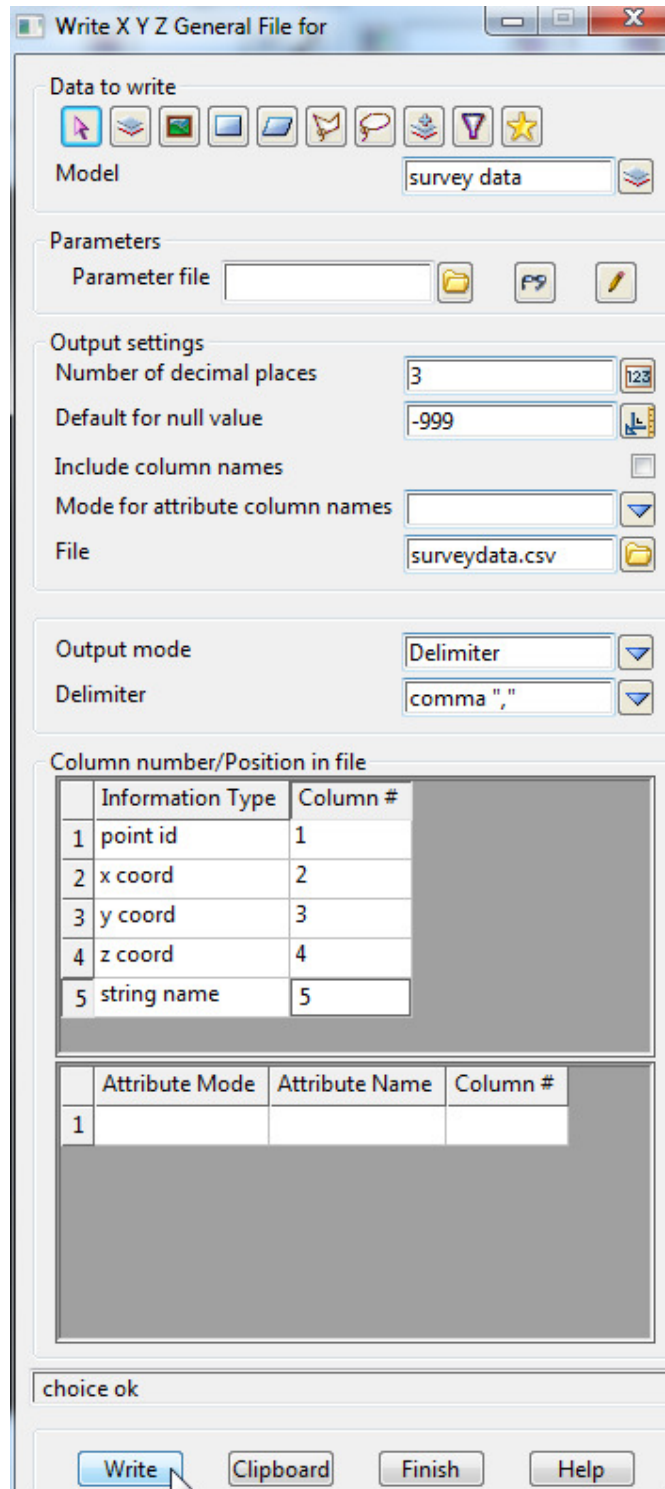
Points from a CSV File

Uploading points to Trimble instruments and controllers can be done by creating and uploading a CSV File. These files are created in 12d using **File I/O => Data Output => xyz => xyz general**



Then select the data source you want to export. Change the Delimiter to a comma and nominate the values you want displayed in each column of the csv file. Then press write.



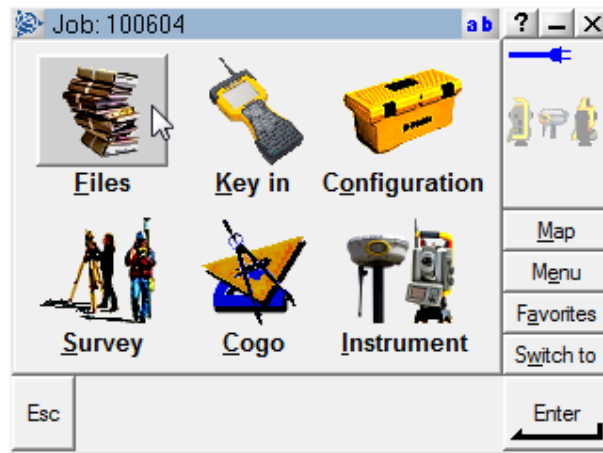


Now copy the newly created csv file from your 12d project job folder onto your USB stick or transferred by Windows 7 Mobile (Active Sync) and stored in the Trimble Data folder.

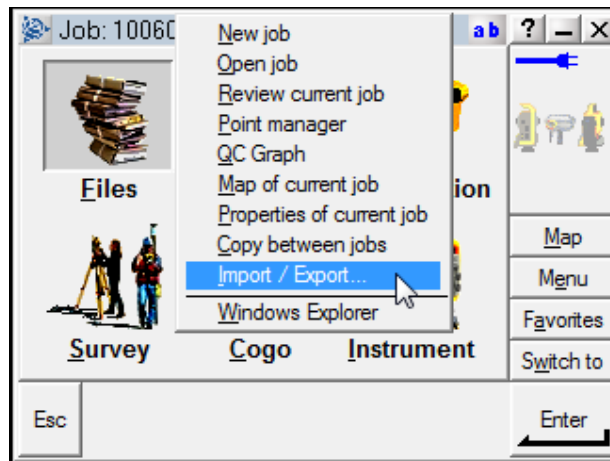




Once the file is in your Trimble Data folder on your controller you need to import it into your current job as shown below.

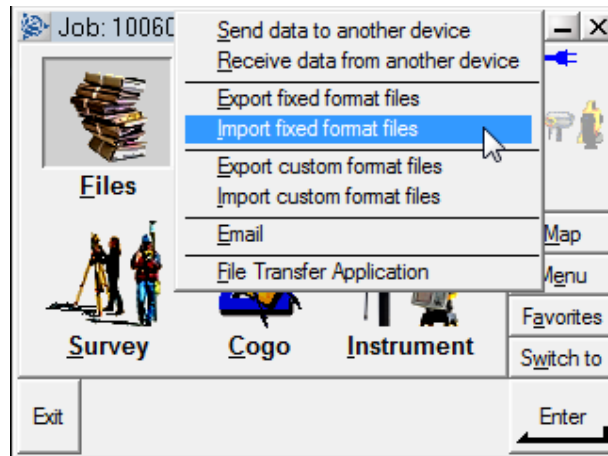


Then select **Import / Export...**



Then select **Import fixed format files**

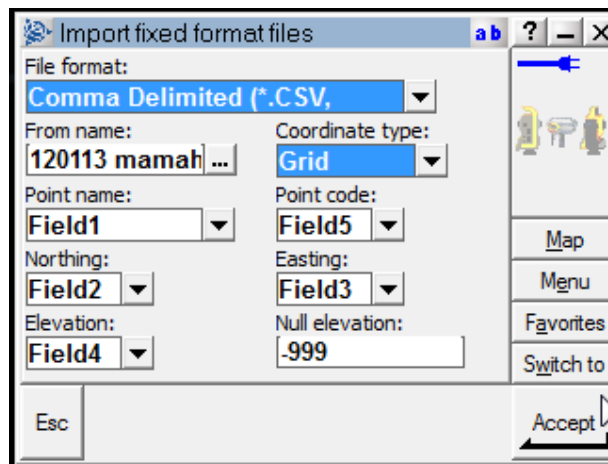




Now use the pull down arrow to select Comma Delimited (*.CSV, *.TXT) as the file format.

Also under File name click on the square box with three dots to browse to the correct directory where you wish to store the file.

Also select what data you would like in each field (column) of the file as shown below.



Then press **Accept**.

The points are now uploaded to your job on the Trimble controller and can be now set out using **Survey => Stakeout => Points**.



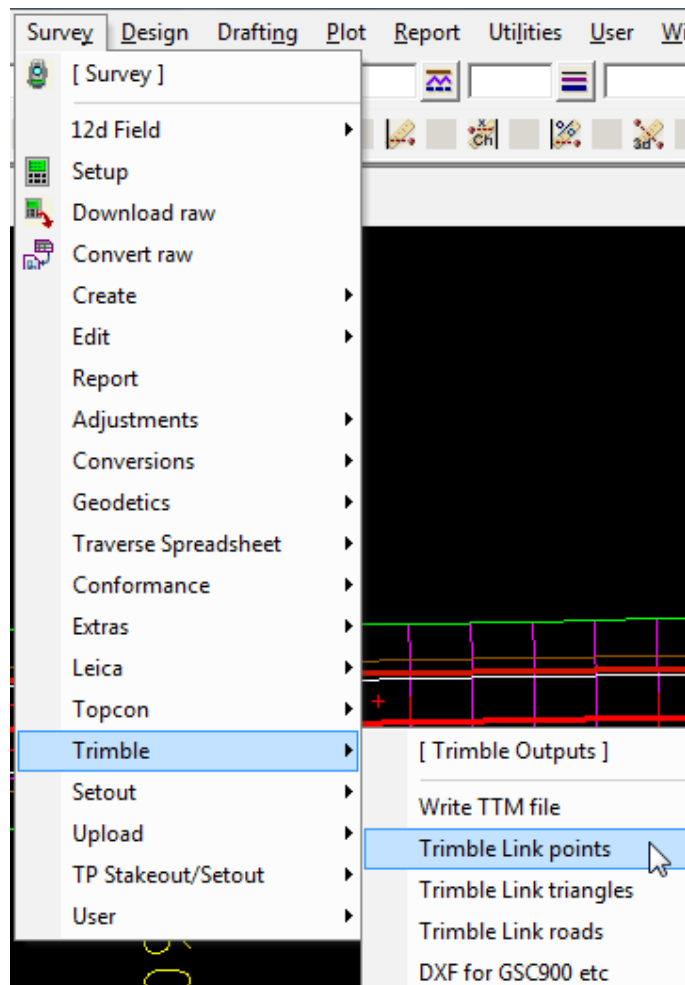


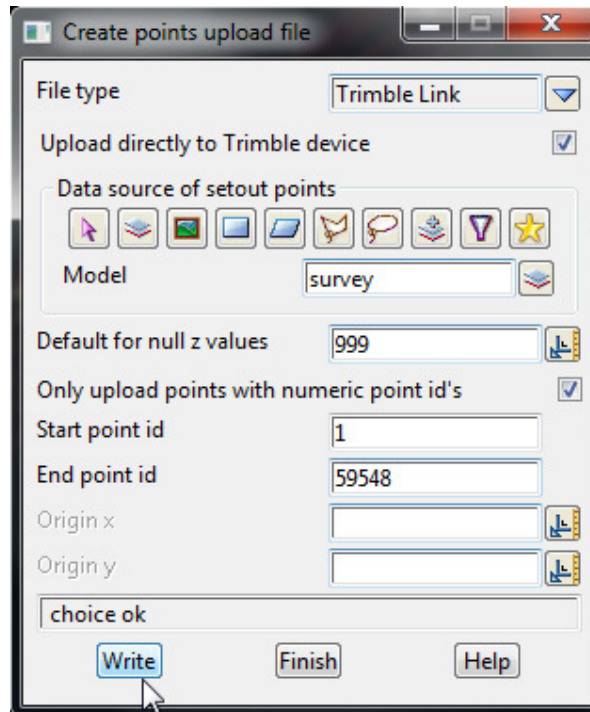
Points from Trimble Link upload

This method uses Trimble Link to automatically upload your set out points to your Trimble controller. Connect the controller to the computer by an approved method (USB Cable or Trimble docking unit) then select the follow option in 12d.

Survey => Trimble => Trimble Link Points

Survey => Upload => Create points upload file (new) – 12dv9



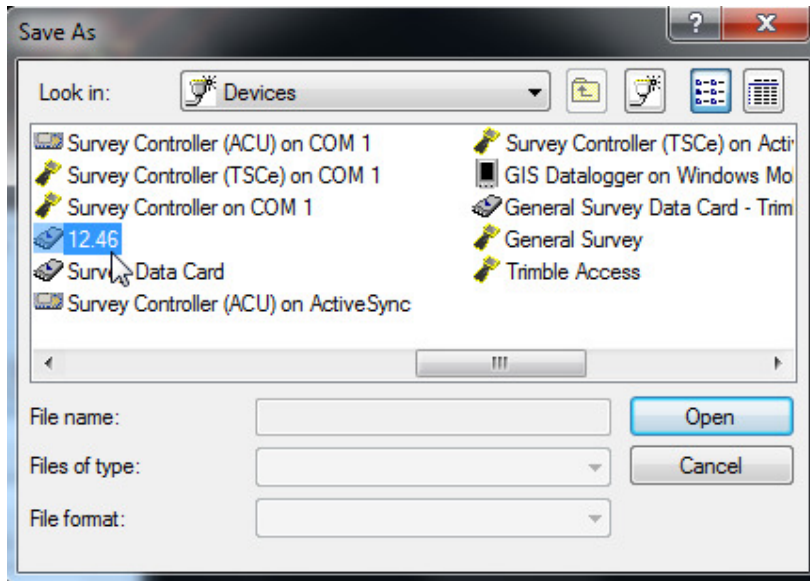


Tick the check box “Upload directly to Trimble device” to upload your points directly to the Trimble controller.

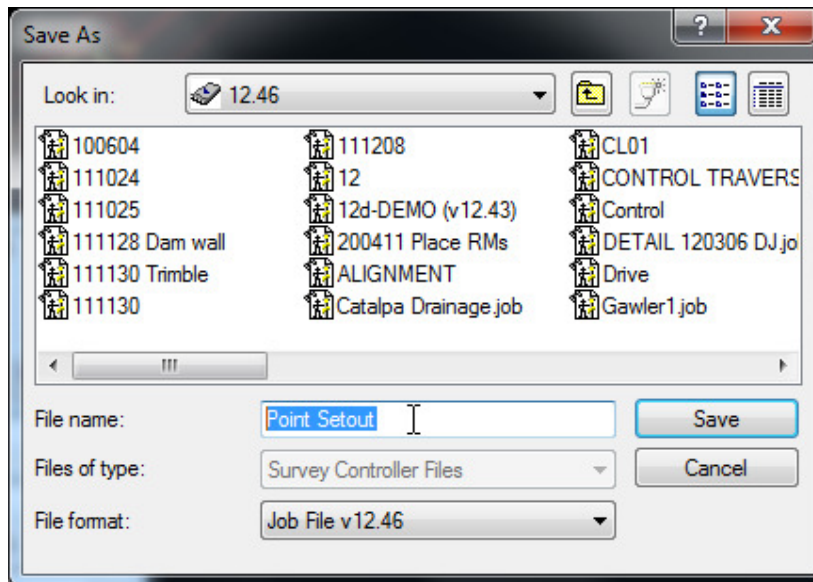
Select the data to upload using one of the source box options.

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 the correct controller to upload your setout points too. If you're using Survey Controller 12.46 select it. If you're using Trimble Access your device could be called a General Survey or General Survey Data Card.

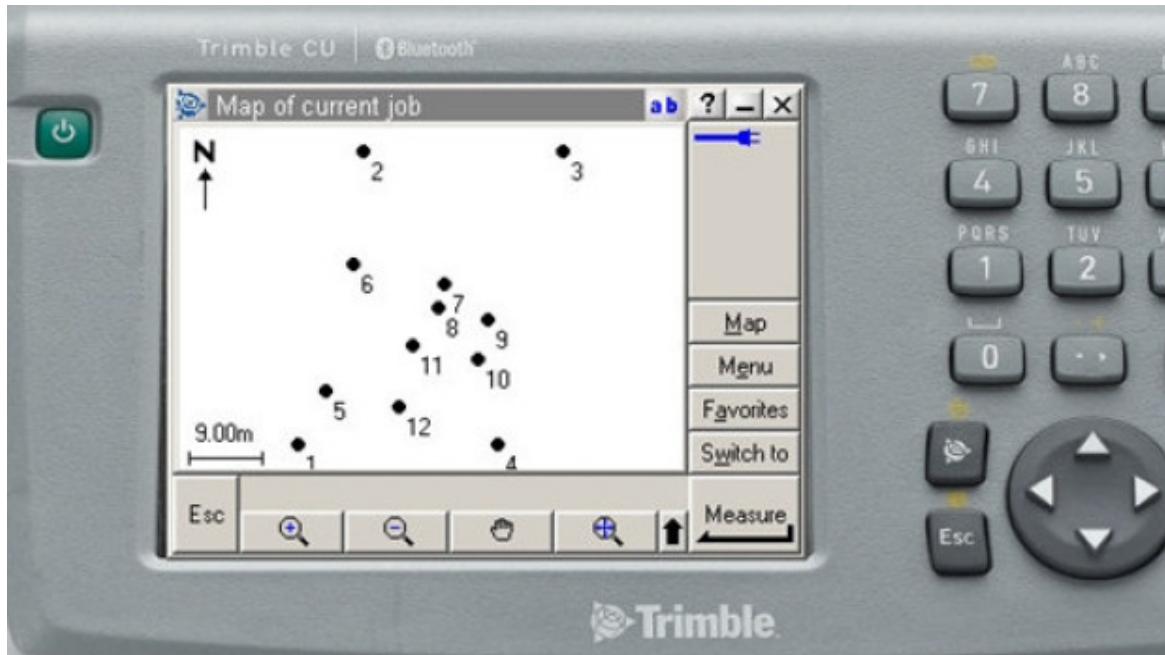


Now give the setout points an appropriate file name usually a job name or number and then select **Save**.





The file can now be opened and viewed in the controller.





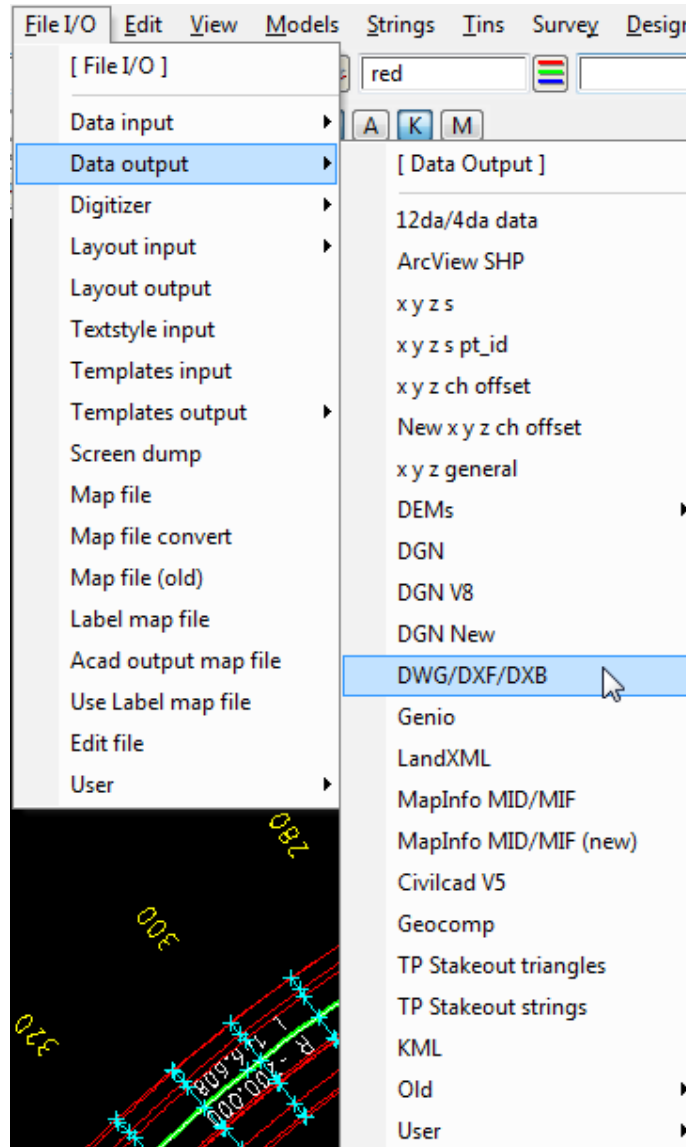
Strings from a DXF File

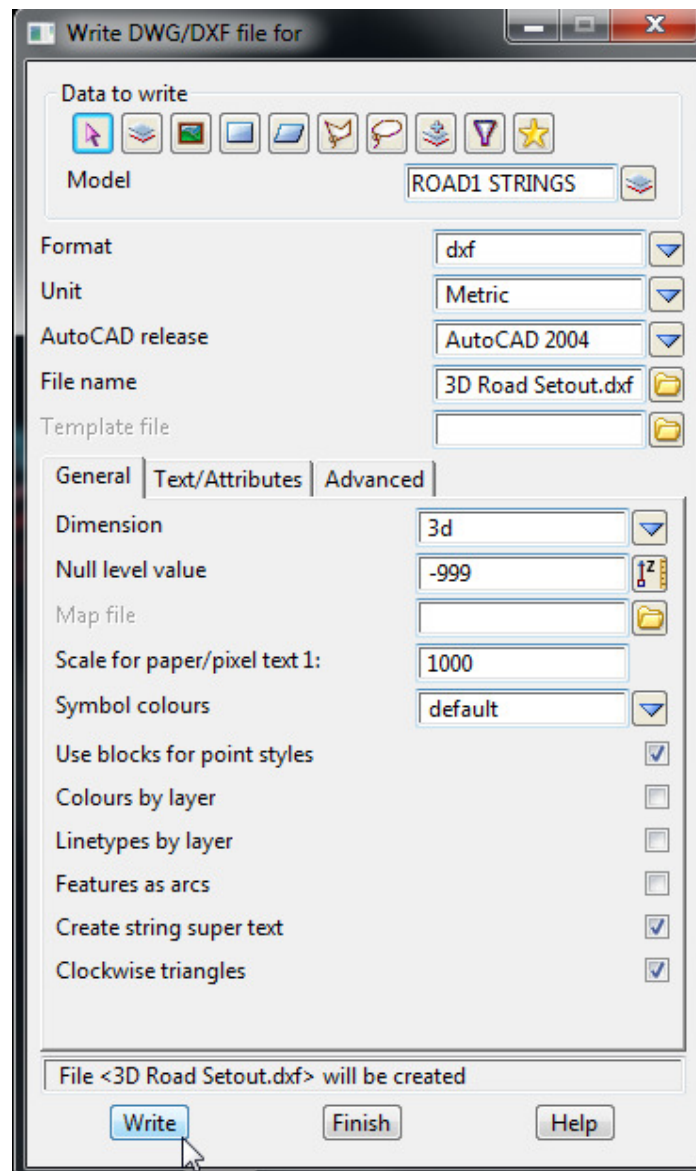
A dxf file can be used for setout of strings and also as a background file to display your data on the Trimble controller.

If you're using a dxf to setout you should export a 3d dxf from 12d. If you only want your dxf to be a background picture then a 2d dxf should be fine.

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







As above select the data to list, select **dxf** as the format, then type in a file name. Select **3d** as the dimension and then press **Write**.

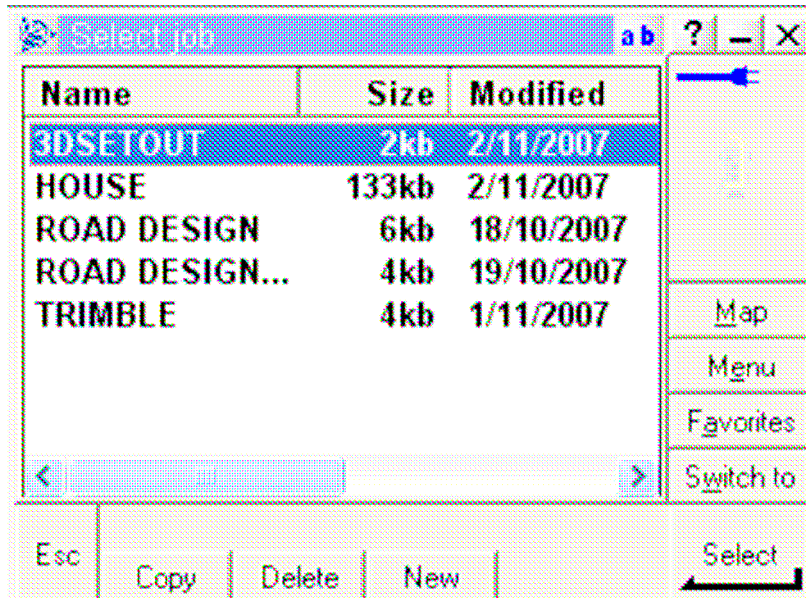
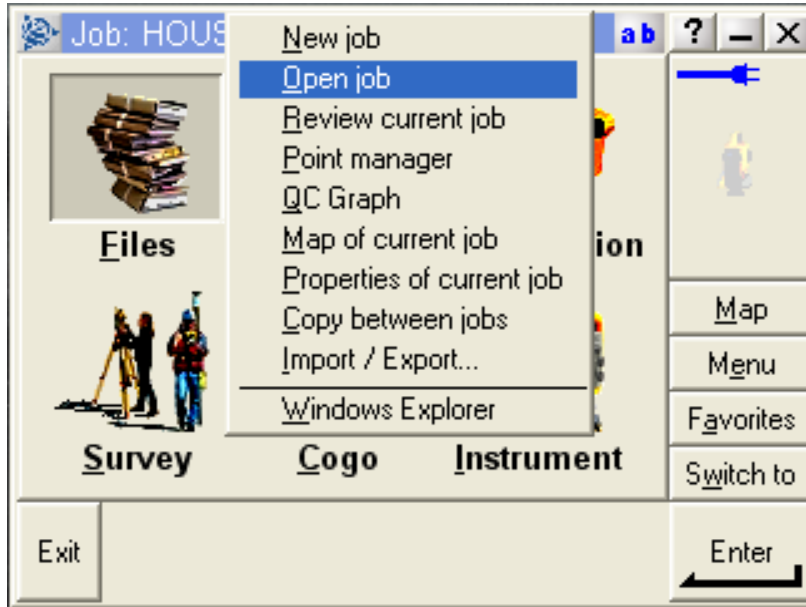
Copy the dxf file to the controller using Windows 7 Mobile (Active Sync) or a USB Stick and place it in the Trimble Data Folder on your controller.

On the controller open the job to setout or create a new job if you need too.



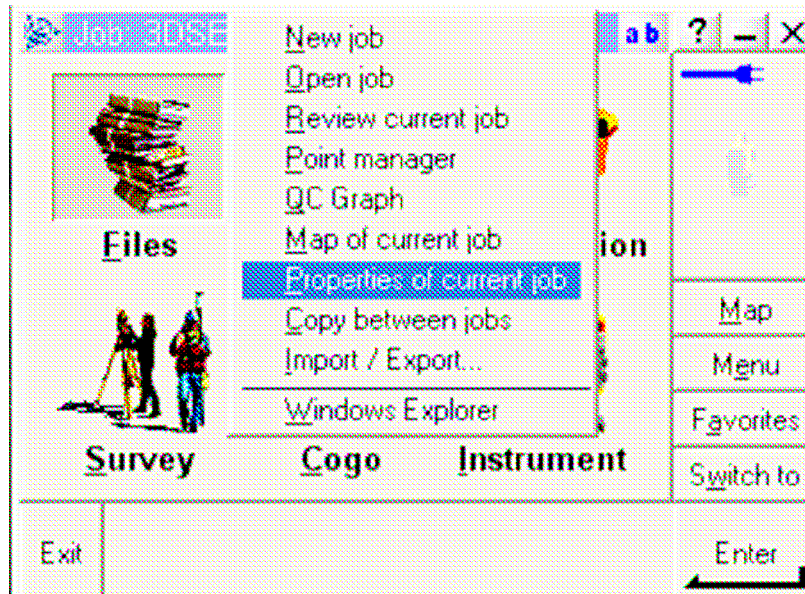


Select **Files** => **Open Job** then pick the required job

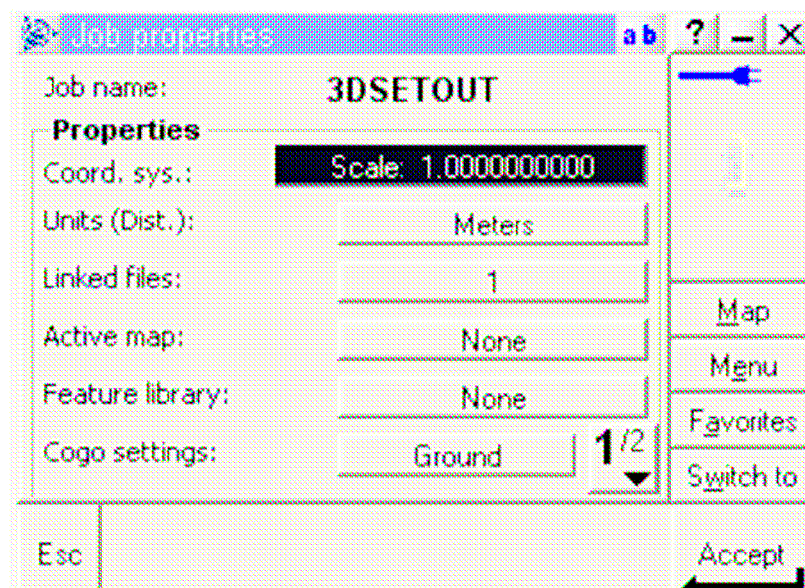




Now select **File => Properties of current job**



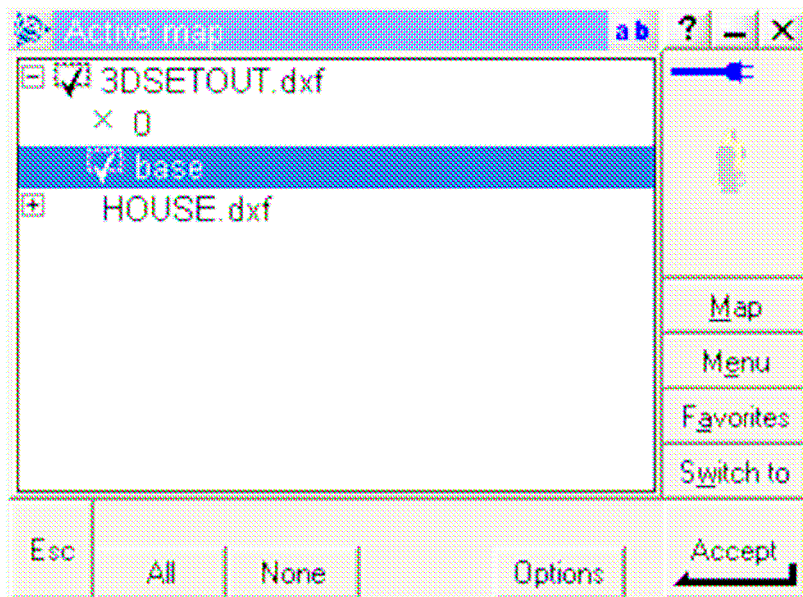
Select **Active map** then select dxf file. The layers can be then toggled on or off.



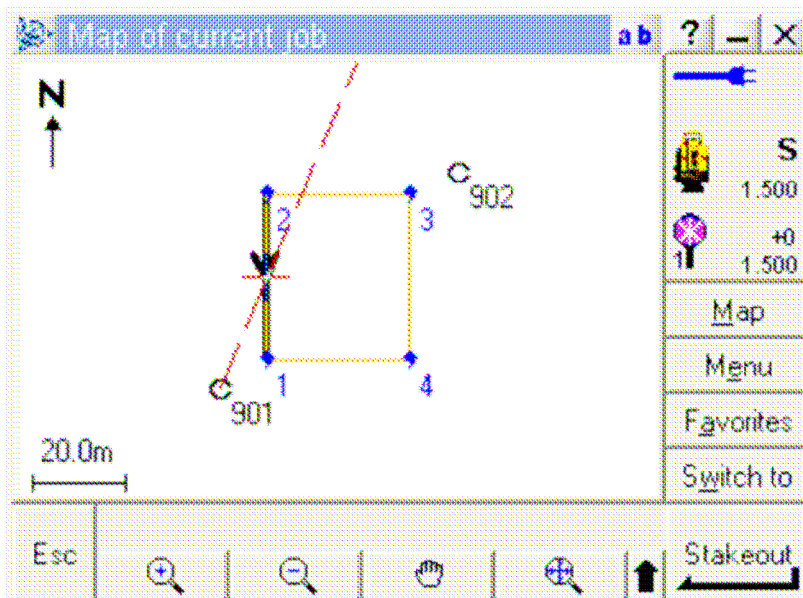


Now tap the screen twice on the word 3DSETOUT so you get a dotted box with a tick as shown below.

This means the dxf is not only visible on the controller but the double tap means you can now select the strings to setout.



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



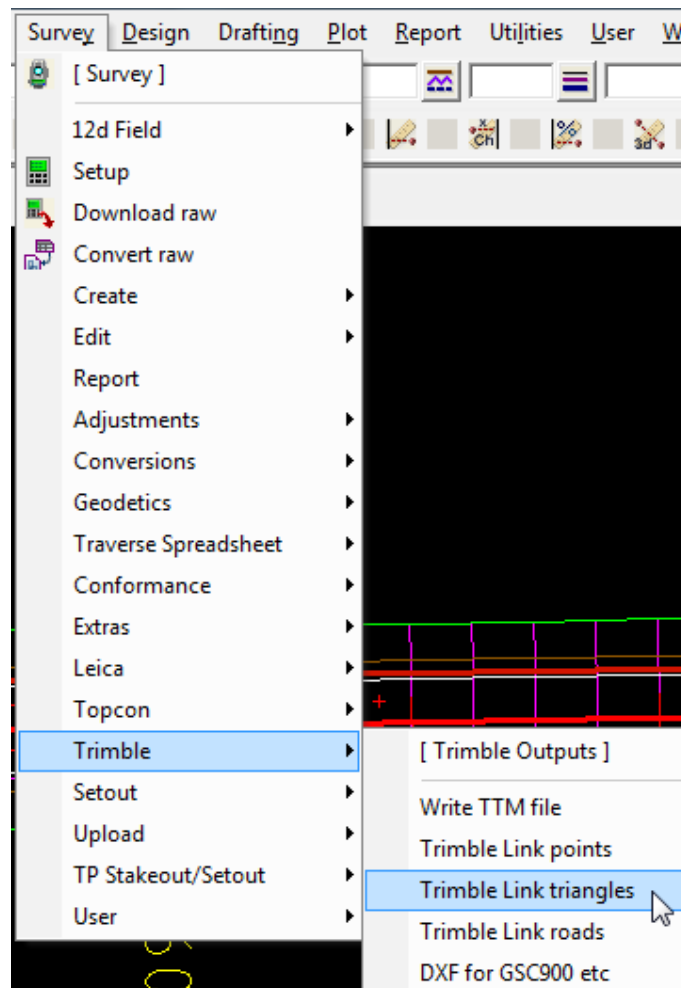


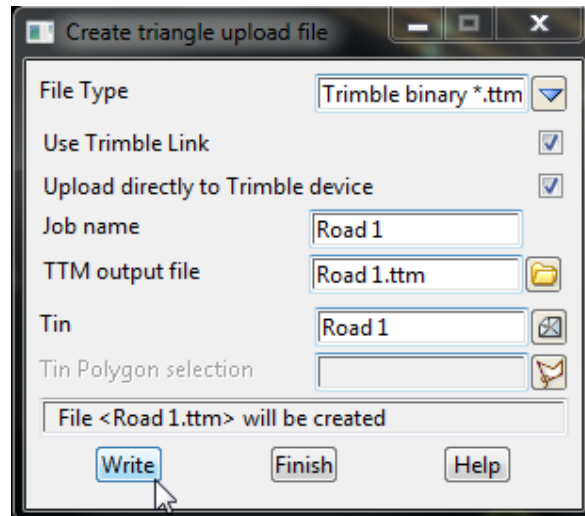
TIN upload for setout

Triangulation Irregular Network (TIN)

Select option **Survey => Trimble => Trimble Link Triangles**

Survey => Upload => Create triangle upload file – 12dv9





Select File Type **Trimble binary *.ttm** (This is a Trimble Triangle File)

Tick the check box to Use Trimble Link

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

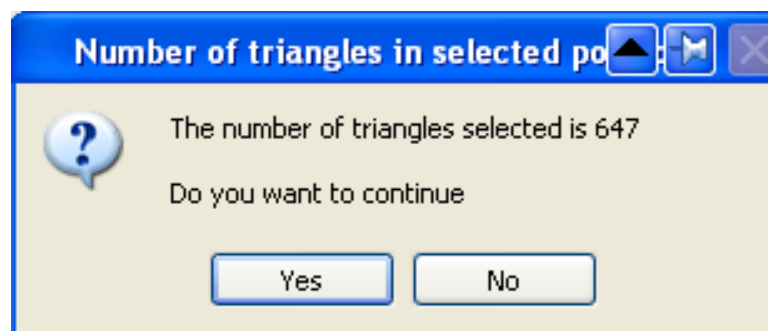
Type in a TIN name to create on the controller

Type in the TTM output file name

Select the TIN you want to setout by selecting the tin icon and choose from a list

Select the polygon around the edge of the TIN. This is usually the TIN boundary. This is also optional

Select **Write**

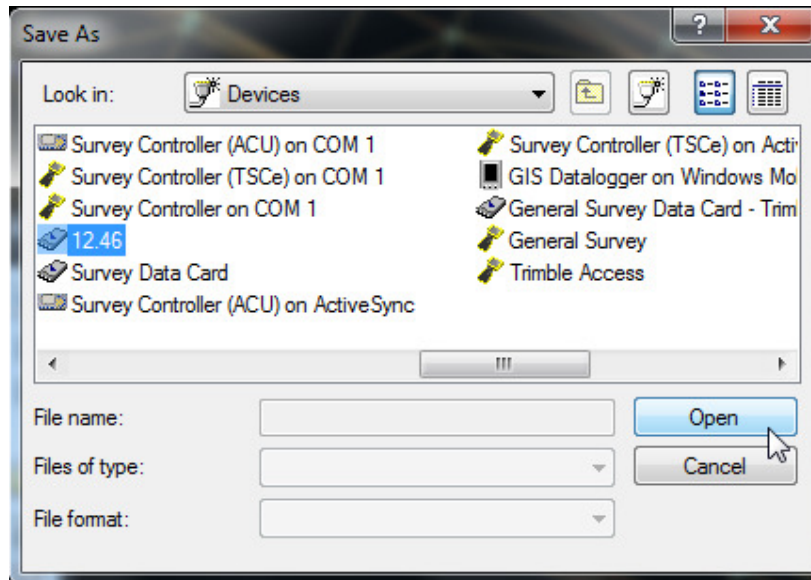


Select **Yes** to confirm the number of triangles.

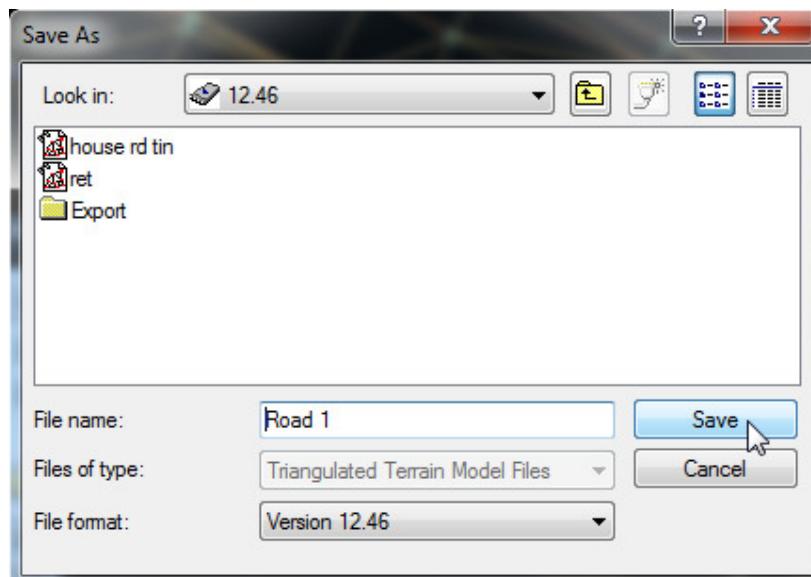




Select the controller then select **Open**



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



Select **Save**



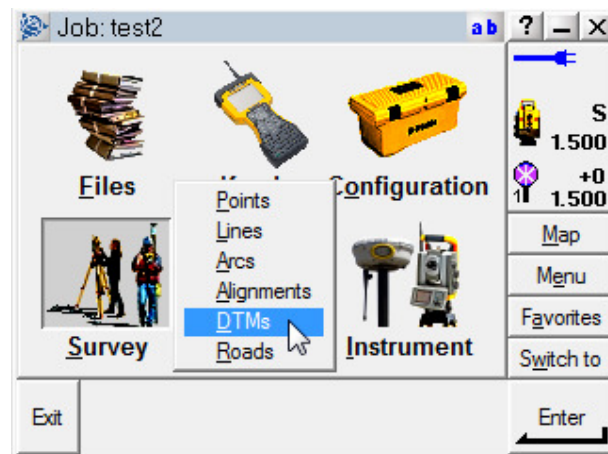
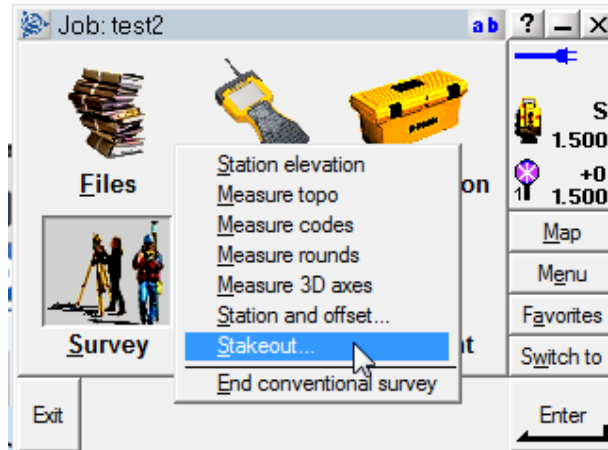


The TIN can now be used for height when setting out using the Trimble controller.

Once you start a new job or open an existing job under the **Files** icon.

You can now setout to your TIN by using the following option

Survey => Stakeout => DTMs

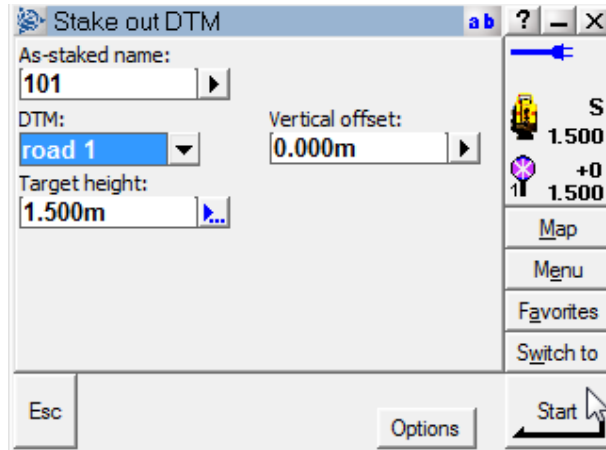


As shown below you have to select your TIN from the DTM pull down list.

You also have the option to apply a vertical offset to your TIN. (This can be handy when setting out Subgrade levels for a Road).

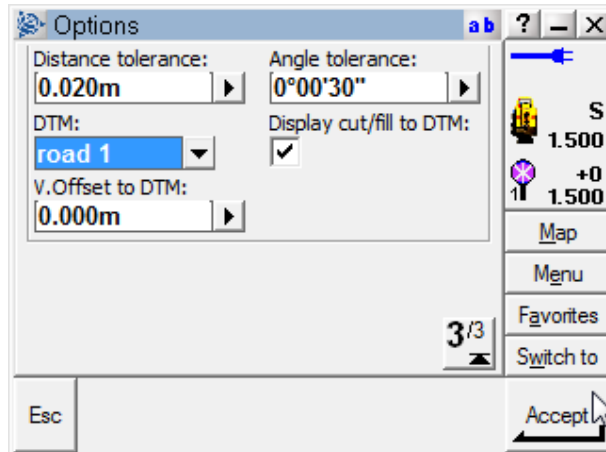
Also do forget to have the correct Target height entered as this will effect your cut & fill values.





There is also an option when staking out to a line on the Trimble controller to set the levels out to a TIN as shown below.

This is found by select the **option** tab and toggling down to page 3. This is found under **Survey => Stakeout => Lines**



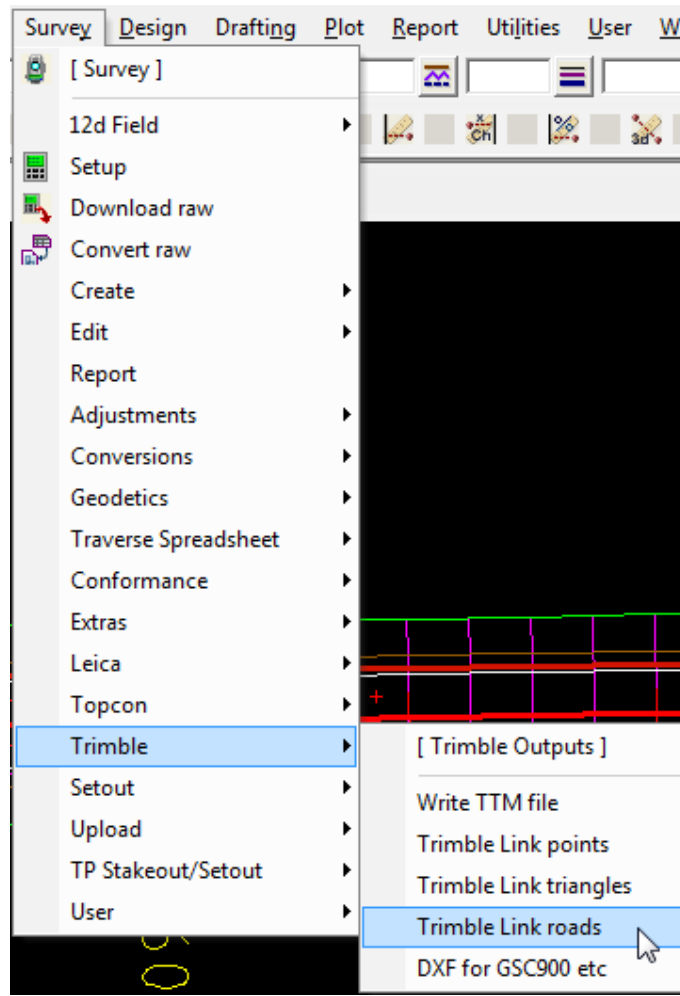


Road Sections and Strings for Setout (Simple Road)

Create upload file for road alignment and associated sections

Using **Survey => Trimble => Trimble Link Roads**

Survey => Upload => Create road upload file (new) – 12dv9





Alignment string: ALIGNMENT-> GC00
Job name: ROAD 1
Upload directly to Trimble device:
Use legacy DC Format (only supports simple spiral):
Report vertical alignment:
Report X-sections:
X-sections model: ROAD1 SECTIONS
Start chainage for X-sections: 137095.77
End chainage for X-sections: 141842.8311
Assume X-sections left end-segment is sideslope:
Assume X-sections right end-segment is sideslope:
Sideslope tolerance (%): 0.01
"ROAD1 ALIGNMENT-> GC00" selected
Buttons: Write, Finish, Help

Select your Alignment String (Usually your Super Alignment G-String). This will then automatically populate the Job Name below. You can change the Job Name to something more appropriate such as ROAD 1.

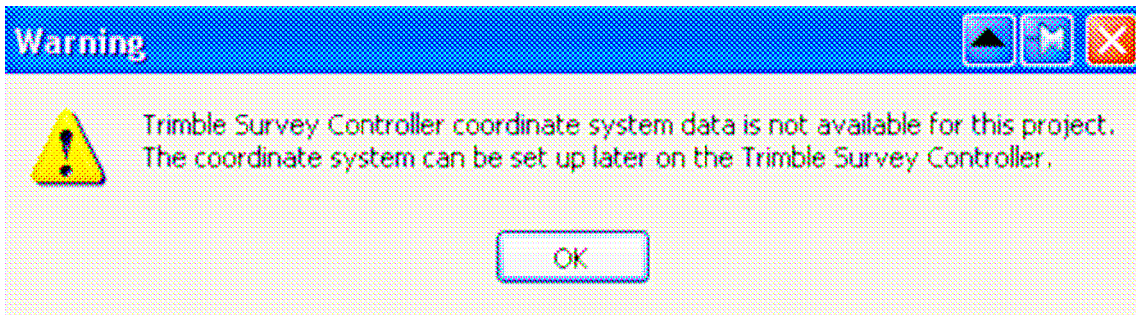
Tick on Upload directly to Trimble device as this will automatically create a Trimble Link Job on your device. If untick a .dc file (*data collector file*) is created in your 12d project folder and you'll have to transfer it manually to your device.

Then Tick on Report vertical alignment and Report X-sections so you can use the alignment to setout to a level.

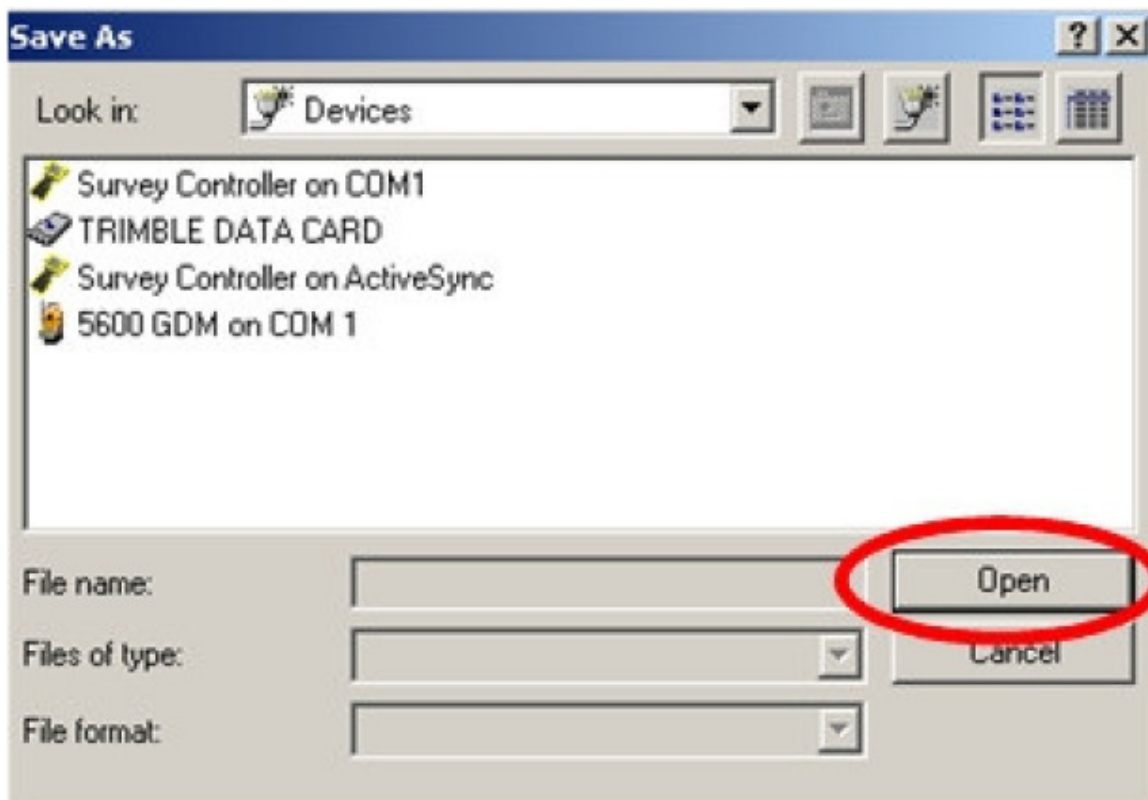
Select your 12d model that the road cross-sections are in. Also you can choose a start and end chainage if you only want parts of the alignment.

Once happy select **Write**.



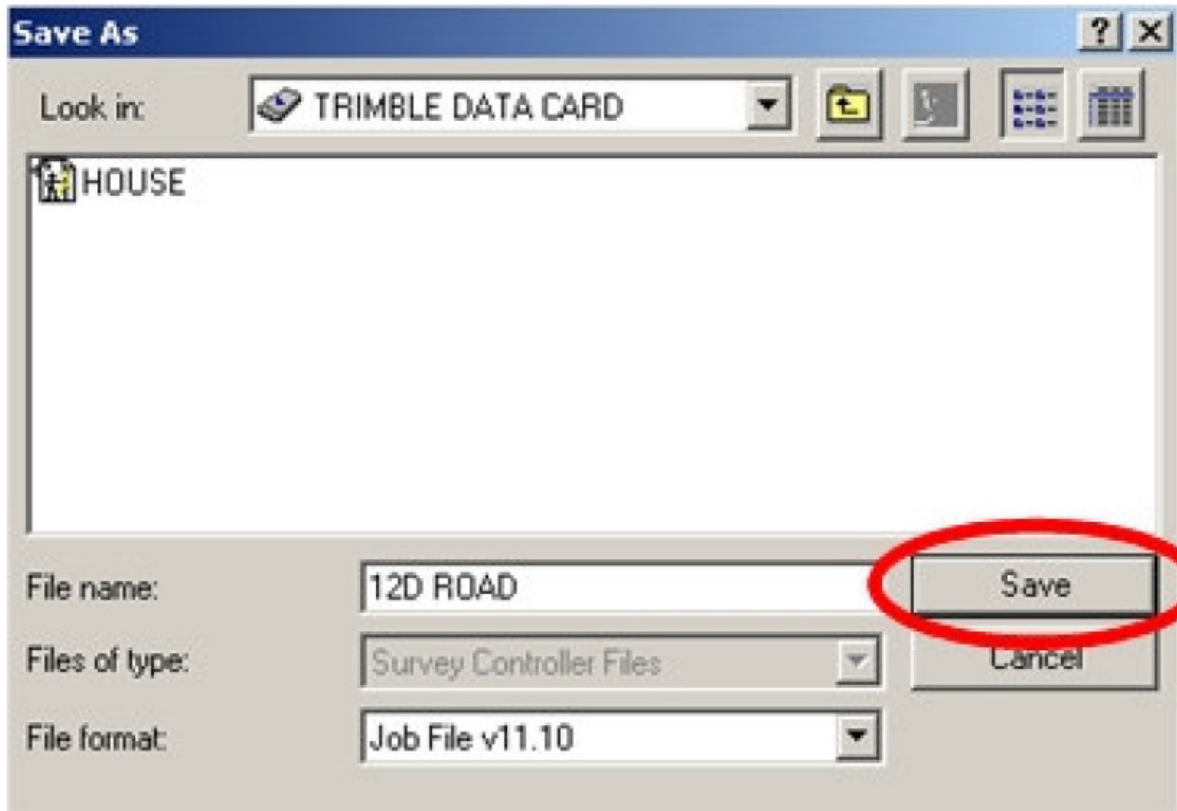


Select **OK** to accept the warning



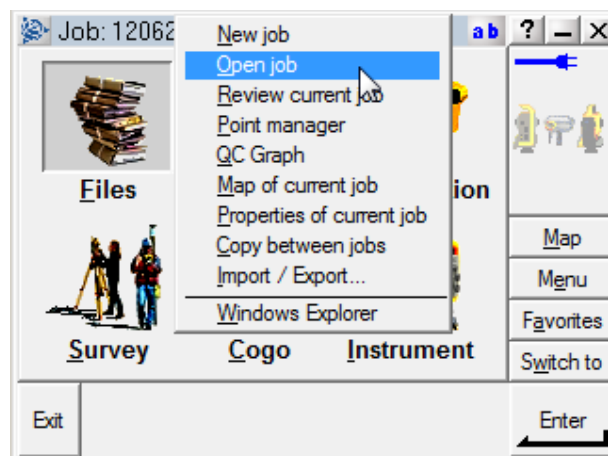
Select the controller then select **Open**

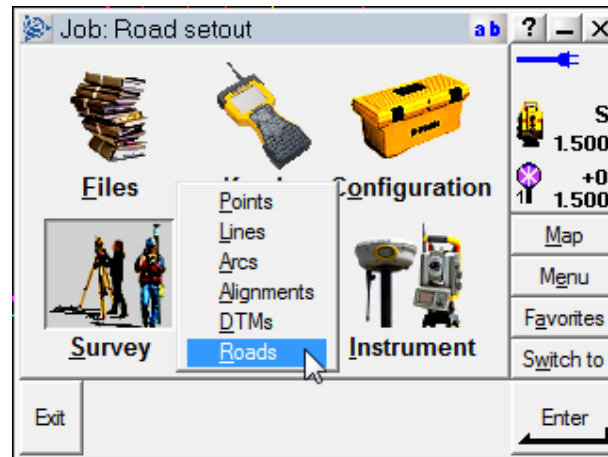
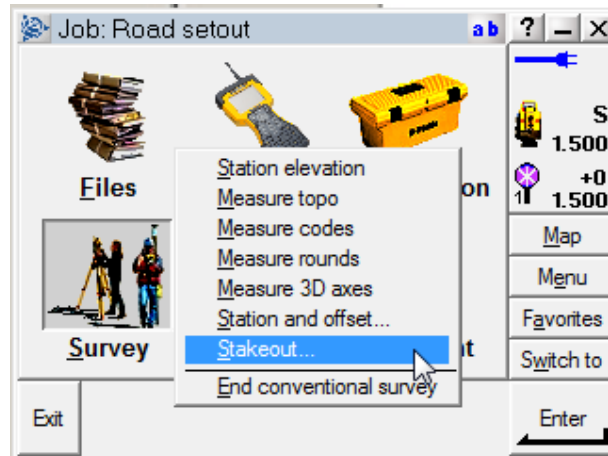




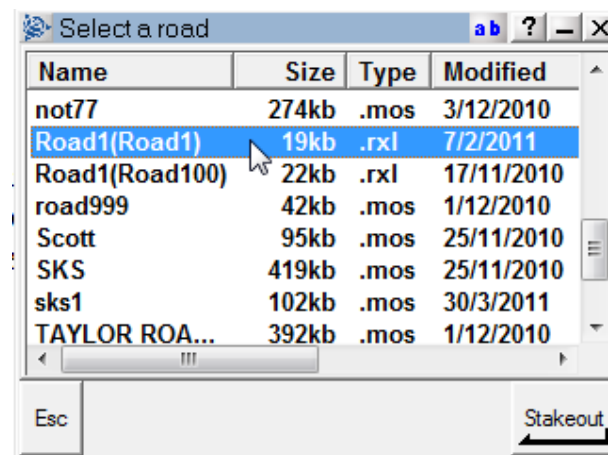
Type in the Road name to create then select **Save**

Now on your Trimble Controller go to **Files => Open Job** and select your road job or create a new job.



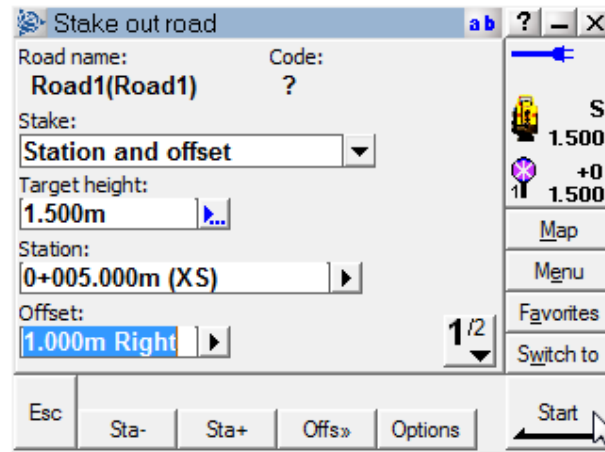


Then select **Survey => Stakeout => Roads**

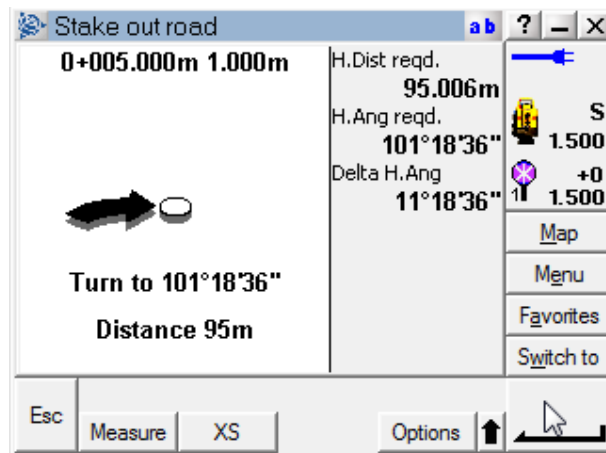


Then select the name of the road you want to setout.





Select the chainage and offset you want to setout and you should have a displayed a bearing and distance to that point as shown below.



You can also select the **XS** icon to view the setout in Cross Section view.

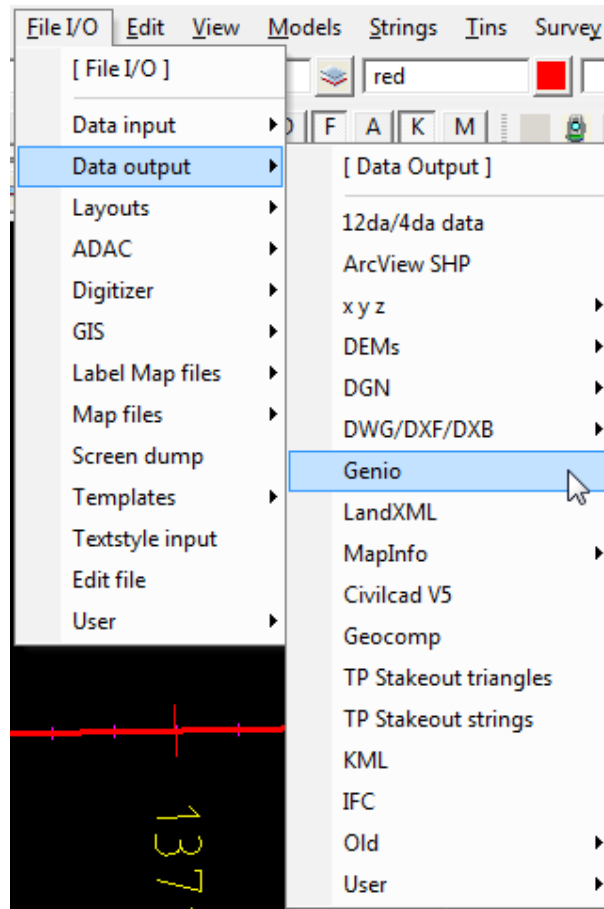


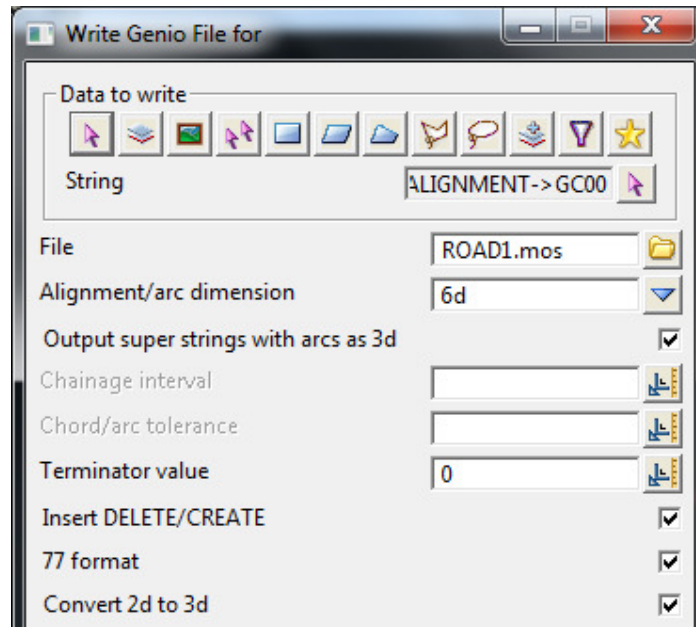
Road Strings for Setout (Complex Road)

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 first.

File I/O => Data Output => Genio





Select alignment string (Super Alignment –G String).

Type in file name eg ROAD 1 this will then automatically give the file a .mos extension.

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

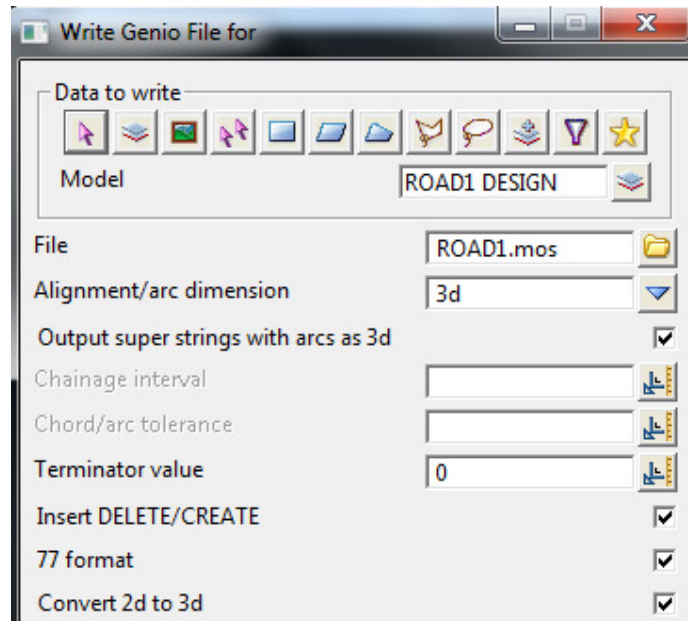
Tick check box for 77 format.

Select **Write**

DON'T FINISH PANEL YET!

You now need to write out the rest of the road strings using the **SAME** panel and file name.





Select model for road strings.

Keep previous file name.

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

Select **Write**



Select **Append** to append to the existing file

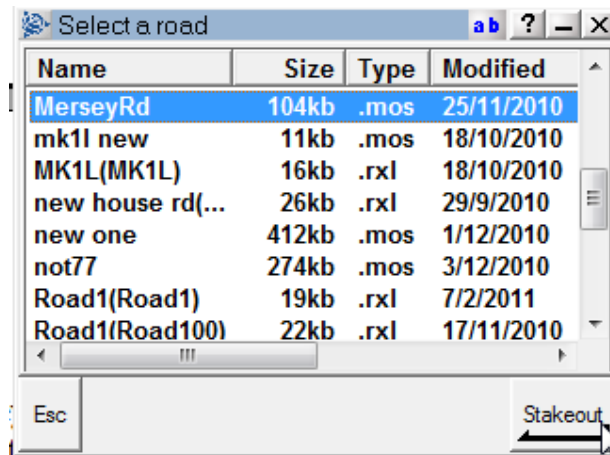
Copy the genio file to the controller using Windows Mobile 7 (*Active Sync*) and Windows Explorer.

Place it in your Trimble Data folder on your Survey Controller.





Then select **Survey => Stakeout => Roads** as previously shown when setting out a simple road. This time select the Genio File with the .mos extension.





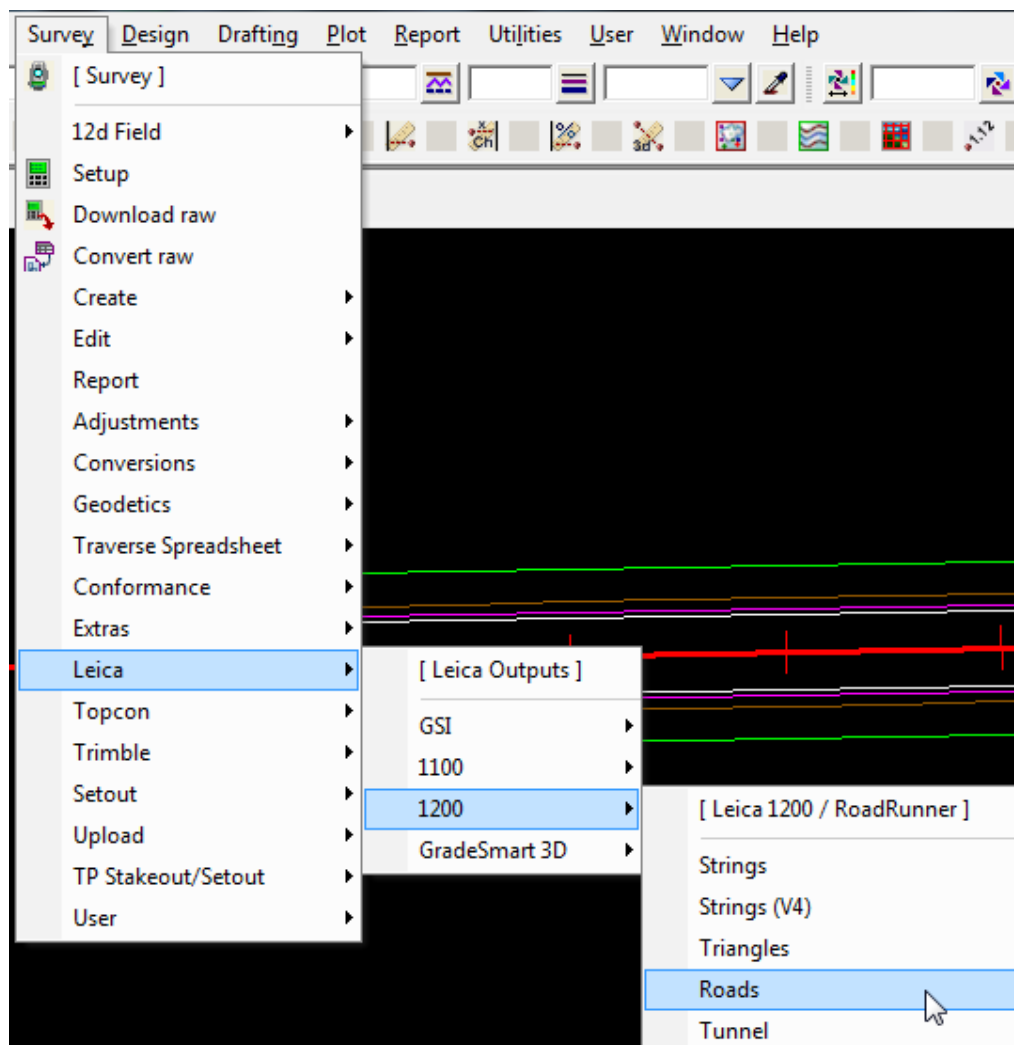
Rail Strings for Setout

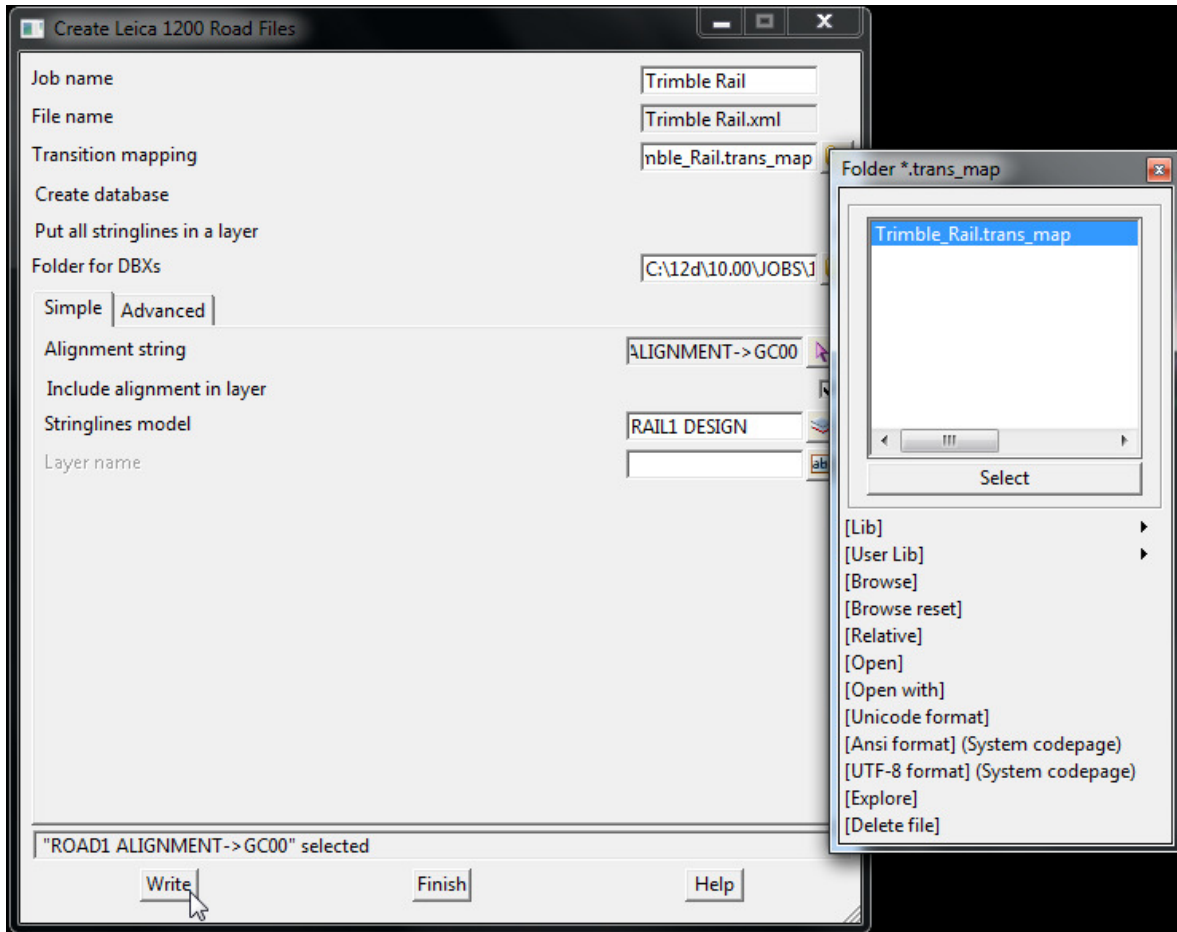
This option is used to export your alignment and strings in a rail job. This is only used if the transition curve type is a Cubic Parabola.

If you try and use the above methods your alignment will fail, as the Trimble Instruments could not read the Cubic Parabola into its software.

First before starting you need the correct Transition Mapping file to use in 12d. Please contact EXDS on (02) 9453 9449 and we can email you the correct Trimble Transition Mapping file. This can be placed in your 12d user_lib folder.

Select **Survey => Leica => 1200 => Roads** (*Yes, this is correct*)





Then type in a job name and press enter so the File name will be automatically created with an .xml extension.

Select the Trimble_Rail.trans_map to map the Cubic Parabola into an xml language that the Trimble Software recognises. Remember where you place this and you the browse icon to find this folder.

Leave the Create database unticked as we are using a Trimble Instrument so the Leica DBX Files are useless to us.

Tick on put all stringlines in a layer.

Select the Alignment string i.e. the G-String

Tick on Include Alignment in layer if you like.





Then select the model of your rail strings in the Stringlines model panel.

Then select **Write**

This is still a work in progress, as Trimble hasn't managed a way to get the alignment into their controller from TBC or 12d with the Cubic Parabola transition curve.

You can import this XML file into Trimble Business Centre (TBC) and export it to a more user-friendly format but it will still chord the alignment.

The only way to get an alignment string into a Trimble controller is by manually entering the alignment into the controller.

I will update at a later date.