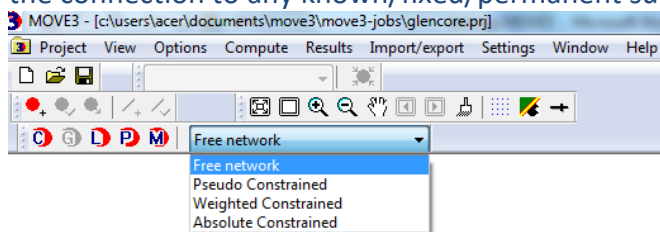


Hello Surveyors,

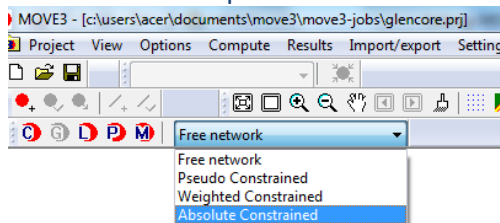
Just anticipating the next step when you get to the adjustment stage. I thought I prepare for you a very quick overview of the steps which I hope will make life easier after the initial import of your observations & known stations.

For the Adjustment if you keep in mind the two major steps or phases you this will help when dealing with errors in the network. You don't always have to do a free network adjustment before a constrained adjustment but it's the logical steps for adjustment procedures which will take any confusion where any errors are in the observations (1st phase free network adjustment) or fixed stations 2nd phase constrained adjustment.

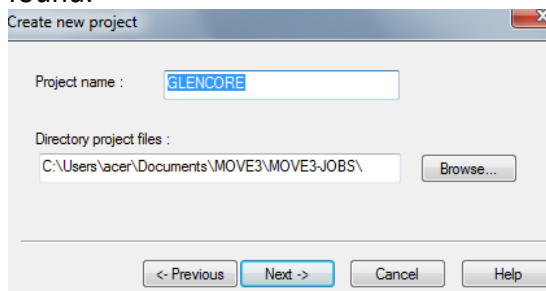
1st Phase Free Network, to check your own surveyed observations and avoiding the effect of errors in the control points thus your just looking at what you measured in the field without the connection to any known/fixed/permanent survey marks.



When you have a pass with your free network adjustment then you can proceed to the **2nd Phase Network** a constrained network eg Absolute Constrained adjustment to check if your network fits onto the previously established control points and do the final adjusted coordinates computation.

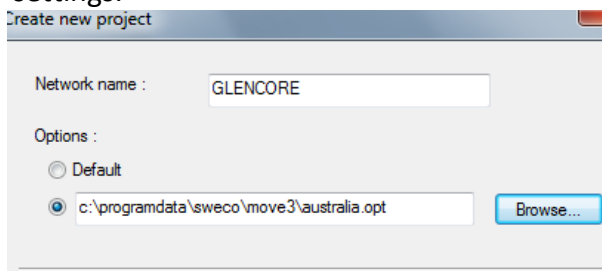


1. Create a new project: Create a directory where you want your MOVE3 jobs to be found.

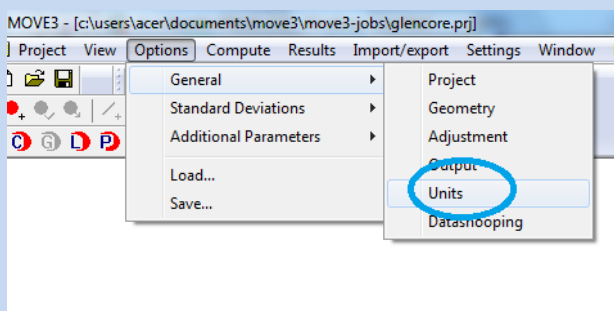


2. Next you have the option to load previous job parameters in your new job these are .opt files (option files) if you go to Browse you can find a list we have made

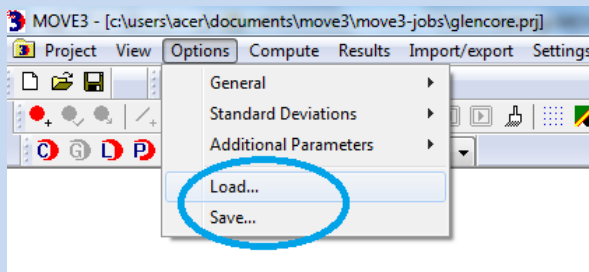
Australian SP opt file which you can select which will give all the Australian SP settings.



If you don't set anything MOVE3 will have its default settings although you may want to set the correct DMS and meters etc under units latter.



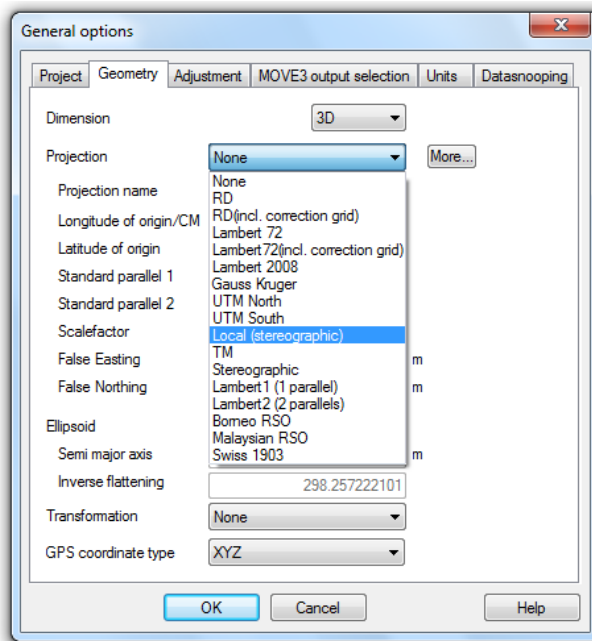
If you did forget to load an .opt file you can do this in the program itself Load an opt file or save your settings when your ready!



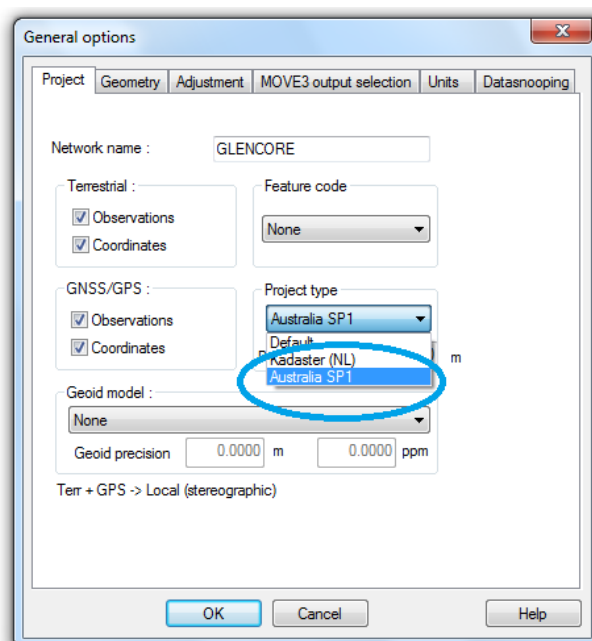
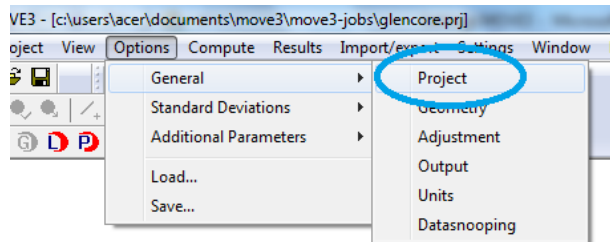
3. The Projection screen will first automatically pop up (Options- general –Geometry)

select from **More** the necessary MGA94 Australian zone projection or choose a Local (Stereographic) for just flat plane no MGA projection).

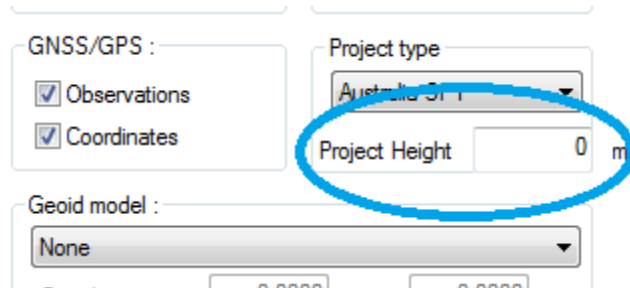
select 1D,2D,3D (you may wish to do a 2D adjustment first then latter a 3D its entirely up to you)



4. **Options-general –Project** set TPS/GPS , Here you can also set the **Australia SP1.7** under Project type to get class and order have the necessary settings for Level of significance etc. If you will not be importing any GPS baselines leave the Geoid model to none.

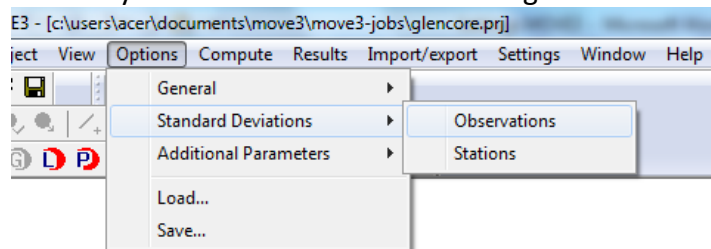


A good tip for underground mines If you have set an project height this could influence on the XY coordinates select a project height.



5. Options- general –Standard Deviations Observations, Stations

To view your standard deviations settings



Here under is an example of quite a tight industrial mine Standard deviations for observations and for your fixed stations you know best your quality!

Standard Deviations

Standard deviations for observations Standard deviations for stations

Terrestrial Observations:

Direction	<input type="text" value="0 00 01.00"/>	dms	<input type="text" value="0 00 00.00"/>	dms.km	
Distance	<input type="text" value="0.0020"/>	m	<input type="text" value="0.0"/>	ppm	
Zenith Angle	<input type="text" value="0 00 01.50"/>	dms	<input type="text" value="0 00 00.00"/>	dms.km	
Azimuth	<input type="text" value="0 00 03.24"/>	dms	<input type="text" value="0 00 00.00"/>	dms.km	
Height Difference	<input type="text" value="0.00"/>	mm	<input type="text" value="1.00"/>	mm/sqrt(km)	
			<input type="text" value="0.00"/>	mm/km	
Shift Vector EN	<input type="text" value="0.0100"/>	m	H	<input type="text" value="0.0100"/>	m
Local Coordinate EN	<input type="text" value="0.0100"/>	m	H	<input type="text" value="0.0100"/>	m

GNSS/GPS Observations:

GNSS/GPS Baseline	<input type="text" value="0.0100"/>	m	<input type="text" value="1.0"/>	ppm
GNSS/GPS Coordinate	<input type="text" value="0.0100"/>	m		

Geometrical Relations:

Angle	<input type="text" value="0 05 24.00"/>	dms		
Distance / collinearity	<input type="text" value="0.0150"/>	m		

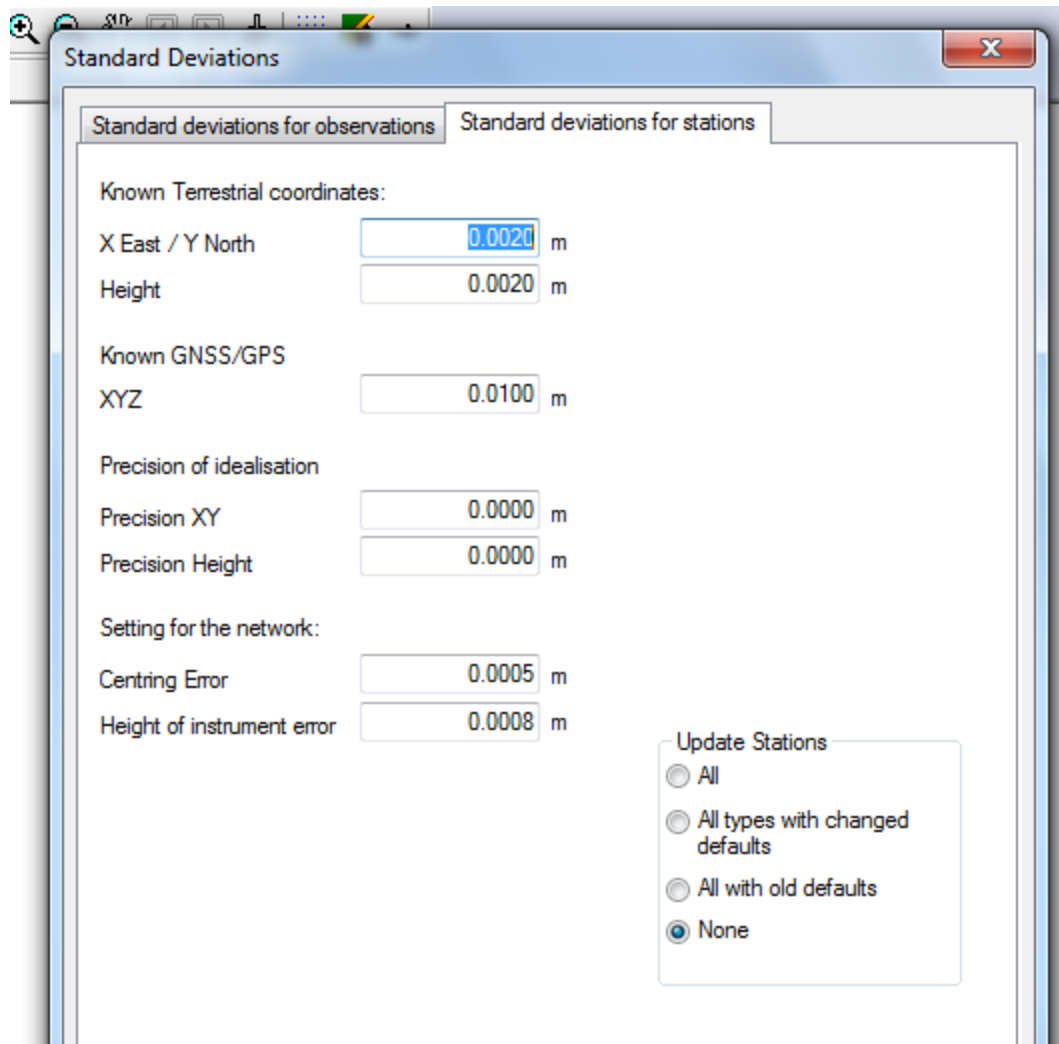
Offsets:

Steel Tape measurement	<input type="text" value="0.0100"/>	m		
Auxiliary point	<input type="text" value="0.0100"/>	m		

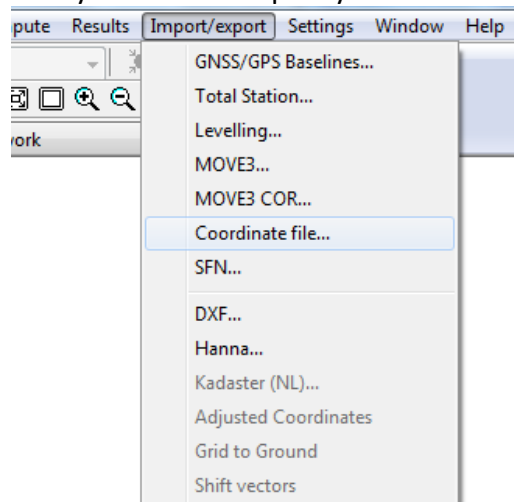
Update Observations

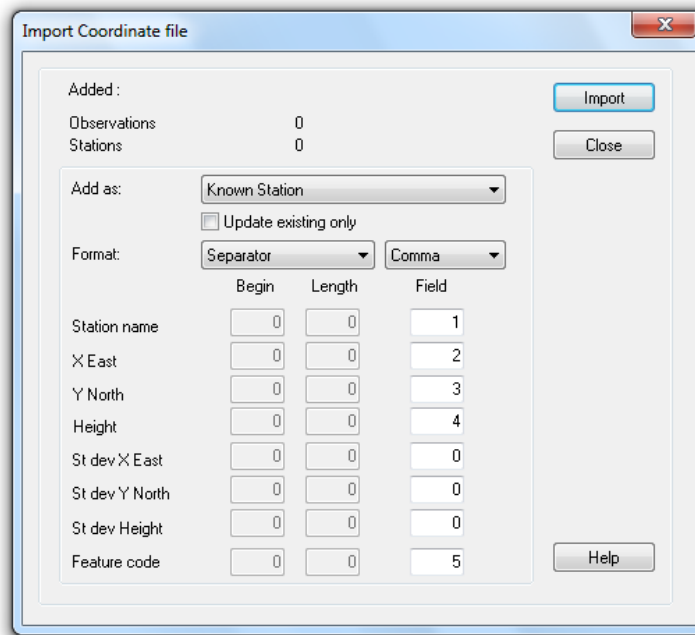
- All
- All types with changed defaults
- All with old defaults
- None

OK Cancel Help



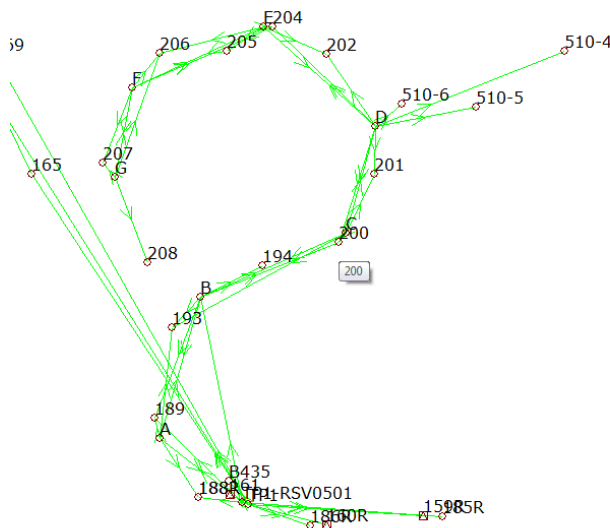
6. Importing fixed coordinates: You can either import your fixed stations in first or your gsi/dbx/jxl etc it's up to you what order you prefer. You have different options on how you want to import your stations etc.



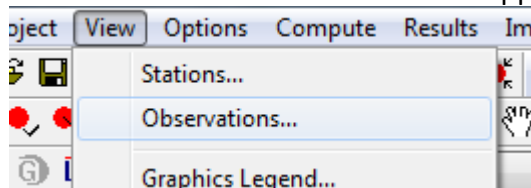


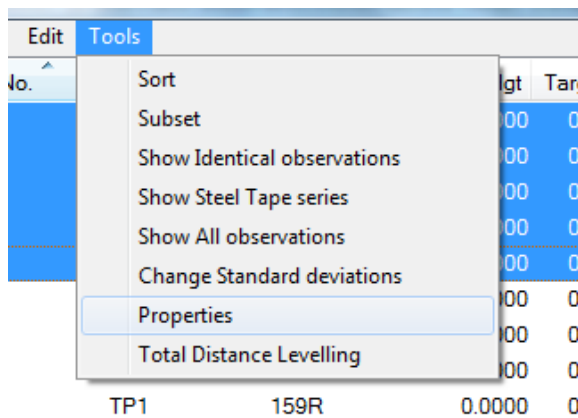
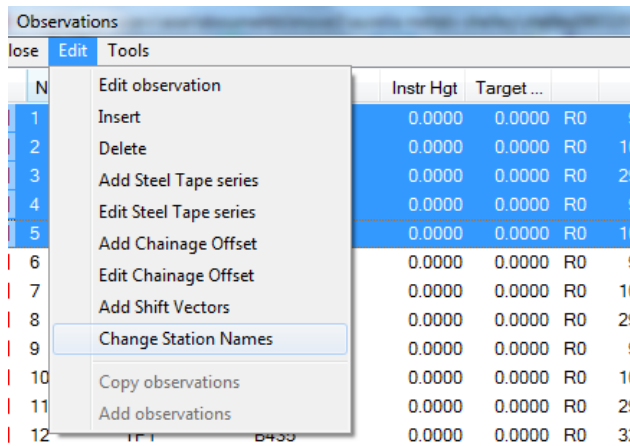
Once you have imported your data you should see it appear on the screen if there the screen doesn't present your job close up there may be a station or observation that is way out so you may have to zoom in to the main project network.

Click (right click on mouse to make a selection!) on a station, fixed station or observation line and you will see how you can easily view an editor will appear which makes editing easy.

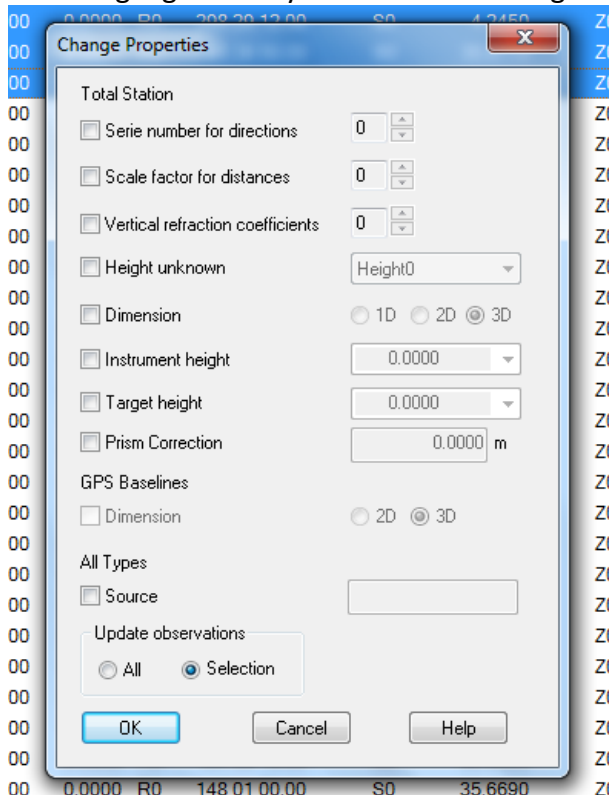


- To View your observations stations here you can edit station names Edit Change station names. Select and highlight and select Change Station Names. Double click on an observation and an editor will appear.





Under Tools- Properties you can change instrument height Target height or if you just want an observation to be 2D adjusted and not 3D you have the possibility. Just select highlight what you want to be change on the observation line.

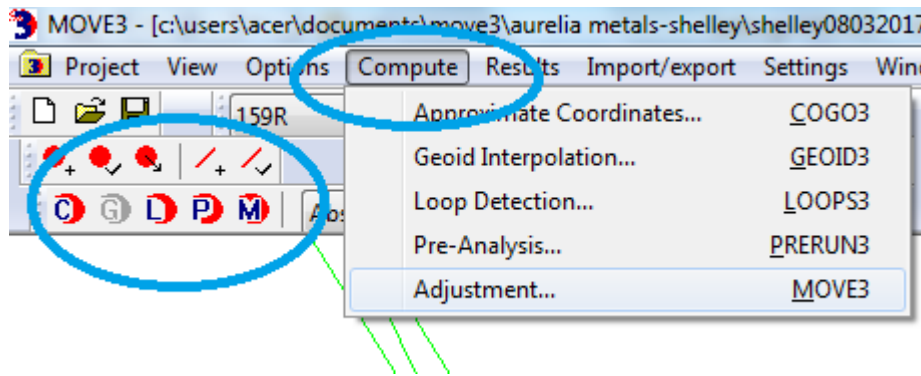


8. Viewing the Stations: * means the station is fixed either XY or height if you select the red box a # symbol appears which means the station won't be used in the adjustment but is still available so keeping the original survey in tact without erasing anything. Double click on a station and a editor page of that station will appear.

Stations						
Close Edit Tools						
	No.	Name	Type	X East	Y North	
<input type="checkbox"/>	1	TP1-RSV0501	TER	436399.1804	6447206.5170	
<input type="checkbox"/>	2	188B	TER	436297.9532	6447514.6127	
<input checked="" type="checkbox"/>	3	159R	TER	436435.8175 *	6447203.8810 *	
<input type="checkbox"/>	4	160R	TER	436416.2520 *	6447202.0090 *	
<input type="checkbox"/>	5	161	TER	436396.6012 *	6447208.1621 *	
<input type="checkbox"/>	6	TP1	TER	436400.3236	6447206.1429	

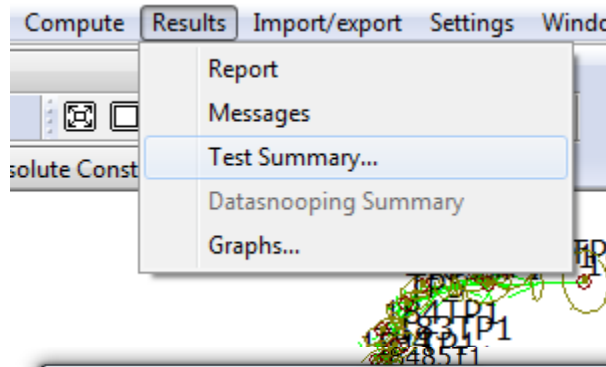
9. Adjustment:

You have two options to run the adjustment under Compute or select C, G L, P, M for a quick selection to run an adjustment.



1. **C** compute approximate coordinates (Free Network)
2. Run the **P** pre-analysis (Free Network) (but do not bother about small differences reported)
3. Run an adjustment **M** (Free Network) to check the measurements against the standard deviations used, unselect # (careful not to remove totally!) /repair rejections reported
4. Run a (Absolut Constrained network) adjustment to check if the network fits onto the Control Points **unselect #/**repair rejected control points) and do the final adjusted coordinate computation.

- Any errors go to **Results Test summary** to go through each outlier double click one by one and do an re-adjustment.



Record	Type	From	To	Test	Factor	Redundancy
2	Direction(R0)	TP1	160R	W-test	108.2	75%
10	Direction(R0)	TP1	160R	W-test	35.6	75%
7	Direction(R0)	TP1	160R	W-test	35.4	75%

Check the box with the suspected wrong observation then do a readjustment. This observation is not permanently erased but won't be used in the adjustment

The 'Edit observations' dialog box is shown for observation '2 TP1 160R'. It contains the following fields and options:

- From:** TP1, **IH:** 0.00000 m, **Height0:** (dropdown)
- To:** 160R, **TH:** 0.00000 m
- Direction:** (checked), **R 0** (spinners), **105 33 21.00** dms (highlighted in red)
- St Dev Abs:** 0 00 01.00 dms
- St Dev Rel:** 0 00 00.00 dms.km
- Deselection:** (circled in red)
- Distance:** (checked), **S 0** (spinners), **16.0000** m
- St Dev Abs:** 0.0010 m
- St Dev Rel:** 0.0 ppm

