

Digital Mapping with OziExplorer / oziTarget

Part 2 by Sean Kavanagh

Going Digital 2 - Navigation with computers for the masses

This is the 2nd instalment on using Ozi Explorer for digital mapping.

This time around I am going to run through some of the most common questions and problems that people struggle with in Ozi Explorer - file management and Drawing PZ's or areas on your maps.

File management.

Ozi Explorer has three main file types that you need to be aware of. *.wpt files for waypoints, *.plt files for tracks and the *.map files for your maps.

In order to keep things simple and easy to move around and store from event to event I have got in the habit of making a master Ozi Explorer data directory in "my documents" and then use a sub directory for each location or event.

For example at the Nationals I had the following...My Documents/oziData/Canowindra2013

In this folder I will keep not only the map files but any track files and waypoint files so that if I want to archive it or move it or find it again for next year, everything is in the once place.

This goes against the way that Ozi Explorer seems to place files but I have found it much easier to manage things in the long run.

Working with waypoints

Now whether it is your own list of waypoints or a set of waypoints for a competition, keeping a clean waypoint file that you can trust is important.

Waypoints get added or deleted all the time in competition so keeping on top of this is critical or mistakes will be made.

Using the example of a fictitious event called "EVENT2013", this is how I work to keep it all straight.

- 1) Having received a file called "Event2013.wpt" as the master list of waypoints for the competition, I will first copy this into the folder called "Event2013"
- 2) I will then rename that file to "Event2013_v1_Master.wpt"
- 3) I will then make a copy of this file and rename it to "Event2013_Working.wpt"

This gives me two versions of the same file, in the same place so that I really, really need to stuff up bad to lose my waypoints.

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4) Now for general flying, I would just open the "Event2013_Working.wpt" file knowing that any changes I make on the day will not affect my master waypoint list.

5) If I want to make the changes permanent then I simply select >save >waypoints to file and save them as "Event2013_v2_Master.wpt"

6) I would then save the waypoints again as "Event2013_Working.wpt" so my working list is updated.

In competition, I take things a little further.

After I load the "Event2013_Working.wpt" file, I then save that waypoint file as "Event2013_Flight1.wpt" or flight2 etc.

That way any changes that I make during the briefing like adding Judge Declared Goals, high lighting potential PDGs or FONs etc. can be saved to a waypoint list that just applies to this flight.

If I need to reboot the computer or restart Ozi Explorer, I can quickly reload the appropriate waypoint list and not have to enter anything.

Most importantly, when I come to the next flight, I won't have to clean up my waypoints. I can just load the "Event2013_Working.wpt" file and have a clean waypoint list.

A detail worth noting at this point is that on the top right of your map there are some quick save buttons - Save All, Map, Waypoint, Event, Track, Route.



These will change to red when you have made changes to the loaded files. If I make changes to my waypoint file, simply clicking the red "Waypoint" button will save over the last loaded waypoint file with the changes.

Warning - if you have loaded or last saved your waypoint files to your master file, clicking this button will save the changes over the top of it. If in doubt, do a manual save so you can pick where it writes the file.

Track files

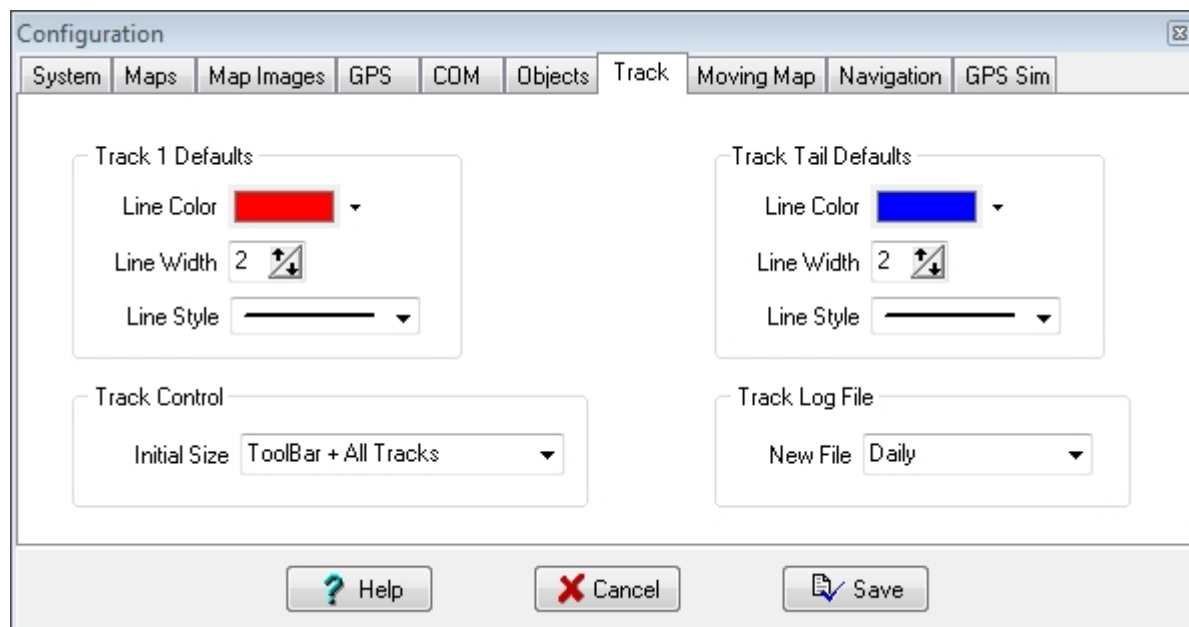
Originally, Ozi Explorer recorded your track file in track 1 which complicated things like manually drawing PZ areas etc. Thankfully this has been changed in latter versions so that your flight track is recorded in a hidden layer and can be recorded to disk automatically.

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The new set up has caused some confusion so the first thing you want to do is set up how your flight track is recorded.

1) Open the Configuration window and go to the TRACK tab.



On the right hand side you have the defaults for your track tail that will show up while you are flying.

Select the line colour, width and style to whatever works for you.

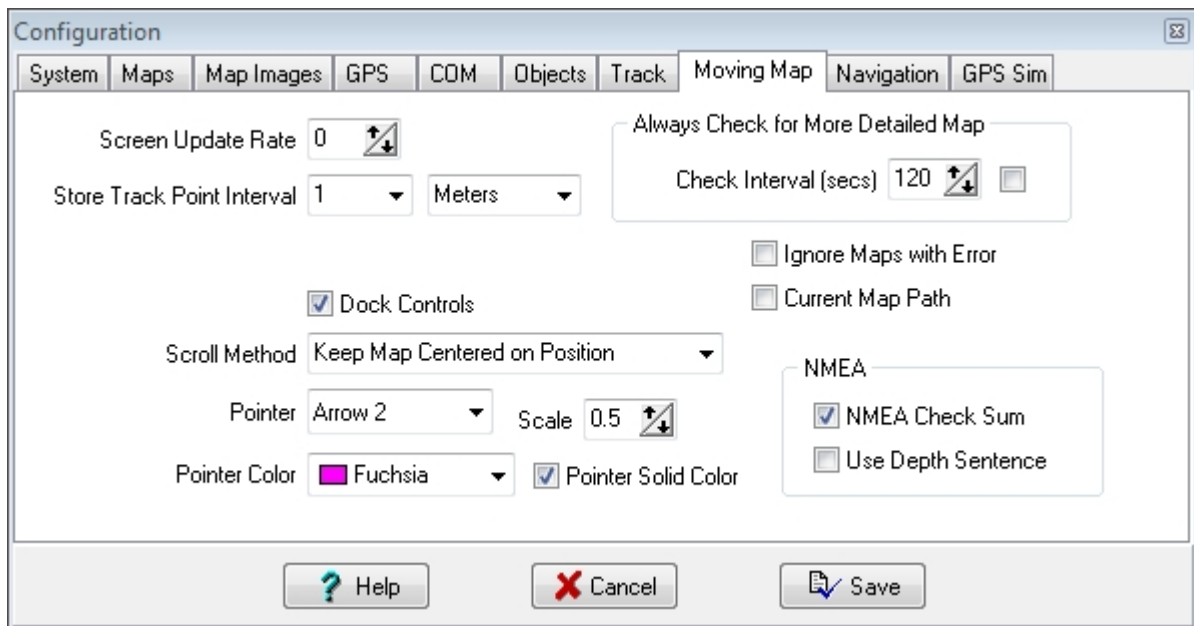
In the "Log File" selection, I use "Daily" so the track files are not too massive. You may be happy with weekly or monthly. If you select NEVER then you will get one huge file for every single flight you have ever done...In my opinion you really don't want to do this.

Daily is good if you want to pull up a particular flight.

You then need to adjust the recording interval so go to the MOVING MAP tab.

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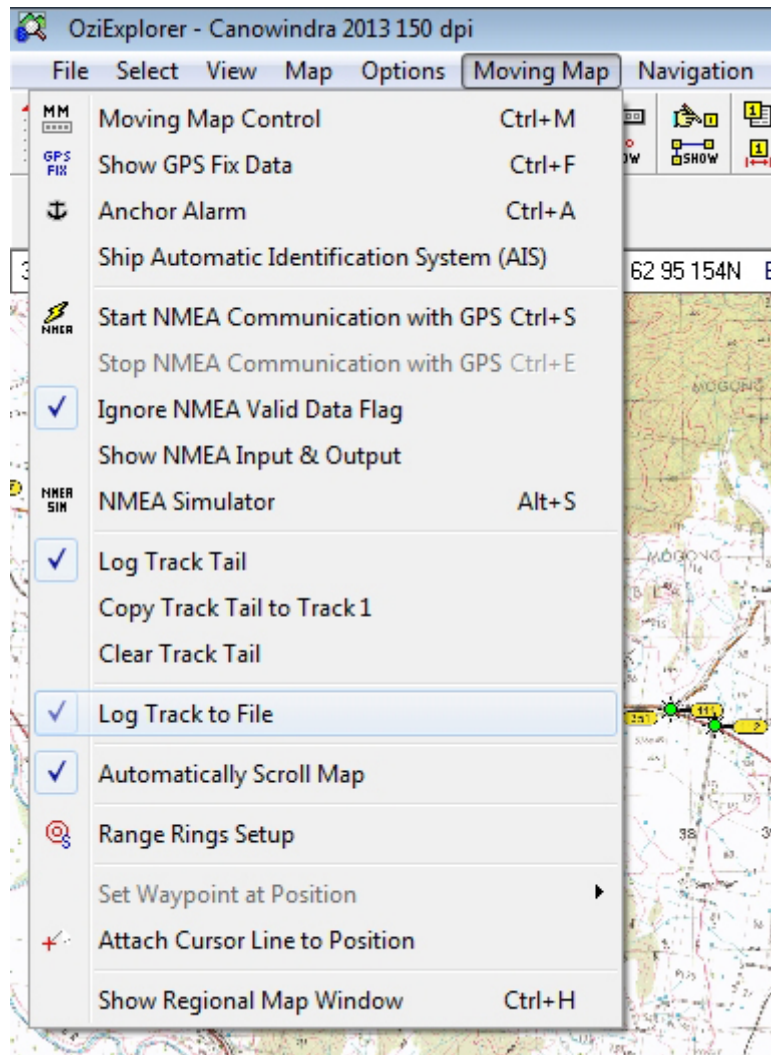
Here you can change the interval that Ozi Explorer will record the track points. Unfortunately you can only do this by distance, not time so I just use 1 meter.

Be aware, the because the recording resolution cannot be set to match the logger requirements in a competition, a track file recorded via Ozi Explorer may not be admissible as a backup log file if needed. You must have your own GPS of the correct type and correct recording interval set up for this purpose.

Finally, to make sure that your track is recorded you need to go to the "Moving Map" menu and ensure that "Log Track Tail" and "Log Track to File" are checked. If not, then you will have no track tail appearing on your map as you fly along and no record of your flight once you close down Ozi Explorer.

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It is a pain and stupid to have all of this split over so many menus and places. The good news is that once set up you should not need to touch it again.

If you want to analyse your current track you can simply select "Copy Track Tail to Track1" and use the track tools to look at it.

The "Log track to File" option will save you track file into the oziexplorer/data folder in a file with the date such as the following "TrackLog 2013-08-06 daily.plt" so if you want to look at a past track file just load it from there.

If you are ending up with tracks all over your screen from previous flights simply select >MOVING MAP >CLEAR TRACK TAIL

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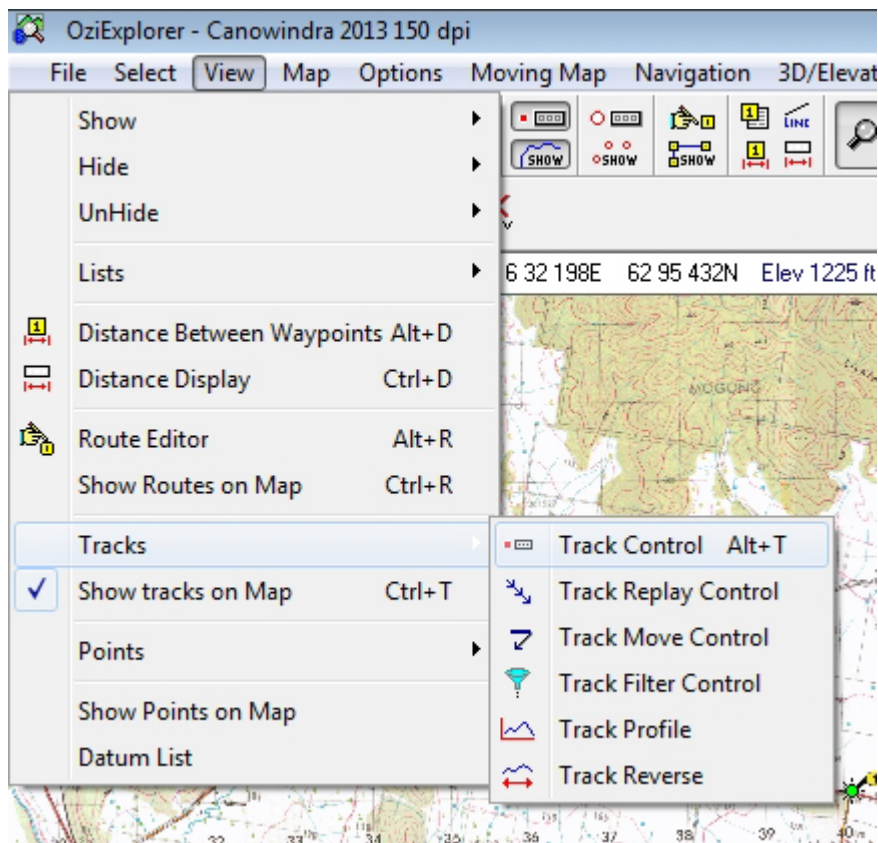
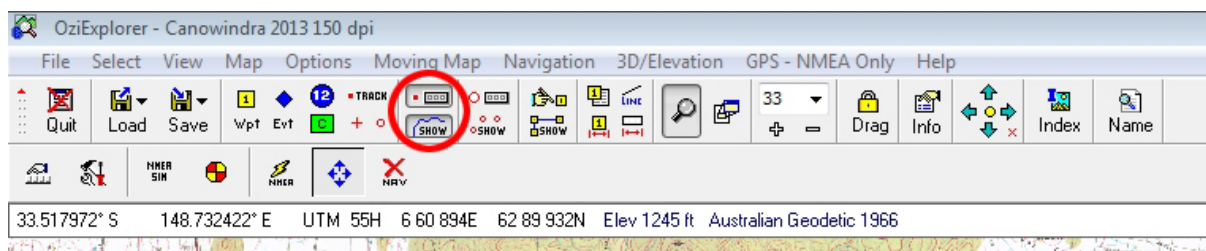
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Adding details to you maps

If there is one area that Ozi Explorer is a letdown it is drawing shapes and additions to your maps. It is not that it can't do it, it is just that it is not intuitive.

Because there are no native drawing tools in Ozi Explorer the only method you have at your disposal is to use track files.

The first thing to do is locate the TRACK CONTROL window. From the keyboard it is ALT+T, from the main menu bar it is under >VIEW >TRACKS >TRACK CONTROL or it is the little button with three dots in the main menu bar icons.



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With the track control window open there are a number of tools that you can use to draw tracks, move track points around, delete track points and merge tracks. If you move your mouse over each button slowly you will get a tool tip explaining what the button does.

Three important points with drawing tracks that you must remember

1) The "SHOW TRACKS" button must be highlighted - this is the top left button on the track control and also directly under the track control icon on the main tool bar.

2) You can only draw a new track in track 1.

3) Always start with track 1 empty. If there is a track in track 1, manually adding points will link the existing and new track sections making a mess.

Draw a new PZ or mark out an area

1) Open the track control window and make sure that track 1 is empty.

2) Select the "Manually create track points" button. Your mouse pointer will change to a crosshair with the word TRACK under it.

3) Click on the first point of the area you want to mark and continue around the edge to keep adding points.

Where you need to go around a corner or bend, just add more points.

Zoom in or out on the map as needed to make things easier.

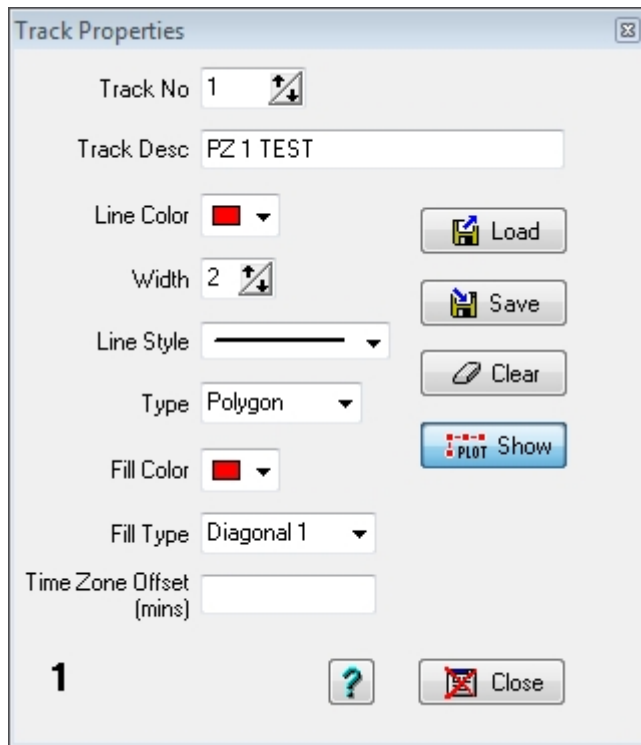
4) Make your last point close to the first point you drew.

NOTE: if you have waypoints on the map it may make selecting the exact location you want if there is a waypoint there. In this case select >VIEW >HIDE >WAYPOINTS. Use >VIEW >UNHIDE >WAYPOINTS when you are done.

5) Double click on the first track in the track control to open the TRACK PROPERTIES window

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6) Change the TRACK DESCRIPTION to something useful and include height data if it is a PZ.

7) Customise the line colour, width and style as needed.

8) The TYPE can be changed POLYGON if you want a filled area and from there the FILL COLOR and FILL TYPE can be changed as needed. Note you could also set it as an ALARM ZONE but I find it annoying having an alarm go off when you overflying at the correct altitude so I never use it.

9) SAVE the track file with a descriptive name like "PZ1.plt" in your directory with all of the other related map data.

Now if you needed to draw a second PZ or area you would do the following;

1) Either clear track 1 by selecting clear from the TRACK PROPERTIES window or close the track properties window and move TRACK 1 down the list using the up/down arrows in the TRACK CONTROL window.

2) Draw the new PZ or area as above and save.

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Moving points and fixing mistakes

If you need to move a point in your PZ or area there are two options. The first is just to redraw the whole thing. To be honest, unless it is a large and complicated area can often be the fastest and easiest option.

The second option is to delve deeper into the tools in the TRACK CONTROL window and to play with the DRAG button on the main tool bar.

1) From the main tool bar, make sure that the DRAG button is unlocked. This will enable you to click on features such as waypoints or in this case track points and move them around on the map.

I recommend that you leave this locked unless you intend to move something - turning it on and off as needed so you don't move things you didn't mean to move.



2) From the TRACK CONTROL window, turn off your MANUALLY CREATE TRACK POINTS button and select the button shown here which is for selecting individual track points.



3) Move your mouse over the point and your pointer should change to a hand. Drag the point to the new position.

4) Save your track as before.

There are lots of other variations on this so have a play and learn the tools that are there. I won't cover them here because there are too many and the help file does a good job explaining what else you can do with track files.

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Drawing Circles

The above methods for drawing irregular areas is great once you get the hang of it but drawing a neat circle is not so easy.

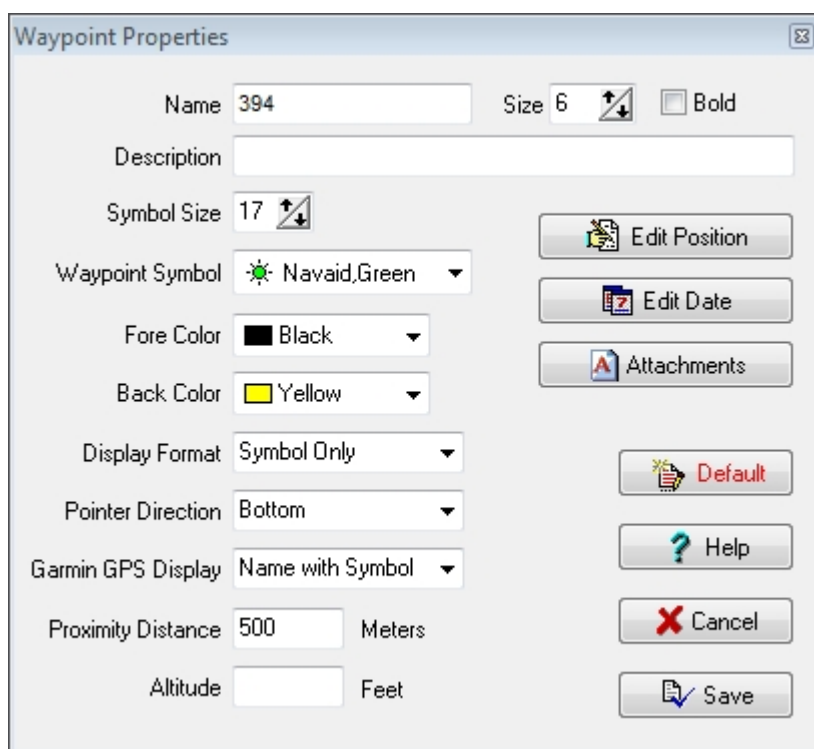
Within Ozi Explorer the only option you have for drawing circles is to set a proximity distance around a waypoint. This limits you to one circle. That circle is then filled and you cannot customise it in any way.

This is how you do it.

- 1) Draw a waypoint and the center of your circle by toggling the POSITION & SET WAYPOINTS ON MAP button on the main tool bar.



- 2) Right click on the waypoint and select PROPERTIES from the context menu.



- 3) Set the PROXIMITY DISTANCE as required. This is the RADIUS of the circle in meters.

- 4) Select SAVE to make the change.

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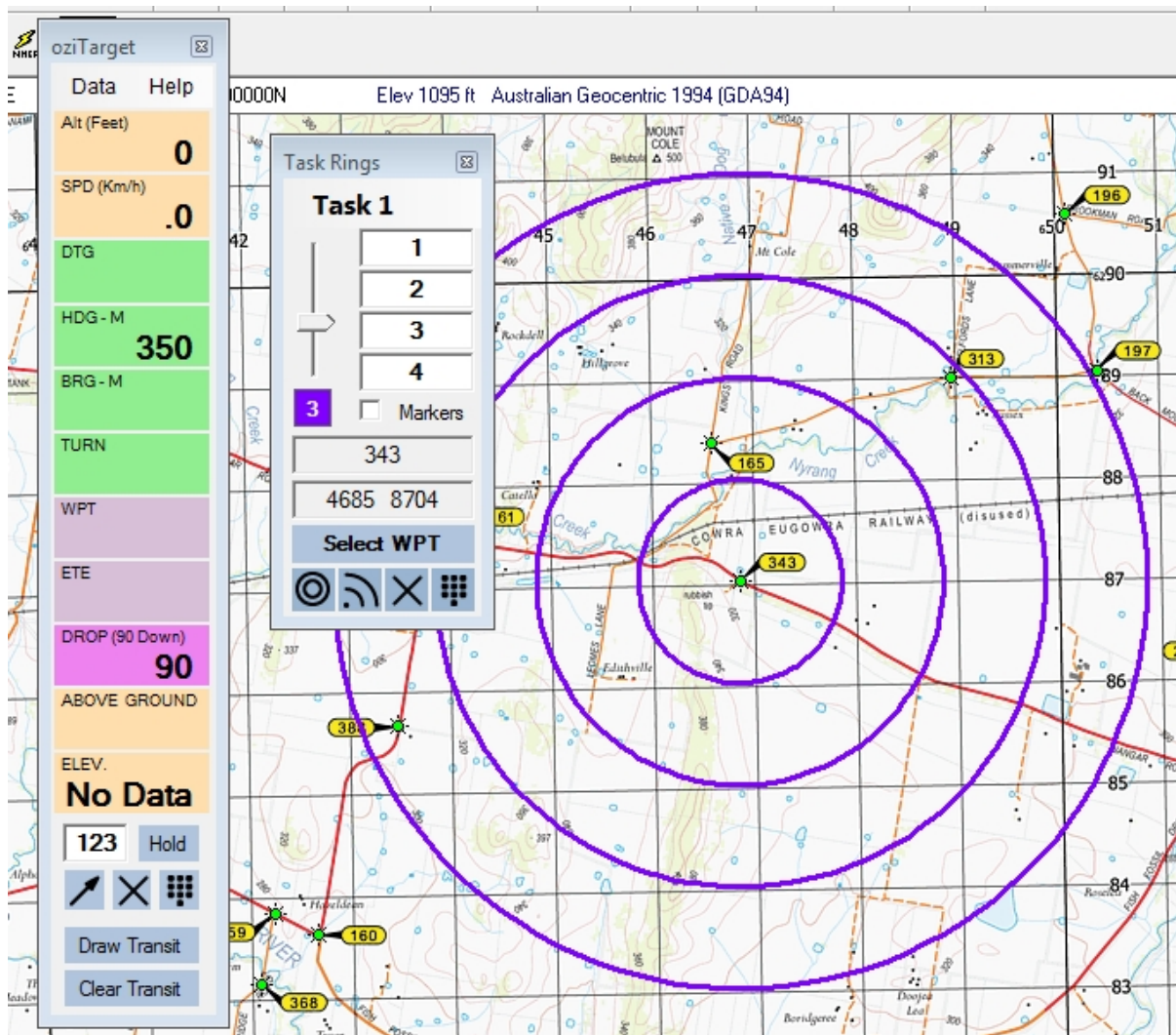
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oziTarget for drawing rings

Fortunately, Ozi Explorer allows third party programs to interact and control things.

As such there is an alternative for drawing rings around waypoints as well as lots of other cool stuff too.

oziTarget is an add-on for Ozi Explorer that can quickly draw perfect circles around your waypoints for minimum and maximum distances.



More details can be found here : <http://ozitarget.blogspot.com.au/>

End of Part 2