RegisCad

GARMIN TRACKS LAT, LONG --> Y,X

1. Download Track using BaseMap if using Oregon (MapSource does not work with Oregon)

2. Edit unnecessary points in BaseMap

3. Save as .gdb file

4. Bring into Mapsource

Note:
Depending on what accuracy is required from converted WGS84 Latitude Longitude Coordinates to our WGS84 Y X Coordinates or even the older Clark Lo Y X Coordinates, one can sommer use Mapsource to do it for you!

5. Edit, Preferences, Position
   a) For WGS Y X Coordinates:
      Grid : South African
      Datum : WGS84

   b) For old Cape Y X Coordinates
      Grid : South African
      Datum : Cape

6. File --> Save as --> Tab delimited text file

7. Open text file
   Delete first lines
   Remove Y & X's and "19 "
   Save

8. Bring file into Excel
   Remove Columns
   Add names to first column
   Save as .prn file

9. Add BEACON LYX to start of file
   Add E to end of file

10. Bring into CAD.

<u>Using ORION (much quicker):</u>

Create a Name DecLat DecLong file
Goto Orion
Input Format name "NameLLSpace"
Output format - use constants as required.

Create DXF out of RegisCad

File → Export → DXF
Vertical Constant –3596932.001
This will store a dxf file which can be brought into Modelmaker and PlanetGis.

Import DXF that was created in ModelMaker or PlanetGis

File → Import → DXF
Vertical Constant 3596932.001 (For Lo19 & Lo17 & Lo21)
Look in Regis for other Lo's.

Create Lables from DXF Files
(this is usually used for new layouts. The design has been completed in ReMap, but I now need labels for all end points of lines).

Create plan with lines only
  Make sure that there are no small gaps or overlaps.
  In ReMap
   Edit → Clean (switch on errors)
   Repeat this process until there a no errors
Make sure there is no text and there are no Points.

File → Export → DXF
Run Program Dxf2xyz
Will save as comma delimited ASCII file with extension xyz
Open this file in EXCEL as comma delimited – skip last column

There will be a lot of duplicates which will have to be removed first as follows:.
Insert a first row
Cell A1 = Y; Cell A2 = X
Select all the data in both columns
(Ctrl-End to get to last value)
Data → Filter → Advanced Filter
Under **Action** select **Copy to another location**
Click box **Unique records only**
The **List Range** already has the correct value
The same range to go into **Criteria Range** (Ctrl-C; Ctrl-V)
Copy to – click on the arrow on the right, then click on the leftmost cell one below the last row.
This will give the new range
Press ok
The unique data will be below the previous data
The previous rows and columns are still selected.
Click on "Delete Rows" and you'll finish with the unique data.
Remove the Y & X row so that data starts in Row 1
Cell C1 = A1 * (-1)
Cell D1 = B1 (-1) OR (B1*(-1)) – 3600000), if you want to remove the constant
Select both C1 & D1 and double-click on bottom right-hand filled square

The will fill both columns
Edit copy (or Ctrl-C)
Select Cell E1
Edit → Paste Special → Value → Ok
Remove columns A – D
Add a column before A
Cell A1 = eg. 100
Cell A2 = 101

Select A1 & A2, click on bottom right-hand filled square
This fill column A with unique numbers starting with eg. 100.
Select colmns B & C
Format → Cells (or press Ctrl-1)
Numbers → 3 decimals
Make sure there is space between the columns
File → Save as → PRN file
This file can then be converted into a survey file (via Choice 37) in Panam or brought into ReMap by making the first line “BEACON LYX” and “E” the last line.

PlanetGis

Shape (shp) files into PlanetGis
PlanetGis Pro 3.08 does not function correctly.
Open PlanetGis 2.61
Open shape file
Save shape file as a Planet .map file (say A.map).
Open PlanetGis Pro
Open the map file to which the shape (now map) file must be added.
Goto Design mode.
Copy the feature(s) from A.map to the main file’s feature by dragging.

Create Y X Dxf in PlanetGis if PlanetGis is Lat Long

Select entities to be converted
File → Export → DXF file (can also create KML & KMZ files this way)
File → Open the dxf file
File → Project → Coordinate System → Convert
Pick Hatebeesthoek – Lo… the correct one

Import DXF file from ReGis or ModelMaker

File
Open
DXF file (will open in a separate map)
East, North - keep

File - Project - Co-ordinate System (is on Non-Earth) - What are you on?
Select
Africa
South Africa

Hartebeesthoek/ Lo 19 (for example).
Select
Close

File Project - Co-ordinate System
Convert
Hartebeesthoek 94
Select
Close

Click Windows
Eg WC-Cadastral
Displays
Right click
Add
Select .dxf all

Remember to copy this data via Design mode if you want to keep it and then to close the DXF file in Design mode, otherwise Planet will keep looking for the dxf file.

MapSource

MapSource to DXF

File → Save As → DXF

In the dialogue choose:
XY scale: 1
Prox circles: 0.001
Text height: 0.001

This process may take a long time depending on how many tracks, waypoints and routes you have.

MapSource to Shape (shp file)

Save tracks, waypoints & routes as GPX file

Run DNRGarmin program (this program is an add-on (extension) to ArcGis, but is a stand-alone program, too and is free to download from the Internet)
DNRGarmin looks for a connected GPS – ignore (Click on OK) – you do not need to be connected to a GPS for this program to work.

File → Set Projection → Datums: WGS 84 → Projections: No Projection

[You can leave all other options as suggested or have a look as to what data your Garmin GPS provides once you have created the shape file.]

File → LoadFrom File: enter the name of the GPX file
Feature Type → you have to select Waypoint, Track or Route – each in turn
Depending on the size of the GPX file, this may take a minute or 2.

You can now see which fields have been used and can now switch off unused fields (File → Set Projection → Waypoints / Tracks)

File → Save To → ArcView Shapefile (Projected)
The following files will be created:
Name.dbf
Name.prj
Name.shp
Name.shx
I suggest that you use NameWpt, NameTrack, NameRoute.. for each iteration.

The shape files can be brought into PlanetGis one by one.
Save each one as a separate MAP file
Once done, combine into one MAP file.

MapSource to GoogleEarth

View → View in GoogleEarth

GoogleEarth will load

Under Temporary Places there will be
MapSource: Waypoints / Tracks / Routes
Right click and change the styles and Icons
Use Share Styles if you want to, for example, make all icons the same

Change the opacity of the text to remove Waypoint labels.

Cadaster (Panam) Survey Program

Survey files into Garmin etrex

Open Survey file
Choice 37
Choice 7
Choice 4 (All → Lat, Long)
Enter Y & X constants and the Lo of the job
Answer Yes to "Do you want to create a GPS file?"
Save to \etrex\Filename

Open program g7towin
File → Open Filename.txt
Waypoints → Upload Waypoints to GPS

Note: If you want to upload the co-ordinates to a Nuvi or the Oregon, bring the file into g7towin and then save that file as a GDB file.
Open MapSource, load the GDB file and then upload the co-ordinates.

GoogleEarth

Create track for upload to GPS

Draw the Path in GoogleEarth
Right click on it under Temporary Places
Save Place as KML file

Open GPSBabel
Convert KML file to GDB file

Open MapSource / g7towin
If necessary pick up points along the track as Waypoints
Upload Track and Waypoints.