

## Drawing requirements for setting out with a Total Station or GNSS Rover

**Notebook:** Hitechiques Knowledge Base

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### Drawing requirements for setting out with a Total Station or GNSS Rover

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You can't upload every drawing to a Total Station tablet or GNSS rover and go and stake out with it. Prior to uploading to the datalogger the drawing must be prepared. There are two reasons for this:

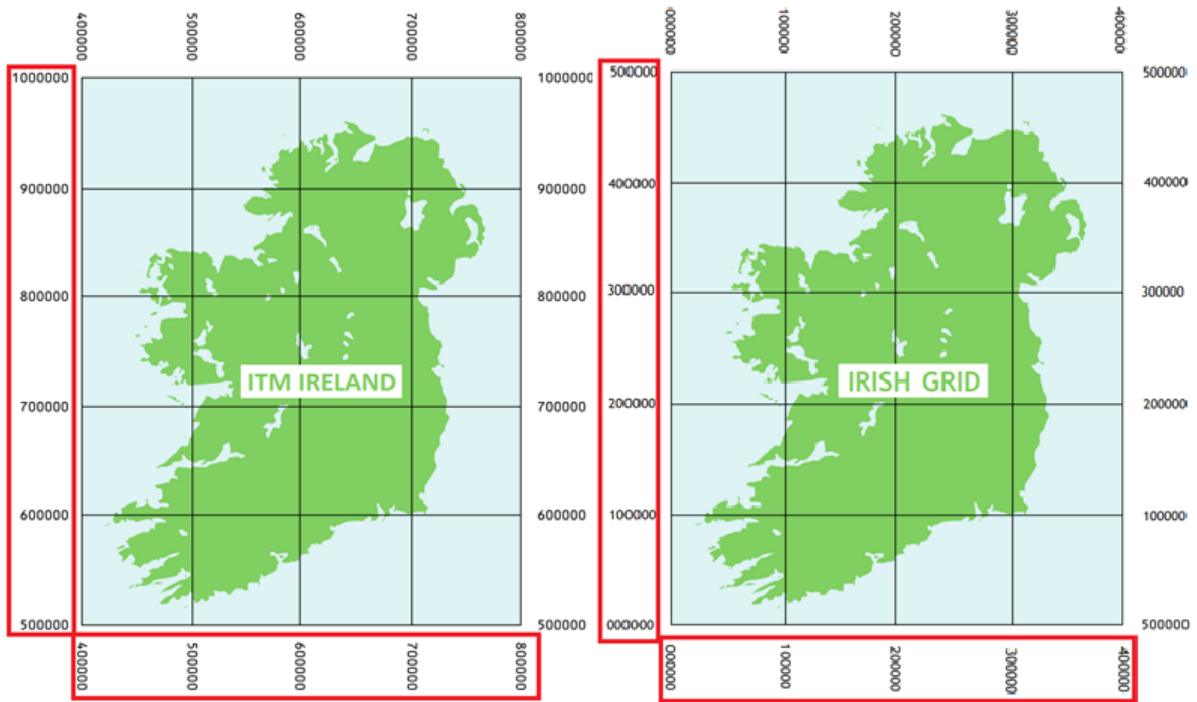
1. Drawings prepared on the PC are using different software to the software on the datalogger. Points, lines, objects are handled different in the different software packages. To exchange between one software package and another you need to save the file as a **D**rawing **e**Xchange **F**ormat – a DXF file
2. Dataloggers have significantly less processing and display power than a PC, so the drawing size needs to be less than that on the PC, see no. 7 below.

The following details the minimum requirements that a drawing file will need before you upload it to the datalogger for setting out.

1. Drawing should be in metres, not millimetres
2. Drawing should be layered, with Survey, Contours, Piles, Buildings, Roads, Footpaths, Foul, Storm, Roads, Greenery, Utilities, Boundaries, Walls, etc., etc. all on separate layers.
3. Remove all the following from the drawing:
  - a. Legends, title boxes, drawing surrounds, explanatory text
  - b. All hatching
  - c. House or building internal fittings
  - d. Unnecessary block, e.g., cars, road gullies, trees, road marking symbols, etc.
4. Explode all objects, including nested objects
5. Remove complex line styles. Lines should be simple lines or polylines
6. Purge all unnecessary layers & blocks
7. The DXF (not DWG) file size should be less than
  - a. 1Mb for handheld dataloggers (generally 3.5" screen)
  - b. 10Mb for tablet dataloggers
8. The file must be DXF, not DWG.
  - a. For Xpad software on the datalogger any DXF version will suffice.
  - b. For FieldGenius on the datalogger software DXF must be R12/LT2 DXF

### The following is an additional ESSENTIAL requirement for setting out with the GNSS rover

1. Drawing must be correctly georeferenced. i.e., coordinates of any point on the drawing must be in either Ireland ITM or Irish Grid and must match its physical position on the ground.  
You can check this in Autocad by doing ID POINT on any point – see approximate position in the these figures:



And additionally by checking the actual position of the site boundaries against the drawing (stake out the boundaries).