

User,

These notes describe the interfacing of 12d version 7 with the Leica 1200 series surveying instruments.

The processes of transferring the files to the CF card both via Leica Geo Office and direct to the survey instrument are described

The following assumptions are made

1)	Software versions
a.	12dversion 7.0C1e
b.	1200 simulatorversion 2.12
c.	Leica Geo Officeversion 2,0,0,0 Build 5028
2)	Total station preloaded with the following files supplied by CR Kennedy
a.	12d format file
b.	Std config set
c.	Sample 12d code list

Upload options include

1)	GSI points	p 2 - 8
2)	Ascii file	p 9 - 18
3)	Dxf file	p 19 - 23
4)	DXF tin	p 24 - 28
5)	XML / Data Base tin	p 29
6)	XML / Data Base Road Strings	p 30 - 31
Download optio	ns include	
7)	Creating / Downloading 12d field file	p 32 - 33

1 GSI points

1.1 Create GSI upload in 12d

Select option **Survey=>Upload=>Create Points upload file** or select option **Survey=>Leica=>GSI=>Points**

Create Instrument Points Up	load File 📃 🔲 🗙	
Instrument choices	Leica GSI 16 🛛 🔽	Select Leica GSI 16 for instrument choice
Output Z values	<u>ସ</u>	
Create new job on SDR33	M	
Left justify fields	Г	
Output feature codes		
User definable terminator	&	
Default char for blank name	z	
Data source of setout points	₽ 7	Select relevant data source
Number of decimal places	3	
Default for null value	999	
Start point number	1 123	Select Get Point Range to set start and end
End point number	702 123	point numbers
Origin x	<u>*</u>	
Origin y	<u>F</u>	
Upload file	1200PTS.gsi 🔂 🔁	Type in file name to create
File <1200PTS.gsi> will be created	j	
Get Point Range Write File	Finish	Select Write File

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1.2 Convert GSI file to database file using Leica Geo Office

🔩 LEICA Geo Office File Import View Tools Export Help 14 R Θ 🗋 🖻 8 B. 6 Management Select Management tab Projects Select Project icon 🗞 LEICA Geo Office - [Project Management] 🚝 File Import Edit View Tools Export Window Help 🗅 📂 1 🗗 🖪 **B** 000 e Right click on **Project** then select Nø Management Contents New... Proie New. Register.. New Project General Coordinates Dictionary Codelist Te Type in Project name then select OK 1200GSI Project Name: C:\Documents and Settin Location: LEICA Geo Office - [Project 😂 File Import Edit View Too

Run Leica Geo Office



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🎭 Import raw dat	a			? ×
Look in: 🛛 🛅 R	D		-	🗈 💣 📰
Name	A	Size	Туре	<u> </u>
TRIANGLES.P	roject		File Folder	
TRIANGLES_	NULLED_NO_BDYS.project		File Folder	
C TRIMBLE			File Folder	
🔟 1200pts.gsi		1 KB	GSI File	
alnFRED.gsi		1 KB	GSI File	
alnGA01.gsi		1 KB	GSI File	-
I alp€C01.ori I		1 10	C ST File	Þ
Path:	D:\12djobs\R&D			
File name:	1200pts.gsi			Import
Files of type:	GSI (Points only)			Cancel
	Include subfolders			Settings
Default point class:	Estimated		•	

Select the newly created gsi file from the 12d working folder then select Import

Assign data to project 1200	GSI		? ×
General View data (Points)			
Contents	Name 🛆	Location	Last Used
	120065I	C:\Documents and Settings\All Use	07/07/2004 20:5
	1		
	1		
		Ass	ign Close

Select Assign

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Select Close

| 📇 Project 1 | 200GSI      |        |              |               |          |            |           |      | _ 🗆      | × |
|-------------|-------------|--------|--------------|---------------|----------|------------|-----------|------|----------|---|
| Point Id    | Point Cla   | Date   | e/Time 🛆     | Eastin        | )        | Northing   | Ellip. H  | lgt. | Ortho. H | G |
| <b>☑</b> 1  | Control     | 07/07/ | /2004 11:11  | 1000.0000     | ) !      | 5000.0000  |           | -    | 0.0000   |   |
| <b>₽</b> 2  | Control     | 07/07/ | /2004 11:11  | 1007.6320     | ) !      | 5034.9950  |           | -    | 0.0000   |   |
| <b>⊡</b> 3  | Control     | 07/07/ | /2004 11:11  | 1031.5020     | ) !      | 5034.9950  |           | -    | 0.0000   |   |
| ☑ 4         | Control     | 07/07/ | /2004 11:11  | 1023.8700     | ) !      | 5000.0000  |           | -    | 0.0000   |   |
| 5           | Control     | 07/07/ | /2004 11:11  | 1003.2800     | ) !      | 5006.4490  |           | -    | 0.0000   |   |
| 0           | Control     | 07/07/ | /2004 11:11  | 1006.5610     | )        | 5021.4960  |           | -    | 0.0000   |   |
| 7           | Control     | 07/07/ | /2004 11:11  | 1017.4060     | )        | 5019.1300  |           | -    | 0.0000   |   |
| <b>⊡</b> 8  | Control     | 07/07/ | /2004 11:11  | 1016.7670     | )        | 5016.1990  |           | -    | 0.0000   |   |
| <b>₽</b> 9  | Control     | 07/07/ | /2004 11:11  | 1022.6290     | )        | 5014.9210  |           | -    | 0.0000   |   |
| 10          | Control     | 07/07/ | /2004 11:11  | 1021.5640     | )        | 5010.0360  |           | -    | 0.0000   |   |
| 11          | Control     | 07/07/ | /2004 11:11  | 1013.5520     | )        | 5011.7830  |           | -    | 0.0000   |   |
| 12          | Control     | 07/07/ | /2004 11:11  | 1011.9750     | ) !      | 5004.5530  |           | -    | 0.0000   |   |
|             |             |        |              |               |          |            |           |      |          |   |
|             |             |        |              |               |          |            |           |      |          | ► |
| 💘 View/E    | dit 🛛 👯 GP: | S-Proc | 🔋 Level-Proc | nt Adjustment | 👘 Points | 🦿 Antennas | 🚨 Results | Ø    | Codelist |   |

The coordinates are shown. Select View/Edit tab to see a map of the points



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Right click on Project name then select **Send to=>PC/CF-Card=>for System 1200** This sends the file to the card to be loaded into the instrument

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## 1.3 Converting GSI file on board instrument





On the 1200 select 4 to go to Convert menu



Select 2 to import GSI data to job

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# 2 Ascii file of coordinates

## 2.1 Create ascii file in 12d Select option File I/O=>Data output=>xyz s pt\_no

| Write XYZS pt_no File for          | _ 🗆 🗙         |                                         |
|------------------------------------|---------------|-----------------------------------------|
| Data to write                      |               | Select relevant data source             |
|                                    |               |                                         |
| View                               | 1             |                                         |
|                                    |               |                                         |
| Output mode                        | Delimiter     | Set Output mode to Delimiter            |
| Column number in file              |               |                                         |
| ×                                  | 2             |                                         |
| Y                                  | 3             | Set the column numbers as per the panel |
| Z                                  | 4             |                                         |
| R                                  |               |                                         |
| Str name                           | 5             |                                         |
| Str no.                            |               |                                         |
| Pt no.                             | 1             |                                         |
| Ver text                           |               |                                         |
| Seg text                           |               |                                         |
| Delimiter                          | comma ","     | Change the delimiter to comma ","       |
| Output settings                    |               |                                         |
| Number of decimal places           | 3 123         |                                         |
| Default for null value             | -999          |                                         |
| Include column names               |               |                                         |
| File                               | 1200ASC.dat 🚞 | Type in the file name                   |
| File <1200ASC.dat> will be created |               |                                         |
| Write Finish                       | Help          | Select Write                            |
|                                    |               |                                         |

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## 2.2 Convert XYZ file to database file using Leica Geo Office

### **Run Leica Geo Office**



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| 🎭 Import ASCII da  | ata             |   |             |            | ? ×      |
|--------------------|-----------------|---|-------------|------------|----------|
| Look in: 🛅 R[      | 2               |   |             |            | 🗈 📸 🎫    |
| Name               |                 | Δ | Size        | Туре       | <u> </u> |
| 🗐 10.6.txt         |                 |   | 1 KB        | Text Docum | ient 💻   |
| 🔟 11.fld           |                 |   | 2 KB        | FLD File   |          |
| 🥘 11.sdr           |                 |   | 1 KB        | SDR File   |          |
| 🛛 🔊 1200_download  | I_upload        |   |             | Shortcut   |          |
| 🧶 1200ASC.dat      |                 |   | 1 KB        | DAT File   |          |
| 🖬 1200pts.gsi      |                 |   | 1 KB        | GSI File   | -        |
| ■ 12 CD 4 SS 1A/   | 4 ino           |   | 974 Y D     | TREC Traco |          |
| Path:              | D:\12djobs\R&D  |   |             |            |          |
| File name :        | 1200ASC.dat     |   |             |            | Import   |
| Files of type:     | All Files (*.*) |   |             | •          | Cancel   |
| Template:          | None            | • | 🔽 View/Edit |            |          |
| Coordinate system: | Local           | • |             |            |          |
| Height mode:       | Orthometric     | • |             |            |          |

Select the newly created ascii file from the 12d working folder then select Import

| U | ser de             | fined ASCII file import wizard - Step 1 of -                                                              | 4                                                                       | ? ×      |
|---|--------------------|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|----------|
|   | This imp<br>choose | port wizard enables you to define a template to as<br>the data format, the starting row, and optionally a | sist with the import of ASCII files. Here you<br>line defining keyword. | can      |
|   | Free               | e - Columns separated by a specific chara                                                                 | icter.                                                                  |          |
|   | O Pos              | ition - Fields are aligned in columns with space                                                          | es.                                                                     |          |
|   | Start im           | port at Row: 1                                                                                            | Keyword:                                                                |          |
|   | Row                | File data                                                                                                 |                                                                         |          |
|   | 1                  | 1,1000.000,5000.000,-999.000,BDY                                                                          |                                                                         |          |
|   | 2                  | 2,1007.632,5034.995,-999.000,BDY                                                                          |                                                                         |          |
|   | 3                  | 3,1031.502,5034.995,-999.000,BDY                                                                          |                                                                         |          |
|   | 4                  | 4,1023.870,5000.000,-999.000,BDY                                                                          |                                                                         |          |
|   | 5                  | 5,1003.280,5006.449,10.500,CNR                                                                            |                                                                         |          |
|   | 6                  | 6,1006.561,5021.496,10.500,CNR                                                                            |                                                                         |          |
|   | 7                  | 7,1017.406,5019.130,10.500,CNR                                                                            |                                                                         |          |
|   | 8                  | 8,1016.767,5016.199,10.500,CNR                                                                            |                                                                         | <b>–</b> |
|   | _                  |                                                                                                           |                                                                         |          |
|   |                    |                                                                                                           | < Back Next > Cance                                                     | el       |

Select Next

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| U | ser          | defined AS                        | CII file impo                   | ort wizard -                      | Step              | 2 of 4                                      | ? X      |
|---|--------------|-----------------------------------|---------------------------------|-----------------------------------|-------------------|---------------------------------------------|----------|
| l | Here<br>auto | : you can sele<br>matically displ | ect the approp<br>ays how the c | riate column i<br>data will be im | delimit<br>portec | er character. The data preview window<br>I. |          |
|   | Colu         | imn separator                     | s:                              |                                   |                   |                                             |          |
| J | 1            | iab 🔽                             | Semicolon                       | 🔽 Comn                            | na                | Treat consecutive delimiters as one         |          |
| I | 3            | Space 🗌                           | Other:                          |                                   |                   |                                             |          |
|   |              |                                   |                                 |                                   |                   |                                             |          |
|   |              |                                   |                                 |                                   |                   |                                             |          |
|   | 0            | 1                                 | 2                               | 3                                 | 4                 |                                             | <u> </u> |
|   | 1            | 1000.000                          | 5000.000                        | -999.000                          | BDY               |                                             |          |
|   | 2            | 1007.632                          | 5034.995                        | -999.000                          | BDY               |                                             |          |
|   | з            | 1031.502                          | 5034.995                        | -999.000                          | BDY               |                                             |          |
|   | 4            | 1023.870                          | 5000.000                        | -999.000                          | BDY               |                                             |          |
|   | 5            | 1003.280                          | 5006.449                        | 10.500                            | CNR               |                                             |          |
|   | 6            | 1006.561                          | 5021.496                        | 10.500                            | CNR               |                                             |          |
|   | 7            | 1017.406                          | 5019.130                        | 10.500                            | CNR               |                                             |          |
|   | 8            | 1016.767                          | 5016.199                        | 10.500                            | CNR               |                                             | -        |
|   |              |                                   |                                 |                                   |                   |                                             |          |
|   |              |                                   |                                 |                                   |                   |                                             |          |
|   |              |                                   |                                 |                                   |                   | < Back Next> Can                            | cel      |

#### Select Next

| User defined ASCII file imp                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ort wizard -                                                                                        | Step 3                                                           | of 4                 |                        | ? ×             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|------------------------------------------------------------------|----------------------|------------------------|-----------------|
| Here you assign headers to th<br>button to assign the headers fr                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | e selected colu<br>rom the pop-up                                                                   | ımns. Se<br>list.                                                | elect the desired co | olumn and use the righ | t mouse         |
| Coordinate type:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Grid                                                                                                | •                                                                | Attribute separ      | rator: 🛛 🖊             |                 |
| Linear units:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Meters                                                                                              | •                                                                | File type:           | Point                  |                 |
| Default coord, class:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Control                                                                                             | •                                                                |                      | C Baseline             |                 |
| 0 Point Id<br>2 Coordinates \$<br>3 Coordinate class<br>4 Coordinate type<br>5 Variance \$<br>6 Reliability \$<br>7 Thematical code \$<br>8 Code group \$<br>8 Code group \$<br>4 Annotation \$<br>8 Remove \$<br>9 Contemport \$<br>9 Code \$<br>0 Code \$ | 3<br>-999.000<br>-999.000<br>-999.000<br>-999.000<br>10.500<br>10.500<br>10.500<br>10.500<br>10.500 | 4<br>BDY<br>BDY<br>BDY<br>CNR<br>CNR<br>CNR<br>CNR<br>CNR<br>CNR | < Back               | Next > 1               | <br>▼<br>Cancel |
| Hemove All                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                     |                                                                  |                      |                        |                 |

Right click on 1st column tab and select Point Id

| P.,   | 1     | Reist Id       | <u>^</u> |      | 4       |           |
|-------|-------|----------------|----------|------|---------|-----------|
|       | 1000  | Foint Id       |          | [    |         |           |
| 11    | 1000. | Coordinates    | E        | Ea   | istina  |           |
| 2     | 1007. |                |          |      | 11.1    |           |
| 3     | 1031  | Loordinate cla | ISS      | - NC | orthing |           |
| L.    |       | Coordinate typ | ie -     | Ωr   | th hei  | iaht      |
| 4     | 1023. |                | Ĩ.       |      |         | .g        |
| 5     | 1003. | Variance       | - • •    | Ge   | eoid se | eparation |
| L 🎽 🗌 |       | man and an     |          |      | _       |           |

Right click on 2nd column tab and select Coordinates=>Easting

#### Page 12

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| P., | Easting  | 2   |                  | L |                   |
|-----|----------|-----|------------------|---|-------------------|
| 1   | 1000.000 | 500 | Point la         | Ŀ |                   |
| 2   | 1007.632 | 503 | Coordinates 🔹 🕨  |   | Easting           |
| 3   | 1031 502 | 503 | Coordinate class |   | Northing          |
| 4   | 1022 070 | 500 | Coordinate type  |   | Orth, height      |
| 4   | 1023.070 | 300 | Varianaa         |   | Gooid constantion |
| 5   | 1003.280 | 500 | valiance •       |   | Geola separation  |

Right click on 3rd column tab and select **Coordinates=>Northing** 

|   | P., | Easting  | Northing | 3     |                  |   | 1                |
|---|-----|----------|----------|-------|------------------|---|------------------|
| I | 1   | 1000.000 | 5000.000 | -999. | Point Id         |   |                  |
| I | 2   | 1007.632 | 5034.995 | -999. | Coordinates      | • | Easting          |
| I | 3   | 1031.502 | 5034.995 | -999. | Coordinate class |   | Northing         |
| I | 4   | 1023.870 | 5000.000 | -999. | Coordinate type  |   | Orth, height     |
|   | 5   | 1003.280 | 5006.449 | 10.50 | Variance         | ₽ | Geoid separation |

Right click on 4th column tab and select Coordinates=>Orth. Height

| P | Easting  | Northing | Orth. he | 4  | Point Id                        | L   |
|---|----------|----------|----------|----|---------------------------------|-----|
| 1 | 1000.000 | 5000.000 | -999.000 | BI | Coordinates                     | . [ |
| 2 | 1007.632 | 5034.995 | -999.000 | BI | Coordinates<br>Coordinate alars |     |
| з | 1031.502 | 5034.995 | -999.000 | BI | Coordinate class                |     |
| 4 | 1023.870 | 5000.000 | -999.000 | BI | Loordinate type                 |     |
| 5 | 1003.280 | 5006.449 | 10.500   | CI | Variance                        | 1   |
| 6 | 1006.561 | 5021.496 | 10.500   | Cł | Reliability                     | •   |
| 7 | 1017.406 | 5019.130 | 10.500   | съ | Thematical code                 | •   |
| 8 | 1016.767 | 5016.199 | 10.500   | CI | Code group                      |     |

### Right click on 5th column tab and select Code group

Select Next

| U | User defined ASCII file import wizard - Step 4 of 4                                                                                                                                                  |          |          |          |     |        |        |          |  |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|----------|-----|--------|--------|----------|--|
| 1 | Enter a name for the template if you would like to store it in the database. Use the SaveAs button to<br>store it, in addition, to a file to enable it to be transfered to another LGO installation. |          |          |          |     |        |        |          |  |
|   | Template name: 12XYZ Save As                                                                                                                                                                         |          |          |          |     |        |        |          |  |
|   |                                                                                                                                                                                                      |          |          |          |     |        |        |          |  |
|   |                                                                                                                                                                                                      |          |          |          |     |        |        |          |  |
|   |                                                                                                                                                                                                      |          |          |          |     |        |        |          |  |
|   | P.,                                                                                                                                                                                                  | Easting  | Northing | Orth.he  | 4   |        |        | <u> </u> |  |
|   | 1                                                                                                                                                                                                    | 1000.000 | 5000.000 | -999.000 | BDY |        |        |          |  |
|   | 2                                                                                                                                                                                                    | 1007.632 | 5034.995 | -999.000 | BDY |        |        |          |  |
|   | з                                                                                                                                                                                                    | 1031.502 | 5034.995 | -999.000 | BDY |        |        |          |  |
|   | 4                                                                                                                                                                                                    | 1023.870 | 5000.000 | -999.000 | BDY |        |        |          |  |
|   | 5                                                                                                                                                                                                    | 1003.280 | 5006.449 | 10.500   | CNR |        |        |          |  |
|   | 6                                                                                                                                                                                                    | 1006.561 | 5021.496 | 10.500   | CNR |        |        |          |  |
|   | 7                                                                                                                                                                                                    | 1017.406 | 5019.130 | 10.500   | CNR |        |        |          |  |
|   | 8                                                                                                                                                                                                    | 1016.767 | 5016.199 | 10.500   | CNR |        |        | •        |  |
|   |                                                                                                                                                                                                      |          |          |          |     |        |        |          |  |
|   |                                                                                                                                                                                                      |          |          |          |     |        |        |          |  |
|   |                                                                                                                                                                                                      |          |          |          |     | < Back | Finish | Lancel   |  |

Type in template name for any future conversions then select Finish

| General       View data         Contents       Name       Location         Image: Contents       1200XYZ       C:\Documents and Settings\All Users\Documents\LGO\Pr |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Contents     Name     Location       Image: Contents     1200XYZ     C:\Documents and Settings\All Users\Documents\LGO\Pr                                           |
| Contents     Name     Location                                                                                                                                      |
|                                                                                                                                                                     |
|                                                                                                                                                                     |
|                                                                                                                                                                     |
|                                                                                                                                                                     |
|                                                                                                                                                                     |
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| 1                                                                                                                                                                   |
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|                                                                                                                                                                     |
|                                                                                                                                                                     |
|                                                                                                                                                                     |
|                                                                                                                                                                     |
| Assign Close                                                                                                                                                        |

Select Assign then Close

| 📇 Project 1200XYZ                                            |                   |                                 |                           |         |       |            |
|--------------------------------------------------------------|-------------------|---------------------------------|---------------------------|---------|-------|------------|
|                                                              |                   | <b>▲</b> 2                      |                           | ▲3      |       |            |
|                                                              |                   | 6                               |                           |         |       |            |
|                                                              |                   | -7<br><b>A</b> 8<br><b>A</b> 11 | <b>≜</b> 9<br><b>≜</b> 10 |         |       |            |
|                                                              | 5<br>             | <b>1</b> 2                      | ▲ <u>4</u>                |         |       |            |
| 20.0 m                                                       | _                 | 4                               | 1                         |         |       |            |
| View/ 🖏 GPS-F                                                | P 🔋 Level-P       | nt Adjustm                      | 👘 Poi                     | 🝸 Anten | 📕 Res | 🖗 Codelist |
| State CA Geo Office<br>File Import Edit Vie                  |                   |                                 |                           |         |       |            |
| <mark>⊡</mark> <u>O</u> pen Project<br>∎ <mark>O</mark> lose | Close the project | ct                              |                           |         |       |            |
| 😂 Print                                                      |                   |                                 |                           |         |       |            |

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Right click on Project name then select **Send to=>PC/CF-Card=>for System 1200** This sends the file to the card to be loaded into the instrument

<del>7 7 7 7</del>

### 2.3 Converting Ascii file on board instrument





On the 1200 select 4 to go to Convert menu



Select 2 to import GSI data to job

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Select **F8** to view the uploaded file

|                    | R I P2⊠ ≌ ≫ @  |
|--------------------|----------------|
| Data: CONTROL      | $\mathbf{X}$   |
| Points Y Lines (O) | Areas (O)Map 🛛 |
| Point              | Point Code     |
| 901                | STAR PKT       |
| 907                | STN            |
| 906                | STN            |
| 905                | STN            |
| 904                | 0IT II DP12345 |
| 903                | BURIED BOTTLE  |
| 902                | STAR PKT DEEP  |
|                    | A ①            |
| CONT NEW EDIT      | DEL MORE PAGE  |

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Select F8 to view the uploaded file

| 07:27<br>MANAGE    | RI ₽ <sup>Q%</sup> <sup>™</sup> ₽ |
|--------------------|-----------------------------------|
| Data: CONTROL      | <u>×</u>                          |
| Points Y Lines (O) | Areas (O) Map 🛛                   |
| Point              | Point Code                        |
| 901                | STAR PKT                          |
| 907                | STN                               |
| 906                | STN                               |
| 905                | STN                               |
| 904                | 0IT II DP12345                    |
| 903                | BURIED BOTTLE                     |
| 902                | STAR PKT DEEP                     |
|                    | A ①                               |
| CONT NEW EDIT      | DEL MORE PAGE                     |

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# 3 Dxf file of points / lines

## 3.1 Create dxf file in 12d Select option File I/O=>Data output=>DWG/DXF

| Write DWG/DXF file for        | _ <b>_</b> X    |                             |
|-------------------------------|-----------------|-----------------------------|
| Data to write                 |                 | Select relevant data source |
| Format                        | dxf 🗸           | Select DXF format           |
| File                          | MOSSRD.dxf 🔁    | Type in the file name       |
| AutoCAD Version               | AutoCAD 2000 🔽  |                             |
| Template file                 |                 |                             |
| General Text/Attributes       |                 |                             |
| Dimension                     | 2d 🔽            | Set Dimension to 2d         |
| Default level                 | -999 <b>1</b> 2 |                             |
| Map file                      |                 |                             |
| Scale for paper/pixel text 1: | 1000            |                             |
| Symbol colours                | default 💙       |                             |
| Acad point style              | style 0 🛛 🔁     |                             |
| Point mode                    | relative 🔽      |                             |
| Point size (%)                | 5               |                             |
| Keep 2d strings level         |                 |                             |
| Use blocks for point styles   |                 |                             |
| Colours by layer              |                 |                             |
| Linetypes by layer            |                 |                             |
| Features as arcs              |                 |                             |
| Output view text              |                 |                             |
| Create string super text      |                 |                             |
| Explode interface strings     |                 |                             |
|                               |                 |                             |
|                               | 1               |                             |
| Finish                        | неір            | Select Write                |

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## 3.2 Convert DXF file to database file using Leica Geo Office

### **Run Leica Geo Office**

| Тоо                                     | Select <b>Tools</b> tab                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 반 Start 📗 🎲                             | 🗊 📓 🔶 🥯 🖸 🖬 t<br>Design to Field Selec Design to Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Design to Fiel<br>Job:<br>Location:     | □ ? ×<br>□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Importer:                               | GSI-Importer 1.0.0.4079 Manage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Import                                  | Choose data for your project                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Pack & GOL.                             | Prepare your project for on-board use                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                         | Close                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Create Job</b><br>Create in: 🛅       | 2 X<br>DBX The second seco |
| Name                                    | ∠ Size Type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Code Confin                             | File Folder                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Convert                                 | File Folder                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Data                                    | File Folder                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| and | File Folder                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                         | File Folder                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                         | File Folder                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| A Dath:                                 | C:\Sustem1200\TPS1200\CE Card\DBX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| lob Name:                               | MOSSRD OK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Importer Type:                          | Points, Lines & Areas Importer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

Change the Importer type to **Points, Lines & Areas Importer** Select **OK** 

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| ø   | Design to Field                     |                                    |                       | ? ×                  |
|-----|-------------------------------------|------------------------------------|-----------------------|----------------------|
|     | Job:<br>Location:                   | MOSSRD<br>C:\System1200\TPS1200\CF | Open<br>Card\DBX      | New                  |
|     | Importer:                           | DXF-Importer 1.0.0.13              | ▼ Manage              |                      |
|     | Import                              | Choose data for your job           |                       |                      |
|     | Pack & GO!                          | Prepare your job for on-board u    | lse                   |                      |
|     |                                     |                                    |                       | Close                |
| Cha | ange the Import                     | er to <b>DXF-Importer 1.0.</b>     | 0.13                  |                      |
| Sel | ect Import                          | •                                  |                       |                      |
| Sel | ect Next                            |                                    |                       |                      |
| DX  | F Converter Wiza                    | d                                  |                       | ×                    |
|     | Select DXF file<br>Select the DXF f | ile that you wish to import        |                       |                      |
|     |                                     |                                    |                       |                      |
|     | Filename of the D                   |                                    |                       |                      |
|     | [D:(120)005                         | K8D(11055KD5D10X1                  |                       |                      |
|     |                                     |                                    |                       |                      |
|     |                                     |                                    |                       |                      |
|     |                                     |                                    |                       |                      |
|     |                                     |                                    | Press "Next " to read | elements in DXF file |

Select the newly created dxf file from the 12d working folder then select Next

< Back

Next >

Cancel

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| DXF Converter Wizard                                       | X                                                                                                                          |                |
|------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|----------------|
| <b>DXF elements</b><br>Select elements to import           |                                                                                                                            |                |
| Select the layers to import  POLYLINES  ROAD-STR  SECTION5 | Linear units of DXF file<br>Metre Point ID prefix Line ID prefix Import points on lines and polylines as separate entities | Clear prefixes |
|                                                            | < Back Next > Cancel                                                                                                       |                |

Select Next

| DXF Converter Wizard | ×                                                                                         |
|----------------------|-------------------------------------------------------------------------------------------|
|                      | Completion of the DXF Import Wizard You have successfully completed the DXF Import Wizard |
|                      | < Back Finish Cancel                                                                      |

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Select Finish

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| 🗭 Design to Field |                                        |               |       | <u>?</u> × |
|-------------------|----------------------------------------|---------------|-------|------------|
| Job:<br>Location: | MOSSRD<br>C:\System1200\TPS1200\CF Car | Open<br>d\DBX | New   |            |
| Importer:         | DXF-Importer 1.0.0.13                  | Manage        |       |            |
| Import            | Choose data for your job               |               |       |            |
| Pack & GO!        | Prepare your job for on-board use      |               |       |            |
|                   |                                        |               | Close |            |

Select Pack & Go!.. Select Close

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# 4 Dxf file of TIN

## 4.1 Create dxf file in 12d Select option File I/O=>Data output=>DWG/DXF

| 🔜 Write DWG/DXF file for      |                     |                                           |
|-------------------------------|---------------------|-------------------------------------------|
| Data to write                 | tin ROAD            | Select relevant data source for TIN model |
| Format                        | dxf 🔽               | Select DXF format                         |
| File                          | ROADTIN.dxf D       | Type in the file name                     |
| AutoCAD Version               | AutoCAD 2000 🔽      |                                           |
| Template file                 |                     |                                           |
| General Text/Attributes       |                     |                                           |
| Dimension                     | 3d 🔽                | Set Dimension to <b>3d</b>                |
| Null level value              | -999 [ <sup>z</sup> |                                           |
| Map file                      |                     |                                           |
| Scale for paper/pixel text 1: | 1000                |                                           |
| Symbol colours                | default 💙           |                                           |
| Acad point style              | style 0 🛛 🔁         |                                           |
| Point mode                    | relative 🔽          |                                           |
| Point size (%)                | 5                   |                                           |
| Keep 2d strings level         | <u> </u>            |                                           |
| Use blocks for point styles   |                     |                                           |
| Colours by layer              | 딜                   |                                           |
| Linetypes by layer            |                     |                                           |
| Output view text              |                     |                                           |
| Create string super text      |                     |                                           |
| Explode interface strings     |                     |                                           |
| choice ok                     |                     | Select Write                              |
| Write                         | Help                | Scient write                              |
|                               |                     |                                           |

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## 4.2 Convert DXF TIN file to database file using Leica Geo Office

| Tools             | in i | Select <b>Tools</b> | s tab<br>Selec I       | Design to | Field         |
|-------------------|------------------------------------------|---------------------|------------------------|-----------|---------------|
| 🖋 Design to Field |                                          |                     | ?                      | ×         |               |
| Job:<br>Location: |                                          | Open                | New                    | Sele      | ct <b>New</b> |
| Importer:         | GSI-Importer 1.0.0.4079                  | Manage              |                        | L         |               |
| Import            | Choose data for your project             |                     |                        |           |               |
| Pack & GOL        | Prepare your project for on-board        | use                 |                        |           |               |
|                   |                                          | [                   | Close                  |           |               |
|                   |                                          |                     |                        |           |               |
| 🎭 Create Job      |                                          |                     |                        | ? ×       |               |
| Create in: 🛅 DI   | BX                                       |                     | • + 1                  | 🗂 🎢       |               |
| Name              | Δ                                        | Size Ty             | ρe                     | <u> </u>  |               |
| Code 🗀            |                                          | Fi                  | le Folder              |           |               |
| Config            |                                          | Fi                  | le Folder              |           |               |
| Convert           |                                          | Fi                  | le Folder              |           |               |
| Data<br>Data      |                                          | Fi                  | le Folder<br>Is Fold   |           |               |
|                   |                                          | Fi                  | ie folder<br>Ie Folder |           |               |
|                   |                                          | FI<br>Fi            | le Folder              |           |               |
| Path:             | C:\System1200\TPS1200\CF C               | ard\DBX             |                        |           |               |
| Job Name:         | ROADTIN                                  |                     |                        | OK        | - ·           |
| Importer Type:    | DTM Importer                             |                     | ▼                      | Cancel    | Type II       |

## **Run Leica Geo Office**

Type in new job name

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Change the Importer type to **DTM Importer** 

Select OK

| 💋 Design to Field |                                   |        |       | <u>? ×</u> |
|-------------------|-----------------------------------|--------|-------|------------|
| DTM Job:          | ROADTIN                           | Open   | New   |            |
| Location:         | C:\System1200\TPS1200\CF Car      | d\DBX  |       |            |
| Importer:         | DTM(DXF)-Importer 1.0.0.13        | Manage | ]     |            |
| Import            | Choose data for your job          |        |       |            |
| Pack & GO!        | Prepare your job for on-board use |        |       |            |
|                   |                                   |        | Close |            |

Change the Importer to DTM (DXF)-Importer 1.0.0.13

### Select Import

| DTM (DXF) Converter Wizard                                     | ×                                     |
|----------------------------------------------------------------|---------------------------------------|
| Select DXF file<br>Select the DXF file that you wish to import | i i i i i i i i i i i i i i i i i i i |
| Filename of the DXF                                            |                                       |
| D:\12djobs\R8D\ROADTIN.dxf                                     |                                       |
|                                                                |                                       |
|                                                                |                                       |
|                                                                |                                       |
|                                                                |                                       |
|                                                                |                                       |
|                                                                | Press "Next " to read DTM in DXF file |
|                                                                | < Back Next > Cancel                  |

Select the newly created dxf TIN file from the 12d working folder then select Next

1-2-2-

| DTM (DXF) Converter Wizard                 |                                                                                                     | ×                          |             |
|--------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------------|-------------|
| DXF elements<br>Select DTM layer(s) to imp | ort                                                                                                 | Ş                          |             |
| Select the layers to import                | Linear units of DXF file                                                                            |                            |             |
|                                            | < Back Next >                                                                                       | Cancel                     | Select Next |
| DTM (DXF) Converter Witzard                | Completion of the DTM (DXF) Import W<br>You have successfully completed the DTM (DXF) Imp<br>Wizard | <b>X</b><br>/izard<br>port |             |
|                                            | < Back Finish                                                                                       | Cancel                     |             |

Select Finish

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| 🚀 Design to Field |                                   |        |       | <u>? ×</u> |
|-------------------|-----------------------------------|--------|-------|------------|
| DTM Job:          | ROADTIN                           | Open   | New   |            |
| Location:         | C:\System1200\TPS1200\CF Car      | d\DBX  |       |            |
| Importer:         | DTM(DXF)-Importer 1,0,0,13        | Manage | ]     | _          |
| Import            | Choose data for your job          |        |       |            |
| Pack & GO!        | Prepare your job for on-board use |        |       |            |
|                   |                                   |        | Close |            |

Select Pack & Go!.. Select Close

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## 5 XML file / Data Base of TIN

## 5.1 Create XML / Data base files in 12d Select option Survey=>Leica=>1200=>Triangles



## 5.2 Copy the data base files to the cf card



Copy the newly created data base files (examples on left) from the 12d working folder to the DBX folder on the CF card



# 6 XML / Data Base road strings (single or multi layers)

### 6.1 Single layer

| NOTES                                                                      |                                                                                         |
|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) Ensure that the alignment starts<br>not the case simply edit the alignm | before the strings and finishes after the strings. If this is ent string and extend it. |
| 2) Strings can not reverse back on alignment                               | themselves and must run in the same direction as the                                    |
| 3) If using data imported via Genie<br>work area                           | o format ensure there is only one alignment string per                                  |
| Turn on the relevant road strings to be used                               | in the layer along with the alignment if the layer is the finished                      |
| surface                                                                    |                                                                                         |
| Select option Survey=>Leica=>1200=>R                                       | pads                                                                                    |
| Salast the Simple teh                                                      |                                                                                         |
|                                                                            |                                                                                         |
| Create Leica 1200 Road Files                                               | Type in the Job name                                                                    |
| File name SMITH ST.xml                                                     |                                                                                         |
| Create database                                                            | Tick the check box so that the database is created                                      |
| Put all tringlines in a layer 🔽                                            | Tick check box to put all stringlines in a layer                                        |
| Simple Advanced                                                            |                                                                                         |
| Alignment string                                                           | Select the Pick icon then select the alignment string                                   |
| Include alignment in layer                                                 | Tick the check box if alignment string is to be included in level calculations          |
|                                                                            | Select the model name for the road strings                                              |
| ,                                                                          | Type in layer name for the strings.                                                     |
|                                                                            | This is the the name visible to the user in Road Runner                                 |
|                                                                            |                                                                                         |
|                                                                            |                                                                                         |
|                                                                            |                                                                                         |
|                                                                            | Select Write                                                                            |
| Write Finish Help                                                          |                                                                                         |
|                                                                            |                                                                                         |

Copy the data base files to the cf card



Copy the newly created data base files (examples on left) from the 12d working folder to the DBX folder on the CF card



### 6.2 Multi layer

| NOTES                                                                                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1) Ensure that the alignment starts before the strings and finishes after the strings. If this is not the case simply edit the alignment string and extend it. |
| 2) Strings can not reverse back on themselves and must run in the same direction as the alignment                                                              |
| 3) If using data imported via Genio format ensure there is only one alignment string per<br>work area                                                          |
| The following panel allows the user to create multiple work areas along with mulitple layers for each work area                                                |

Select option Survey=>Leica=>1200=>Road

|          |                              | Select            | the Adv                 | r <b>anced</b> tab     |                 |                        |                 |                        |                 |                        |                 |                        |                 |   |
|----------|------------------------------|-------------------|-------------------------|------------------------|-----------------|------------------------|-----------------|------------------------|-----------------|------------------------|-----------------|------------------------|-----------------|---|
| <u> </u> | Create Leica 1200 Poad Files |                   |                         |                        |                 |                        |                 |                        |                 |                        |                 |                        |                 |   |
| Job      | Job name SMITH ST            |                   |                         |                        |                 |                        |                 |                        |                 | -                      |                 |                        |                 |   |
| File     | nam                          | e                 |                         |                        |                 |                        |                 |                        |                 |                        |                 | SMIT                   | 'H ST.xml       | ŕ |
| Cre      | ate (                        | database          | 1                       |                        |                 |                        |                 |                        |                 |                        |                 |                        |                 |   |
| Put      | all si                       | tringlines i      | in a layer              |                        |                 |                        |                 |                        |                 |                        |                 |                        |                 | ☑ |
| Sir      | nple                         | Advanc            | éd                      |                        |                 |                        |                 |                        |                 |                        |                 |                        |                 |   |
| Γ        | A<br>st                      | lignment<br>tring | Alignment<br>in layer 1 | Stringlines<br>model 1 | Layer<br>name 1 | Stringlines<br>model 2 | Layer<br>name 2 | Stringlines<br>model 3 | Layer<br>name 3 | Stringlines<br>model 4 | Layer<br>name 4 | Stringlines<br>model 5 | Layer<br>name 5 |   |
|          | 1 0                          | L1->CL1           | ~                       | ROAD STR A             | FSL A           | SUBGRADE A             | SUBGRADE A      | SUBBASE A              | SUBBASE A       |                        |                 |                        |                 |   |
|          | 2 C                          | 12->CL2           |                         | ROAD STR B             | FSL B           | SUBGRADE B             | SUBGRADE B      | SUBBASE B              | SUBBASE B       |                        |                 |                        |                 |   |
|          |                              |                   |                         |                        |                 |                        |                 |                        |                 |                        |                 |                        |                 |   |
|          |                              |                   |                         |                        |                 |                        |                 |                        |                 |                        |                 |                        |                 |   |
|          |                              |                   |                         |                        |                 |                        |                 |                        |                 |                        |                 |                        |                 |   |
| ["CI     | L2->                         | >CL2" sele        | cted                    |                        |                 |                        |                 |                        |                 |                        |                 |                        |                 |   |
|          |                              |                   | Write                   | ]                      |                 |                        | Finish          |                        |                 |                        | H               | elp                    |                 | 1 |

Type in Job name as per simple method

Fill in each row picking the alignment string, string line models and layer name for the paritcular work area

#### Tick the check box if alignment string is to be included in level calculations

#### The Layer name is the the name visible to the user in Road Runner

Click in last cell (under column name Layer name 5) then press [Enter] key to create new row

The second and subsequent row are for multiple work areasClick on Alignment string pick icon Select Write

Copy the data base files to the cf card

| Name                   |  |
|------------------------|--|
| 🗟 G001_0108_095748.XCF |  |
| 🗟 G001_0108_095748.X24 |  |
| 🖬 G001_0108_095748.X23 |  |
| 🖬 G001_0108_095748.X22 |  |
| 🖬 G001_0108_095748.X16 |  |
| 🖬 G001_0108_095748.X15 |  |
| ROAD.xml               |  |

Copy the newly created data base files (examples on left) from the 12d working folder to the DBX folder on the CF card



# 7 Creating Field file

The detail survey is converted to a 12d field file on board the survey instrument

| FPS1200 PC Simulator                                                                        |                                                                                                                                                                                                                                                                                                                                                                                          |  |
|---------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| File Configuration Tools Window Help                                                        |                                                                                                                                                                                                                                                                                                                                                                                          |  |
| TPS1200 Simulator                                                                           |                                                                                                                                                                                                                                                                                                                                                                                          |  |
| 12:21<br>TPS1200<br>Hain Henu<br>1 Survey 2 Programs 3 Manage<br>4 Convert 5 Confin 6 Tools | ▲ACC       005       GW         (12)       ●7       ●8       ●3         (11)       ●4       ●5       ●6         3711       WX       VZ_u         (10)       ●1       ●2       ●3         (15)       ●1       ●2       ●3         (15)       ●1       ●2       ●3         (15)       ●1       ●2       ●3         (15)       ●1       ●5       ●1         (15)       ●1       ●5       ●1 |  |
|                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                          |  |
| CONT                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                          |  |
|                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                          |  |

Select 4 to convert

| 09:19<br>TPS1200                                         | ° ≤ ■<br>2 ~ @ |
|----------------------------------------------------------|----------------|
| Convert Data<br>1 Export Data from Job                   | ×              |
| 2 Import ASCII/GSI Data to<br>3 Copy Points Between Jobs | aot            |
|                                                          |                |
|                                                          |                |
|                                                          | A û            |
| CONT                                                     | A U            |

Select 1 to export

| Export Data from Job         |                                           |
|------------------------------|-------------------------------------------|
| Directory : Data             | Select CF Card to export to               |
| Job : FRRDQA                 | Select the job to convert                 |
| Coord System : <none></none> |                                           |
| Format File : 12D_TPS.FRT 虲  | Select the format file <b>12D_TPS.FRT</b> |
| File Name : DETAIL.FLD       | Type in the field file name               |
| CONT FILT CSYS               | Select <b>F1</b> to continue              |

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| 12:35<br>EXPORT + IR I Q <sup>0</sup> % 2≥ |                |
|--------------------------------------------|----------------|
| Expert Data From 300                       | Cord 4 )<br> } |
| Lob complete.                              | ь.             |
| Do you wish to export an Formmore data?    | y<br>Iel       |
| File                                       |                |
| NO                                         | A<br>YES       |

Select F4 to finish

Copy the field file from the card to the working folder in 12d

Once the field file is copied to the working folder the file is reduced using option **Survey=>Create=>Field File** 

See reduction notes in the Getting Started for Surveying manual

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