

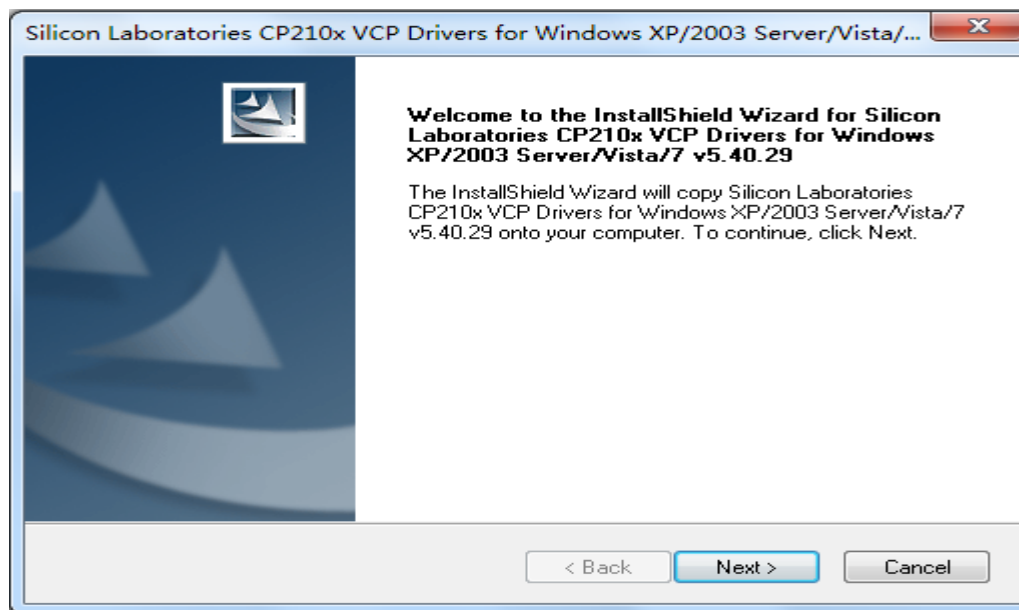
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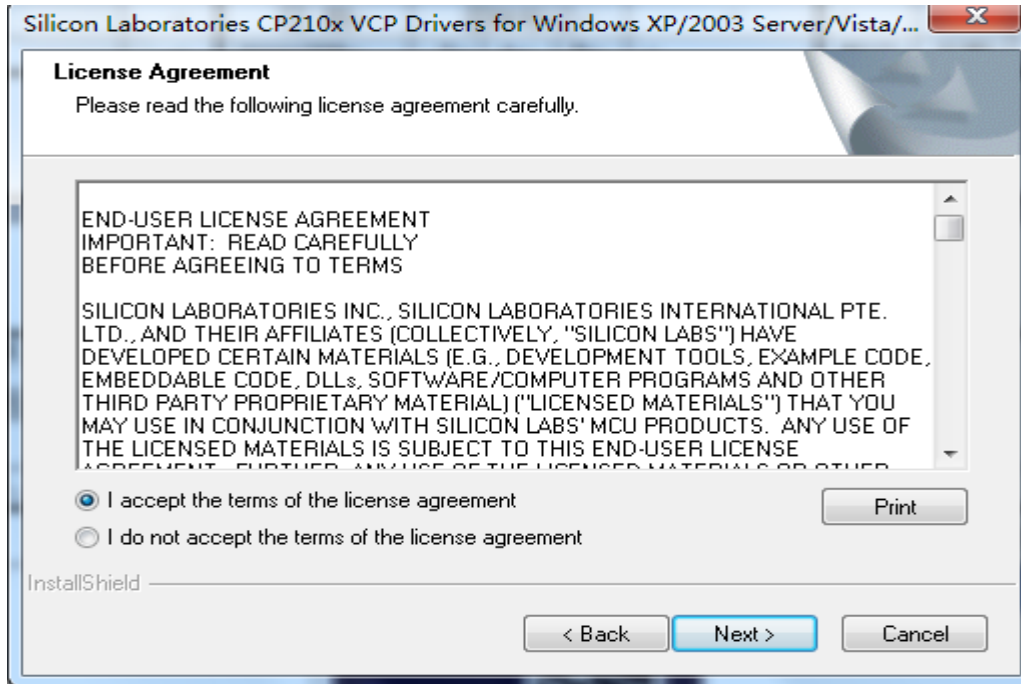
1、 Data transmission software instructions

1.1 Install Data Transfer Line Driver

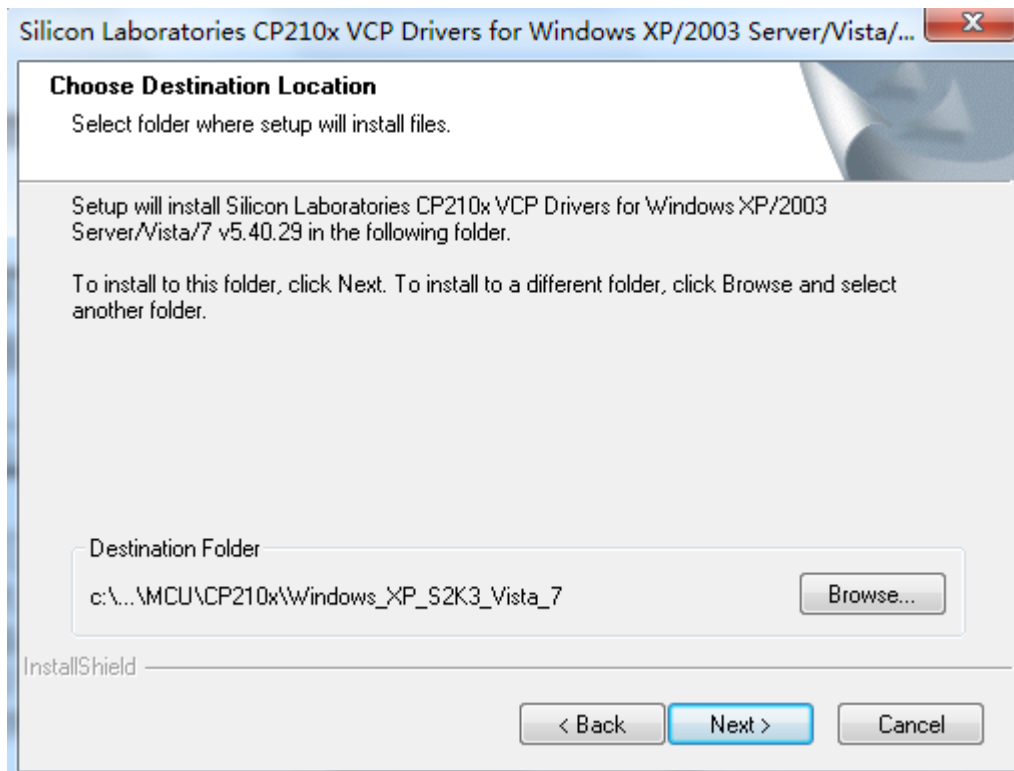
1. Double click“CP210x_VCP_Win_XP_S2K3_Vista_7.EXE”, install as the default setting. This install program needs to be installed as the administrator. At WIN7 System, please select the icon and right click, then choose to “Run as administrator”.



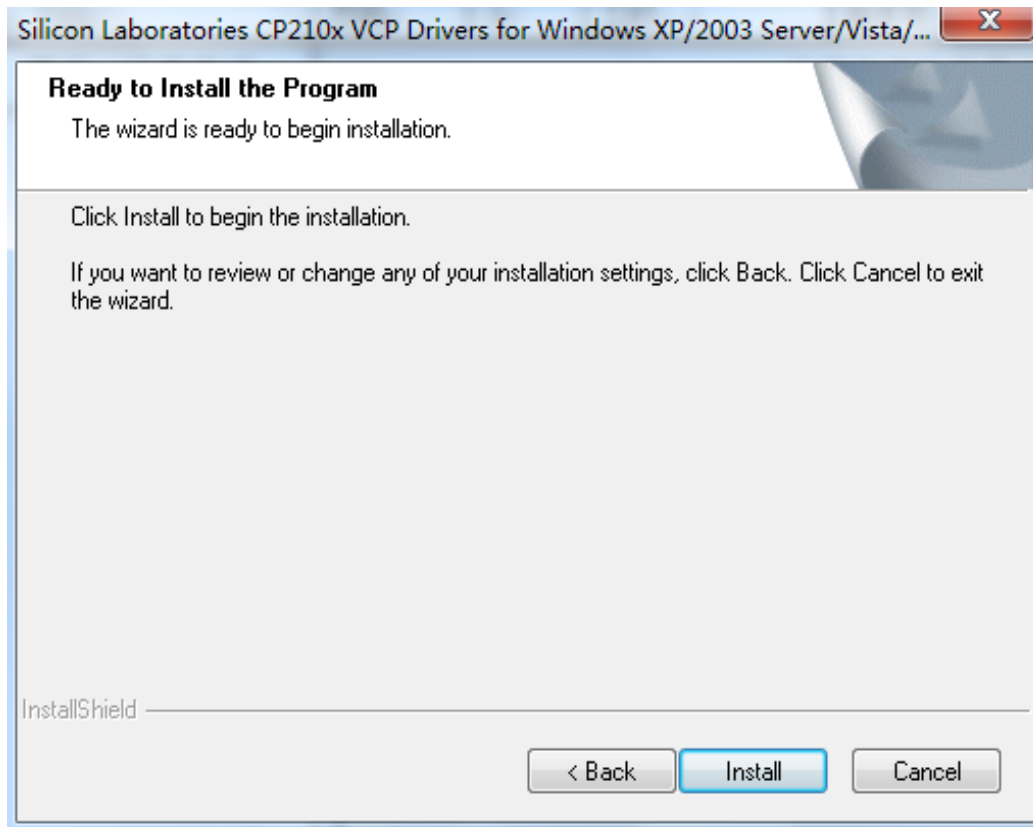
2. Select as the following, then click “Next>” button.



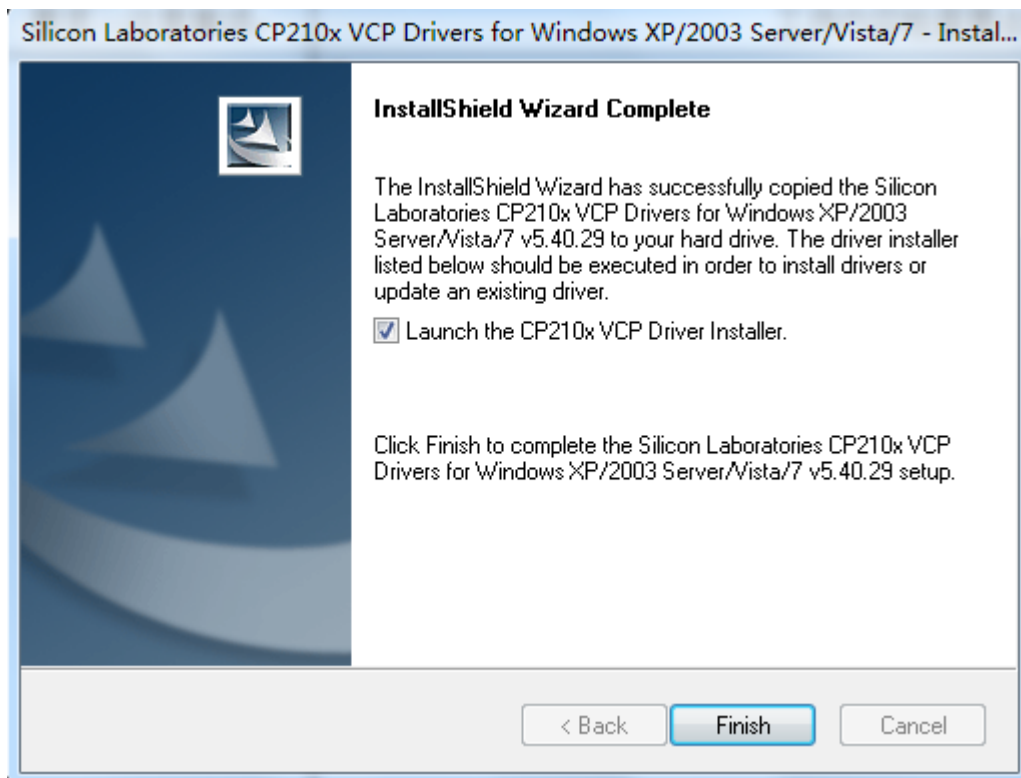
3. Click “Next>”.



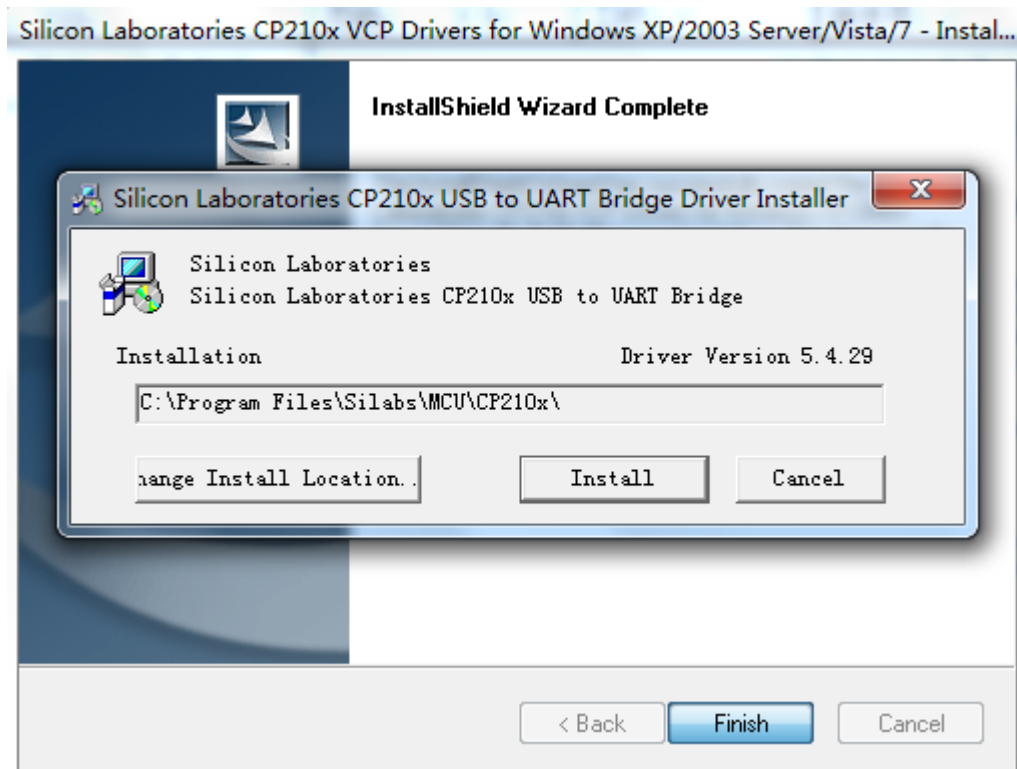
4. Click “Install” to start installing.



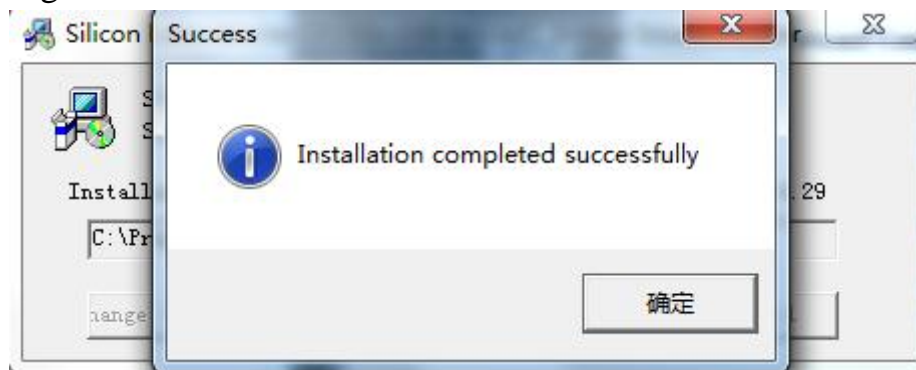
5. Select as the following, mark the “Launch the CP2102x VCP Driver Installer”, then click “Finish”.



6. Click the “Install” button, then start to install driver program.



7. After installing, it will hint “Installation completed successfully” as following.



8. Connect the data transfer line with the Computer USB Port.



9. The computer will hint as the following pictures, and inform that the serial port is COM3.

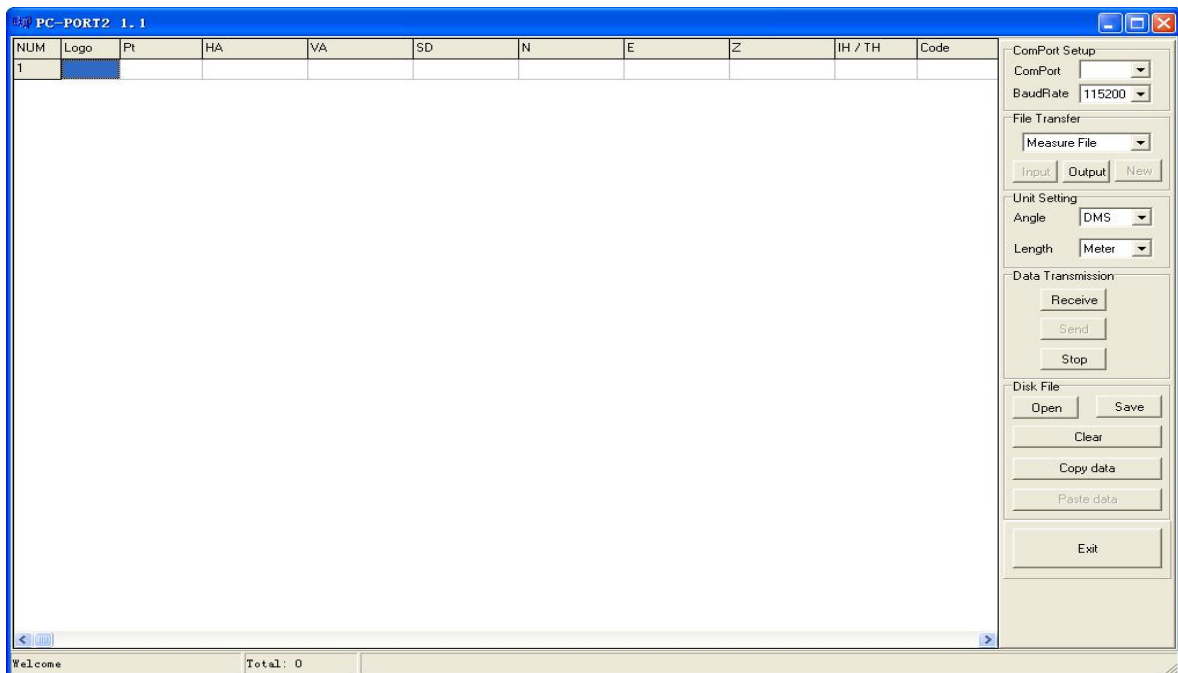


1.2 Export the surveying data (*.MEA) to the computer.

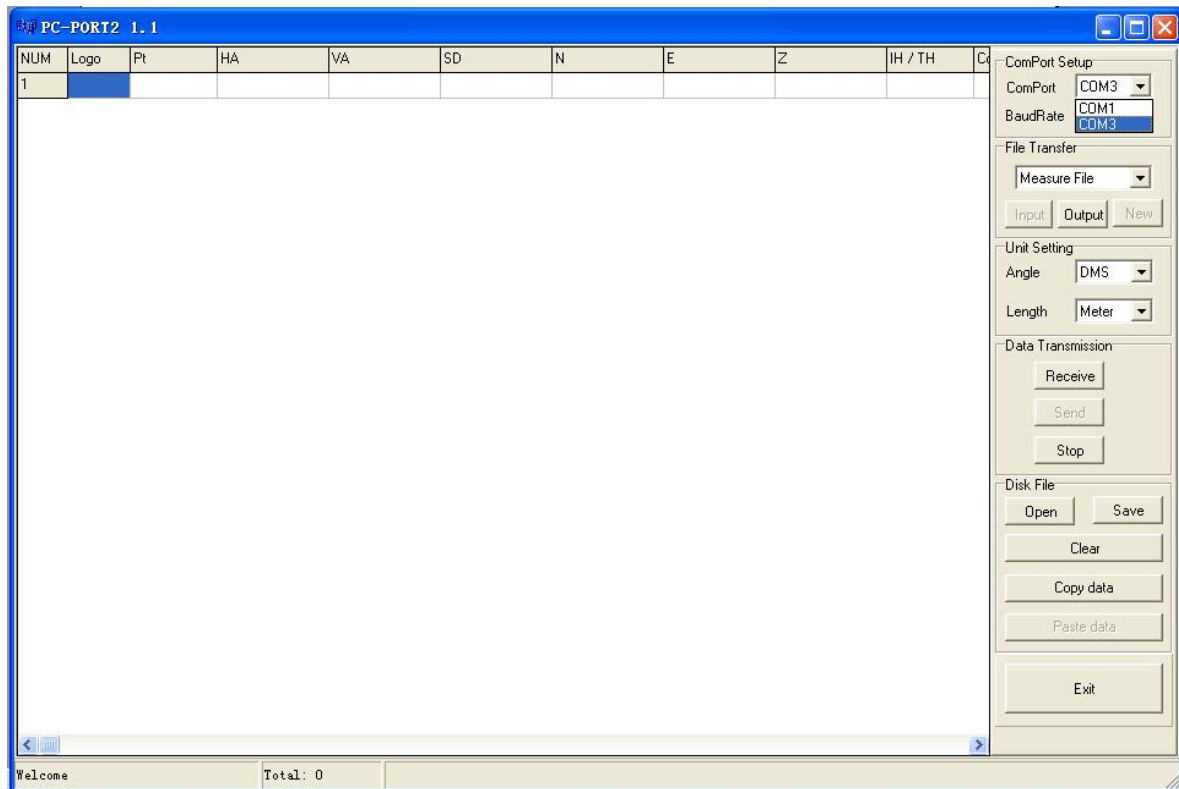
1. Install the battery of the equipment (make sure that the capacity of the battery is more than half), then connect the equipment with the transfer line's another end (six pins).



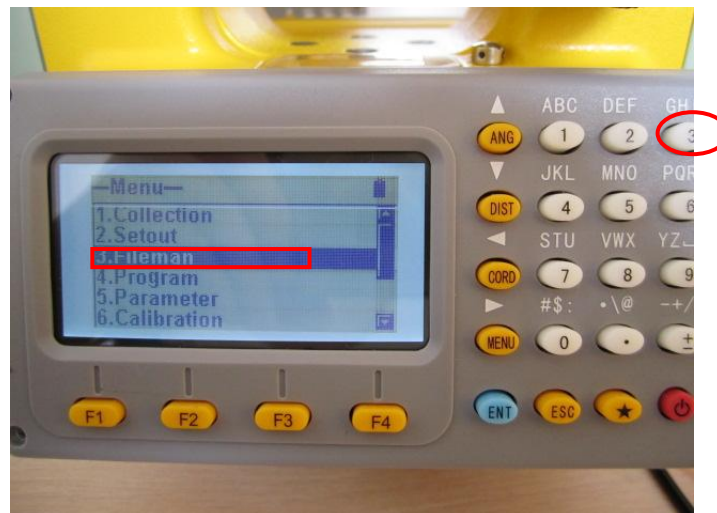
2. Run the program "PC Port 2" as the administrator.



3. Serial port chooses the number COM3 when installing hints you.



4. Press the power button to start the equipment, then press “MENU” button to enter the function menu. Press “3” button to enter “Fileman”.



5. Press “3” button to export the file.



6. Press “F3” to chose the file you need to export. This time we choose the original surveying data file *.MEA, then press “ENT” button to confirm.

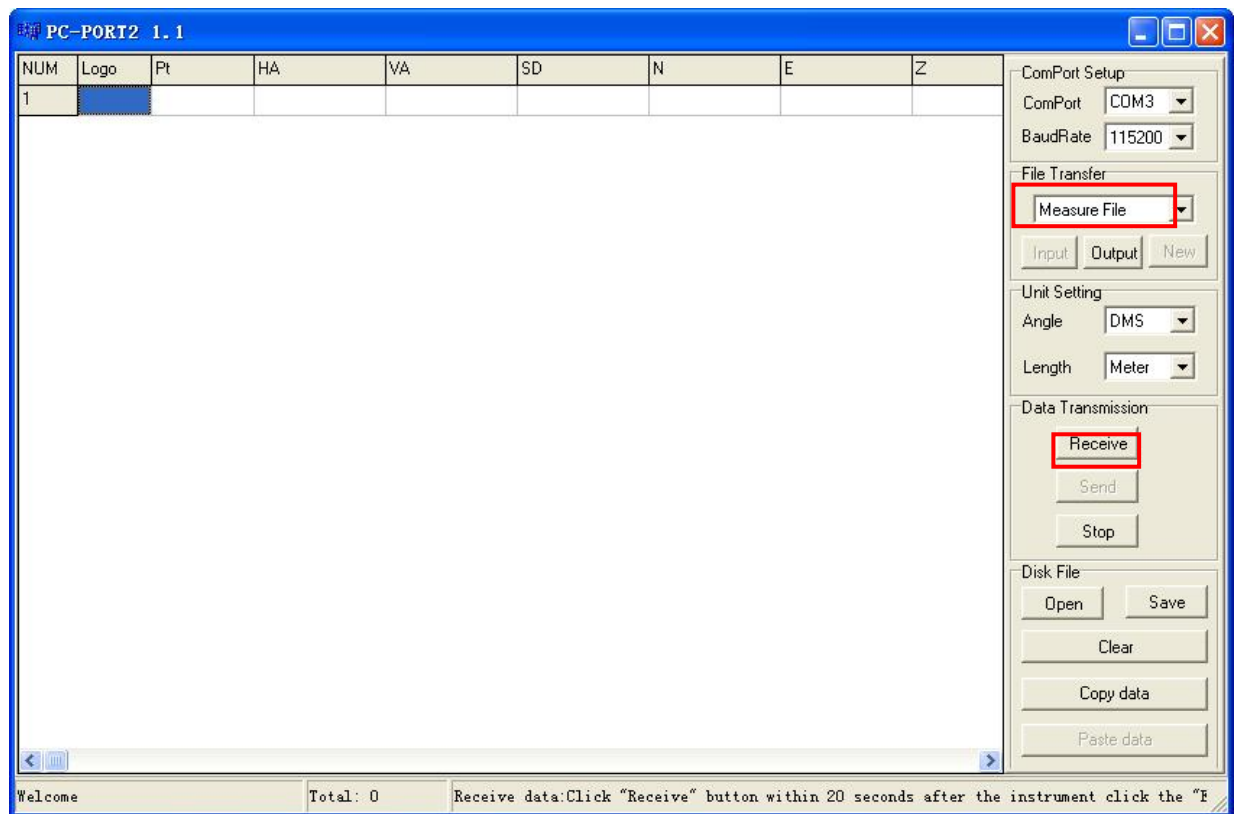


7. Press up and down button to select the file you need to export and press “F4” to confirm, then it will return back to the exporting interface, and show the file name you chose.





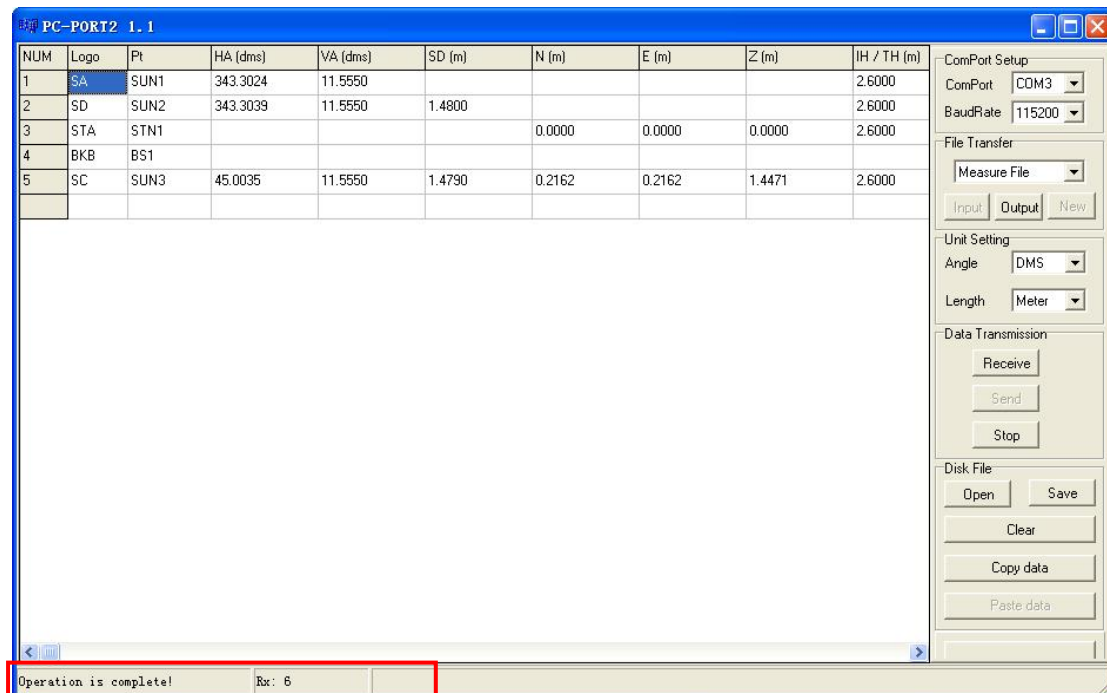
8. On the computer, press “Receive” button as the following picture.



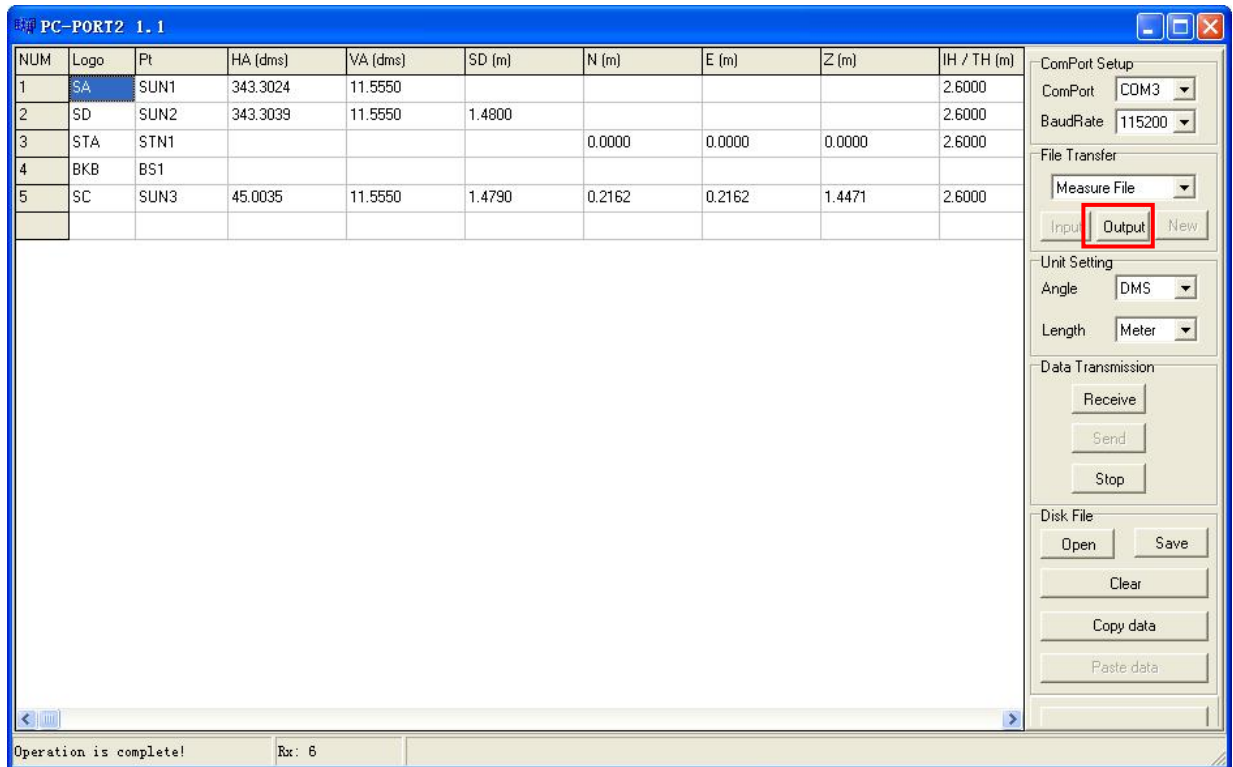
9. Then click the “F4” button to do the exporting operation, after exporting, it will show you how many data you have exported.



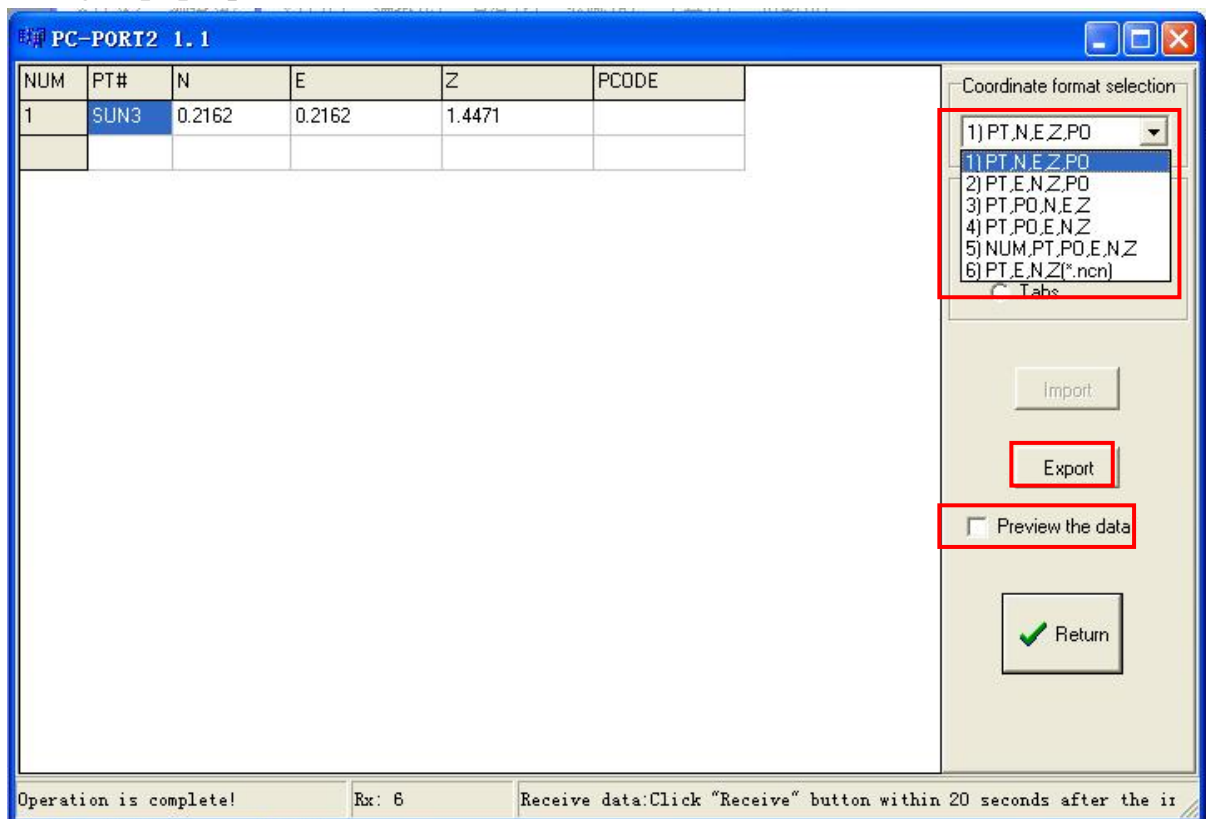
10. On the computer it will also show you how many data you have received.



11. After received the data, click “Output” button, then it will enter the coordinate derived interface.

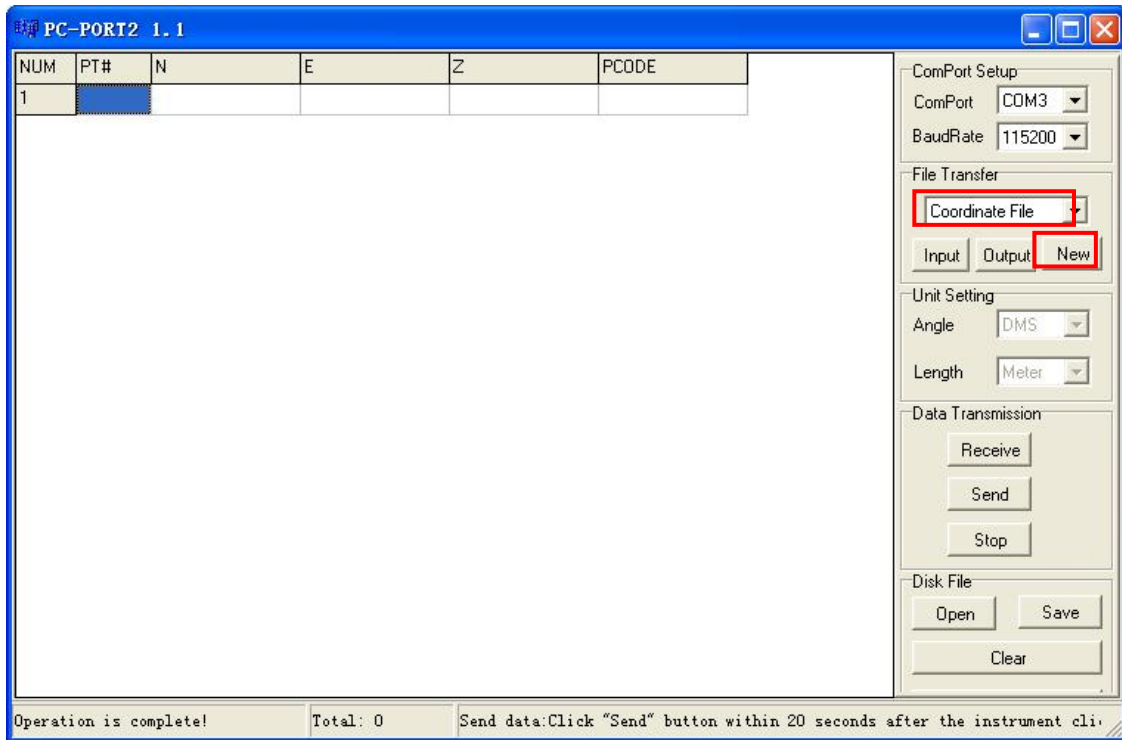


12. Choose the format of the coordinate you need to export, then click “Export” button, if you need preview the data, mark the check box of “Preview the data”. Type the name and choose the data format in the dialogue pop-up, then click “Save” button.

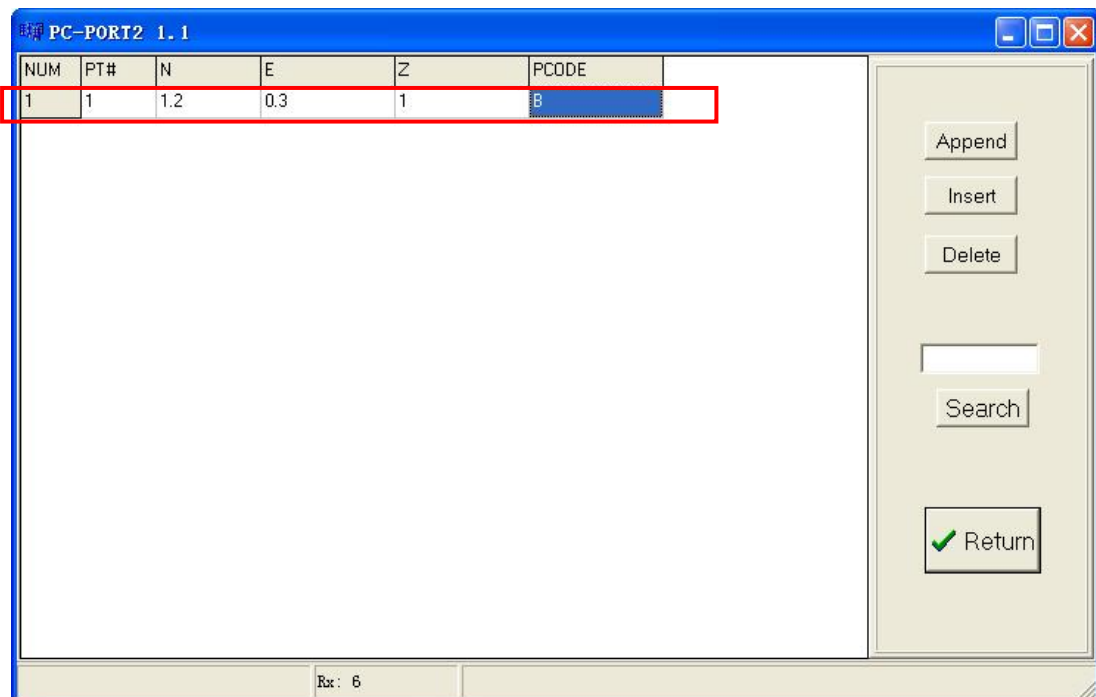


1.3 Creating Coordinate data file on the computer.

1. Run the data transfer software, select “Coordinate file” from the pop-up menu, then select “New”.

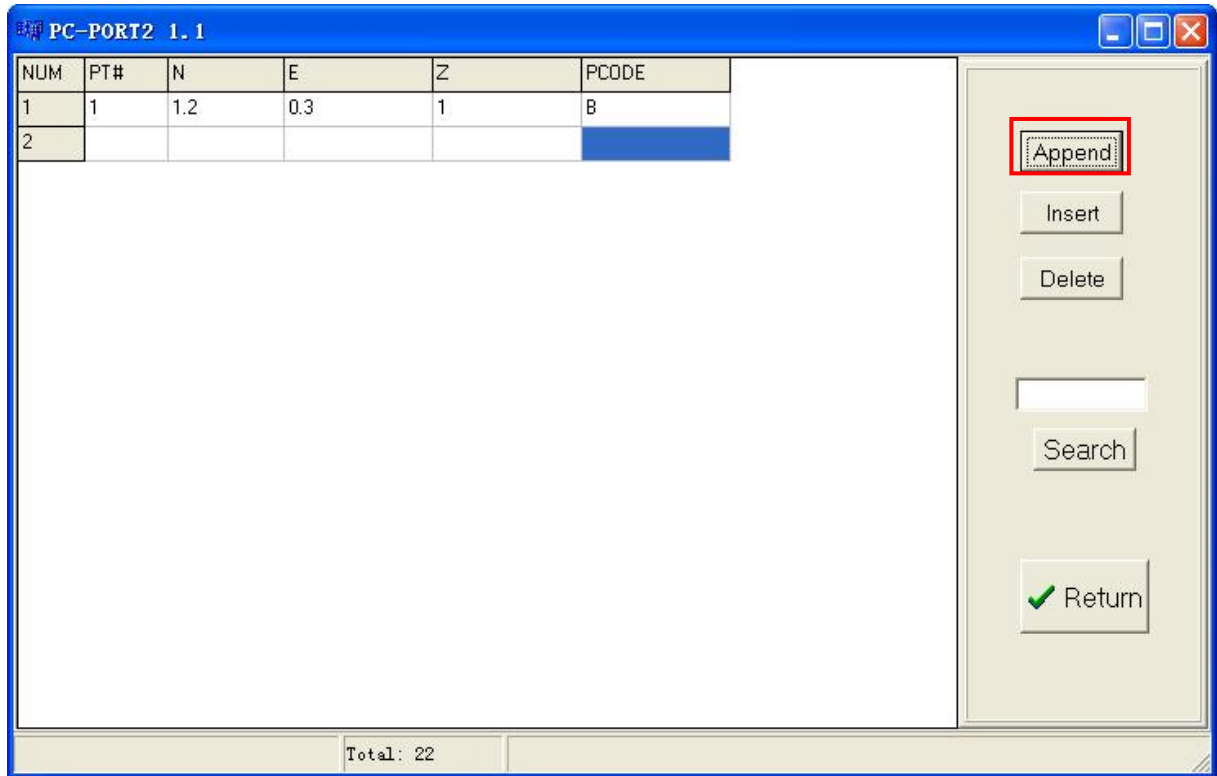


2. At the data editing interface, you can click the enter box to enter the Point Name, E,N, Z, and PCODE.

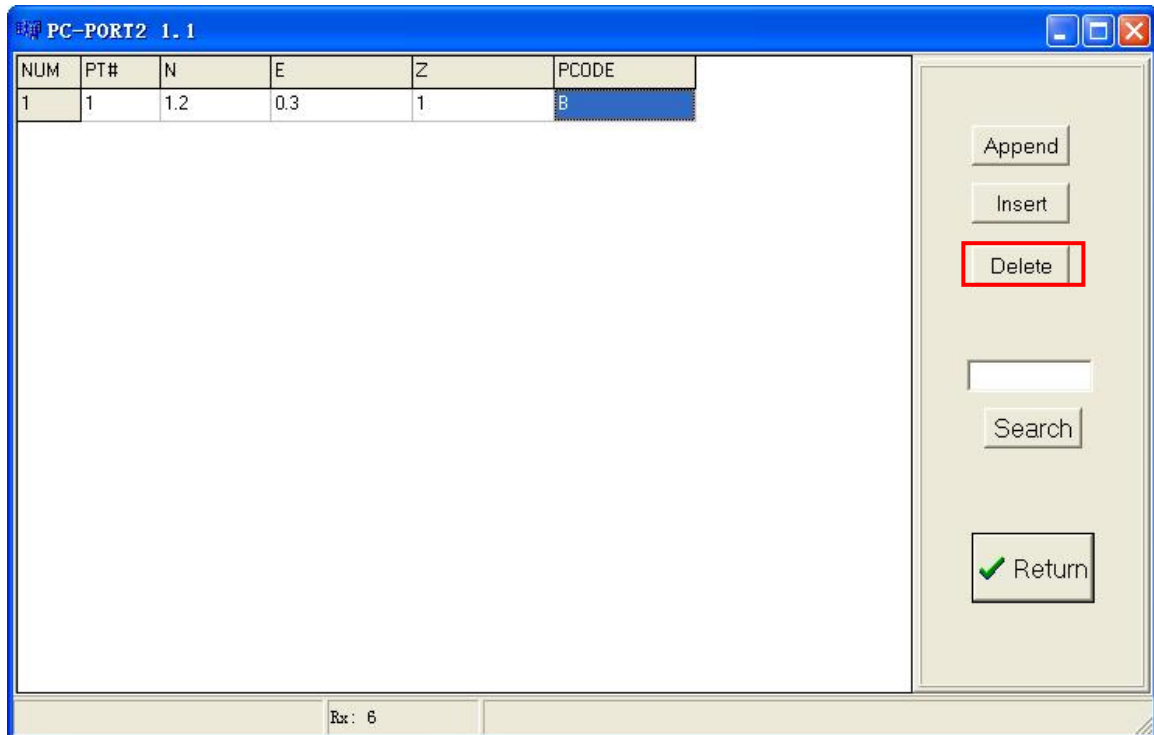


HI-TARGET

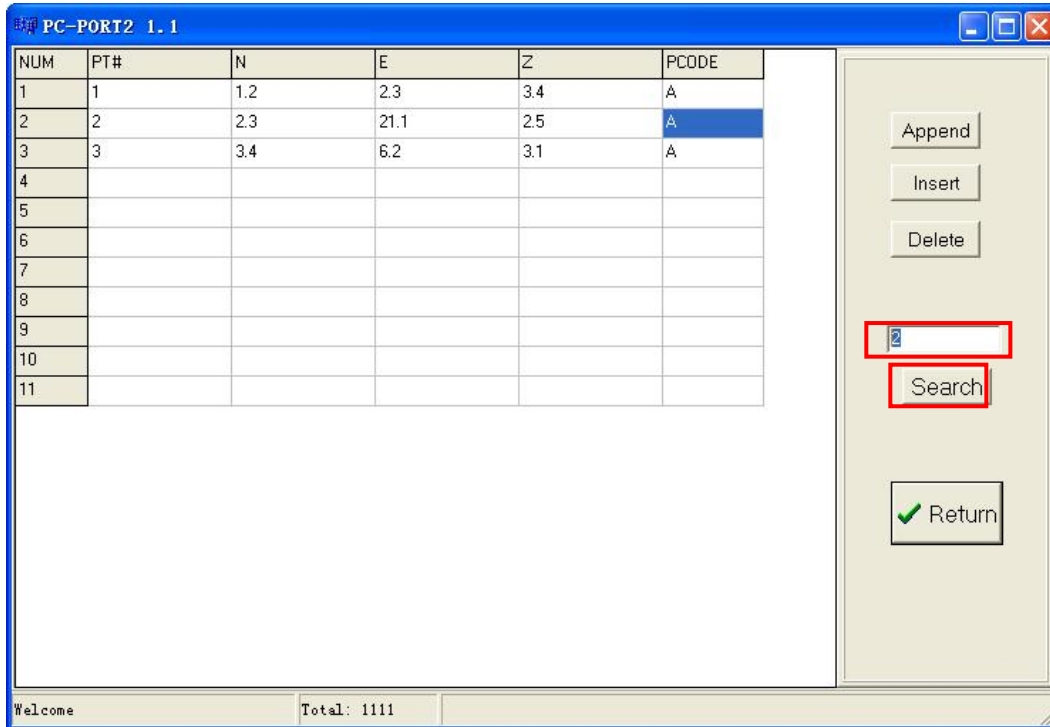
2. If you need to edit next data, you can click “Add” button, and if you entered wrong info, you can modify directly in the box.



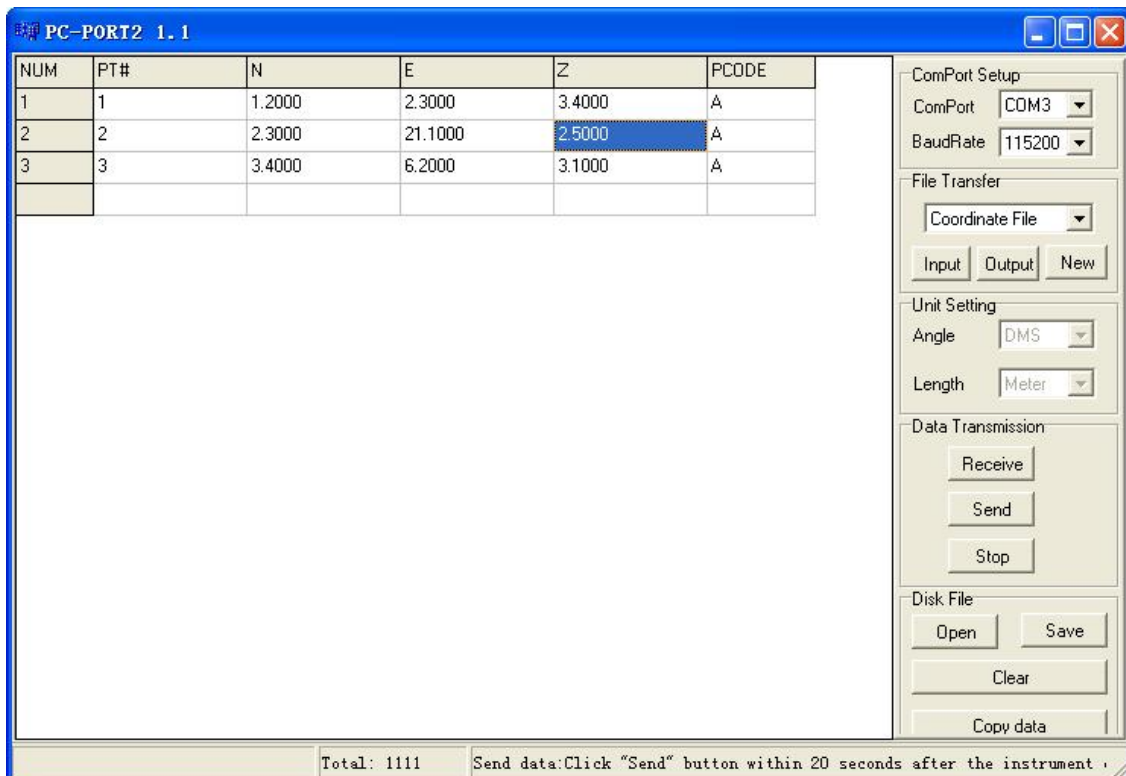
3. If you don't need one of the data, you can select that data, then click “Delete” button to delete.



4. If there are many data, you can use the “Search” function to enter the point name you want to see.



5. After editing, click “Return” to return back to the main interface, then you can import the data to the equipment or save to the computer.



1.4 Import coordinates data on the computer to the instrument.

1. The way to connect the computer and the equipment is the same as before said.
2. Press the “MENU” button enter the menu interface, press “3” button to the “Fileman”, then press”2” button to do the operation of importing.



3. Press “F3”, then you can choose the file to receive.



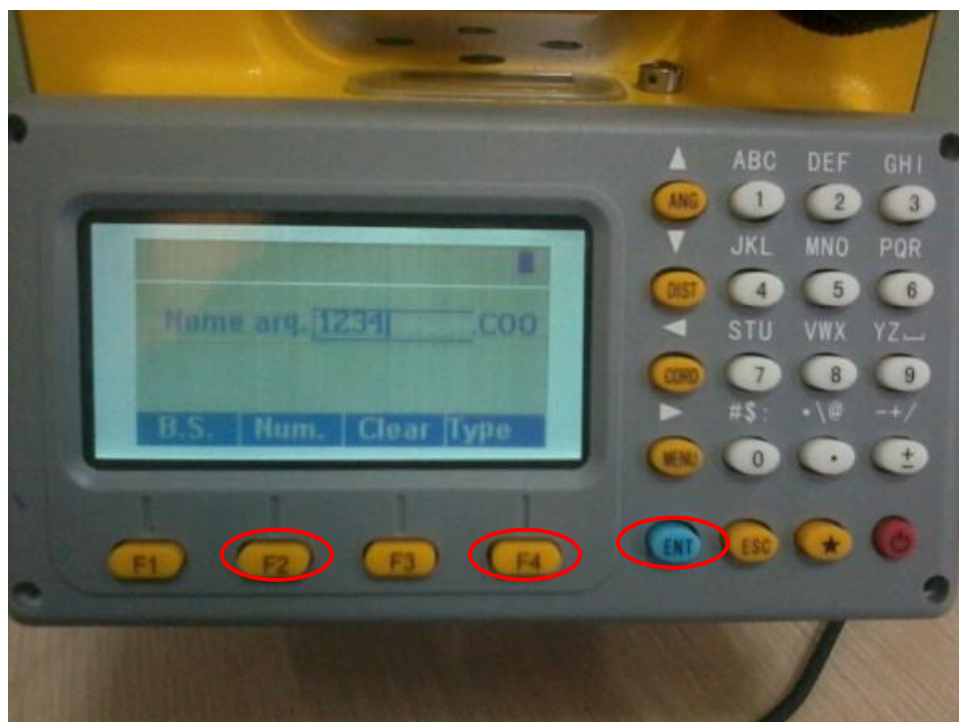
4. If there is no .COO file to choose, or you want to save these data in

HI-TARGET

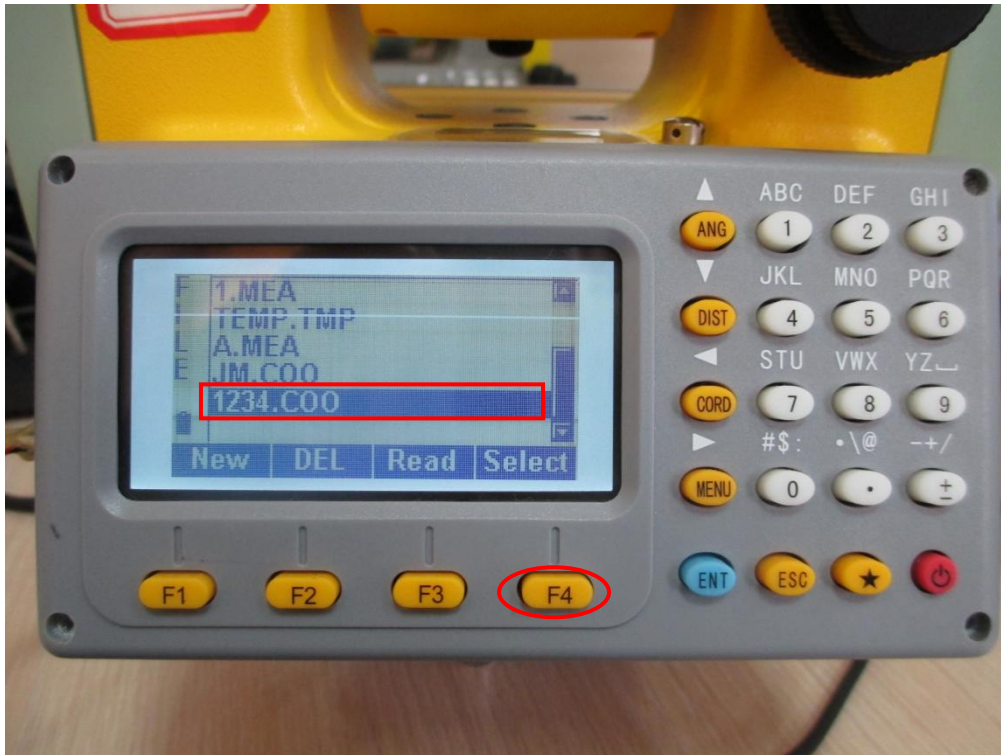
new file, you can press “F1” button to create a new file.



5. Then enter the file name in the entering box, press “F4” button to change the file type to .COO, press “ENT” button to confirm.



6. Then select the file you just created, press “F4” button to confirm.



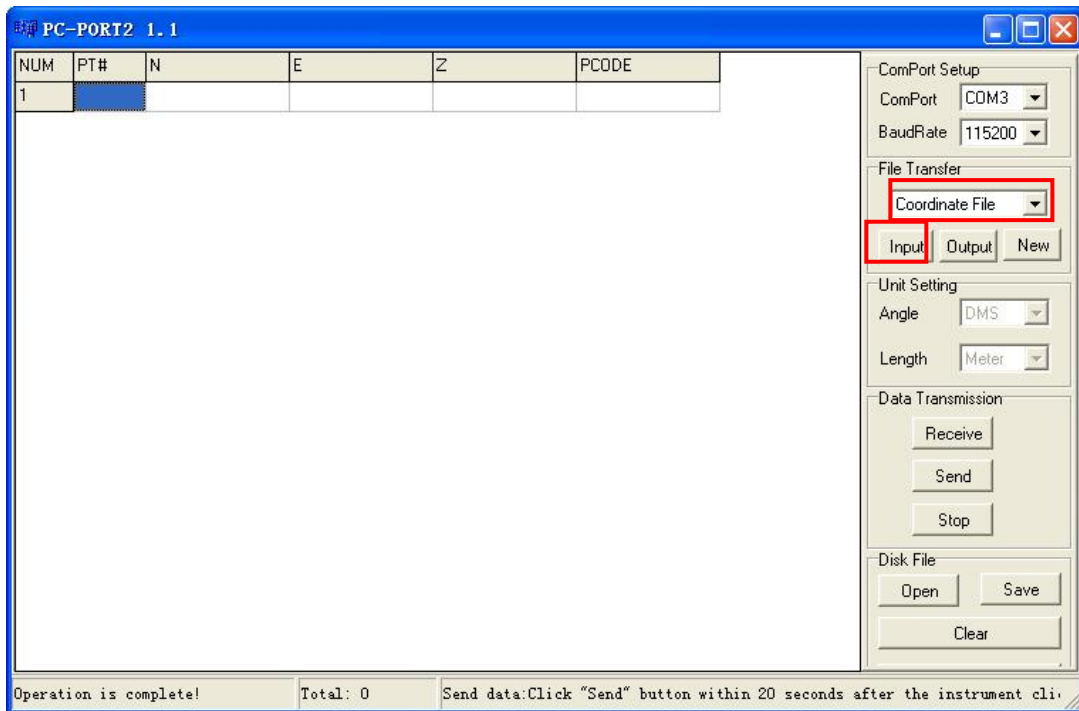
7. Click “send” in Pc-Port and then press “F4” button to start importing.



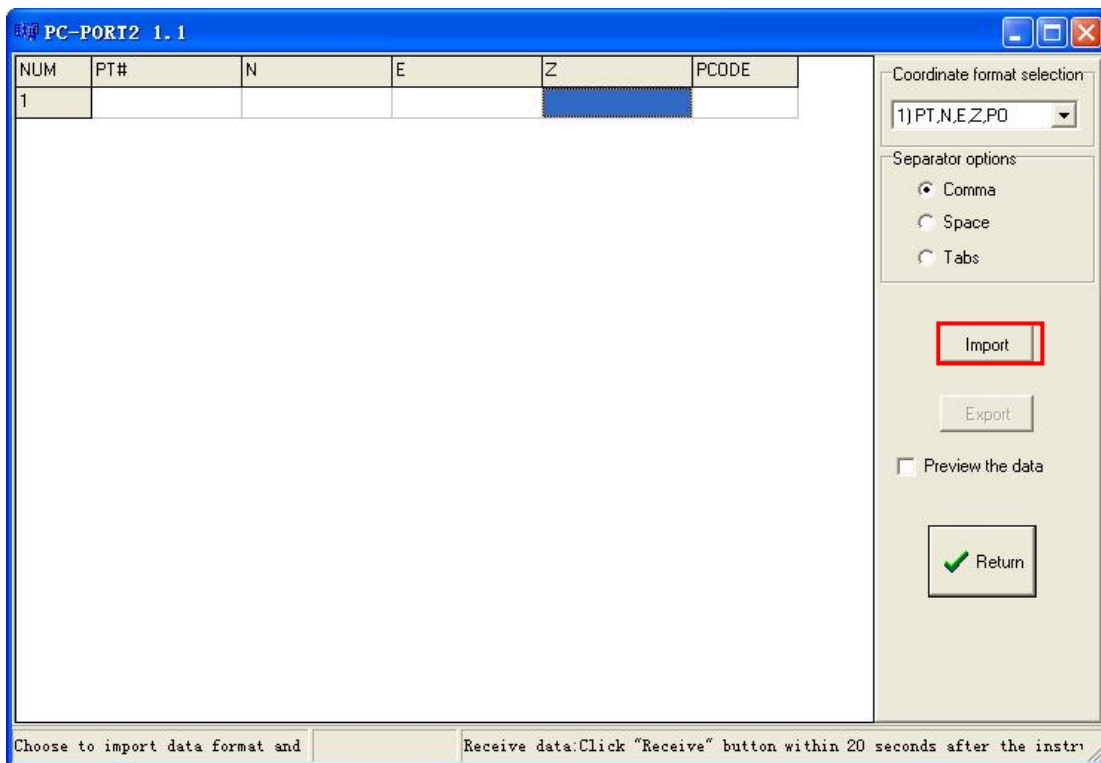
8. As to the file that you already have, after running the data transfer

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software, select “Coordinate file”, then click “Input”.

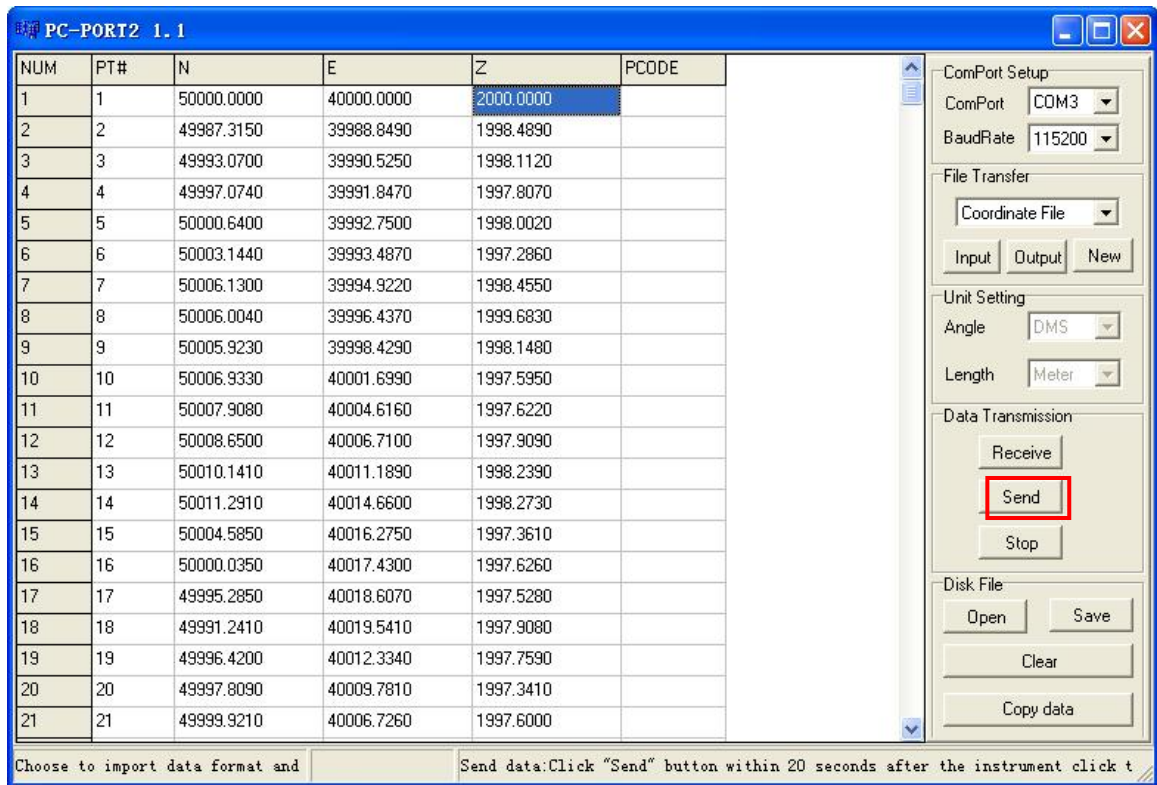


9. Select the Coordinate format you want to import, then click “Import” button, then choose the file you need to open, click “Open” button.



10. Then click “Send” button.

HI-TARGET



11. On the equipment, press “F4” button, then it will show the data number you have imported.



12. On the computer, it will also show what data you have imported.

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The screenshot displays the PC-PORT2 1.1 software interface. It features a main data table with columns for NUM, PT#, N, E, Z, and PCODE. The Z column for row 1 is highlighted. To the right of the table are several control panels: ComPort Setup (COM3, 115200), File Transfer (Coordinate File, Input, Output, New), Unit Setting (Angle: DMS, Length: Meter), Data Transmission (Receive, Send, Stop), and Disk File (Open, Save, Clear, Copy data). At the bottom, a status bar shows 'Operation is complete!', 'Tx: 28', and a 20-second timer for sending data.

NUM	PT#	N	E	Z	PCODE
1	1	50000.0000	40000.0000	2000.0000	
2	2	49987.3150	39988.8490	1998.4890	
3	3	49993.0700	39990.5250	1998.1120	
4	4	49997.0740	39991.8470	1997.8070	
5	5	50000.6400	39992.7500	1998.0020	
6	6	50003.1440	39993.4870	1997.2860	
7	7	50006.1300	39994.9220	1998.4550	
8	8	50006.0040	39996.4370	1999.6830	
9	9	50005.9230	39998.4290	1998.1480	
10	10	50006.9330	40001.6990	1997.5950	
11	11	50007.9080	40004.6160	1997.6220	
12	12	50008.6500	40006.7100	1997.9090	
13	13	50010.1410	40011.1890	1998.2390	
14	14	50011.2910	40014.6600	1998.2730	
15	15	50004.5850	40016.2750	1997.3610	
16	16	50000.0350	40017.4300	1997.6260	
17	17	49995.2850	40018.6070	1997.5280	
18	18	49991.2410	40019.5410	1997.9080	
19	19	49996.4200	40012.3340	1997.7590	
20	20	49997.8090	40009.7810	1997.3410	
21	21	49999.9210	40006.7260	1997.6000	

ComPort Setup
ComPort: COM3
BaudRate: 115200

File Transfer
Coordinate File
Input Output New

Unit Setting
Angle: DMS
Length: Meter

Data Transmission
Receive
Send
Stop

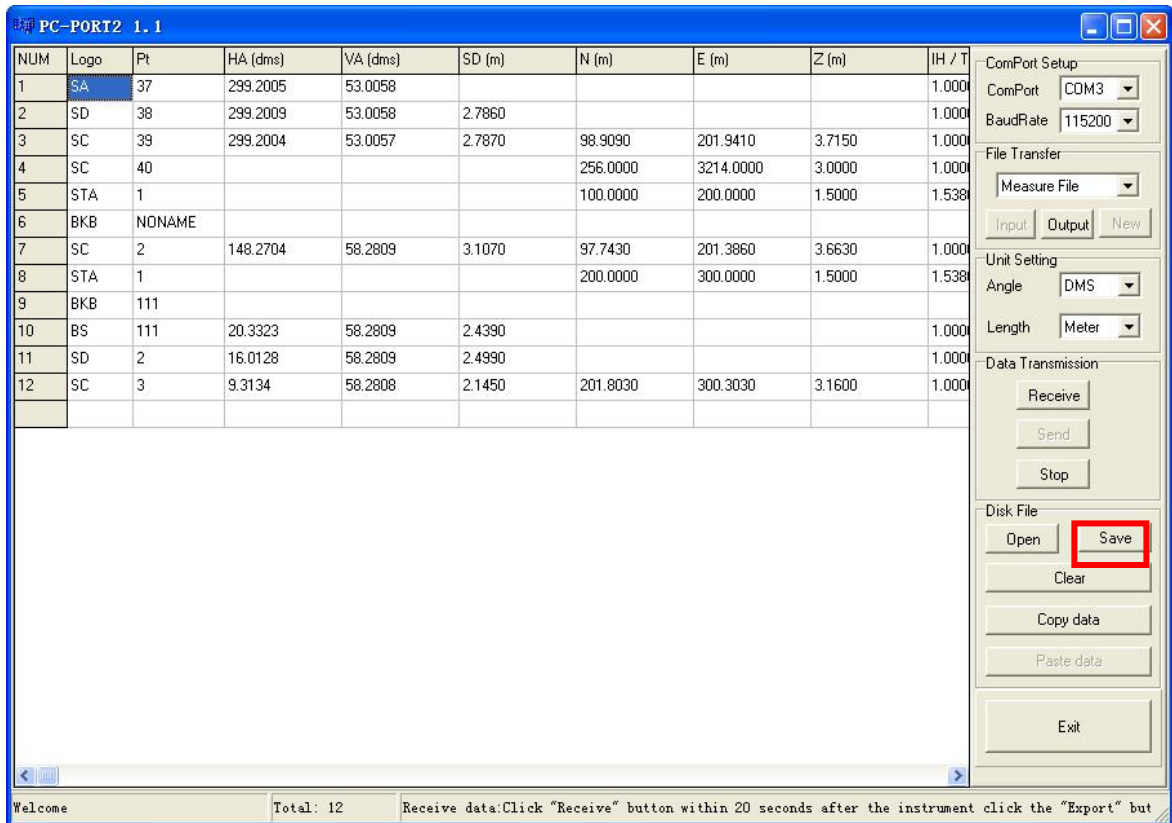
Disk File
Open Save
Clear
Copy data

Operation is complete! Tx: 28 Send data: Click "Send" button within 20 seconds after the instrument click t

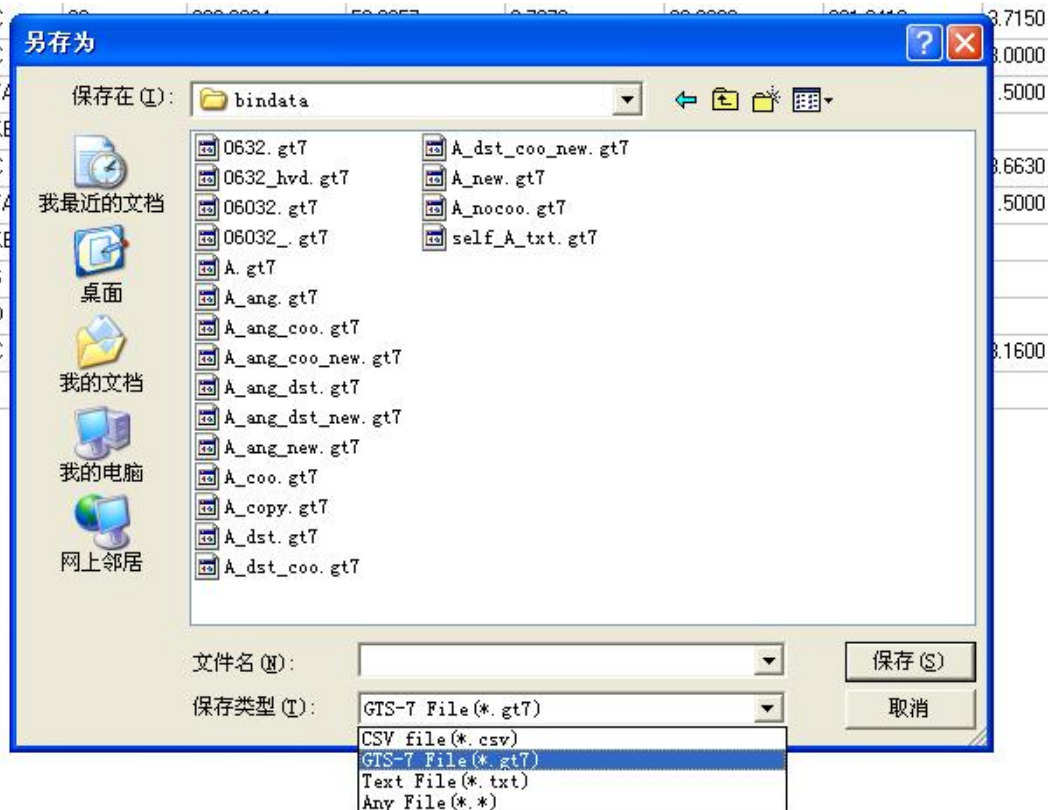
1.5 Convert data to GTS-7 format

1. Open a measuring file or receive measuring file from the instrument.

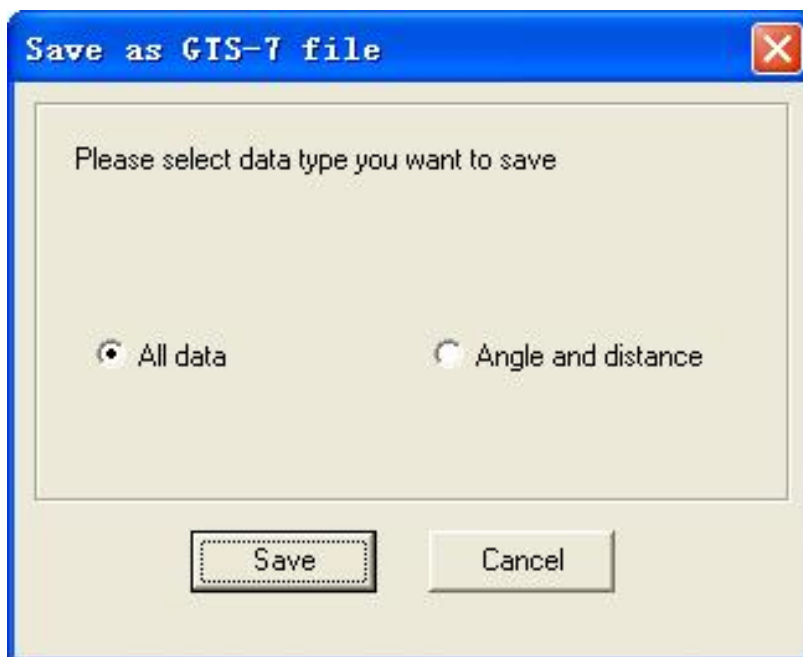
Then click the “Save” button.



2. Select “GTS-7 File (*.gt7)”, then input file name and click “Save” button.



3. Select the type of measuring data you want to save, then click “Save” button.



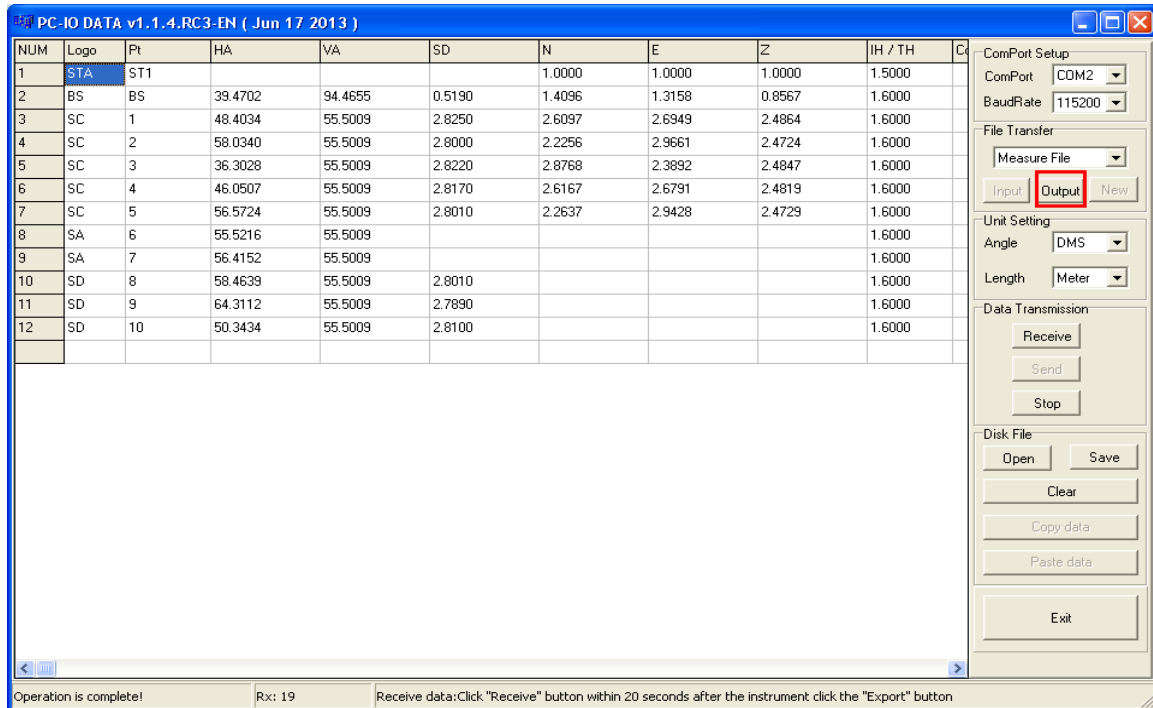
4. The software will save the measuring data to the file as GTS-7 file format. You can open the file with notepad and view the content.



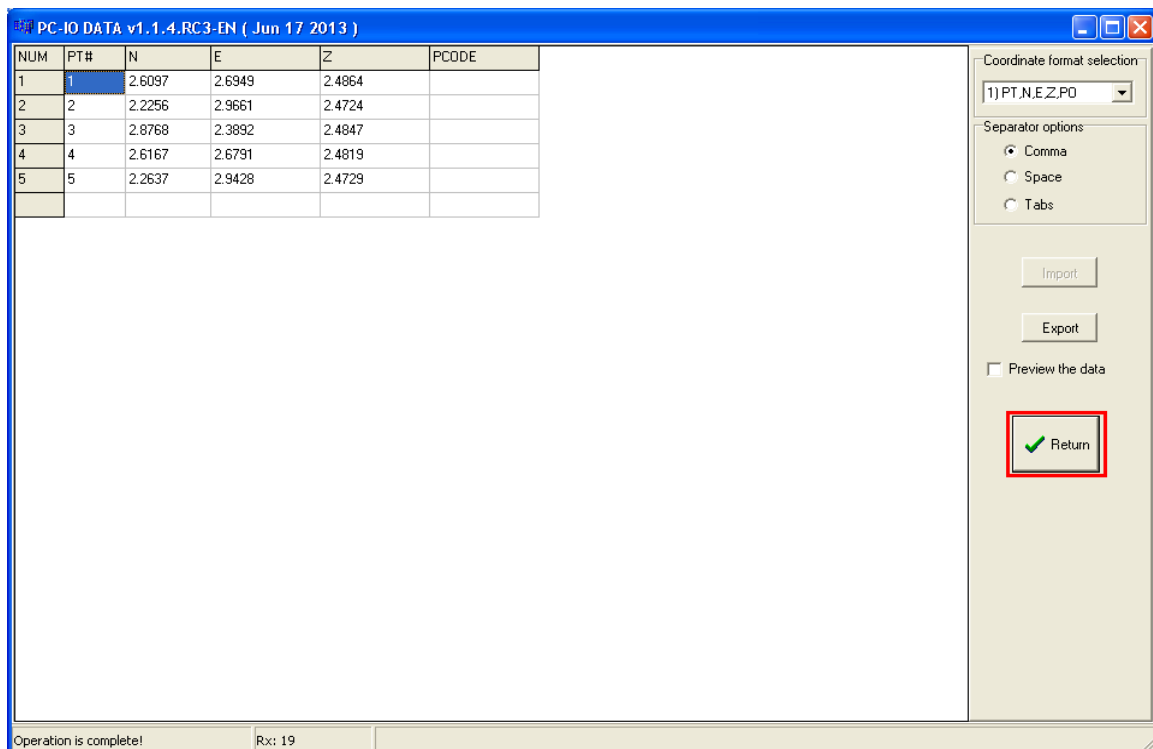
```
test.gt7 - 记事本
文件(F) 编辑(E) 格式(O) 查看(V) 帮助(H)
JOB      0417.JOB,
INST     HTS221
UNITS    M,D
SS       37,1.0000,2
HU       299.2005,53.0058
SS       38,1.0000,2
SD       299.2009,53.0058,2.7860
SS       39,1.0000,2
SD       299.2004,53.0057,2.7870
XYZ      201.9410,98.9090,3.7150
SS       40,1.0000,2
XYZ      3214.0000,256.0000,3.0000
STN      1,1.5380,2
XYZ      200.0000,100.0000,1.5000
BKB      NONAME,336.4715,150.0000
SS       2,1.0000,2
SD       148.2704,58.2809,3.1070
XYZ      201.3860,97.7430,3.6630
STN      1,1.5380,2
XYZ      300.0000,200.0000,1.5000
BKB      111,148.2700,20.3322
BS       111,1.0000
SD       20.3323,58.2809,2.4390
SS       2,1.0000,2
SD       16.0128,58.2809,2.4990
SS       3,1.0000,2
SD       9.3134,58.2808,2.1450
```

1.6 Convert the measurement file to dxf format.

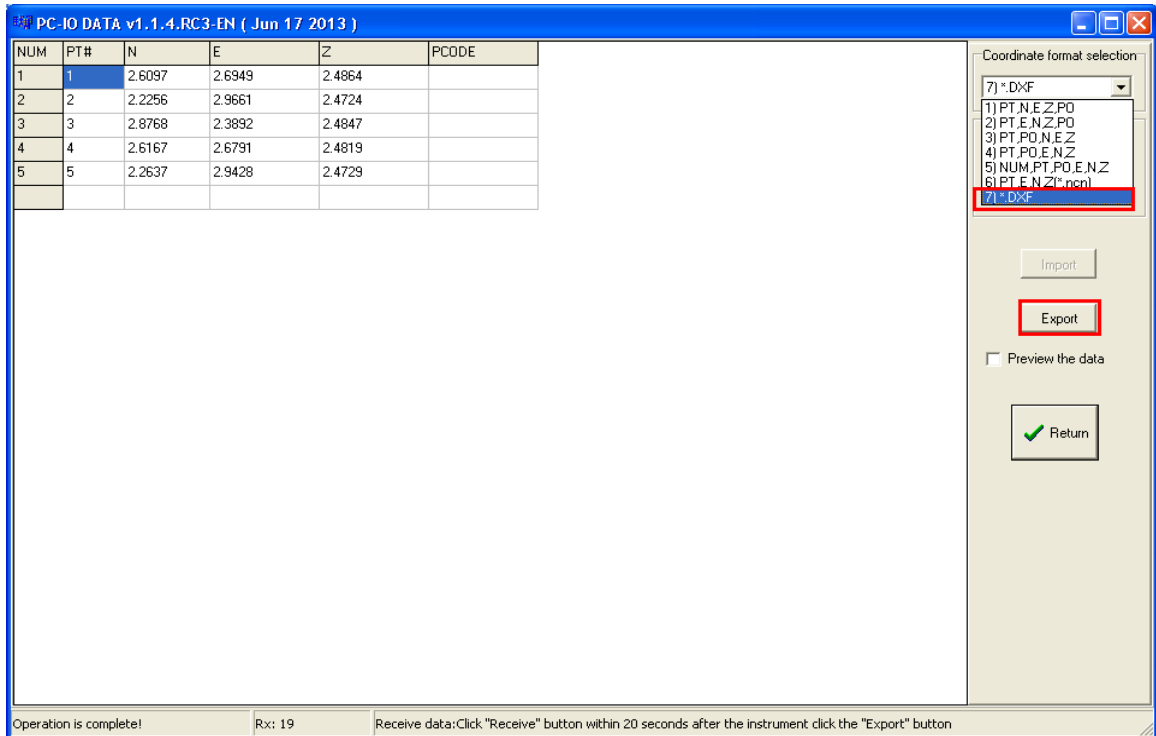
1. After downloading the data to Pc-PORT, then click “Output”.



2. Then you will go to the coordinates interface.

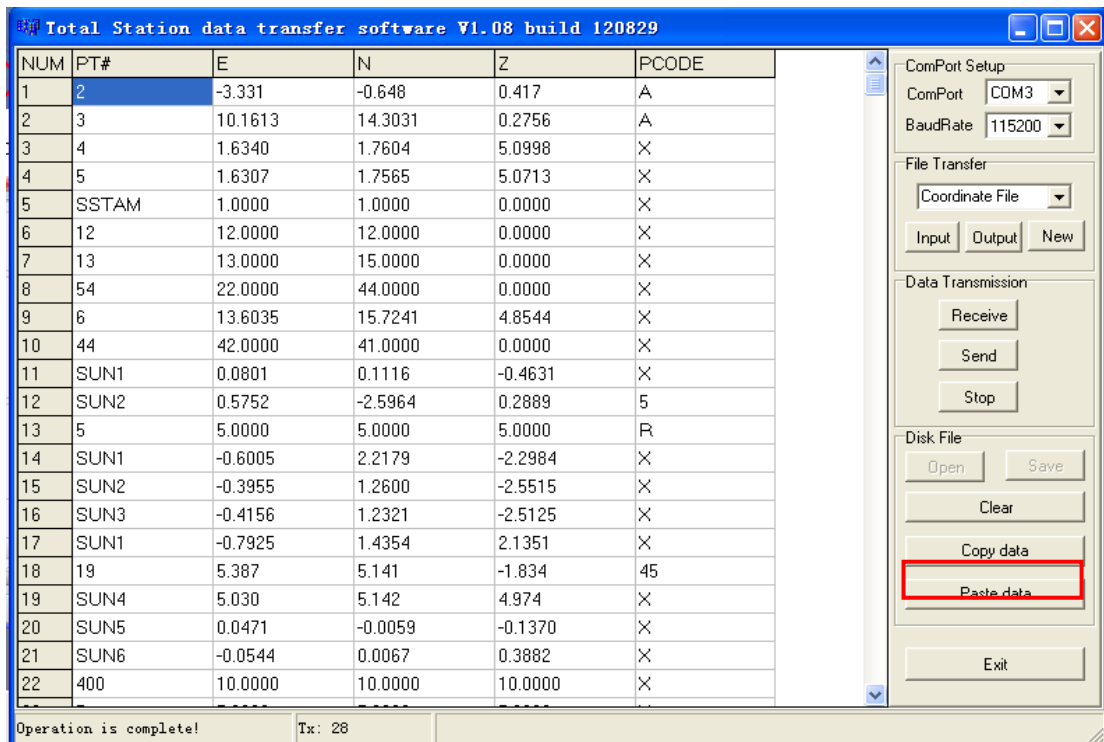


3. Click “Return” to go to the main interface, then click “Output” and you will see the “DXF” option in the drop-down list. Then click “Export” to export the dxf file.



1.7 Copy and paste data between Pc-PORT and CSV file

1. Below Shows the surveying data in Pc-PORT, the coordinates, the code data can be copied to the clipboard.



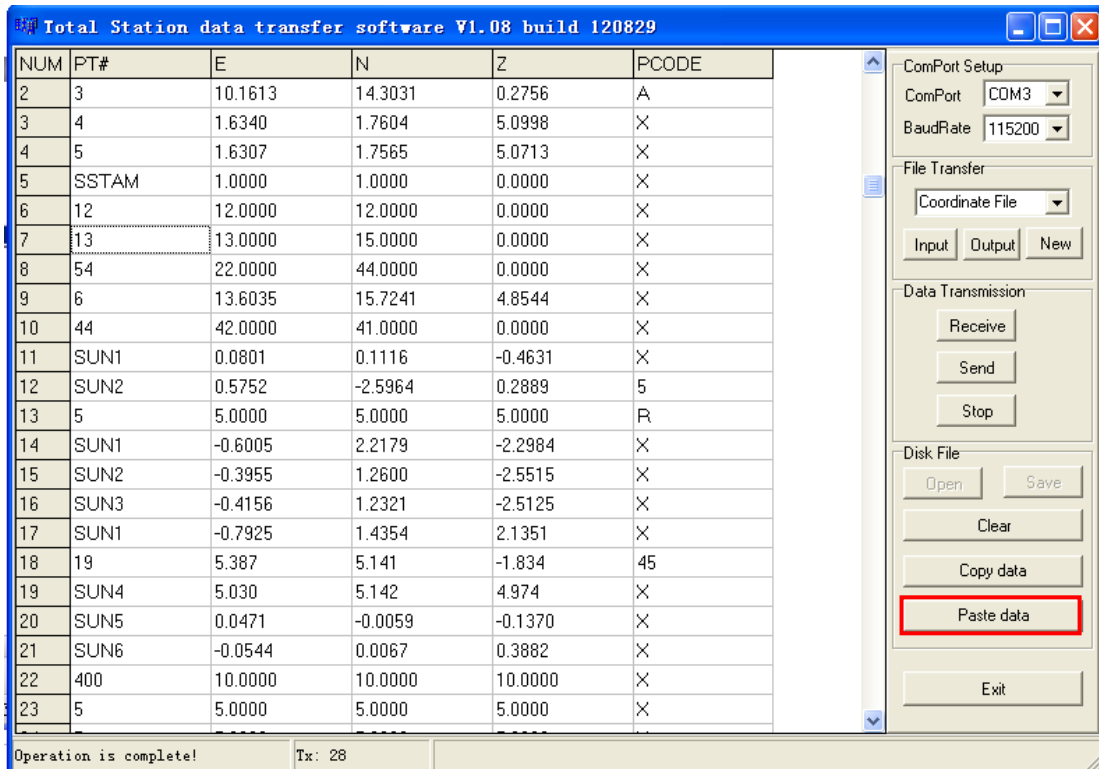
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2. You can then paste to excel. The format from left to right order is Point Name,N,E,Z,PCODE.

	A	B	C	D	E
1	2	-3.331	-0.648	0.417	A
2	3	10.1613	14.3031	0.2756	A
3	4	1.634	1.7604	5.0998	X
4	5	1.6307	1.7565	5.0713	X
5	SSTAM	1	1	0	X
6	12	12	12	0	X
7	13	13	15	0	X
8	54	22	44	0	X
9	6	13.6035	15.7241	4.8544	X
10	44	42	41	0	X
11	SUN1	0.0801	0.1116	-0.4631	X
12	SUN2	0.5752	-2.5964	0.2889	5
13	5	5	5	5	R
14	SUN1	-0.6005	2.2179	-2.2984	X
15	SUN2	-0.3955	1.26	-2.5515	X
16	SUN3	-0.4156	1.2321	-2.5125	X
17	SUN1	-0.7925	1.4354	2.1351	X

3. It can also copy the data from excel. The format from left to right order should be Point Name,N,E,Z,PCODE.

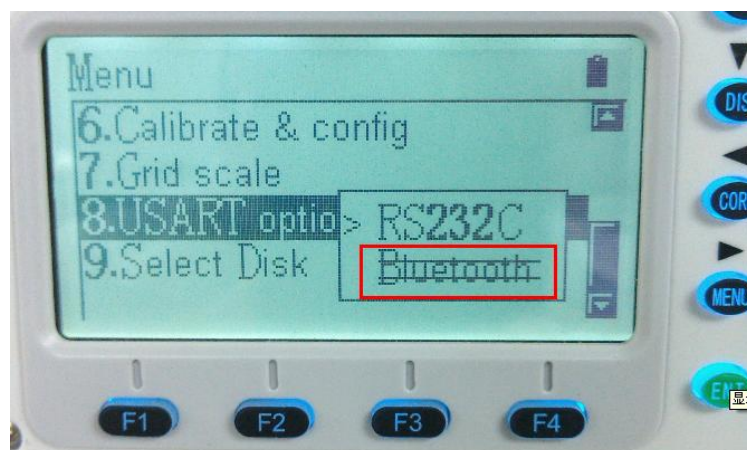
4. Then paste the data by clicking “Paste data”, refer to the picture below.



2 Instruction of connecting controller with the instrument by Bluetooth

2.1 Set in total station

After pressing the start button, press the [MENU] button to enter the menu interface, and then press the number key 8, in the pop-up dialog box press [▼] to select Bluetooth option.



Click the [ENT] key to confirm and click [ESC] key to cancel.

2.2 Set in the controller

2.2.1 Bluetooth Settings

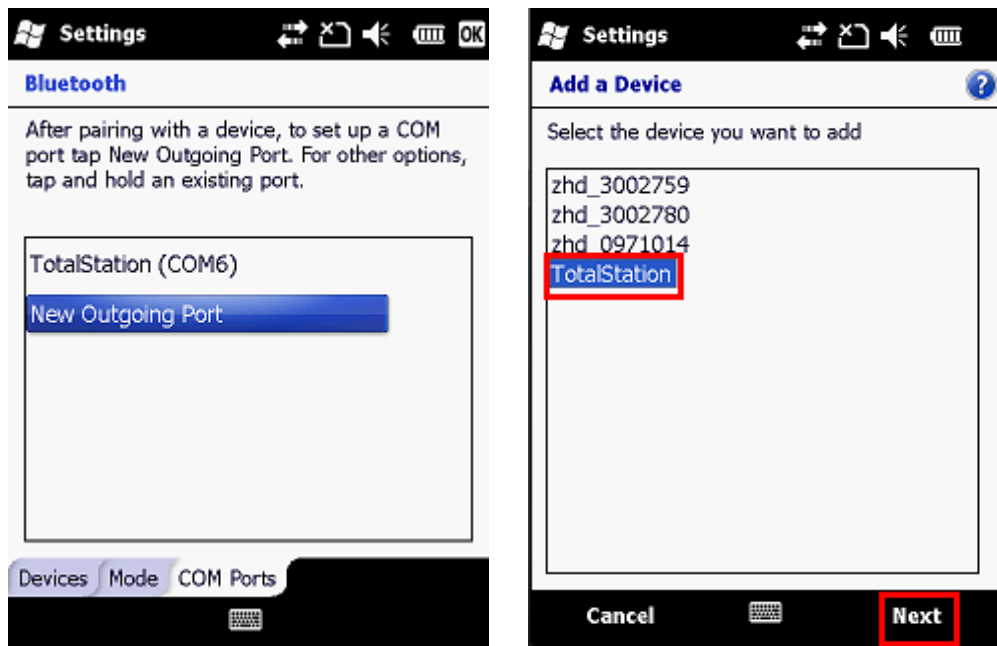
1. Go to “Settings” and then “Bluetooth” to set the Bluetooth.



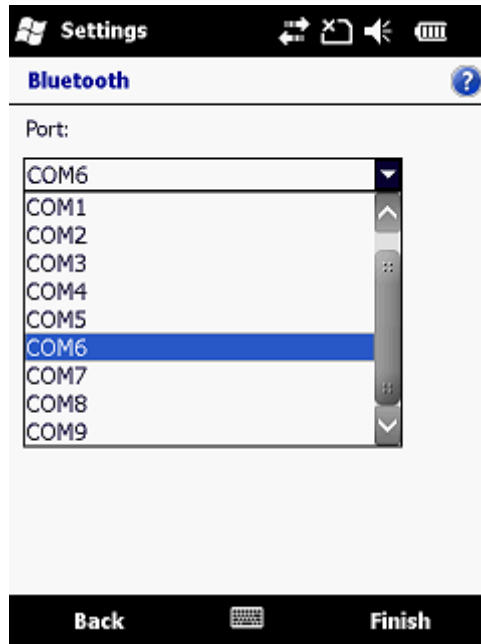
2. Click “Add new device” to search the total station. Then you will see the it in the list. Then click “Next”, enter the pin code “1234” and then click “Next”.



3. Click “COM Ports” in the bottom, then click “New Outgoing Port” to select a port.



4. Choose a unused port and then click “Finish”.



2.2.2 Bluetooth connections in SurvCE

1. Run SurvCE software.
2. Click “Equip” and then “1Total Station” in the main interface of SurvCE software..

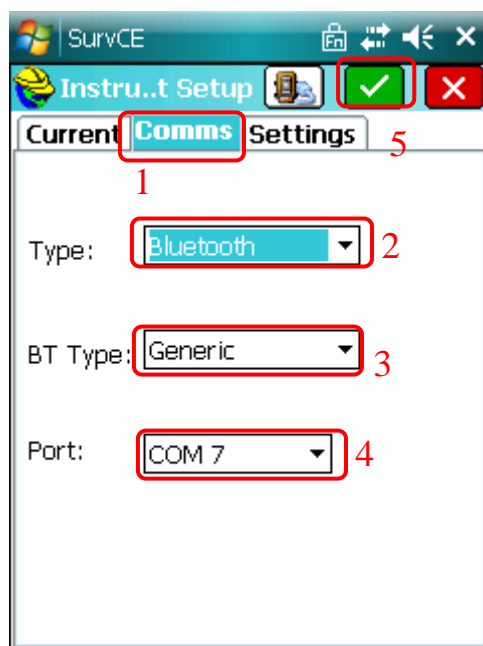


3. In “Current” interface, select “Topcon Direct” for “Manufacturer” and

“GTS Series (non-motorize)” for “Model”.



4. Then go to “Comms” interface, select “Bluetooth” for “Bluetooth” and “Generic” for “BT Type”. As to the com port, it’s the one you selected in the Bluetooth setting.

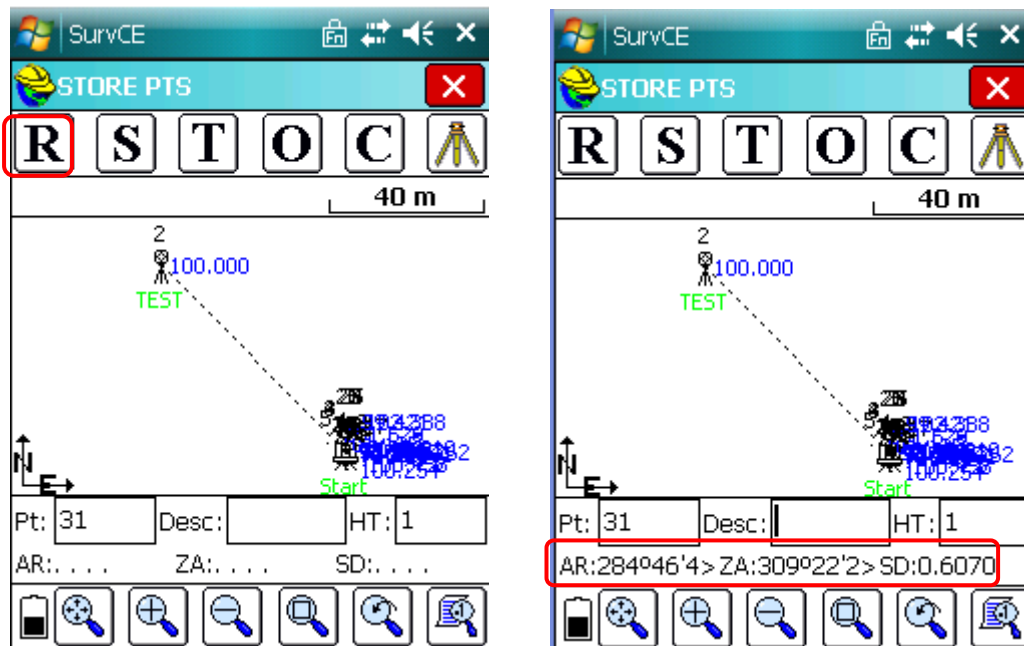


2.2.3 Store points

1. Click the “Store Points” items in the “Survey” options.



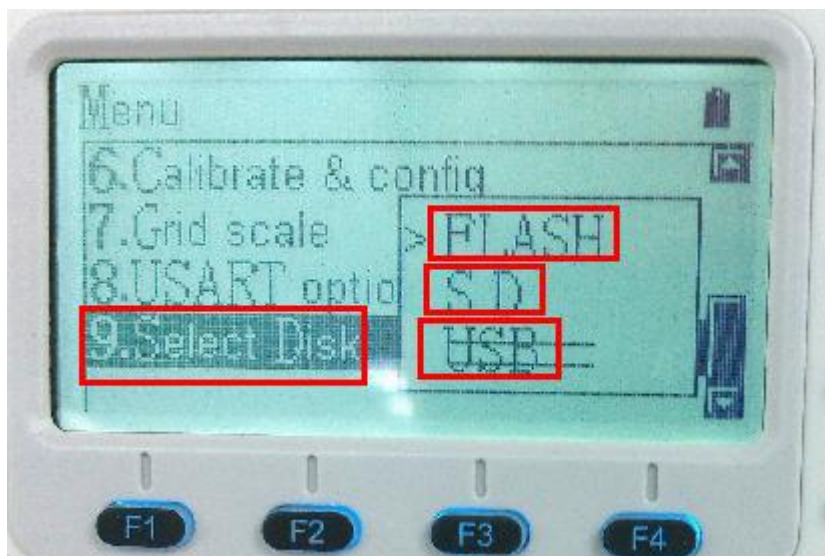
2. Select the upper-left corner of [R], you can remotely operate the instrument to measure, and display the data on the instrument on the blow screen.



The data display on the hand book show that the instrument is connected to the hand book.

3. The usage of USB flash disc and SD card

3.1 For ZTS320, the projects can be conducted in the SD card or USB flash disc.



3.2 Go to “Menu’ and then “Select Disc” to select a disc for the projects.

3.3 Then you can create new files for the projects and all this files will be

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saved in the disc you selected before.