Leaptronix®

IWT PC-LINK Software Manual

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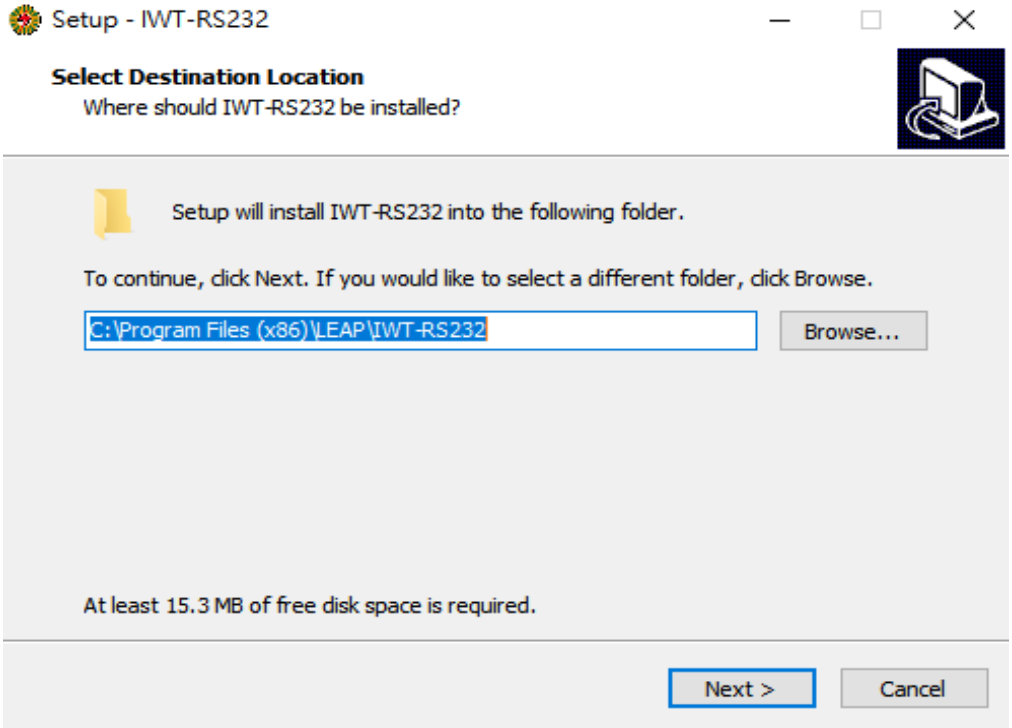
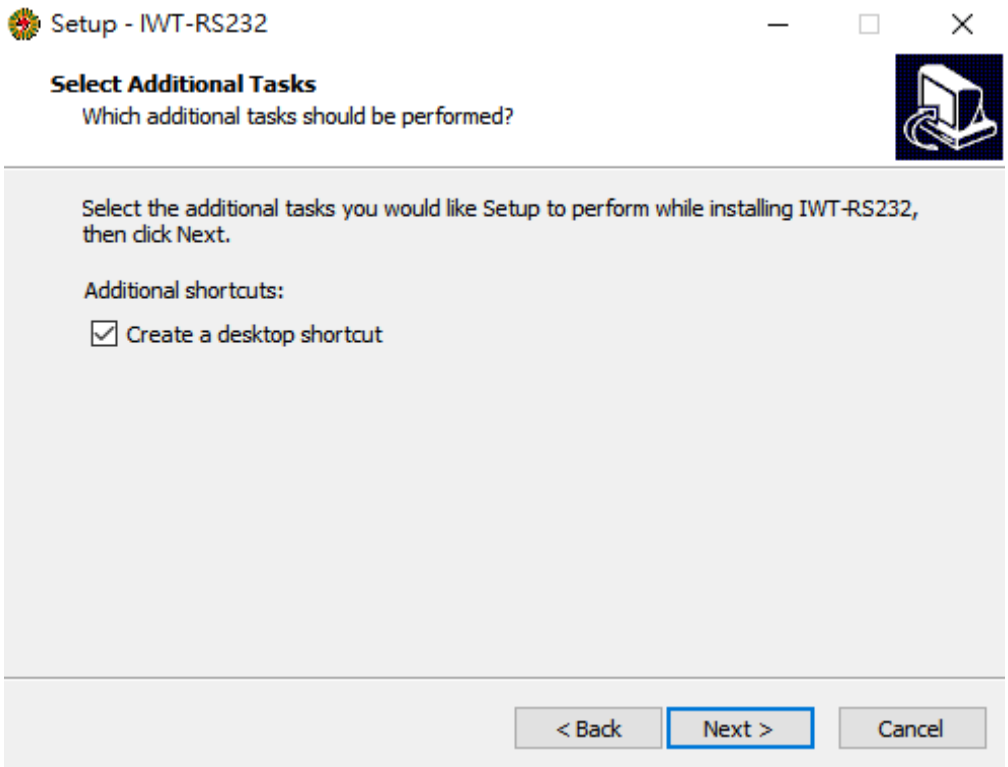
I. Installing PC-Link Software:

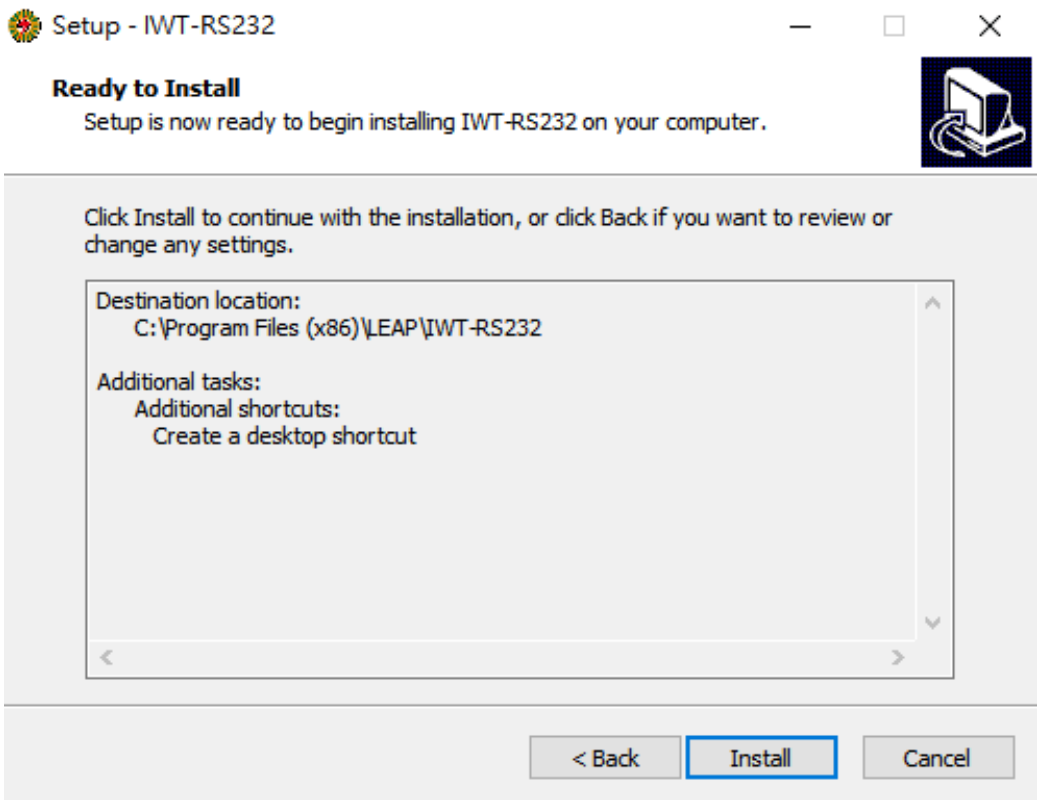
1. Set the directory path:



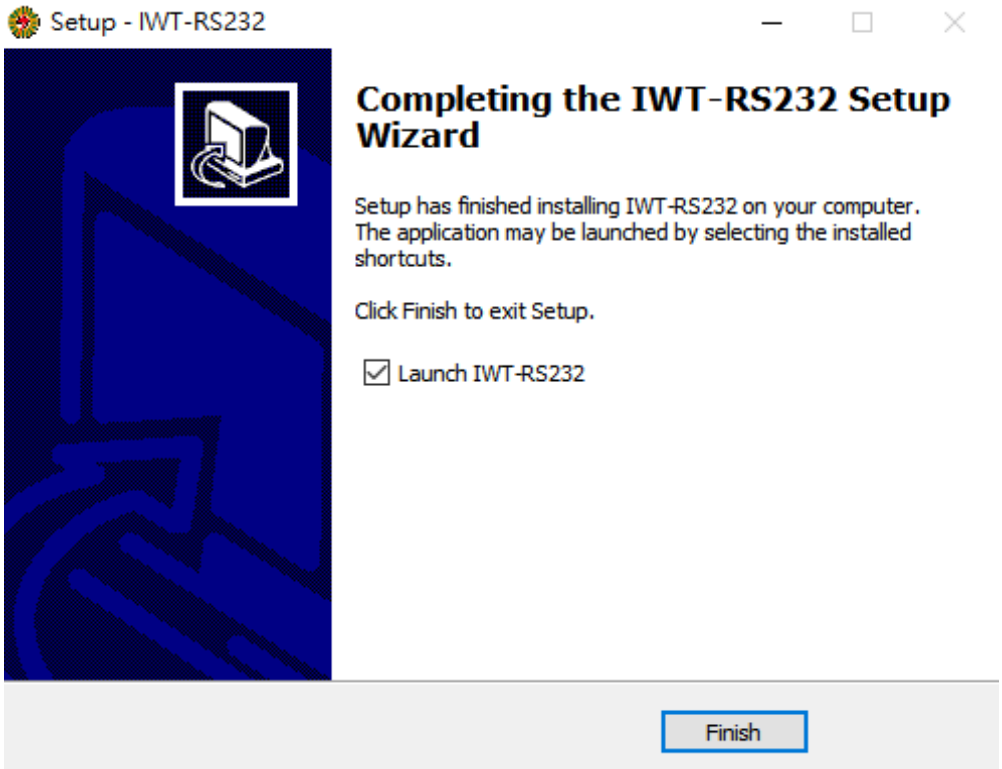
2. Check the desktop shortcut box if it's needed.



3. **Click on Install to start.**



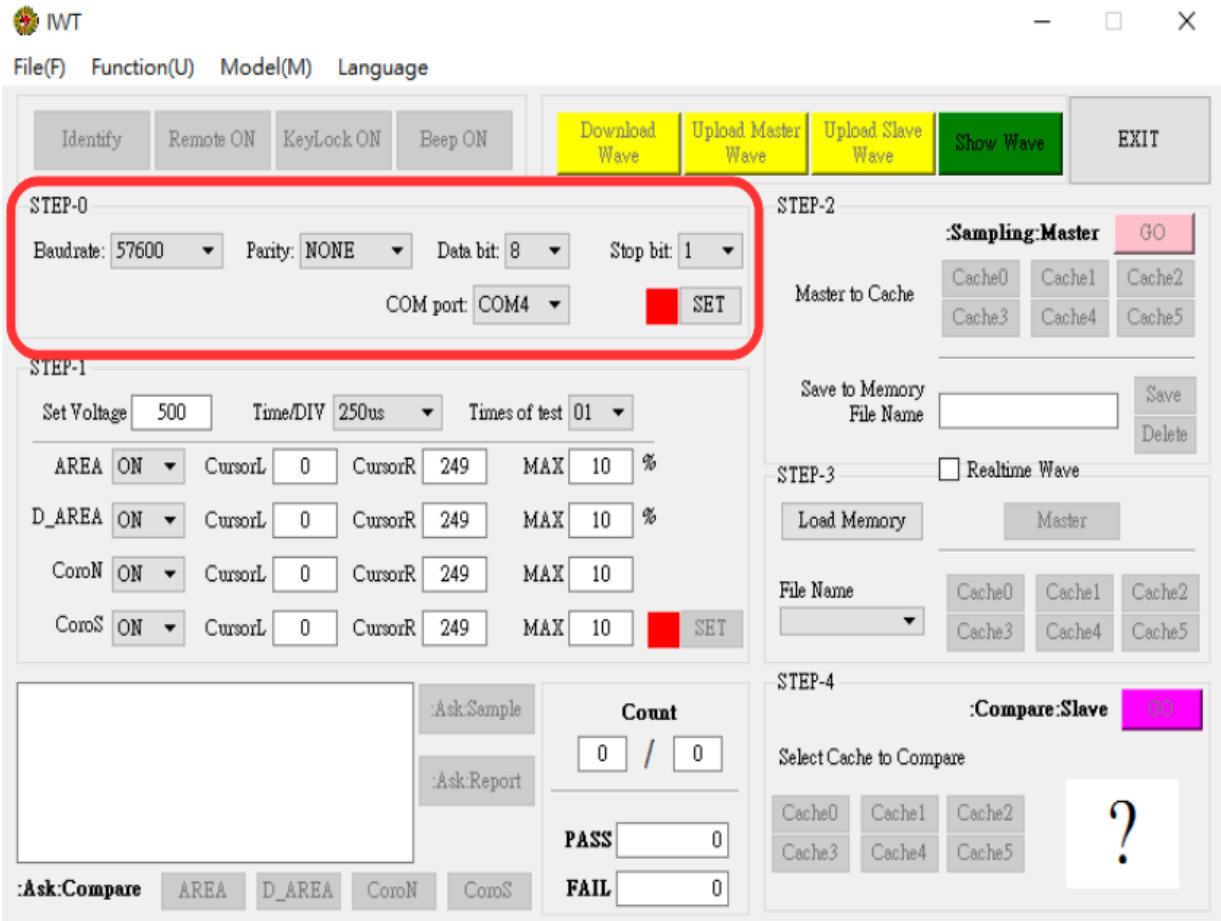
4. **Click on Finish to finish installing and launch the program.**



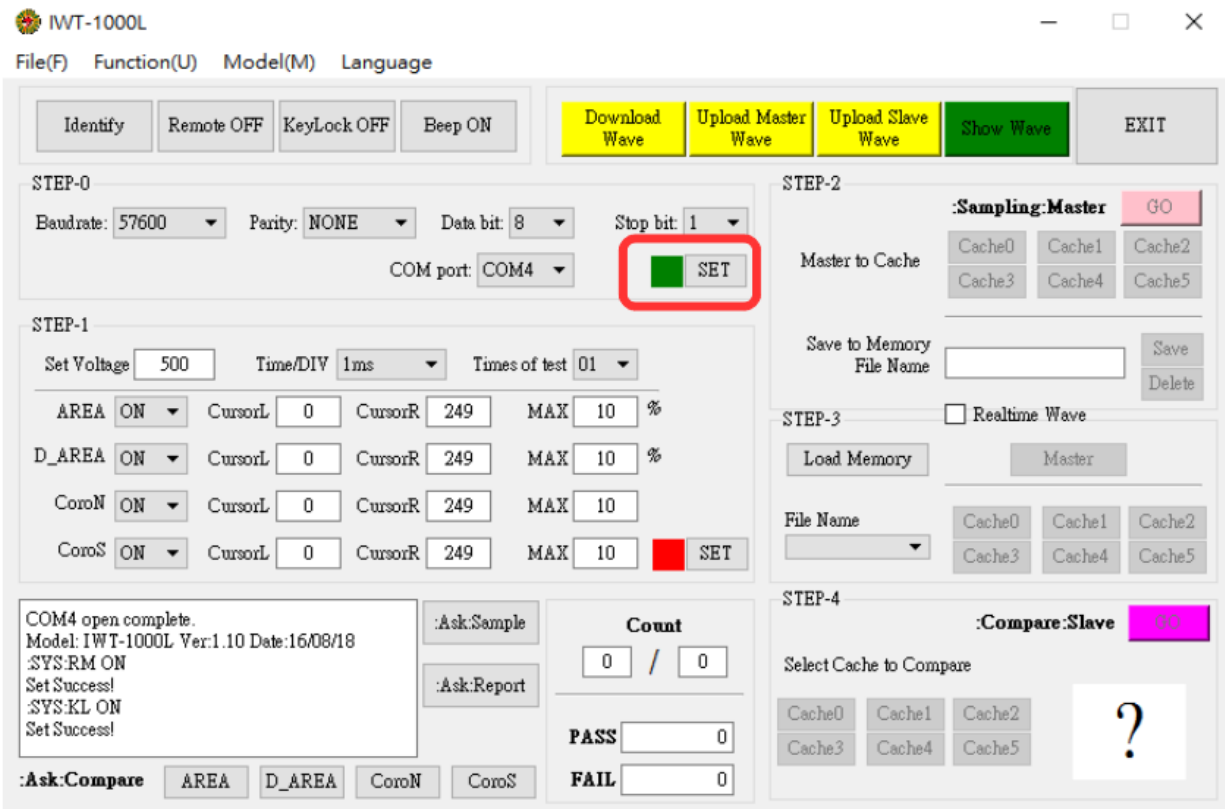
II. Run the Software:

1. Set the parameters or use the default values in STEP-0 section and connect the machine.

Default: Baudrate:57600, Parity: None, Data bit: 8, Stop bit:1. The current RS232 device will be shown in the COM port list and you can choose the one you need to use. Press **SET** to connect. Note that you need to properly install the RS232 device and make sure of the correct COM port no.

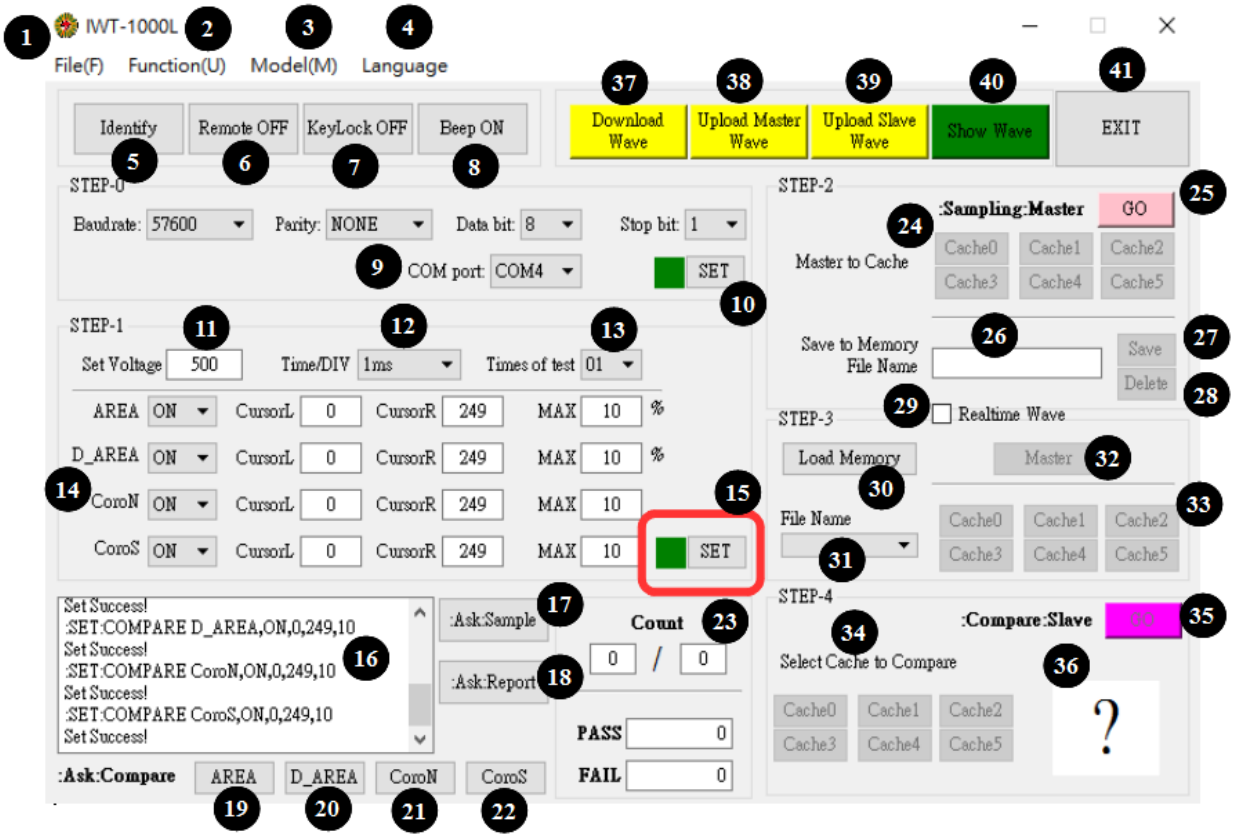


2. **The connection is completed when SET button turns from red to green and the IWT model will be automatically detected.**

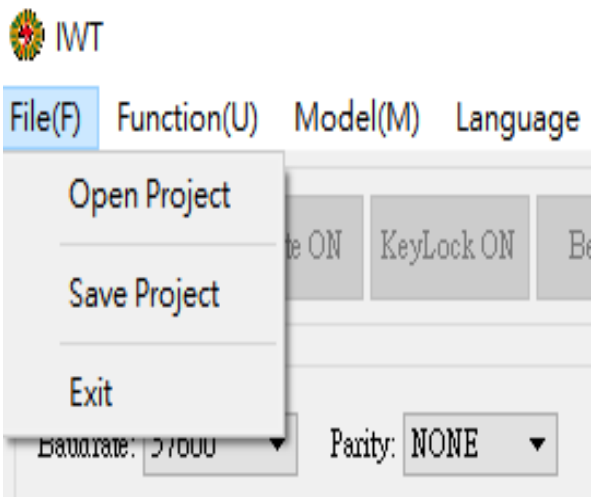


III. Function Description

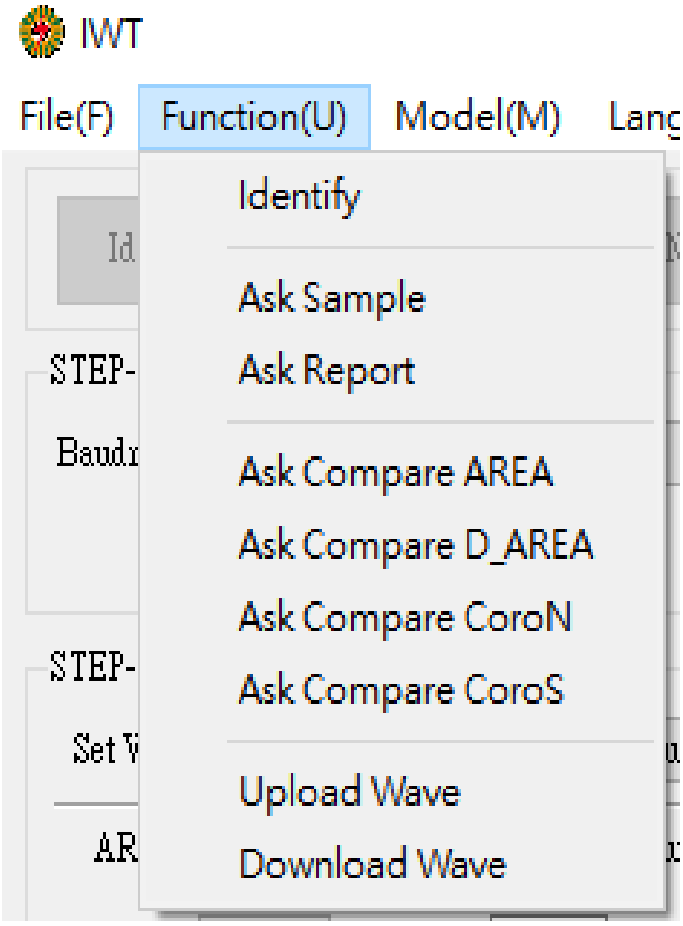
Before getting the sample waveform, parameters in STEP-1 have to be set. The 15 **SET** button turning green means the setting is completed and it's ready to get waveforms.



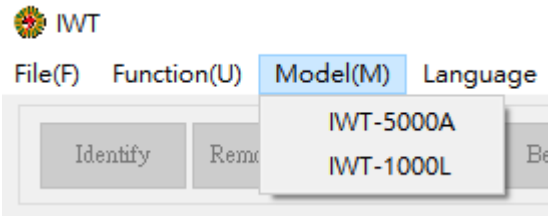
1. Open or Save Project, and Exit can be executed in File(F).



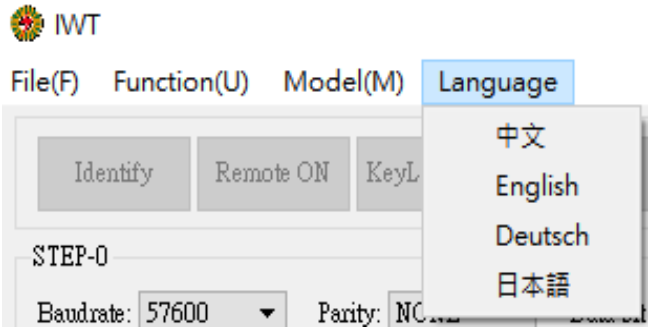
2. Commands can be sent in Function(U).



3. Manually select the IWT model.



4. Select Language.



5. Show the IWT model name on the caption.
6. Disable the connection between IWT and Software. (It's not recommended to disable this during connection.)

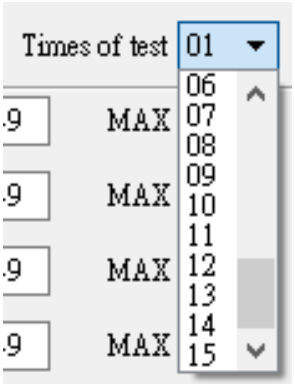
7. Disable the keyboard lock on IWT during connection. (Not recommended to disable it.)
8. Enable/Disable the alarm on IWT.
9. COM ports to be selected, which will be listed automatically. Please connect the RS232 port before running the program.
10. Press **SET** to connect IWT to the software.
11. Set the test voltage of IWT.
12. Set the Time/DIV of waveform display

    IWT-5000A：

    250nS, 500nS, 1uS, 2.5uS, 5uS, 10uS, 25uS, 50uS, 100uS, 250uS / 10 steps

    IWT-1000L：

    125nS, 250nS, 500nS, 1uS, 2.5uS, 5uS, 10uS, 25uS, 50uS, 100uS, 250uS, 500uS, 1mS / 13 steps
13. Set the times of test and get the waveform of the average. (Max:15)



14. The test conditions of IWT, please refer to IWT operation manual.
15. Press this button to send the parameters in STEP-1 to IWT.
16. Data Log: displaying the communication data from both ends during connection.
17. Send out command: **ASK:SAMPLE**

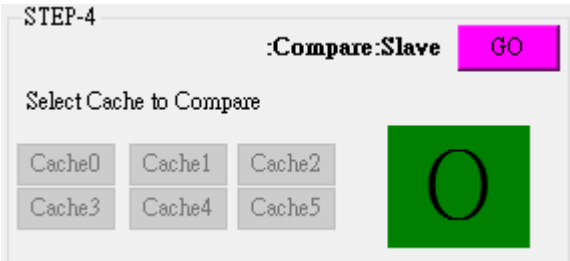
    Ask for the voltage/sampling rate/TIME/DIVE/HV Test Times/AVG Test Times
18. Send out command: **ASK:REPORT**

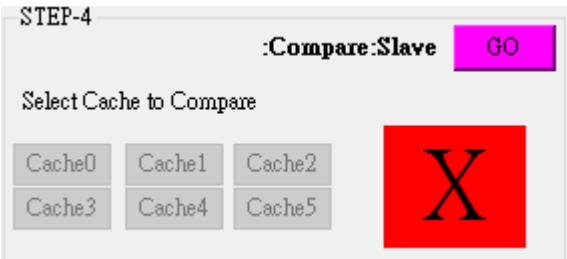
    Ask for the comparison results
19. Send out command: **ASK:COMPARE AREA**

    Ask for the settings of AREA comparison.
20. Send out command: **ASK:COMPARE D_AREA**

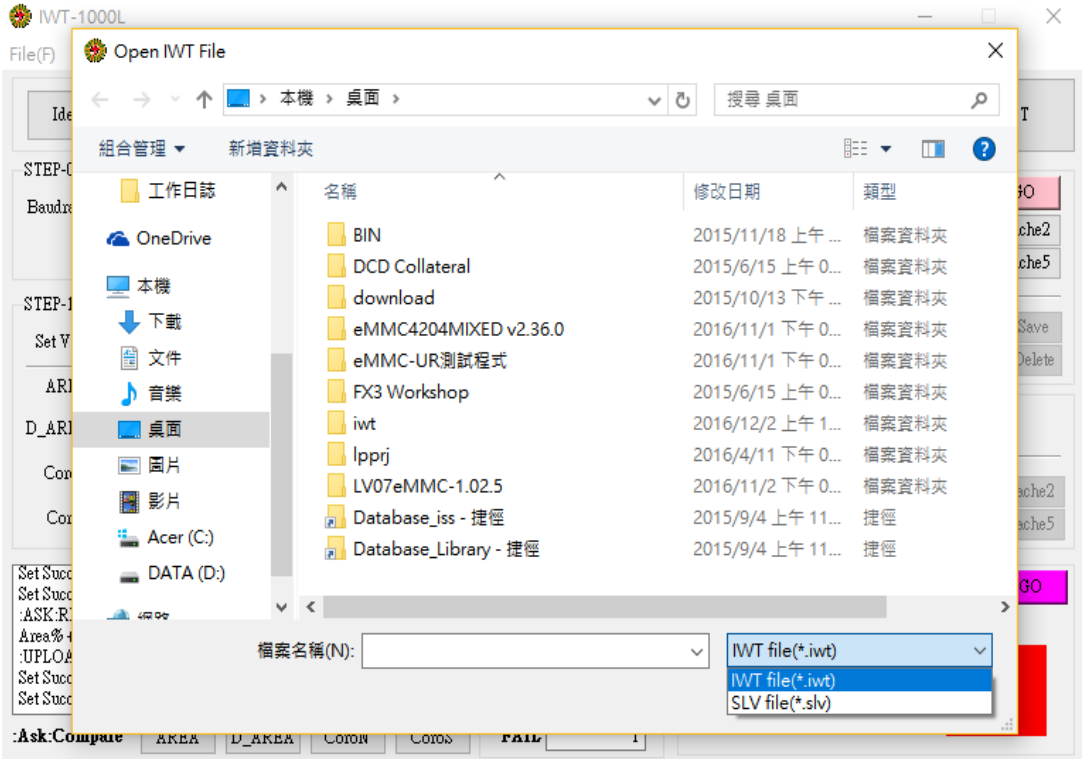
    Ask for the settings of D_AREA comparison.

21. Send out command: **ASK:COMPARE CORON**
    Ask for the settings of CoroN comparison
22. Send out command: **ASK:COMPARE COROS**
    Ask for the settings of CoroS comparison
23. Display of the numbers of PASS/FAIL
24. Save the current displayed waveform to the internal Cache of IWT. Max: 6 sets
25. Get the waveform of Master sample and save it as Master waveform.
26. Enter the name of the file to be saved in or deleted from the internal memory of IWT. Max Length: 10 Char.
27. Save the waveform to the internal memory of IWT in the specified name.
28. Delete the file of the same name in IWT memory.
29. Check the box and the instant display of the current waveform will be enabled when calling function 25 or 32.
30. Show all the files in IWT memory in the list of function 31.
31. Show the file list after calling function 30.
32. Display the selected waveform in memory on IWT LCD, and it will also be displayed on the PC if function 29 is checked.
33. Load the waveform data in the memory to the Cache of IWT. Max: 6 sets
34. Load the waveforms and data in the Cache and execute function 35 to compare.
35. Retrieve the waveform and test results of the DUT and compare the data with those of STEP-2(Master) and show Pass or Fail in function 36.
36. Result display: Green O = Pass Red X = Fail



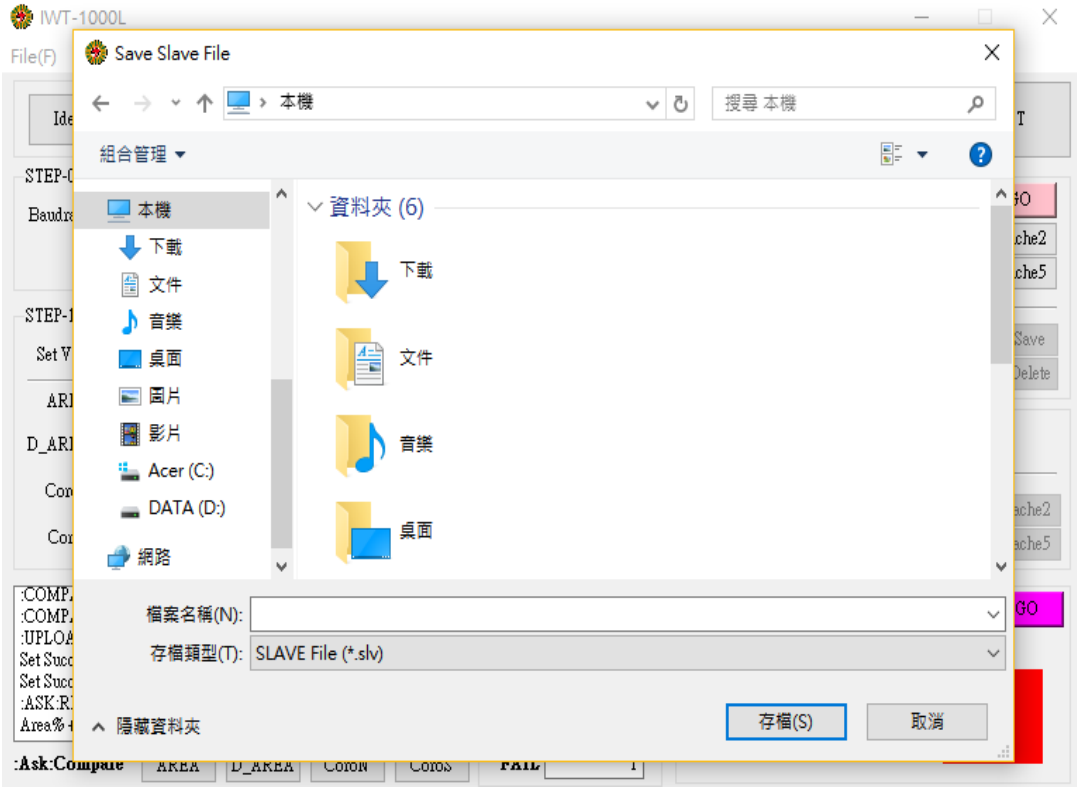


37. Download the waveform from PC software to IWT. File format: *.iwt or *.slv

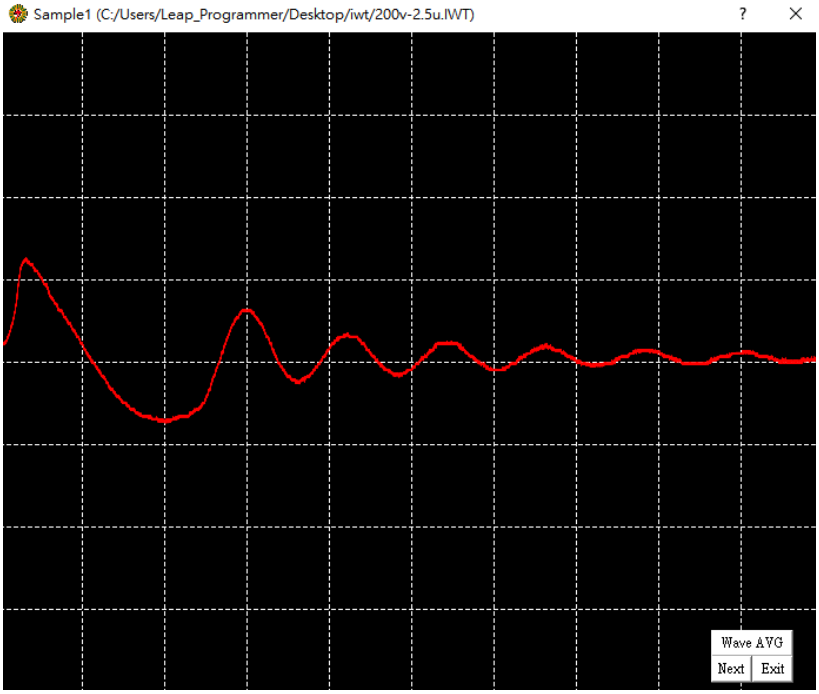


38. Upload the Master waveform from IWT to PC software.

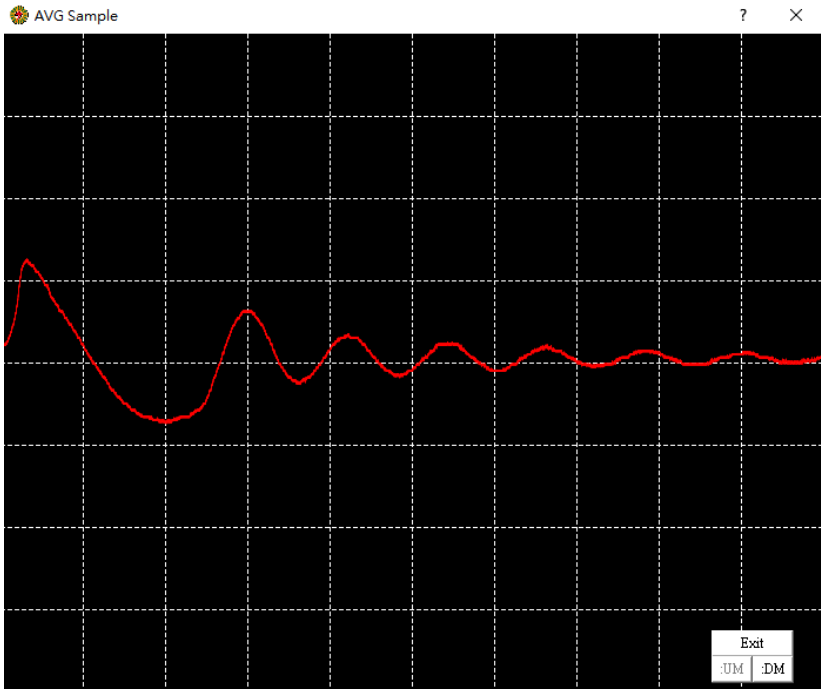
39. Upload the Slave(DUT) waveform from IWT to PC software in *.slv format



40. Open and display the waveform file made in function 38 or 39 on PC. Press Next to open a new one(Max: 10 sets) And press Wave AVG to calculate the average values of all the opened waveforms.



Press **:DM** button in the AVG Sample waveform screen to download the waveform to IWT as Master waveform.



41. Exit PC-Link Software

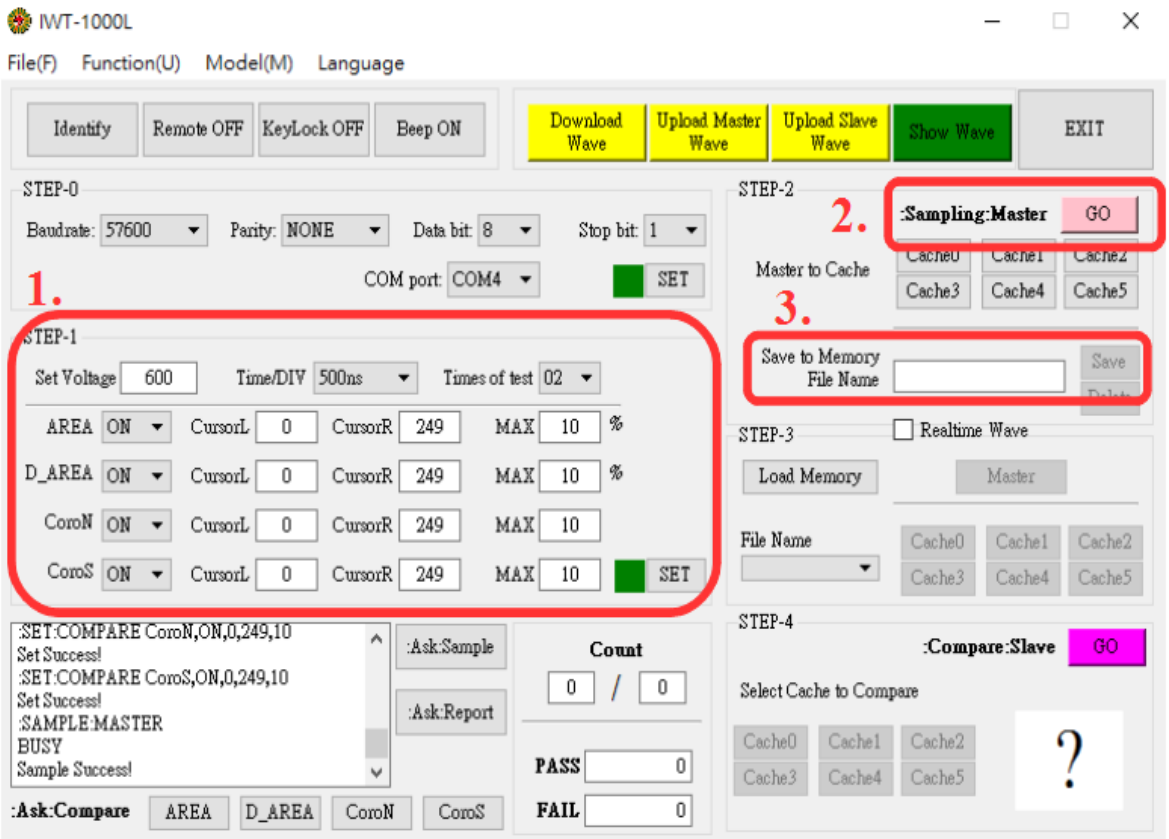
IV. Examples

1. Making Golden/Master Sample:

a. After setting the test conditions and parameters of Voltage, Time/DIV, Times of Test, AREA, D_AREA, CoroN, CoroS, press SET button and make sure it turns green.

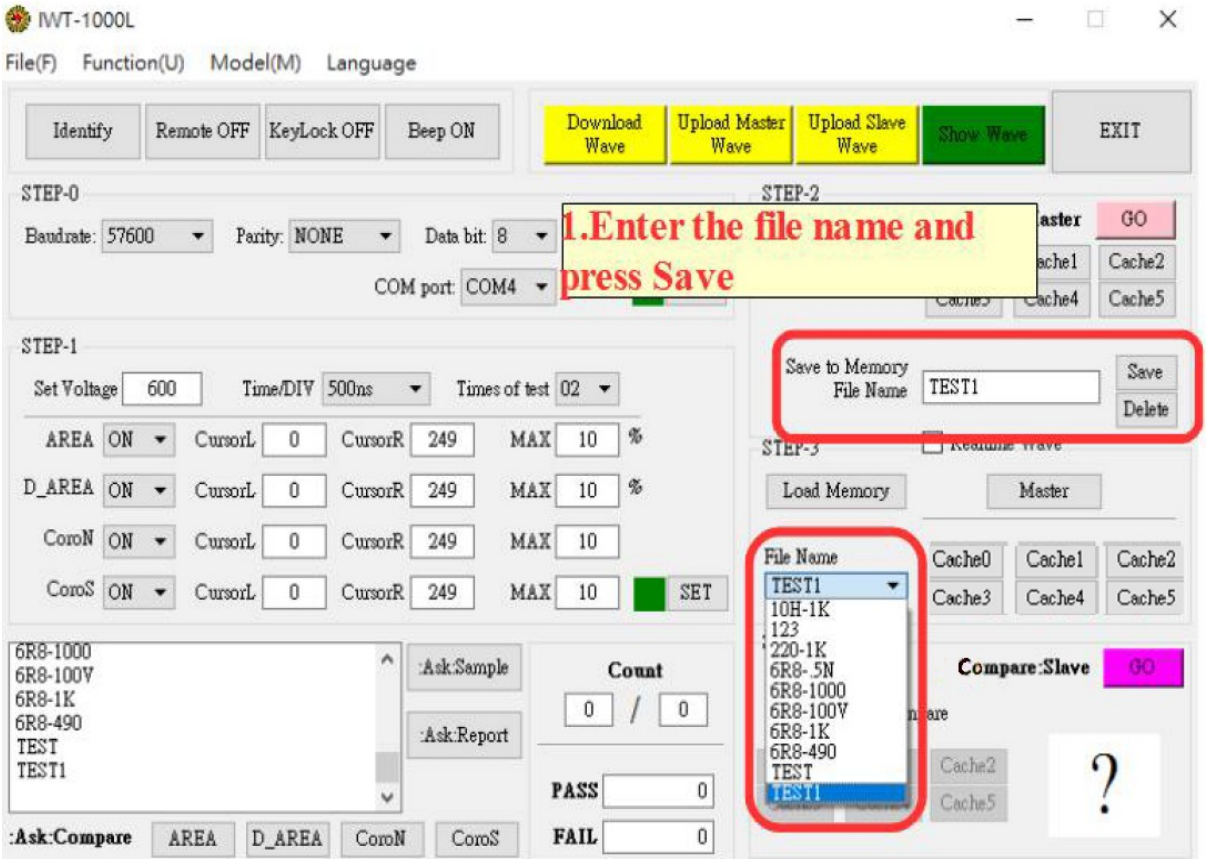
b. Press **GO** button to complete sampling.

c. Enter the file name and save the master waveform into IWT memory.

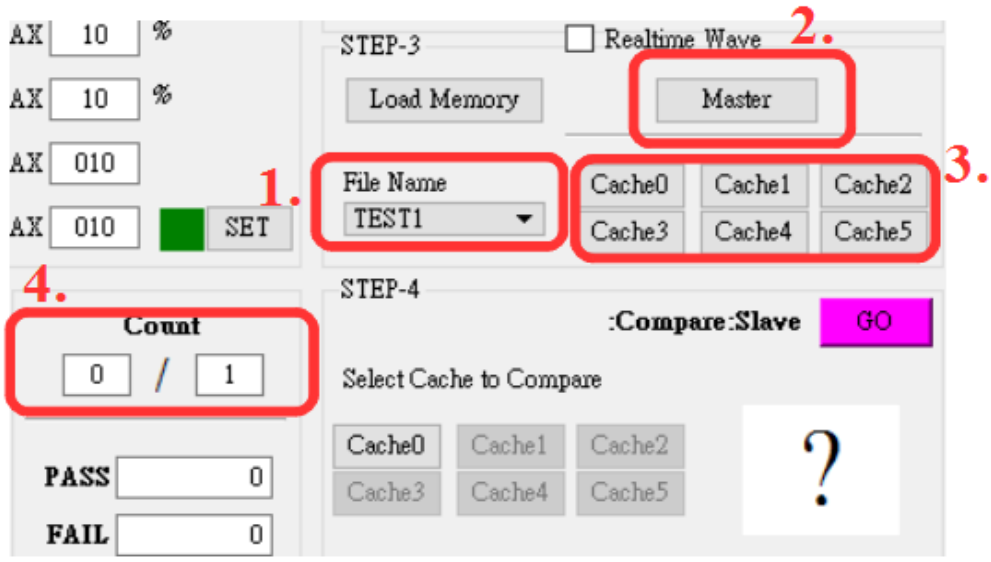


2. Multi-Lead Transformer

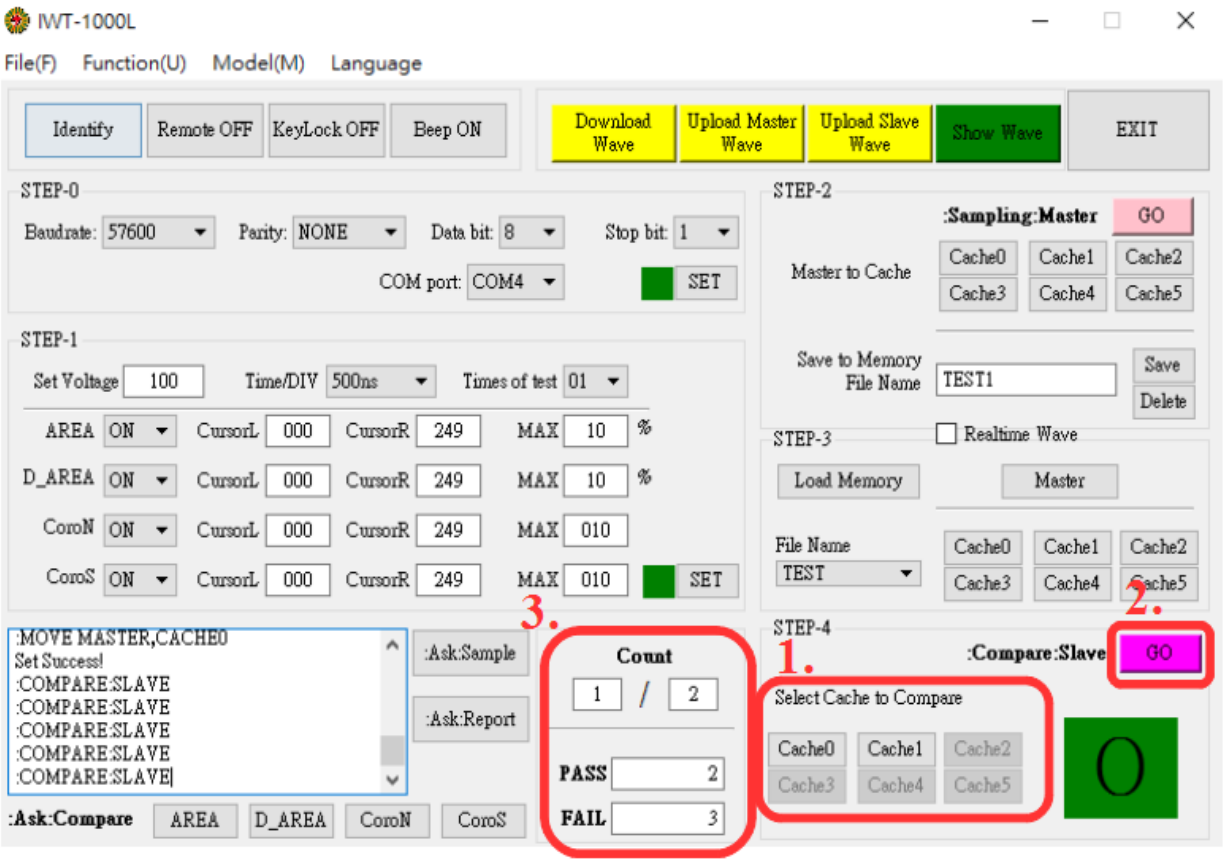
a. Finish sampling and save the waveform data of each lead/coil set into IWT memory and make sure the waveforms are displayed in the STEP-3 list.



b. Select the waveform file and press **Master** button to set it as the master sample data in the Cache. There are up to 6 sets waveforms to be set in the Cache area(Cache0~Cache5), and the Count number will add accordingly.

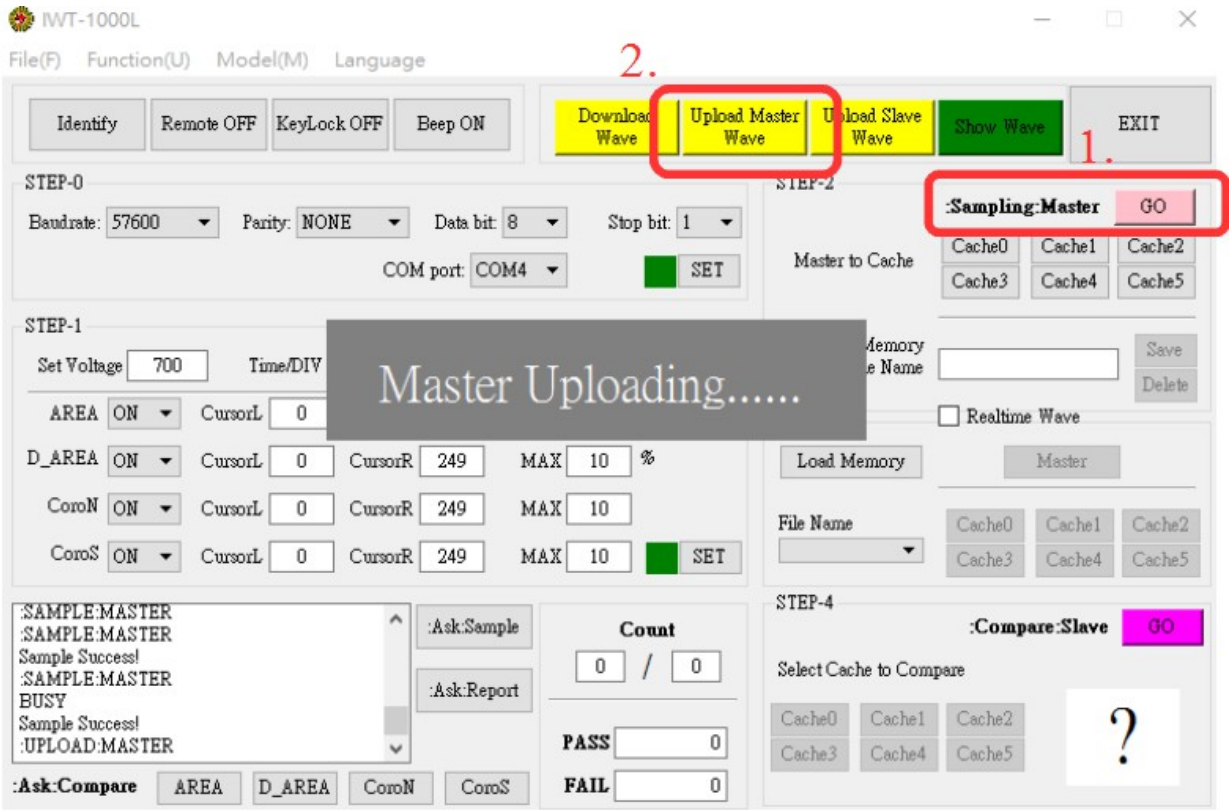


c. Please attach the cable clips on the corresponding coil leads and select the Cache data for comparing and then press **Go** button to proceed test. The Pass/Fail numbers will be shown in the Count area.

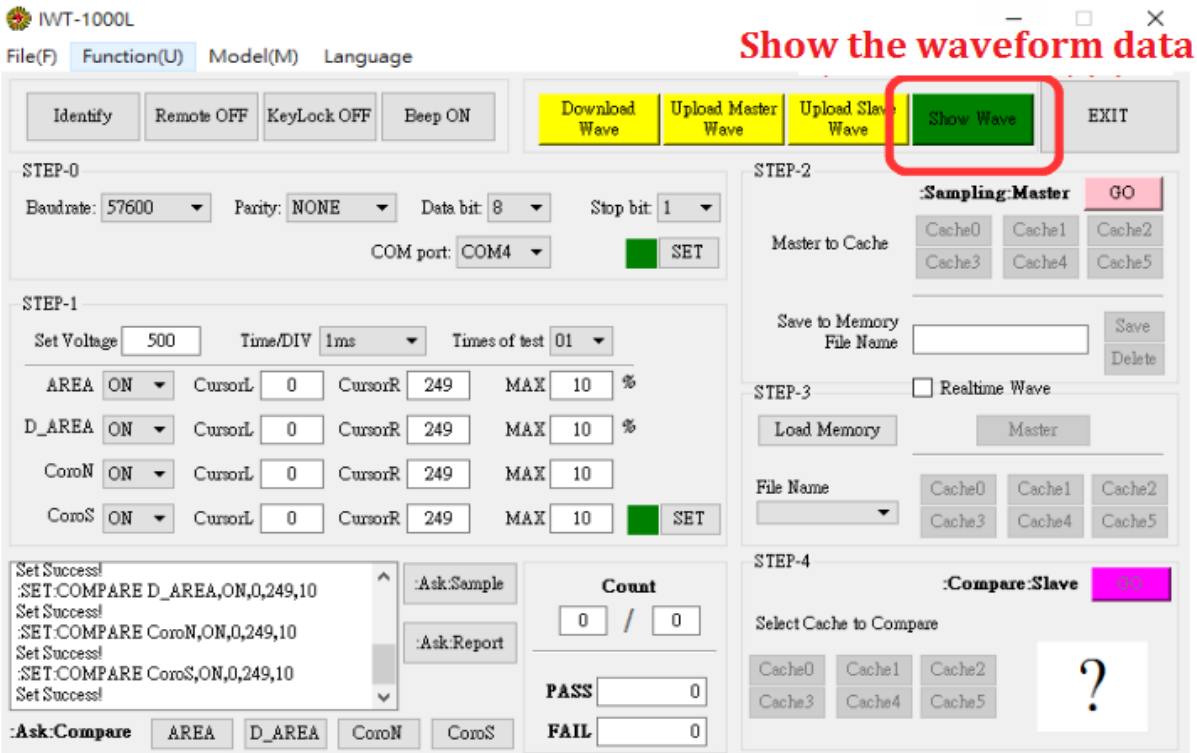


3. **Use several samples to get an average waveform data to use as Master sample data:**

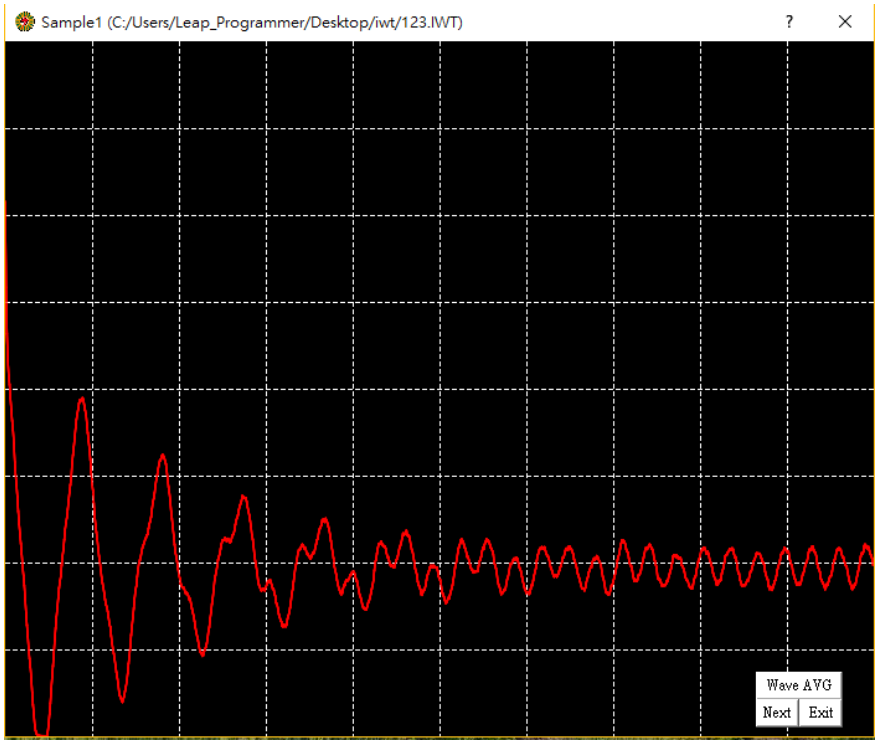
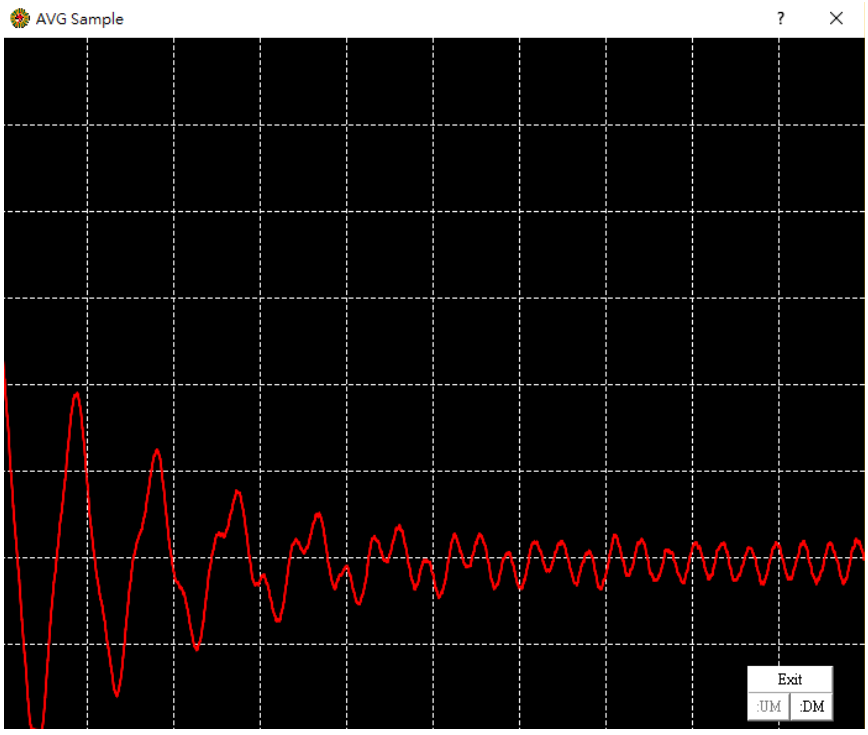
a. Please refer to Example 1. to create several Golden/Master sample data from several DUTs of good quality and upload the data to PC.



b. After saving all the waveform data, press **Show Wave** button to open the waveform files that were saved in the previous step.



c. Press **Next** button in the bottom-right corner of the screen to open the next waveform data. There are up to 10 waveforms to be used for calculating the average data.



d. When the last waveform is opened, press the **Wave AVG** button in the bottom-right corner to generate the average waveform. Then press **:DM** button to send the data to IWT and set as Master Sample with a file name. Note that you should use a file name that is different from the existing files in the IWT memory.