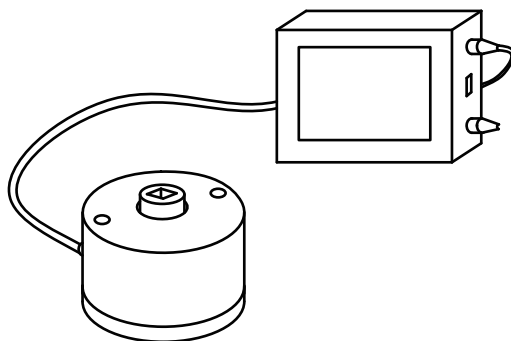


NovaTork[®]

Instructions

TEM Torque Tester



Shanghai UB Machinery Co., Ltd.

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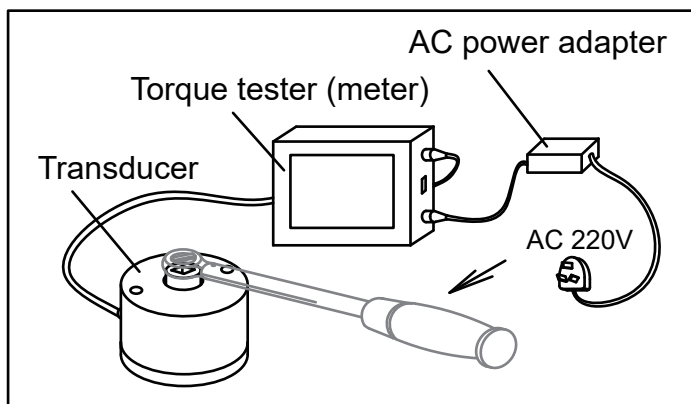
I Before Use

- The display screen of this torque tester is a touch screen. The buttons are displayed on the screen. Please touch the buttons you need with your finger.
- Before use, check whether the connection between the transducer and the meter is reliable and whether the power adapter lead is in good condition.
- The AC input end of the power adapter should be connected to 220V-50Hz AC power supply. The output is 12V DC. Do not use other regulators with the same DC output voltage, to avoid the instrument being damaged.

II Operation

1. Connect power

- After confirming the correct voltage of AC power supply, plug in the AC input plug of the power adapter and insert the output plug into the corresponding hole of the meter, as shown in figure 1:



【Figure 1】

- After power connected, the display shows language options, see figure 2:



【Figure 2】

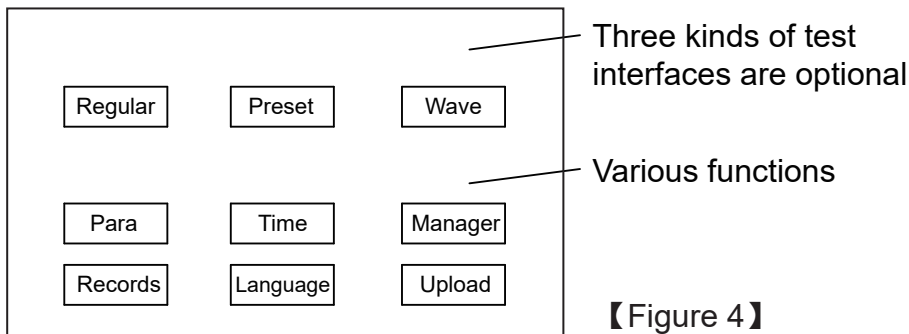
2. Select language

- After a few seconds, when the language buttons are available, choose the language and you can see the home page. Take “English” language as an example, as shown in figure 3:



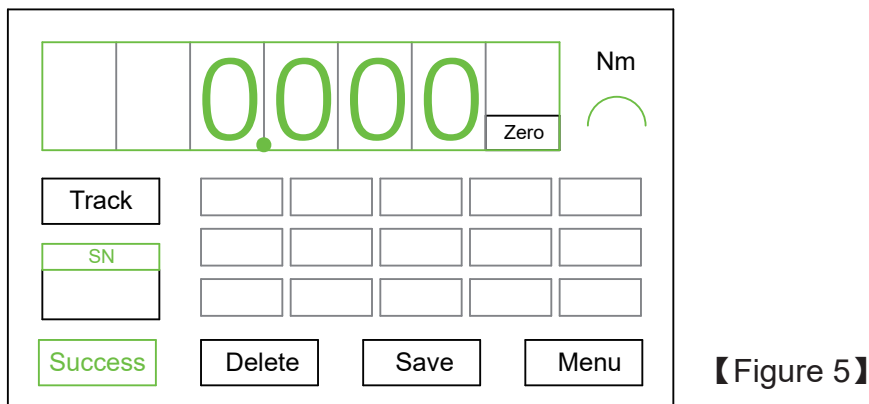
【Figure 3】

- After 5 seconds, the system will automatically enter the main menu, as shown in figure 4:

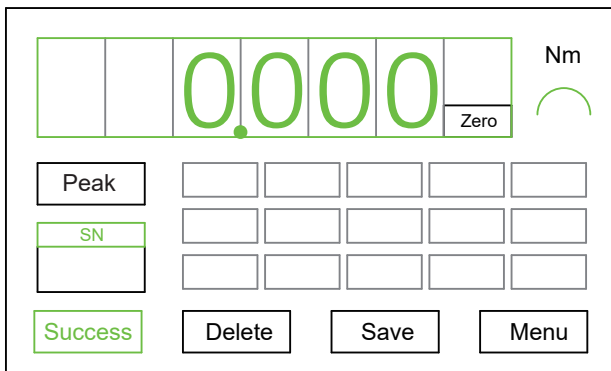


3. Regular test

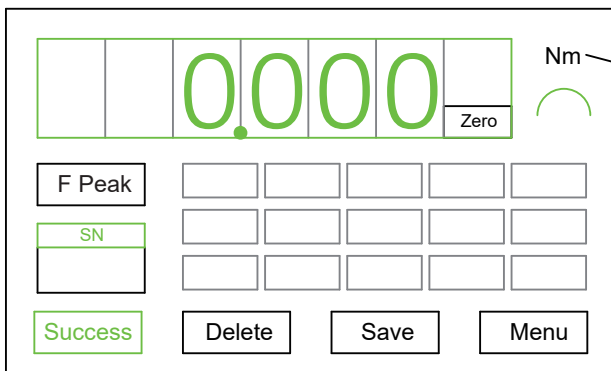
- Tap the “Regular” button on the screen to display the interface in figure 5. If the torque tester and transducer are connected normally, the prompt box at the lower left will display “Success”:



- Under "Track" mode, while testing torque, the reading will change along with torque changing.
- Tap the "Track" key to swift to "Peak" or “First Peak”, see figure 6 & 7, while testing the torque, the reading will be held at Peak value or First Peak value.



【Figure 6】

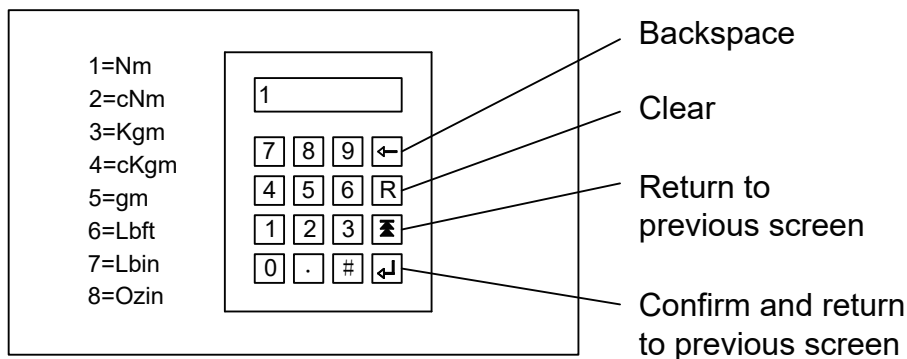


Click torque unit
to set torque
unit, see figure 8

【Figure 7】

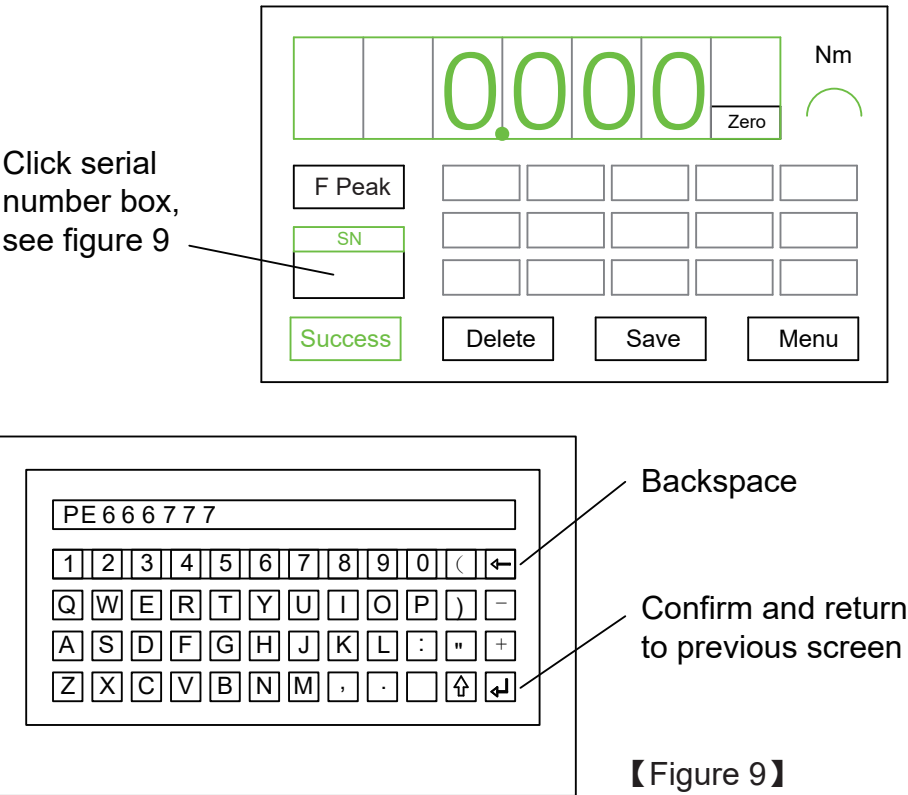
4. Select unit of torque

- Tap the unit, see interface as figure 8, press unit and input number, then press enter.



【Figure 8】

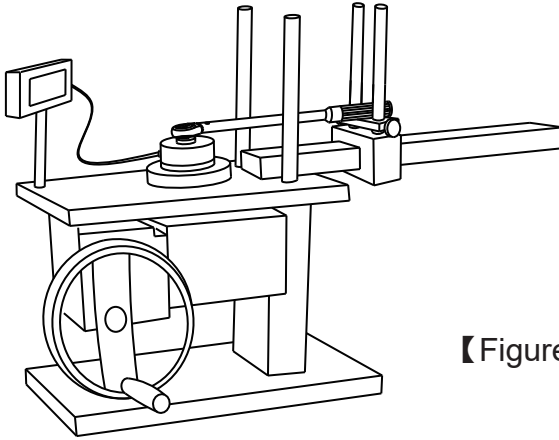
5. Input serial number



- The test data will not be saved if there's no serial number.
- To modify serial number, do the same step as above.

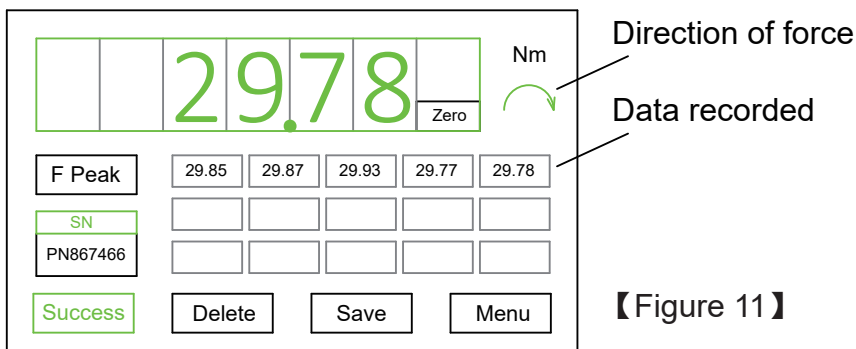
6. Calibrate torque wrench

- Insert torque wrench's square driver into transducer's head holder, force point is at the center of grip or at the forcemark on grip. Direction of force should be vertical with shaft of torque wrench, see figure 10.



【Figure 10】

- To calibrate “Click” torque wrench, while hear the click sound, stop loading the force. The data display area on the screen will record the reading after the force released. One serial number can save 15 data.
- Sometimes, if the torque is small, the click sound is not obvious to be heard, watching the reading while loading the force, if the reading does not increase with the load, it means the internal mechanical structure has already released. The torque tester will catch the first peak value. See figure 11.
- When loading, a directional arrow appears to indicate the direction of force. See figure 11.

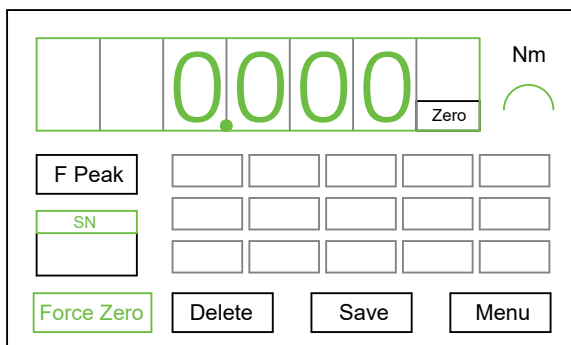


【 Figure 11 】

- The torque tester will have a data saving function after each load, and the data display area will be automatically reset when it is reloaded after unloading. You can also press “Zero” to manually reset, the prompt box in lower left corner shows "Force Zero".

7. Delete data and save

- The test reading is not able to be saved without serial number, there will be a warning to request user to input serial number. The torque tester can save 8000 data.
- If found the data isn't correct and need to be adjusted, press “Delete”.
- Press “Save” to save data, readings on display will be cleared, see figure 12.



【 Figure 12 】

8. Set parameters

- Press “menu” to main interface, then press “Para” to set parameters, you can set 100 groups of parameters, see figure 13.
- While set the error %, the display will show limit data, see figure 13.
- If error% is 0, you can set any limit data, see figure 14.

ID	2	Unit	Lbft	Mechanical
Set Val	100.00	Error%	3.00	
Min	97.00	Max	103.00	
	Zero	Save	Menu	

【Figure 13】

- Please press “Save” to save the settings.

ID	2	Unit	Nm	Mechanical
Set Val	100.00	Error%	0.00	
Min	93.00	Max	105.00	
...	Zero	Save	Menu	

【Figure 14】

9. Preset test

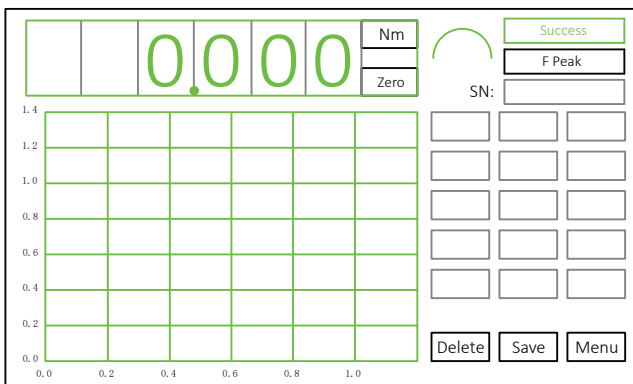
- Press “Preset” on the main interface, see figure 15.
- Tap “ID”, select preset number, the parameters you have saved in “Para” menu will show on the display.
- Input serial number, start test, if test data is out of accuracy, will be displayed in red. After test, press “Save” to save the data, or press “Delete” to delete the data.

The screenshot displays the 'Preset test' interface. At the top, a large digital display shows the number '10021' in green. To the right of the display is a 'Zero' button and a curved arrow icon. Below the display, there are several input fields and buttons. On the left, there is a button labeled 'F Peak'. To its right, there are five small rectangular boxes containing the values '99.88', '100.68', '101.54', '99.56', and '100.21'. Below these boxes are two more empty boxes. To the right of these boxes is an 'ID:' label followed by a box containing the number '2'. Below the 'ID:' box is a 'Set value' label followed by a box containing '100.00'. To the left of the 'Set value' box is a 'SN:' label followed by a box containing 'PE783577'. Below the 'SN:' box is a 'Success' button. To the right of the 'Success' button are three buttons: 'Delete', 'Save', and 'Menu'. At the bottom right, there are two boxes containing '97.00' and '103.00'.

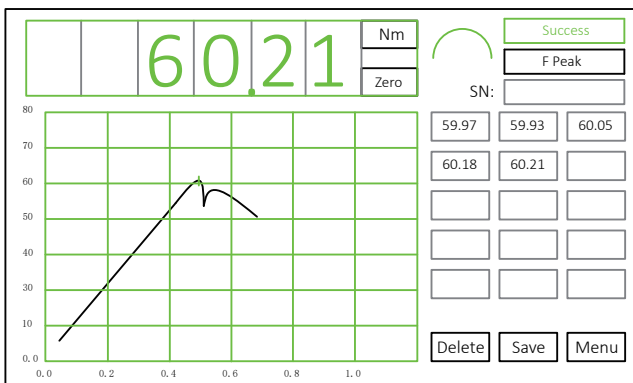
【Figure 15】

10. Wave test

- Press “Wave” on main interface, see figure 16.
- Two modes: “First Peak” and “Peak”; Select torque unit; Input serial number, the wave will be shown while testing, maximum 15 data can be recorded, press “save” to save data, see figure 17.
- During continuous testing, unload and then load, zero clearing will be done automatically. You can also press “Zero” to clear by manual.
- The last test data can be deleted by “Delete” key.



【Figure 16】



【Figure 17】

11. Set date and time

- Press “Time” on main interface, see figure 18.
- Press “OK” after date and time is set.

Figure 18 shows the date and time setting interface. At the top, there is a long horizontal input field. Below it, the date is set to '2017 Y 2 M 11 D' and the time is set to '17 H 2 M 2 S'. At the bottom, there are two buttons labeled 'OK' and 'Menu'.

【Figure 18】

12. Record data and upload

- Press “Upload” on main interface, see figure 19.

The main interface displays the following information:

- SN: PE236775
- Test interface
- Routine
- Test mode
- F Peak
- Unit
- Nm
- Next
- 40.26
- 40.26
- 40.26
- 40.26
- 40.26
- 121.23
- 120.86
- 120.75
- 120.68
- 121.05
- 201.51
- 202.03
- 200.98
- 201.22
- 201.76
- Last
- 2017-02-15 15:30:12
- 245
- Menu

【Figure 19】

- Press “Next”, “Last”, you can see all saved data, serial number, mode and time.
- Install the software on your computer by double-click SerialTFT.exe. Connect the meter and computer with the included USB cable. If it's not connected, display will show “Connection failed” highlighted in yellow, see figure 20. If connected, show “Successful connection” highlighted in green, see figure 21.
- Then click “Read”, data will be saved under “OutputData” file folder by Excel format, see figure 22.

The SerialTFT.exe interface shows the following information:

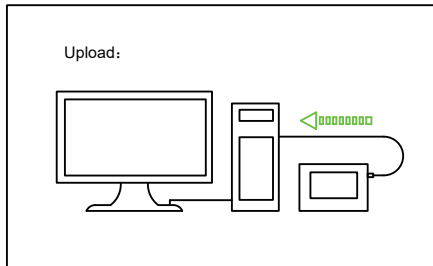
- Language
- 1
- 15
- Read
- Exit
- Connection Failed

【Figure 20】

The SerialTFT.exe interface shows the following information:

- Language
- 1
- 15
- Read
- Exit
- Successful connection

【Figure 21】



【Figure 22】

III Attentions

- The operating environment of torque tester and transducer is:

Temperature: 17°-27°C;

The humidity: less than 85 RH.

- Torque tester and transducer should not be struck at will, and should be kept away from vibration source.
- Torque tester and transducer work area should be free from magnetic field interference; otherwise it will affect the accuracy of the torque tester.
- The transducer shall be bolted first, whether on the test rack or elsewhere, to ensure that there is no loosening. When it is found there is loose during operation, it should be repaired in time to avoid personal injury.
- Torque wrench's force point is at the middle point of the grip. If there is a force mark on the grip, the force should be applied at the mark; otherwise the test accuracy will be affected.

- When testing torque wrench applied force, the person should stand in a position conducive to maintaining balance, and take necessary protection.
- When the use of torque tester and transducer is over, the power should be cut off.

IV Main Technical Specifications

- Test within 10%-100% of Maximum range, accuracy is 0.5%
- 7" Color touch screen
- Menu easy to operate
- “First Peak”, “Peak” and “Track”, switch between three modes at will
- Nm, cNm, Kgm, cKgm, gm, Lbft, Lbin and Ozin, 8 units are optional
- Swift between Chinese and English
- Preset 100 groups of parameters, good for preset torque wrench testing
- Save 8000 test data
- Continuous test, automatic reset
- Upload data
- Attach with power adapter, Input AC 220V, Output DC 12V

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