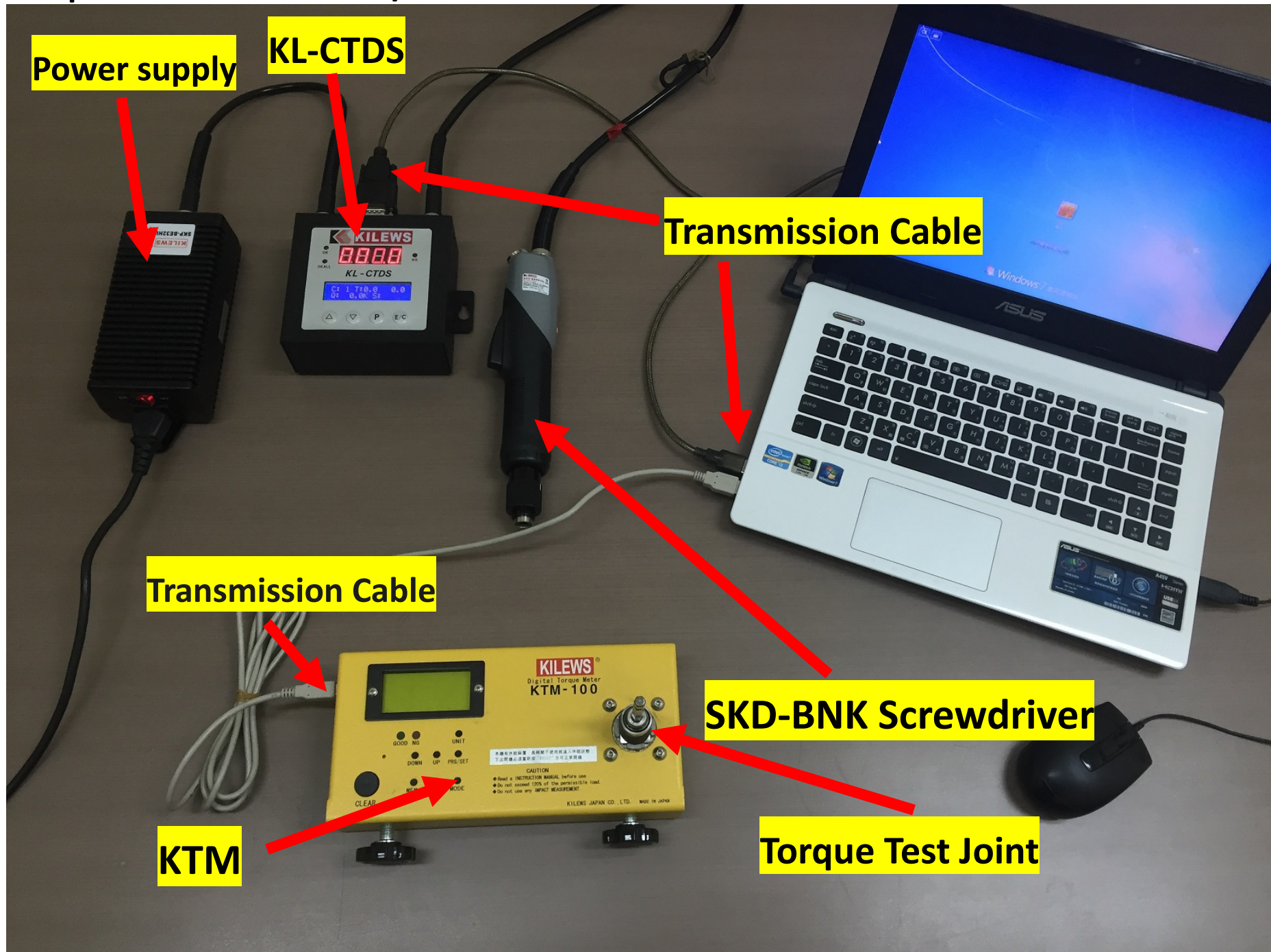


KL-CTDS and BNK screwdrivers with KTM Calibration Procedure



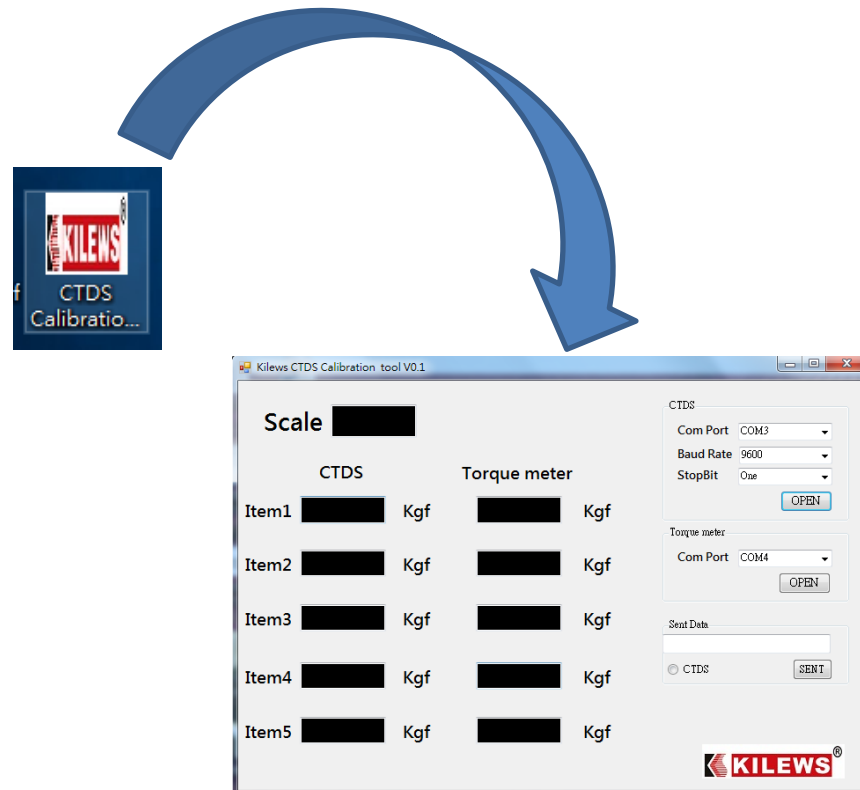
- Requirement instrument/tools:



- **Turn on the computer; connect both transmission cables for KL-CTDS and KTM to computer USB port, open windows program manager to check COM port position and status, if couldn't find any or only one port available might because that the program of the USB not been installed properly.**



- **Double click the KL-CTDS Calibration software icon when both KL-CTDS and KTM transmission cables are connected.**



- Please set com port number COM5 for KL-CTDS and COM4 for Torque meter, besides, no others setting requirement, click open button to get linked.

| CTDS | |
|-----------|------|
| Com Port | COM5 |
| Baud Rate | 9600 |
| StopBit | One |
| OPEN | |

| Torque meter | |
|--------------|------|
| Com Port | COM4 |
| OPEN | |

● Enter calibration mode in KL-CTDS:

1. Press P button for 3 sec to enter to setting mode
2. keep press up or down button until shows "TORQUE" mode
3. When enter to TORQUE mode,
click E/C button and tick will start twinkling



4. Press up button to switch it to “ON” position



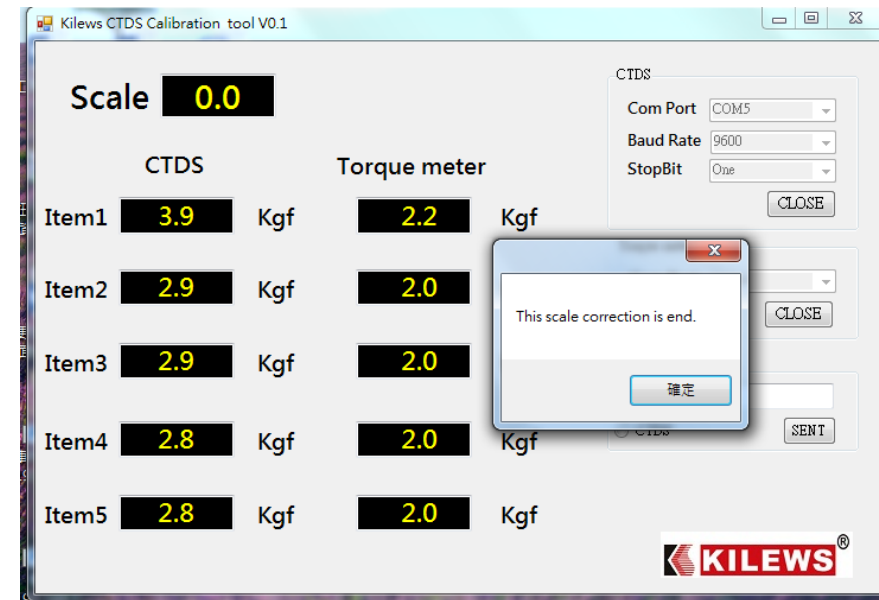
5. Click E/C button again to confirm it.



6. The scale “0” will start blinking when enter the torque calibration mode, Click E/C button again to start calibration.



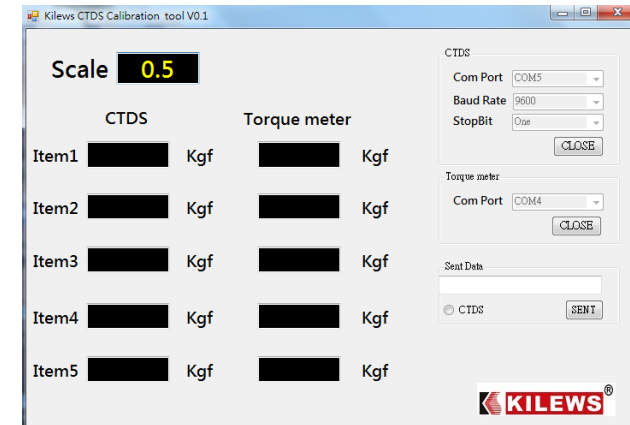
- Please adjust screwdriver torque scale to 0 and start executes calibration, let screwdriver preform the torque test five times on the KTM. (Kilews recommended that set torque auto-zero time to 0.5 second on KTM, which can reduce the time of pressed clear button and shorten the calibration cycle time)



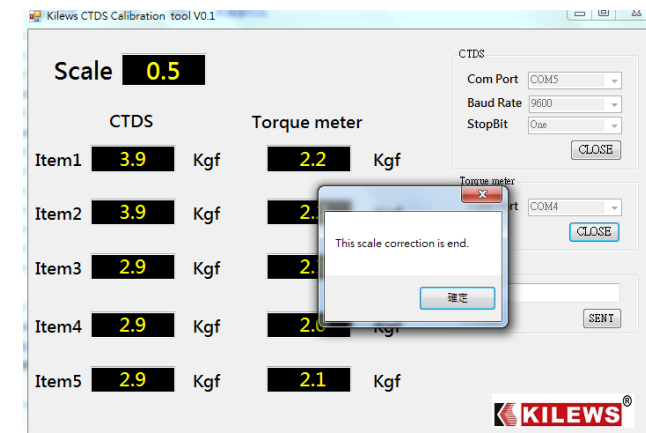
- The windows of "scale collection is end" will pop up after 5 times torque shut-off test, click button"確定"as confirmed, meanwhile the Scale value what shows on KL-CTDS will start twinkling and jump to next scale 0.5, then press E/C button one time to confirm it. Now adjust the torque scale of screwdriver from 0 to 0.5.



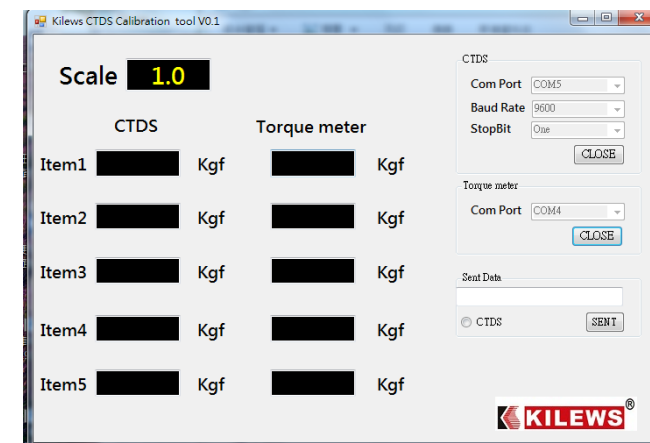
- The calibration software scale will jump to next scale as 0.5 as well, then we can start to test next five times torque value for this scale on KTM.



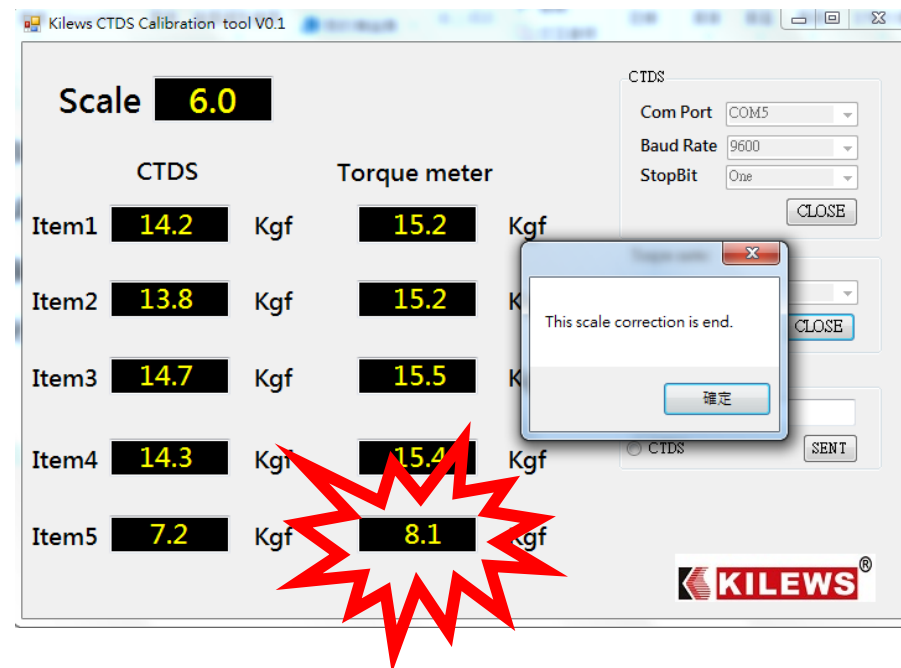
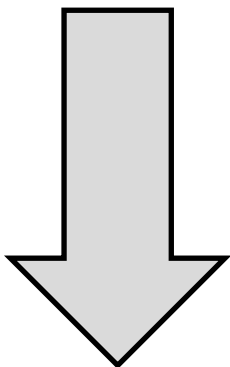
- Like previous test run, the windows of “scale collection is end” will pop up after 5 times torque shut-off test, click button “确定” as confirm and meanwhile the scale value what shows on KL-CTDS will start twinkling and change to 1 accordingly, then press E/C button to confirm it.



- Now adjust the torque scale of screwdriver from 0.5 to 1, the software scale will also jump to next scale 1 as well, then we can start to test next five times torque value for this scale on KTM.



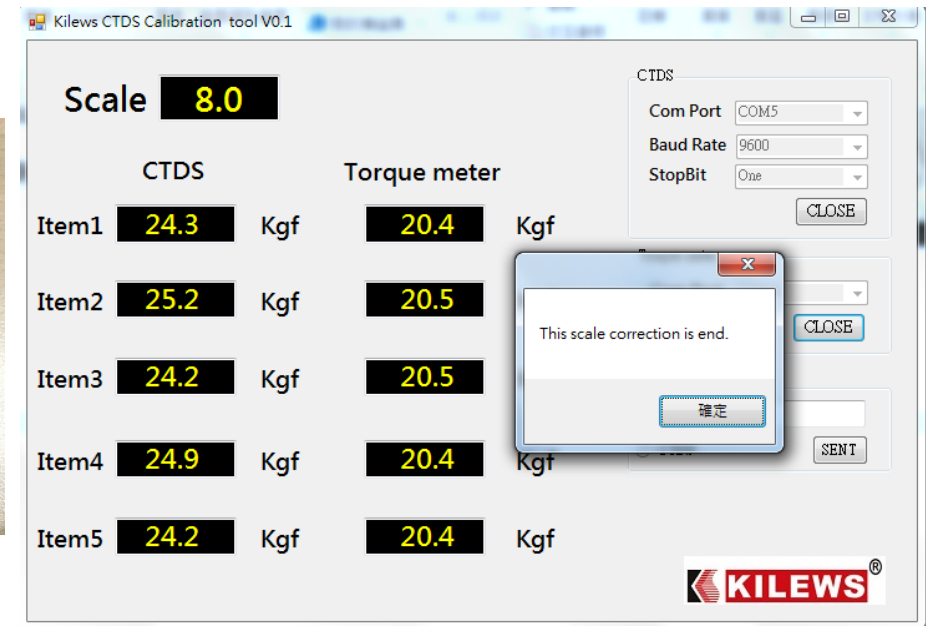
- Repeat the above test until scale 8 (0.0~0.5~1~1.5~2~2.5....8); just in case of the torque value shows abnormal during the test process, such like unable shut-off may cause by tools skew or torque joint set inappropriate and so on, we can just click"確定" button to confirm it as usual.



Then press the DOWN button on KL-CTDS panel to return to the pervious scale retest again, press E/C button one more time to confirm it and start preform calibration one more time.



- When completed scale 0-8 torque test then click“确定” button to confirm it.



- The KL-CTDS scale value will return to 0 after entire process, then press E/C button to confirm and twinkling stop at the same time. Meanwhile the above 17 times test torque value results will store in KL-CTDS automatically. Press P button 3 seconds for jump out the calibration function, press P button again for another 3 seconds to jump out the setting mode.

Done



- What we can expect to have after calibration process,

1. KL-CTDS will recognize BNK screwdriver which has been done calibration process; please be noted that each of BNK screwdrivers which needs apply with KL-CTDS must be completed the calibration process as above instruction, otherwise the torque value can't display on the screen of KL-CTDS successfully.
2. The torque value shows on KL-CTDS will much closer to the KTM display torque value. (within $\pm 10\%$)
3. The torque value shows on KL-CTDS are calculated by changes of each screw fastening peak current value, therefore the torque value shows here is not real torque value but for reference only.