

TOPTUL[®]
PROFESSIONAL HAND TOOLS

Digital Torque Wrench - Short Handle Type

USER MANUAL



DT-030S2
DT-085S3
DT-135S4

Operation Instructions:

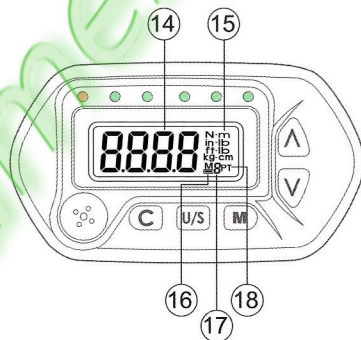
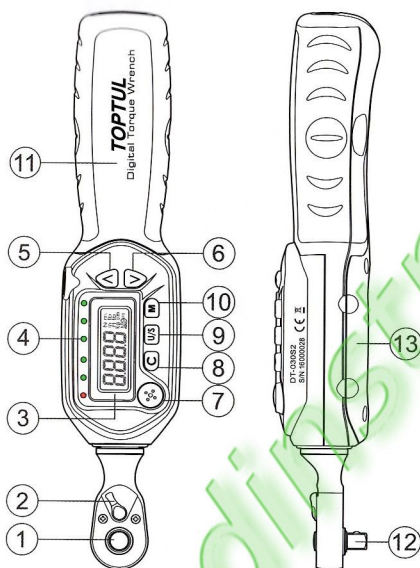
Before operation the torque wrench, please read this manual thoroughly and retain it for future reference.

Model

Item No.	Square Drive	Length (mm)
DT-030S2	1/4"	221
DT-085S3	3/8"	271
DT-135S4	1/2"	380

Torque Range			
Nm	Ft-Lb	In-Lb	Kg-cm
1.5-30	1.11-22.12	13.3-265.5	15.3-306.1
4.2-85	3.1-62.7	37-752	43-867
6.8-135	5.0-99.5	60-1195	69-1378

Main Product Feature



1. Quick Release Push Button
2. Direct Switch (Clockwise / Counterclockwise)
3. Digital LCD Display
4. LED Indicator
5. Increase Button
6. Decrease Button
7. Buzzer
8. Power On / Clear Button
9. Unit / Setting Button
10. Pre-Setting Number Selection
11. Anti-Slip Handle
12. Square Driver
13. Battery Cover
14. Torque Value Indicator
15. Torque Unit Indicator: N.m / in.lb / ft.lb / kg.cm
16. Battery Indicator
17. Memory Number
18. Peak Hold / Track Mode

Product Specifications

Torque Accuracy ①	CW $\pm 2\%$ / CCW $\pm 3\%$
Storage Memory	50 Readings
Pro-Setting No.	9 Set
Bright LED	6 LED (1 Red + 5 Green)
Operating Mode	Peak Hold Mode / Track Mode
Torque Unit Selection	Nm, Ft-Lb, In-Lb, Kg-cm
Head Type	Lever Type Ratchet
Gear Teeth	48 Teeth
Ratcheting Mechanism	Clockwise / Counterclockwise
Battery	1.5V AAA x 2 pcs
Battery Life ② (Continuous Operation)	48 Hours
Working Temperature	-10°C ~ 60°C
Storage Temperature	-20°C ~ 70°C
Humidity	Up to 90% non-condensing
Auto Shut Off	5 Minutes (when not in use)
Drop Test	1 M
Vibration Test ③	10 G
Environmental Test ④	Pass
Electromagnetic Compatibility Test ⑤	Pass

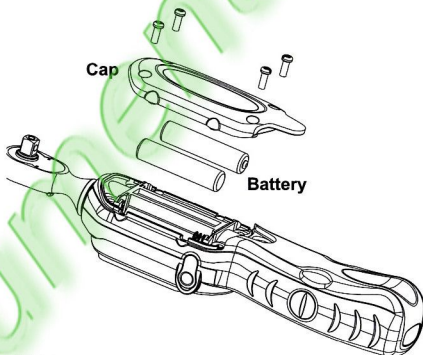
NOTE:

- ① The accuracy of the readout is guaranteed from 20% to 100% of maximum range ± 1 increment. The torque accuracy is a typical value. Calibration point is at the middle line of black circle area on the rubber grip. For keeping the accuracy, calibrate the wrench for a constant period time (1 year).
- ② Two AAA batteries.
(Toshiba carbon-zinc battery)
- ③ Horizontal and vertical test.
- ④ Environmental test:
 - a. Dry heat
 - b. Cold
 - c. Damp heat
 - d. Change of temperature
 - e. Impact (shock)
 - f. Vibration
 - g. Drop
- ⑤ Electromagnetic compatibility test:
 - a. Electrostatic discharge immunity (ESD)
 - b. Radiated susceptibility
 - c. Radiated emission

Before Using the Wrench

A. Battery Installation

1. Remove the battery cover.
2. Install two AAA batteries matching the \pm polarities of the battery to the battery compartment.
3. Put on the battery cover and fasten it tightly according to the following figures.



NOTE:

When opening the battery cover of wrench, you can see a viewing window for the water contact indicator. Through this viewing window, you can check if this wrench is damaged by water penetration where the water contact indicator turns into red.

B. Power On and Resetting the Wrench

- Press **(C)** to power on the digital torque wrench.
- Usually press **(C)** to reset the digital torque wrench before using it.



NOTE:

If an external force is applied to the torque wrench during power-on / reset or wake up period, an initial torque offset will be recorded in the memory.

C. Action During Sleep Mode

The wrench will auto sleep after about 5 minutes idle for power saving. Press **(C)** to wake up the wrench during the sleep mode.

D. Resetting the Wrench

- Press **C** **▲** together will reset the wrench.
- If the wrench does not function normally,
Press **C** **▲** together to reset the wrench.

E. Low Battery Voltage Protection

If the battery serial voltage is under 2.3 volts, the wrench will display a battery symbol and then turn off after a while.



Pre-Set Torque Values

(Programming of up to 9 Set of Target Torque Value, M1 - M9)

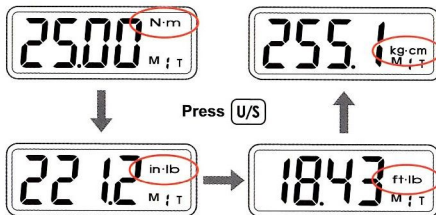
STEP 1: Without applying torque, press **M** to select the memory location of preset target torque value.



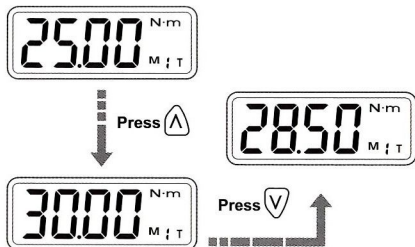
NOTE:

1. The maximum capacity for "Pre-Setting No." is 9 sets.
2. The "Memory Setting No." is in sequential.
3. If the torque values have already been pre-set at the memory location, directly select the memory location to start the operation.
4. If **Er0** is appeared, that means this wrench has ever been applied over than 110% of torque of the spec.

STEP 2: Set torque measurement unit, press **U/S** to select the torque unit. (N.m, in.lb, ft.lb, kg.cm)



STEP 3: Set target torque value, press Δ the increase key or ∇ the decrease key to adjust the torque value.

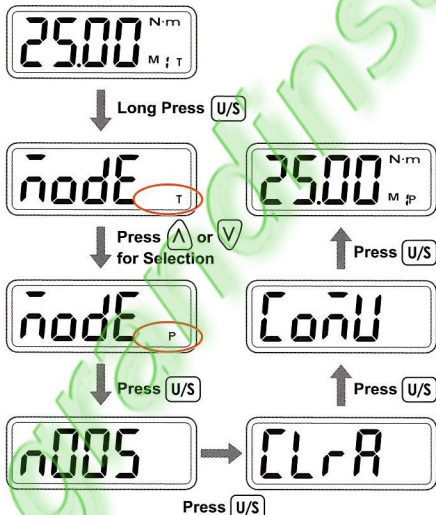


NOTE:

The "Unit Selection" is in sequential.

STEP 4: Set operation mode

1. Long press U/S to enter the operation setting mode.
2. Press Δ the increase key or ∇ the decrease key to selection operation mode.
(Peak Hold Mode / Track Mode)
3. Press U/S 4 times to return back the operation interface.



General Operating Instruction

- Before use the digital torque wrench, make sure there is no any input force imposed on the device. Then press C to power on the digital torque wrench.
- Select the correct size of hand socket and install on the square driver of torque wrench.
- Ensure the tightening objects is full engaged to the socket and have a set position 90° vertical to the torque wrench.
- When operate, hold the center of the handle to input force.

A. Operation Mode - Track Mode

STEP 1: Without applying torque, press C to power on or system initial the digital torque wrench.

NOTE:

If Er0 is appeared, that means this wrench has ever been applied more than 110% of torque of the spec.

STEP 2: Press M to select the preset target torque value.

STEP 3: Apply torque

1. When 80% of the target torque is reached, the Green LED will begin to flash and the alarm tone will beep intermittently.
2. When 99.5% of the target torque has been reached, the alarm will change to a steady tone and the Green LED will stop flashing and stay on. The Red LED will also illuminate.

START USE

Press **C**
to power on or system initial.

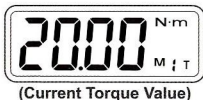
Press **M**
to select the preset target torque.



Apply Torque



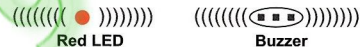
Apply Torque



Reach 80% of target torque.
Green LED will begin to flash and
the alarm tone will beep intermittently.



Reach 99.5% of target torque.
Green LED will begin to stop flashing and
stay on and the Red LED will illuminate.
The alarm will change to a steady tone.



B. Operation Mode - Peak Hold Mode

STEP 1: Without applying torque, press **C** to power on or system initial the digital torque wrench.

NOTE:

If **Er0** is appeared, that means this wrench has ever been applied more than 110% of torque of the spec.

STEP 2: Press **M** to select the preset target torque value.

STEP 3: Apply torque

1. Stop to release the input force when target torque is reached, the LCD Display will begin flash and display the maximum number of output torque.

a. Press **M** to record the operating torque value.

NOTE:

If **Full** is appeared, that means the wrench's memory is full and the next value record can not be written in. Please refer the "Peak Hold Mode Recorded Value Review" section to clear the memory records.

b. If don't need to record any torque value, use digital torque wrench without setting again.

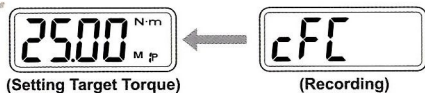
2. When 80% of the target torque is reached, the Green LED will begin to flash and the alarm tone will beep intermittently.

3. When 99.5% of the target torque has been reached, the alarm will change to a steady tone and the Green LED will stop flashing and stay on. The Red LED will also illuminate.

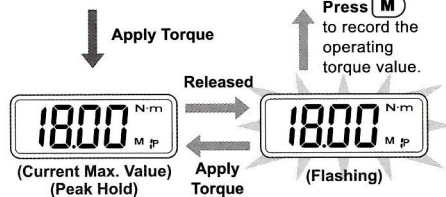
START USE

Press **C**
to power on or system initial.

Press **M**
to select the preset target torque.



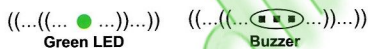
Press **M**
to record the
operating
torque value.



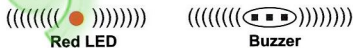
Apply Torque



Reach 80% of target torque.
Green LED will begin to flash and
the alarm tone will beep intermittently.



Reach 99.5% of target torque.
Green LED will begin to stop flashing and
stay on and the Red LED will illuminate.
The alarm will change to a steady tone.



C. Peak Hold Mode Recorded Value Review

STEP 1: Long press **U/S** to enter the operation setting mode.

NOTE:

The "Peak Hold" mode recorded value also can be operated from "Track" mode operation.

STEP 2: Press **U/S** to enter the recorded value review mode.

NOTE:

If you operate in the "Peak Hold" mode, the display will show **nodE** and please go to next step.

STEP 3: Press **▲** the increase key or **▼** the decrease key to check the stored torque values at each memory location. (n001 - n050).

NOTE:

If the record is empty, it will show **nonE**.

STEP 4: Press **U/S** to reach **CLrR** clear record mode.

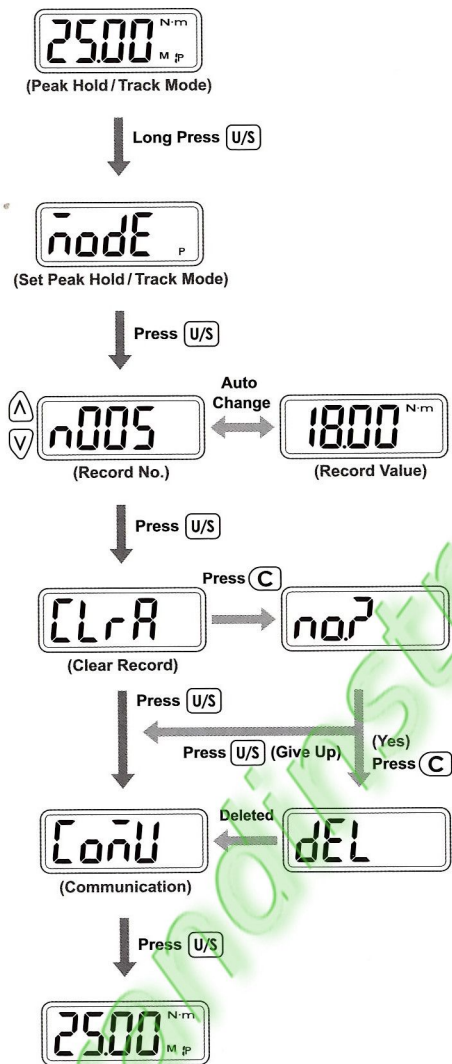
- Press **C** and **nor** is appeared and ready delete the record data.
- Press **C** LCD Display will display **dEL**, or press **U/S** to give up the procedure of del.
- Press **U/S** to enter the communication mode.

NOTE:

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Do Not equipped with communication mode.

- Press **U/S** to return back operation interface.



Cautions for Use

- Before operate the digital torque wrench, please read this manual thoroughly and retain it for future reference.
- One-year periodic recalibration is necessary to maintain accuracy.
(Please contact your local dealer for calibrations.)
- Do not use the torque wrench when it is shut off.
- Do not press any key when apply torque on the torque wrench.
- **Never** use the digital torque wrench to loosen the fasteners.
- Apply torque slowly and grasp the center of the handle. Do not apply load to the end of handle.
- Do not use extensions, such as a pipe or iron tube, on the handle of wrench. Do not impose an external force on the handle; use a steel tube slide over the wrench handle to increase the leverage.
- Over-torque (105% of Max. torque range) could cause breakage or lose accuracy.
- Do not use sockets, adapters or other accessories showing wear or cracks, it may result in damages to the torque wrench or may lead to injury.
- Make sure the correct switch position of ratcheting direction before operation.
- This torque wrench is not an insulated device. The plastic handle is not insulated. Direct contact with electricity power sources may cause electrical shock and serious injuries.
- Do not shake violently or drop wrench.
- Do not use this wrench as a hammer.
- Do not leave this wrench in any place exposed to excessive heat, humidity, or direct sunlight.
- Do not use this apparatus in water.
(Not waterproof)
- If the wrench gets wet, wipe it with a dry towel as soon as possible. The salt in seawater can be especially damaging.
- Do not use organic solvents, such as alcohol or paint thinner when cleaning the wrench.
- Keep this wrench away from magnets.
- Do not expose this wrench to dust or sand as this could cause serious damage.
- Do not apply excessive force to the LCD panel.
- When the wrench is not used for an extended period of time, remove the battery.
- Keep a spare battery on hand when going on a long trip or to cold areas.
- Do not mix battery types or combine used batteries with new ones.
- Sweat, oil and water can prevent a battery's terminal from making electrical contact. To avoid this, wipe both terminals before loading a battery.