DTA-200N

TOPTUL®
PROFESSIONAL HAND TOOLS

Digital Torque Adapter (DTA-Series)

Operation Instructions.

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

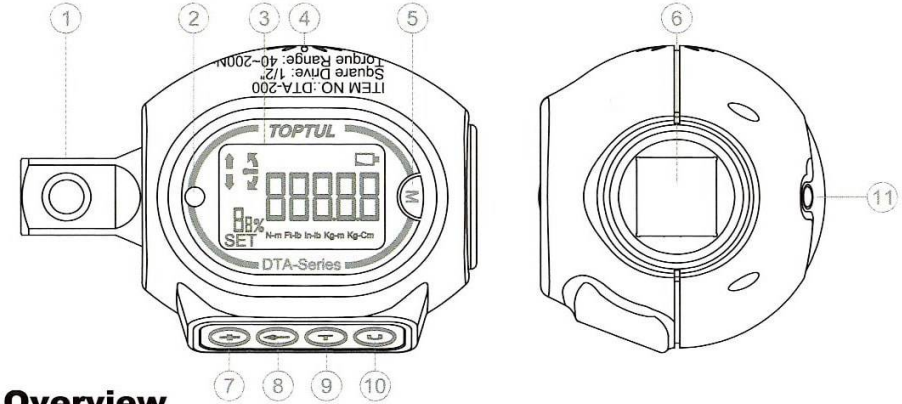
Product Specifications

Torque Accuracy	CW ± 2% / CCW ± 2 %
Storage Memory	10 Sets
Torque Unit Selection	Nm, Ft-Lb, In-Lb, Kg-cm, Kg-m
Display Resolution	0.1 Nm, 0.1 Ft-Lb, 1 In-Lb, 0.01 Kg-m, 1 Kg-cm
Operating Mode	Peak Hole Mode / Track Mode
Working Temperature	-10°C ~ 60°C
Storage Temperature	-20°C ~ 70°C
Humidity	0 ~ 90%
Battery	3V CR2032 x 1pc
Battery Life	50 Hours
Auto Shut Off	3 Minutes (when not in use)

Torque Conversion Chart

Unit	Nm	Ft-Lb	In-Lb	Kg-m	Kg-cm
1 Nm	1	0.736	8.84	0.1019	10.19
1 Ft-Lb	1.355	1	11.98	0.1381	13.81
1 In-Lb	0.112	0.083	1	0.0114	1.14
1 Kg-m	9.795	7.22	86.7	1	99.85
1 Kg-cm	0.096	0.071	0.86	0.01	1

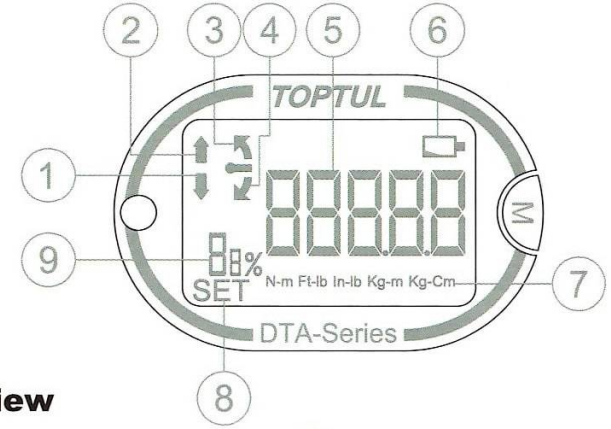
Main Product Features



■ Overview

① Adaptor
② LED Indicator
③ Digital LCD Display
④ Buzzer
⑤ Mode Button (M)
(Power On/Off Backlight)
⑥ Square Driver
⑦ Value Setting Key (+)
⑧ Digit Shift Key (←)
⑨ Peak Hold / Track Mode Key (T)
(Confirm Key)
⑩ Unit Key (U)
⑪ Battery Lid

■ Digital LCD Display

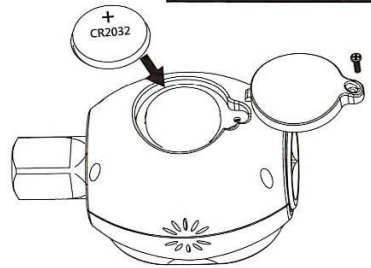


■ Overview

① Track Mode
② Peak Hold Mode
③ C.C.W. (counterclockwise)
④ C.W. (clockwise)
⑤ Torque Value Indicator
⑥ Low Battery Icon
⑦ Torque Unit Indicator:
N-m / Ft-lb / In-lb / Kg-m / Kg-Cm
⑧ Setting Indicator
⑨ Torque percentage

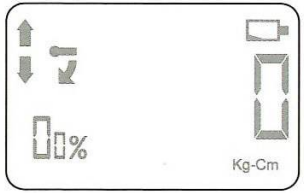
Battery Replacement

1.Use a screwdriver to open the rear case.
2.Replace DC 3V CR2032 Type battery.
(Do not use low-power batteries)
3.Reinstall the cover.



Low Battery Voltage Indication

- When battery voltage is under 2.6V.
  A low battery icon will be shown on the display.
- When battery voltage is under 2.4V.
  A low battery icon will be blinking on the display.
  Please replace a new battery.
  (Stop to use the torque adapter)

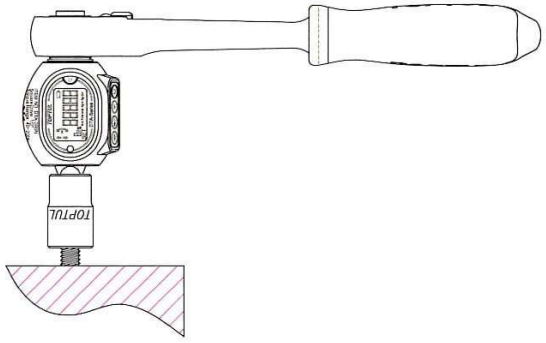


Attention:

1. Please be noted the polarity of battery, “+” should be at upper side.
2. When the torque adapter is not use for long period, take out the batteries.

General Operating Instruction

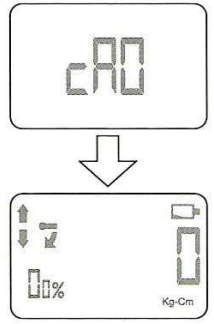
- Before use the digital torque adapter, make sure there is no any input force imposed on the device. Then press (M) the power key to turn on the device.
- Select the correct size of ratchet and hand socket to install on the square driver of torque adapter.
- The operation requires a steady and horizontal force input.
- When applied force at C.W. direction, the LCD display will be indicated a arrow in C.W. direction. When applied force at C.C.W. direction, the LCD display will be indicated a arrow in C.C.W. direction.



(CCW)

(CW)

Digital LCD Display & Function Panel



■ Power On:
Press (M) the power key to turn on the digital torque adapter and auto-zeroing process will be done.

Note:
Please make sure torque is "zero" when in the process of auto-zero period. Otherwise an offset will be included.
Damages to the torque adapter may occur if the device is turned on while force is applied to the adapter.

■ Power Off:
- Auto Power Off:
  Without applying torque and no key is pressed, the torque adapter will turn off automatically after about 3 minutes when the LCD display indicates "0".
- Manual Power Off:
  Without applying torque, press (M) the power key for 3 seconds to turn off the digital torque adapter.

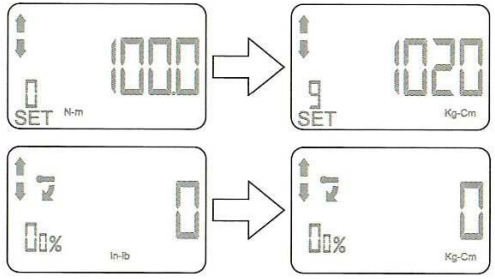
■ Low Battery:
When battery is low, the battery indicator will blink. Stop to use the torque adapter immediately.

Pre-Set Torque Values

(Programming of up to 10 Set of Target Torque Value, 0 SET – 9 SET)

STEP 1: Select the memory location of preset target torque value

(1) Without applying torque, press ⊕ the value setting key to enter the memory setting mode.
(2) Press ⊕ the value setting key to select the memory location (0 SET – 9 SET).
(3) Press Ⓣ the Peak Hold / Track Mode key (the confirm key) to store the selected memory location.

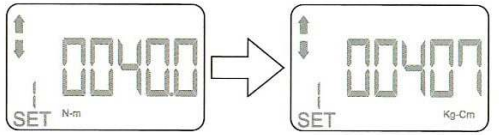


Note:

If the torque values have already been pre-set at the memory location, directly select the memory location to start the operation.
*Before operating the digital torque adaptor, please CHECK Torque Unit Indicator on LCD display and ensure current unit is set-up as pre-set torque unit. If not, switch to track mode and press Ⓤ the unit key to unify the torque unit.

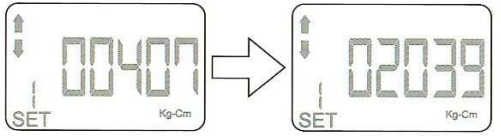
STEP 2: Set Torque Measurement Unit

(1) Press ⊕ the value setting key to enter the memory setting mode.
(2) Press ⊖ the digit shift key to adjust the torque value. (The torque value indicator will blink.)
(3) Press Ⓤ the unit key to select the torque unit. (Kg-Cm, Kg-m, In-lb, Ft-lb, N-m)
(4) Press Ⓣ the Peak Hold / Track Mode key (the confirm key) to store the current torque value setting.



STEP 3: Set Target Torque Value

(1) After pre-set the torque unit, press ⊖ the digit shift key to adjust the torque value. (The torque value indicator will blink.)
(2) Press ⊕ the value setting key to increase the torque value. (Press ⊖ the digit shift key to adjust unit value then press ⊕ the value setting key to increase the number.)
(3) Press Ⓣ the Peak Hold / Track Mode key (the confirm key) to store the current torque value setting.



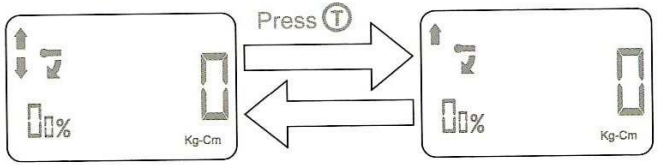
Note:

If the adjusted value of the pre-setting more than 120% of the maximum torque for this adapter. The value will be reset to zero.

General Operational Instruction – Track Mode & Peak Model

■ Track Mode / Peak Hold Mode Selection

Press (T) the Track Mode key (the confirm key) to change operation mode.

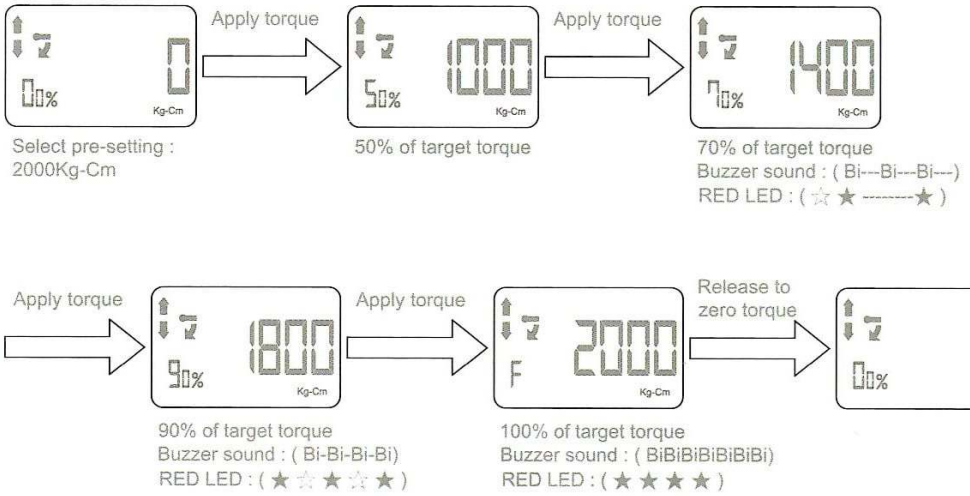


■ Track Mode

At **Track Mode**, when the applied torque approaches to 70% of target torque value, the buzzer will slowly beep (Bi---Bi---Bi---). When the torque reaches to 90% of target torque value, the buzzer will quickly beep (Bi-Bi-Bi-Bi). When the applied torque approaches to 100% of target torque value, the LCD indicator will indicate “F” and the buzzer will generate a long beep. (BiBiBiBiBiBiBi).

(When the applied force is stopped, the current operating torque value will be turned to “Zero” on LCD display and it is the notable feature under Track Mode.)

EXAMPLE:



■ Peak Hold Mode

At **Peak Hold Mode**, when the applied torque approaches to 70% of target torque value, the buzzer will slowly beep (Bi---Bi---Bi---). When the torque reaches to 90% of target torque value, the buzzer will quickly beep (Bi-Bi-Bi-Bi). When the applied torque approaches to 100% of target torque value, the LCD indicator will indicate "F" and the buzzer will generate a long beep. (BiBiBiBiBiBiBi).
(When the applied force is stopped, the current operating torque value will be stabilized on LCD display. It is the notable feature under Peak Hold Mode)

DTA SERIES

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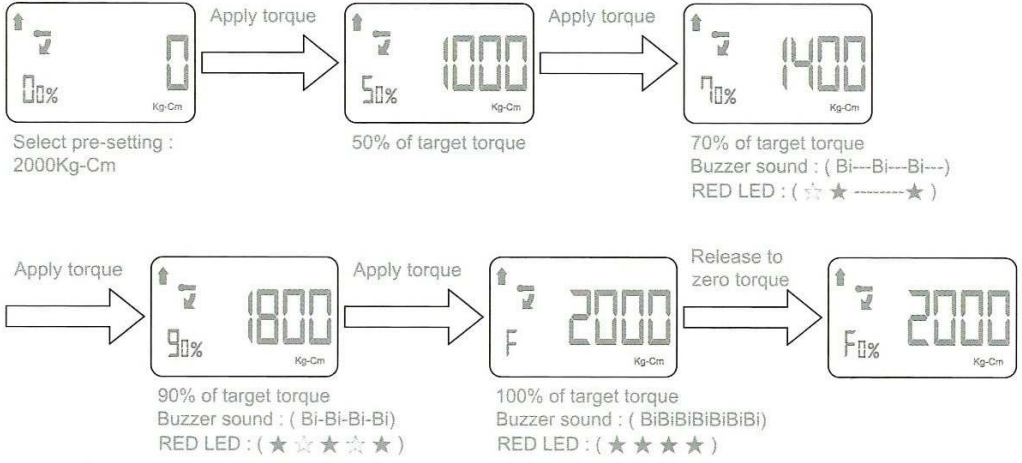
EXAMPLE:

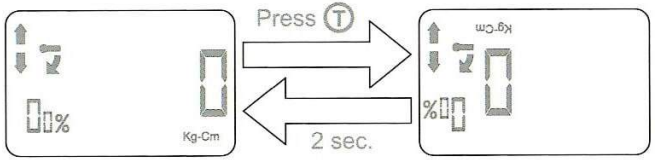


Note:

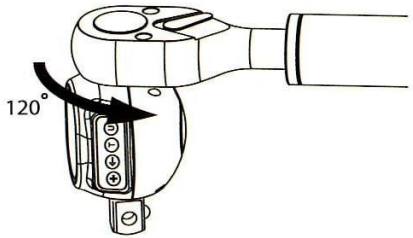
If the value of the selected pre-setting is zero.
A default value equal to the 120% of the maximum torque for this adaptor will be loaded into as the target torque.

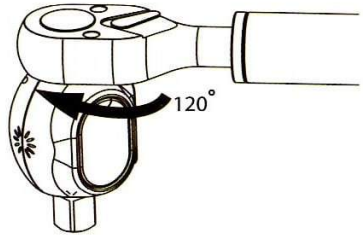
User Friendly

- Press and hold (T) the Peak Hold / Track Mode key (the confirm key) button for 2 seconds can toggle the direction of LCD display. It's for users to read torque value easily.



- Rotatable mechanism design can reach total 240° view area for easily reading the torque value on the LCD display.





Cautions for Use

- Before operate the digital torque adapter, please read this manual thoroughly and retain it for future reference.
- Do not use the torque adapter when it is shut off.
- Always turn the torque adapter on so the applied torque is measured.
- Do not press any key when apply torque on the torque adapter.
- Never use the digital torque adapter to loosen the fasteners.
- Excessive torque input of maximum applicable torque range may result in damage to the torque adapter. Over-torque can cause breakage.
- For tightening fasteners such as bolts and nuts, use the correct sizes of sockets to operate.
- Make sure the torque adapter capacity matches or exceeds each application before operating.
- When the torque input value exceeds the maximum applicable torque range of the torque adapter, please re-calibrate the device for precision torque measurement verification.
- Make appropriate postural/stance adjustments during operation to prevent a possible fall.
- Operator and observer should wear proper eye protection, such as safety goggles during operation at all time.
- Periodic recalibration is necessary to maintain the accuracy of the digital torque adapter. (It is recommended that the calibration should be performed once a year or every 5000 cycles.)
- This torque adapter is not an insulated device. Direct contact with electricity power sources may cause electrical shock and serious injuries.
- Do not use this torque adapter on any live electrical circuits.