

Specifications:

Model	Range	Square Drive	Weight
DWA-2501	250.0 in-lb	1/4inch	1.5 pound
DWA-1002	100.0 ft-lb	3/8 inch	2.2 pound
DWA-2503	250.0 ft-lb	1/2 inch	3.4 pound

Display: 5-digit, alpha-numeric LCD with function and battery indicator icons.

Accuracy: Torque: within $\pm 1\%$ of Indicated Value of both CW and CCW directions. (10%-100% of F.S)

Angle: within $\pm 1^\circ$ when rotating to 90° at the speed rate @ $2^\circ/s$ to $400^\circ/s$

Calibration: should be performed once a year or every 15,000 cycles whichever comes first.

Resolution:

Units of measure: ft-lb, in-lb, Nm

Model	Drive	ft-lb	in-lb	Nm
DWA-2501	1/4 inch	0.01 ft-lb	0.1 in-lb	0.01 Nm
DWA-1002	3/8 inch	0.1 ft-lb	1 in-lb	0.2 Nm
DWA-2503	1/2 inch	0.2 ft-lb	1 in-lb	0.3 Nm

Modes of measure: Peak Hold, Angle

Measurement Modes:

ANGLE- 15 seconds display of peak Angle.

Minimum 5% of full scale torque apply before Angle start measurement.

Example: Model DWA-1002 full scale is 100ft-lb
5% of F.S is 5 ft-lb. when torque reached
Above 5 ft-lb. Angle will start measure.

TORQUE - Display torque value in real time when torque is loading and display peak torque when released

Visual, Audible Alerts:

Yellow LED and buzzer pulse at 80% - 96% of target torque. Pulse rate increases as target torque is approached.

Green LED and buzzer on continuously when applied torque is within 96% - 104% of target torque.

Red LED and buzzer on continuously when applied torque exceeds $>104\%$ target torque or wrench full-scale.

Tactile Vibration when applied torque is within $\pm 4\%$ of target torque.

Battery Power:

2 AA battery up to 200 hours of continuous operation

Certification:

This device is calibrated at the factory and is certified to meet International Standards. ISO-6789-2003 and ASME B107-28-2005 standards compliant. Certificate of N.I.S.T. (National Institute of Standards Technology). Traceability from 10% to 100% of full scale.

Maintenance:

To clean the wrench, wipe with a lightly dampened cloth. DO NOT use: solvents, thinners or engine cleaners. DO NOT immerse in any liquids. It is highly recommended that your Torque & Angle Wrench be calibrated once a year or every 15,000 cycles, whichever comes first. Contact Digitool Solutions representatives for repair and calibration services.

Warranty Service and Recalibration

Digitool Solutions provides a 1 year warranty that covers any Digital Torque & Angle Wrench which fails to give satisfactory service due to defective workmanship or materials (excluding calibration) for 12 months from the date of original purchase. Calibration is only covered by this warranty for each new unused Torque & Angle Wrench out of box. Products must be returned with proof of purchase, freight prepaid, to the warranty service center listed below.

This warranty excludes Torque & Angle Wrench that have been subjected to abnormal use, accidental damage, neglect, or lack of maintenance. Any modification or disassembly of this Torque & Angle Wrench or repair by an unauthorized service center will void the warranty. This warranty gives you specific rights. You may also have other rights which vary from state to state. The foregoing obligation is Digitool Solutions sole liability under this or any implied warranty and under no circumstances shall Digitool Solutions be liable for any incidental or consequential damages.

Note: Some states do not allow the exclusion or limitation of incidental or consequential damages so the above limitation or exclusion may not apply to you.

For Warranty Service and Recalibration/Certification Services, contact:

Digitool Solutions LLC,.

13905 Ramona Ave. Unit #A
Chino, CA 91710

Phone: (909)591-9581

Fax (909) 233-6491

Website: digitoolsolutions.com



DIGITOO L SOLUTIONS

Professional Torque Products

ELECTRONIC TORQUE ANGLE WRENCH

TORQUE, ANGLE INDICATOR

For Models
DWA-2501, DWA-1002,
DWA-2503

USER'S GUIDE

Ratchet head:

1/4" , 3/8" or 1/2" drive 36 teeth

Accuracy:

Torque. $\pm 1\%$ CW & CCW
From 10%-100% of Full scale
Angle. $\pm 1^\circ$ of 90° rotation
@ speed rate $2^\circ/s$ - $400^\circ/s$

Display:

5-digit, alpha-numeric LCD
With functions, units and
battery indicator icons.

Indicators:

LED Green, Yellow and Red
Buzzer, Vibrator

Power:

Manual/Auto shut off after
5 minutes Idle

Battery:

2 AA size Battery Regular Alkaline
up to 200 hours of continuous operation



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Important Safety Instructions



WARNING - Risk of flying particles.

- Read this entire User's Guide before using the Torque and Angle Wrench.
- Always follow good professional tool practices.
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Wear Safety goggles.

- Insure that all equipment is in good working order and that ratings of the Torque & Angle Wrench, tools and drives exceed the torque being applied.
- Never use the Torque & Angle Wrench with the power off.
- Never initiate ZeroTare with torque applied.
- Never use the wrench as a breaker bar to loose nuts, bolts or fasteners.
- Save these instructions.

Introduction

The DTS Torque and Angle Wrench provides Torque accuracy within $\pm 1\%$ both direction CW and CCW of reading between 10% and 100% of full scale and angle accuracy $\pm 1^\circ$ of 90° rotation @ speed 2°/s to 400°/s.

The wrench also employs a vibrator, a buzzer, and a 3-color LED. These indicators alert users when torque or angle approaches its preset value.

The wrench requires only two AA batteries and can operate up to 200 hours of continuous use.

In addition, the DTS Torque and Angle Wrench features three selectable torque units. They are ft-lb, in-b, and Nm.

Three modes are featured:

- **TORQUE** - display torque value in real time, and show peak torque when wrench is released.
- **ANGLE** - display both maximum Angle & Torque applied for 15 seconds.

Front Panel Display and Keypad

Keypad Functions:

Power ON - M key

U - Unit Select - ft-lb, in-lb or Nm

- Zero Tare Torque/Angle (hold key 3 seconds)

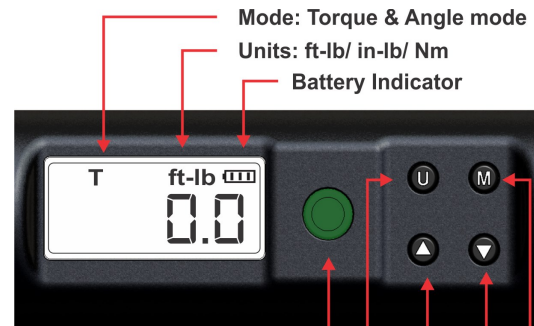
M - Mode Select TORQUE, ANGLE

- Manual power off, (hold key 3 seconds)

▲ - Increase TARGET TORQUE / ANGLE value
(Hold for rapid scrolling)

▼ - Decrease TARGET TORQUE / ANGLE value
(Hold for rapid scrolling)

Automatic Power OFF after 5 minutes of idle time.



Mode: Torque & Angle mode

Units: ft-lb/ in-lb/ Nm

Battery Indicator

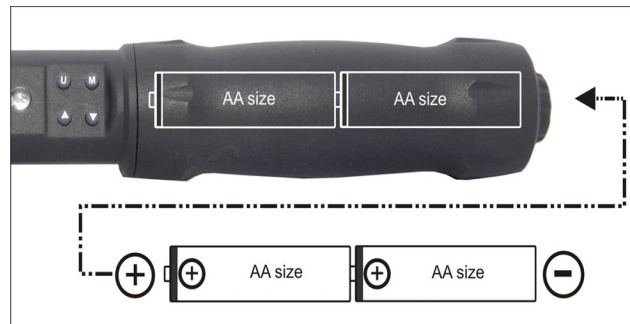
LED: Yellow/ Green/ Red

U ft-lb/ in-lb/ Nm
Clear Angle

▲ Increase Target

▼ Decrease Target

M Power ON/OFF



Operator Instructions

1. Setup:

- Turn on the Torque and Angle Wrench by pushing the **M** buttons.
- Press the **U** key
For **Peak** to view the units of measure.
Repeatedly push the **U** key to display the desired units of measure, ft-lb, in-lb or Nm.
For **Angle**, pushing the **U** key will clear the Angle to 0°
- Press the **M** key to select the display mode:
TORQUE or ANGLE Mode
- Push the **▲** or **▼** key to view the TARGET TORQUE or ANGLE value. Use these same keys to increase or decrease to the desired value.
While loading in either TORQUE or ANGLE modes, the Torque and Angle wrench will display applied torque or angle respectively. The yellow LED and the buzzer will begin to pulse at 80% of TARGET TORQUE, getting faster as the TARGET TORQUE value is approached.

2. Application:

- With the power on, install the Torque and Angle Wrench insert the driver into the socket.
- Apply torque load to the fastener in either CW or CCW directions. During loading, the Torque and Angle wrench will display applied torque in real time.
- When the applied torque is within 4% of the TARGET TORQUE value in TORQUE modes, the green LED, buzzer and vibrator (optional) will output continuously. Stop applying torque, as the installation is complete.

Release Indications:

Should the applied torque exceed the TARGET TORQUE value by more than 4%, the red LED and buzzer will alert continuously. If the torque over 125% of torque range, the display will indicate "OVER TORQUE."

Temperature Drift:

Storage Temperature 0°F to 125°F

Operating Temperature 40°F to 110°F

Humidity - up to 90% non-condensing

Re-Order Components :

- Torque Angle wrench P/N DWA-XXXX
- User's Guide P/N DTS-UG- DWA