Electronic Torque Wrenches

PRODUCT MANUAL

3x AA 1.5 V Batteries
Not Included

FEATURES

Modes	Torque, Angle, Torque+Angle
Units	ft-lb, in-lb, Nm, kg-m
Direction	CW/CCW
Torque Accuracy	±2%
Angle Accuracy	±1% (90˚ rotation @ 30˚/sec)
Ratchet/Head	90-Tooth/15º Flex
Display	LCD with Backlight
Sensory Feedback	Lights, Sound, Vibration
Presets/History	10 Presets/Last 50 Records
Length Offset	Up to ±15 in./381 mm
Cycle Counters	Basic, Repetitions, Total
Calibration Reminder	Date and/or Cycles

WRENCH MODELS

Item	Drive Size	Range	Overall Length	Weight
TRQ81122	3/8 in.	10–100 ft-lb	20.0 in.	2.71 lb.
TRQ82123	1/2 in.	30–300 ft-lb	27.1 in.	4.51 lb.

Before using the torque wrench, we recommend you read and understand the entire manual. This tool is a precision measuring instrument that you should operate, store, and maintain with care. Failure to follow instructions could result in damage to the tool, damage to property, or injury.

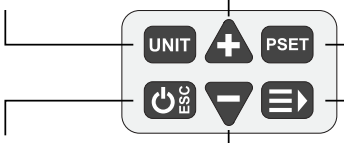
- **Do not exceed 110% of the wrench's maximum torque setting**
- **Pull the wrench slowly while observing all feedback indicators**
- **Do not use the wrench to break loose a fastener**
- **If you drop or damage the wrench, test and verify its accuracy before use**
- **Remove batteries during long-term storage to avoid leakage and damage**

BUTTON CONTROLS

Press: Cycle through units
Press & Hold: Recall last history record

Increase value/ Navigate up

Press: Cycle through presets
Press & Hold: Create, edit, or delete a preset



Press: Power on/Escape/ Reset counter/Dismiss alert
Press & Hold: Power off

Decrease value/ Navigate down

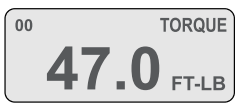
Press: Confirm/Cycle through measurement modes
Press & Hold: Open main menu

FIRST USE INSTRUCTIONS

Power On	1. Unscrew the battery cap (reverse threaded) 2. Insert 3 AA batteries, '+' end first, then replace the cap 3. Press ESC to power on
Set Date & Time Required for HISTORY and CALIBRATION REMINDER	4. Press & hold ≡ to open the main menu 5. Go to SETTINGS→DATE & TIME Press +/− to navigate and ≡ to confirm 6. Enter the current date and time Press +/− to adjust values and ≡ to confirm them
Set First Use Date Recommended for reference	7. Go to SETTINGS→FIRST USE DATE 8. Enter the current date
Set Calibration Reminder Recommended for maintaining accuracy	9. Press ESC to go back to the main menu 10. Go to INFORMATION→CALIBRATION REMINDER 11. Enter a future date and/or number of cycles 12. Change the setting from "Off" to "On" 13. Press ESC three times to exit all menus

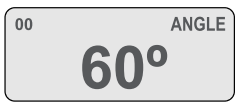
MEASUREMENT MODES

Press ≡ to cycle through the three measurement modes:



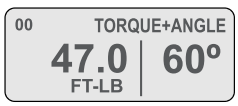
Torque Mode measures the resistance to rotation as you tighten the fastener. Use when tightening to a defined torque specification.

1. Press UNIT to cycle through FT-LB, NM, KG-M, IN-LB
2. Press +/− to set the target torque value



Angle Mode measures degrees of rotation. Use when the specification prescribes turning a tightened fastener an additional amount to achieve the final clamping force. You don't need to complete the angle in a single sweep. An onboard gyroscope allows the ratcheting action to accumulate the total angle in multiple steps.

1. Press +/− to set the target angle value



Torque+Angle Mode combines the settings from the Torque and Angle mode screens and allows you to do both operations in one step.

1. Set a torque value in Torque Mode
2. Set an angle value in Angle Mode
3. Select Torque+Angle Mode

USE CAUTION when measuring the angle on a tightened fastener or you may exceed 110% of the wrench's maximum torque setting, triggering an on-screen warning.

PRESETS

Reuse your measurement settings by saving them as a preset. You can save up to ten presets and assign each of them a number between 1 and 10.

Create a New Preset:

1. Start with a measurement mode selected and set up the way you'd like to save it
2. Press & hold PSET then press +/− to highlight a number to assign for the preset
   NOTE: Square brackets indicate that a position is empty, e.g. [01]

PRESETS CONTINUED

3. Press ≡ to confirm the position (if occupied, you can overwrite it)
4. Press +/− to set the repetitions, then press ≡ to save the preset

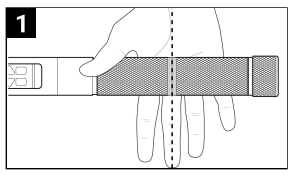
Select and Use a Preset:

1. Start with any measurement mode selected
2. Press PSET to cycle through all saved presets
3. Stop on the preset you'd like to use

Edit or Delete a Preset:

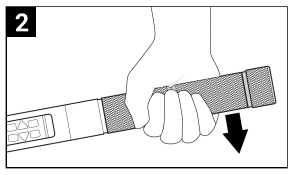
1. Start by selecting the preset you want to edit or delete
2. Press & hold PSET to open the EDIT PRESET menu
3. Press +/− to navigate options, then press ≡ to confirm

APPLYING TORQUE

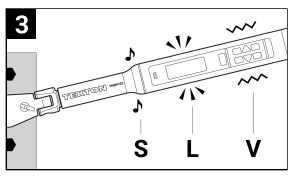


Grip the handle so your middle finger rests on the groove in the knurling. This is where the pressure should be concentrated.

Improper hand placement or using handle extensions will cause inaccurate torque and may damage the wrench.



Operate the wrench **slowly** and steadily, keeping even pressure on the handle. Stay in control and observe the feedback sequence as you approach your target value (see Section 5).



By default, the wrench provides sound **(S)**, lights **(L)**, and vibration **(V)** feedback. STOP pulling as soon as you've reached the target value.

Use care not to overtighten the fastener, especially with lower target torque values.

FEEDBACK SEQUENCE

Besides the digital display, the wrench also provides **three forms of sensory feedback** during operation to let you know when you are approaching your target value, when you have reached it, and when you have exceeded it.

Torque or Angle	Lights (Red, Green, Yellow)	Sound	Vibration
105%	R R R	Continuous Tone	None
Target: 100%	G G G	Continuous Tone	Continuous
95%	Y Y G	Fast Beeping	None
90%	Y Y Y		
85%	Y Y	Slow Beeping	
80%			
75%	Y		
70%			
65%	None	None	
0%			

⚠ **Do not exceed 110% of the wrench's maximum torque setting**—exceeding this limit may permanently damage the wrench. If you cross this threshold, the tool will alert you with an on-screen prompt, along with lights, sound, and vibration. The message must be cleared with the ⏻ button to continue using the wrench.

PEAK MEASUREMENTS

A **"peak measurement"** is the highest value achieved while in use. When force is removed, the peak measurement will be displayed on the screen and flash for 10 seconds. To dismiss, you can immediately take a new measurement or press ⏻.

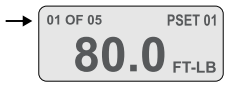
If the peak measurement meets or exceeds your target value, then it is counted as one "cycle" in INFORMATION→CYCLE COUNT. The peak measurement will also be recorded and time-stamped in HISTORY. To quickly view the most recent record, press & hold UNIT while on a measurement mode or preset. The record will be displayed on the screen and flash for 10 seconds. Press ⏻ to dismiss.

If the peak measurement exceeds 110% of the wrench's maximum torque setting, it will be recorded in INFORMATION→OVER TORQUE (110%).

COUNTERS

When a peak measurement meets or exceeds your target value, it also increments a counter. To reset the counter, press ⏻.

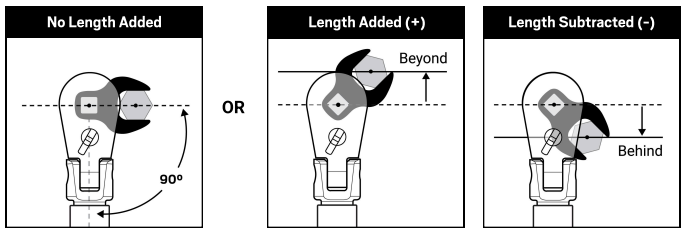
Measurement Mode Counter
Counts each measurement after it happens. Starts at 00 and increments to 99 before restarting.



Saved Preset Counter
Leads you through a series of fasteners. Starts at 01 and increments after each measurement, restarting after the last fastener.

HOW TO CORRECT FOR OFF-AXIS TOOLS

Using an off-axis tool such as a crowfoot wrench or torque adapter can change the effective length of the torque wrench. A **length offset** can be added if needed.

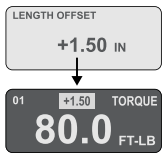


No correction is needed if the drive square and fastener are aligned at a right angle to the handle.

A correction is needed if the fastener is positioned beyond or behind the drive square. Measure the length of the offset and enter it as a (+) or (-) value, depending on the offset direction.

Enter a Length Offset:

1. Press & hold ☰ and go to SETTINGS→LENGTH OFFSET
2. Press ▲▼ to set the value, then press UNIT to toggle IN/MM
3. Press ☰ to confirm, then press ⏻ twice to exit all menus
4. Measurement mode displays inverted colors with offset value



⚠ **Using a negative offset at high torque values could overload and damage the wrench.**

⚠ **Be sure to set the LENGTH OFFSET back to 0.00 once a correction is no longer needed.**

MENU OPTIONS

Press & hold ☰ to open the main menu:

HISTORY

VIEW	View last 50 recorded peak measurements with dates and times
CLEAR	Delete all history records, this cannot be undone

SETTINGS

KEY BEEP	Set keypad button beeps to On/Off
BACKLIGHT	Set backlight of LCD screen to On/Off/Auto
LCD CONTRAST	Set contrast of LCD screen
AUTO SHUTOFF	Set timer for the wrench to automatically power off
AUDIO FEEDBACK	Set volume of audio feedback while applying torque
VIBRATION FEEDBACK	Set vibration feedback while applying torque to On/Off
LENGTH OFFSET	Set offset length to correct for off-axis tools
DATE & TIME	Set current date and time
FIRST USE DATE	Set date for the first time the wrench was used
NUMBER FORMAT	Set decimal number format to use Point/Comma

INFORMATION

REFERENCE DATES	View factory calibration date, last calibration date, and the date of first use (editable in SETTINGS)
CYCLE COUNT	View total cycles where 100% of a target value was achieved
CALIBRATION REMINDER	View or set a calibration reminder on a future date or specified number of cycles, whichever comes first
OVER TORQUE (110%)	View the number of cycles where a measurement exceeded 110% of the wrench's maximum torque setting, including the highest torque value recorded with the date and time
FIRMWARE	View the firmware version number and build number

MAINTENANCE AND STORAGE

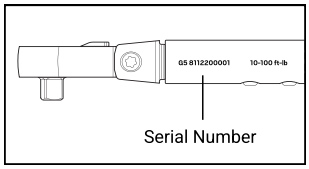
- Keep dry; avoid water and solvents
- Do not disassemble; internal parts require factory service
- Let wrench acclimate to temperature changes to ensure accuracy
- Set a CALIBRATION REMINDER to maintain accuracy through regular recalibration
- Store in protective case to prevent damage
- Replace batteries when prompted—press ⏻ to dismiss the early "Low Battery" alert and install fresh batteries at the "Replace Batteries" alert
- Remove batteries during long-term storage to avoid leakage

⚠ **If batteries die or are removed, all data is saved except DATE & TIME, which is held in memory for one week without power, then it must be re-entered.**

CERTIFICATE OF CALIBRATION

Each wrench is calibrated to be accurate within ±2% for torque and ±1% for angle (CW/CCW).

This torque wrench has a serial number that matches a unique certificate of calibration included in the case.



WARRANTY

We keep it simple—if your tool doesn't work like it should, let us know and we'll make it right. No time limits, no receipts, and we ship replacement parts within the United States and Canada.

TEKTON SUPPORT

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RESOURCE GUIDE

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