



**YELLOW
JACKET®**

Digital Electronic Torque Wrench



Operating Manual

Model 60648

This manual will help you to use the many features of your new digital torque wrench. Before operating the torque wrench, please read this manual completely, and keep it nearby for future reference.

FEATURES

- Interchangeable head
- Digital torque value readout
- +/- 2% accuracy
- CW and CCW operation
- Peak hold and track mode selectable
- Buzzer and LED indicator for the 9 pre-set target torques
- Water contact indicator
- Engineering units (ft-lb, in-lb, N-m, kg-cm) selectable
- 50 data memory for recall and joint torque auditing
- Auto Sleep after about five minutes idle
- (2) AAA Batteries included

MAINTENANCE AND STORAGE

ATTENTION:

One-year periodic recalibration is necessary to maintain accuracy. Please contact your local dealer for calibrations.

CAUTION:

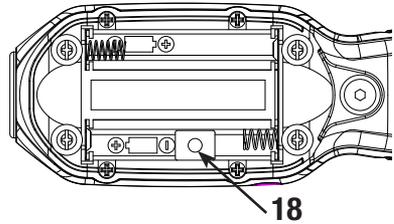
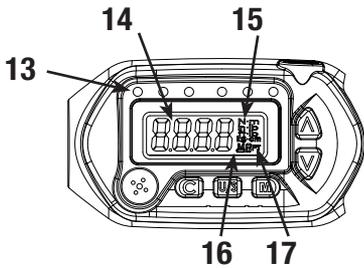
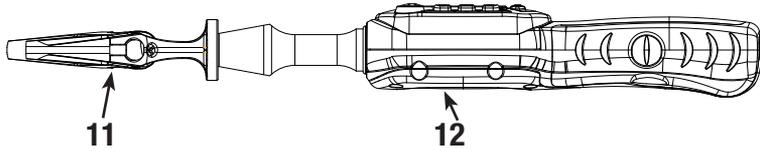
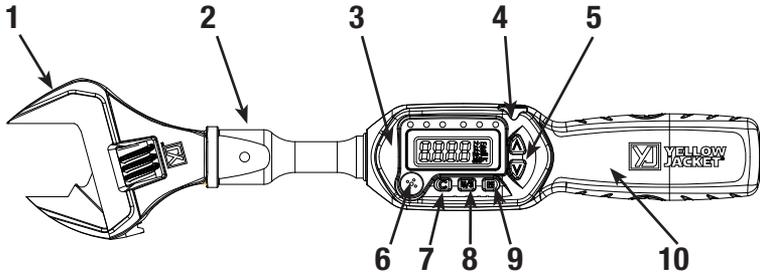


1. **Over-torque (110% of Max. torque range) could cause breakage or lose accuracy.**
2. Do not shake violently or drop wrench.
3. Do not use this wrench as a hammer.
4. Do not leave this wrench in any place exposed to excessive heat, humidity, or direct sunlight.
5. Do not use this apparatus in water.(not waterproof)
6. If the wrench gets wet, wipe it with a dry towel as soon as possible. The salt in seawater can be especially damaging.
7. Do not use organic solvents, such as alcohol or paint thinner when cleaning the wrench.
8. Keep this wrench away from magnets.
9. Do not expose this wrench to dust or sand as this could cause serious damage.
10. Do not apply excessive force to the LCD panel.
11. Apply torque slowly and graspe the center of the handle. Do not apply load to the end of handle.

BATTERY MAINTENANCE

1. When the wrench is not used for an extended period of time, remove the battery.
2. Keep a spare battery on hand when going on a long trip or to cold areas.
3. Do not mix battery types or combine used batteries with new ones.
4. Sweat, oil and water can prevent a battery's terminal from making electrical contact. To avoid this, wipe both terminals before loading a battery.
5. Dispose of batteries in a designated disposal area. Do not throw batteries into a fire.

NAMES AND FUNCTIONS OF PARTS



- | | |
|--|--------------------------------------|
| 1. Head Insert | 10. Anti-Slip Handle |
| 2. Sensor Yoke | 11. Jaw Adjust |
| 3. LCD Readout | 12. Battery Cover |
| 4. Communication Part | 13. LED Indicator |
| 5. UP/DOWN Button | 14. Torque Value |
| 6. Buzzer | 15. Units (ft-lb, in-lb, N-m, kg-cm) |
| 7. Power ON/CLEAR Button | 16. Pre-Setting Number |
| 8. Unit/Setting Button | 17. Peak/Track Mode |
| 9. Pre-setting Number Selection Button | 18. Water Indicator Viewing Window |

SPECIFICATIONS

Model No.	Max. Torque	Square Drive (inches)	Torque Measuring Range	Length
68848	62.7 ft. lb. 85 N-m	3/8	3.1-62.7 ft. lb. 4.2-85 N-m	10.6 in. 270 mm
All Models				
Accuracy *1	CW : ±2% CCW : ±3%			
Data memory size	50			
Pre-Sets	9			
Bright LED	6LEDs (1 Red+5 Green)			
Operation Mode	Peak hold/Track			
Unit Selection	ft-lb, in-lb (N-m, kg-cm)			
Gear Teeth	52			
Button	5			
Battery	AAA x 2 (included)			
Operating Temperature	14°F ~ 140°F (-10°C ~ 60°C)			
Storage Temperature	4°F ~ 158°F (-20°C ~ 70°C)			
Humidity	Up to 90% non-condensing			
Drop Test	1 m			
Vibration Test *2	10G			
Environmental test *3	Pass			
Electromagnetic compatibility test *4	Pass			

NOTE: Accuracy is guaranteed from 20% to 100% full scale.

*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 (one year).

*2: Horizontal and vertical test.

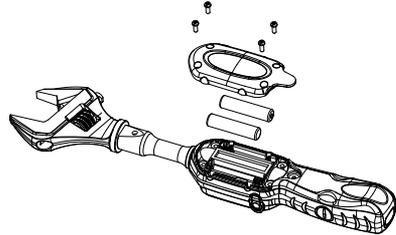
*3: Environmental test:
 a. Dry heat
 b. Cold
 c. Damp heat
 d. Change of temperature
 e. Impact (shock)
 f. Vibration
 g. Drop

*4: Electromagnetic compatibility test:
 a. Electrostatic discharge immunity (ESD)
 b. Radiated susceptibility
 c. Radiated emission

BEFORE USING

BATTERY INSTALLATION

- Remove the battery cover.
- Insert two AAA batteries matching the -/+ polarities of the battery to the battery compartment.
- Replace the battery cover and fasten it tightly according to the following figures.



ATTENTION:

When opening the battery cover of your 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.

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.



ATTENTION:

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

ACTIVATION DURING SLEEP MODE

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

RESETTING THE WRENCH

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

SETUP

LOW BATTERY VOLTAGE PROTECTION

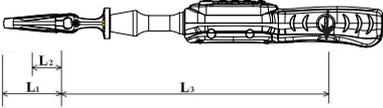
- If the battery serial voltage is in low voltage status, the wrench will display a battery symbol and then turn off after a while.



WHEN CHANGING THE TYPE OF HEAD

- If you use the different head of the wrench, the reading on the display will be different for the different length of the head. Please refer to the following explanation.

Calibration Point



$$D = D1 * (L3+L1) / (L3+L2)$$

D: The set torque

D1: The actual torque applied to the nut.

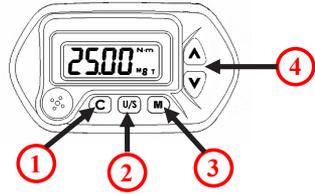
L1: The extended length

L2: The normal length

L3: The length from the fitting pin to the calibration point.

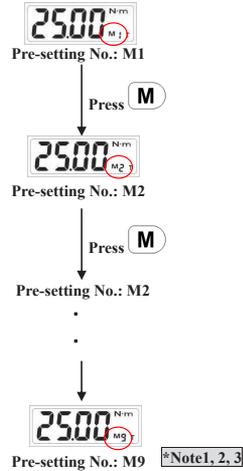
- Reference dimension for each model :

Model	L2(mm)	L3(mm)
68848	29	131.6



- 1 Power On/Clear
- 2 Unit Selection/Setting
- 3 Pre-setting No.
- 4 Up/Down Button

STEP 1: PRE-SETTING NO.



Note:

1. If **Err0** is appeared, that means this wrench has ever been applied more than 110% of torque of the spec.
2. The maximum capacity for "Pre-setting No." is 9 sets.
3. The "Pre-setting No." is cyclic.

STEP 2: UNIT SELECTION

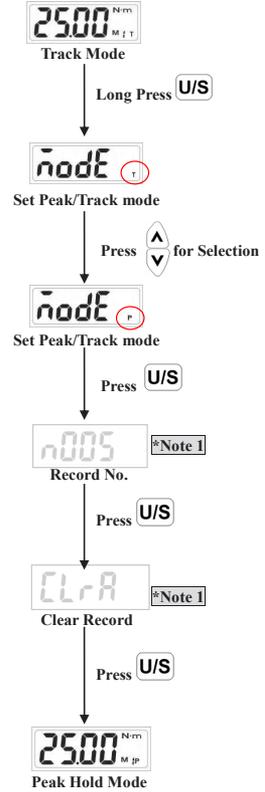


STEP 3: SET TORQUE VALUE



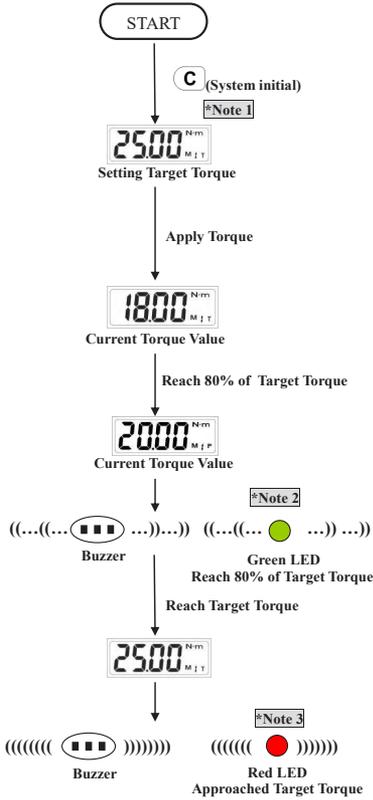
Note:
1. The "Unit Selection" is cyclic.

STEP 4: PEAK HOLD /TRACK MODE SELECTION

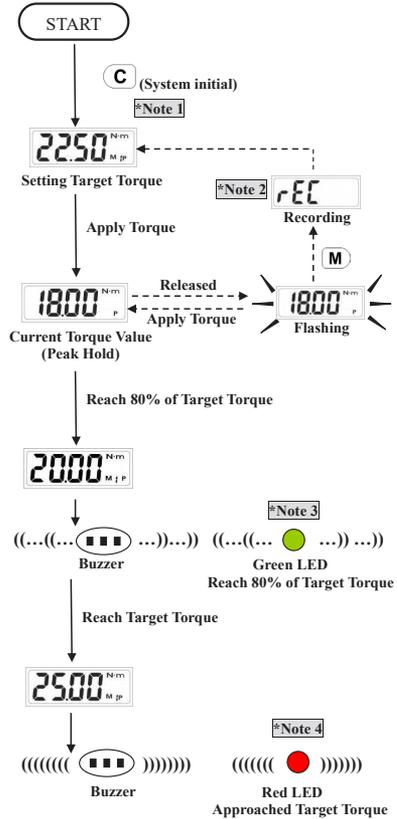


Note:
1. Please skip this procedure and continue to the next step.

TRACK MODE OPERATION PEAK MODE OPERATION

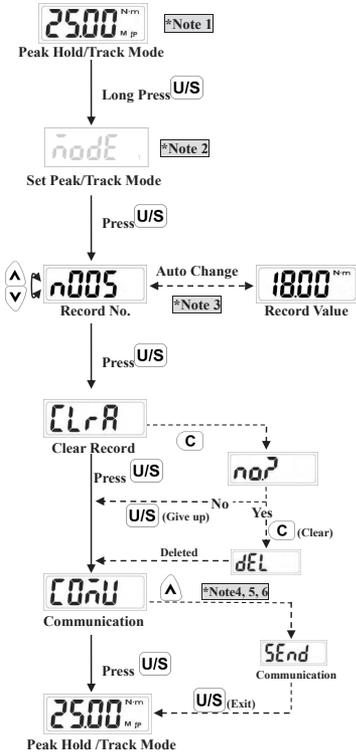


- Note:**
1. If **Err0** is appeared, that means this wrench has ever been applied more than 110% of torque of the spec.
 2. When 80% of the target torque is reached, the green LED will begin to flash and the alarm tone will beep intermittently.
 3. When the target torque is approached, the alarm will change to a steady tone and the green LED will stop flashing and stay on. The red LED will also illuminate.



- Note:**
1. If **Err0** is appeared, that means this wrench has ever been applied more than 110% of torque of the spec.
 2. If **Fu11** 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.
 3. When 80% of the target torque is reached, the green LED will begin to flash and the alarm tone will beep intermittently.
 4. When the target torque is approached, the alarm will change to a steady tone and the green LED will stop flashing and stay on. The red LED will also illuminate.

Peak Hold Mode Recorded Value Review



Note:

1. The "Peak Hold" mode recorded value review also can be operated from "Track" mode operation.
2. If you operate in the "Peak Hold" mode, the display will show *node* and please go to next step.
3. If the record is empty, it will show *nor?*
4. This function is not supported on all type of models.
5. Communication mode is for uploading record data to PC.
6. Communication mode is also for calibration of torque wrench. Please contact your local dealer for more information.