



# Operating Manual

EcoTorq-Series (Mini, Standard & Angle)



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Dear Users,

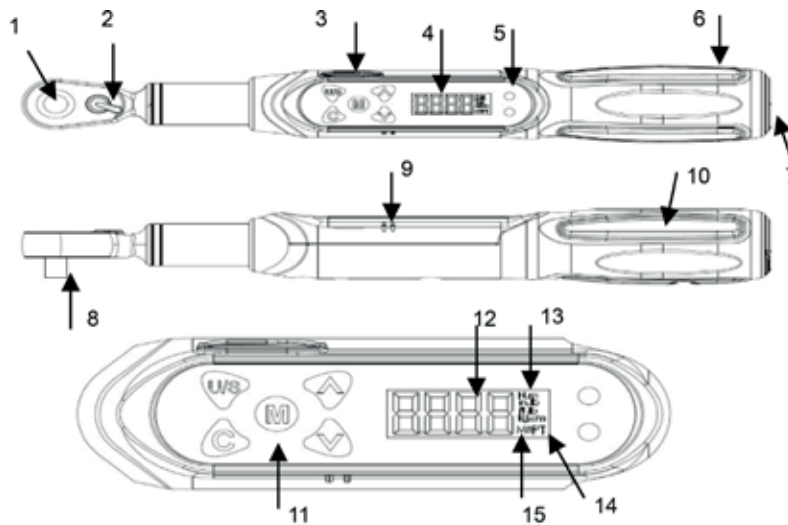
Thank you for using mini digital torque wrench. This manual will help you to use the many features of your new digital torque wrench.

Before operating the torque wrench, please read this manual completely, and keep it nearby for future reference.

## 1. MAIN FEATURES

- Digital torque value readout
- Maximum deviation Mini-Series:  $\pm 2\%$  cw,  $\pm 3\%$  ccw
- Maximum deviation Standard & Angle-Series:  $\pm 1\%$  cw,  $\pm 2\%$  ccw
- Peak hold and track mode selectable
- Buzzer and LED indicator for the 9 pre-settable target torques
- Engineering units(N-m, ft-lb, in-lb, kg-cm)selectable
- 250 data memory for recall and joint torque auditing
- Communication functions
- Auto power off after about 5 minutes idle
- Rechargeable batteries are compatible Notes:
  - \* 1: The accuracy of the readout is guaranteed from

## 2. NAMES AND FUNCTIONS OF PARTS



- |                            |                                     |
|----------------------------|-------------------------------------|
| 1. Reversible Ratchet Head | 10. Calibration Mark                |
| 2. Direction Lever         | 11. Operating Buttons               |
| 3. Communication Port      | 12. Torque Value (Mini & Standard)  |
| 4. LCD Readout             | Torque and Angle Value (Angle only) |
| 5. LED Indicator           | 13. Torque Units                    |
| 6. Anti-slip Handle        | 14. Peak/Track Mode                 |
| 7. Battery Compartment     | 15. Memory Number                   |
| 8. Ratchet Drive           |                                     |
| 9. Buzzer                  |                                     |

### **3. Notes:**

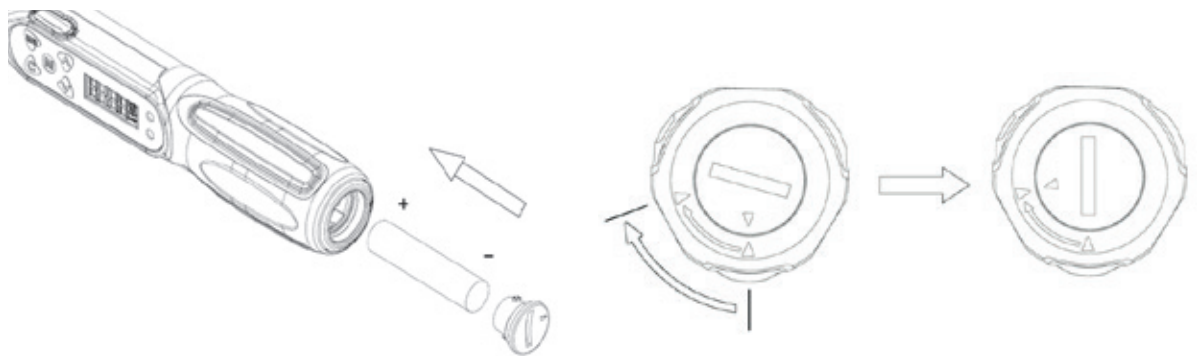
- 1: The accuracy of the readout is guaranteed from 20% to 100% of maximum range + /- 1 increment. The torque accuracy is a typical value. Calibration point is on the rubber grip. For keeping the accuracy, calibrate the wrench for a constant period time (1 year).
- 2: Use a special designed cable (accessory) to upload record data to PC.
- 3: One AAA battery (Mini-Series), two AAA batteries (Standard & Angle-Series).
- 4: Horizontal and vertical test.
- 5: Environmental test:
  - a. Dry heat
  - b. Cold
  - c. Damp heat
  - d. Change of temperature
  - e. Impact (shock)
  - f. Vibration
  - g. Drop
- 6: Electromagnetic compatibility test:
  - a. Electrostatic discharge immunity (ESD)
  - b. Radiated susceptibility (RS)
  - c. Radiated emission (RE)



## 4. BEFORE USING THE WRENCH

### 4.1. Battery installation

- Remove the battery cover.
- Insert one AAA batteries matching the -/+ polarities of the battery to the battery compartment.
- Put on the battery cap and fasten it tightly according to the following figures.



### 4.2. 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 period, an initial torque offset will be recorded in the memory.

### 4.3. Auto power off

The wrench will auto power off after about 2 minutes idle for power saving. Press to **C** power on the wrench again.

#### CAUTIONS:

During communication period (Send appears), the auto power off function is disabled.

### 4.4. Resetting the wrench

- If the wrench does not function normally, loosen the battery cap then tighten it to re-start.

## 5. SETUP



1. Power On/Clear
2. Unit Selection/Setting
3. Pre-setting No.
4. Adjust Torque Value

### 5.1. Step 1: Pre-setting no



Pre-setting No.: M1

Press **M**



Pre-setting No.: M2

Press **M**

Pre-setting No.: M3

⋮



Pre-setting No.: M9

**\*Note 1,2,3**



**Note:**

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



5.2. Step 2: Unit selection



Pre-setting Unit: N-m

Press U/S



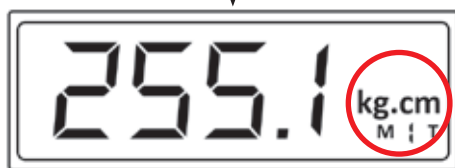
Unit Selection: in-lb

Press U/S



Unit Selection: ft-lb

Press U/S



Unit Selection: kg-cm

Press U/S



Unit Selection: ° (Deg.)

(Angle-Series only)

5.3. Step 3: Set target torque



Pre-setting Target Torque

Press 



Increase Torque Value

Press 

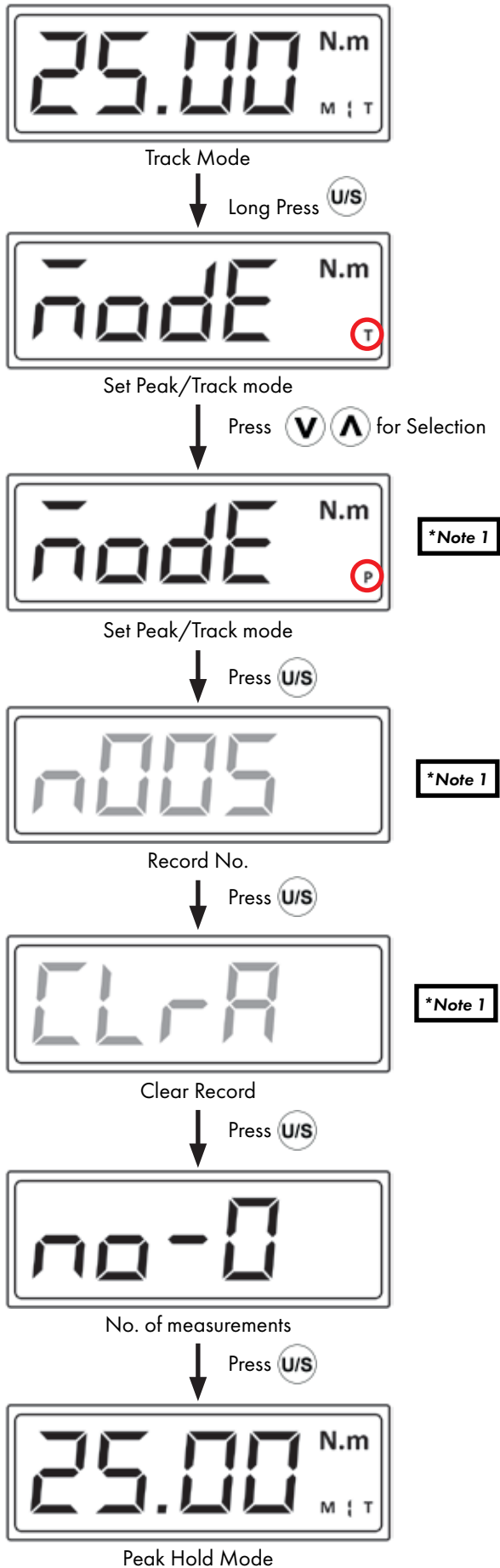


Decrease Torque Value



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

5.4. Step 4: Peak hold/track mode selection

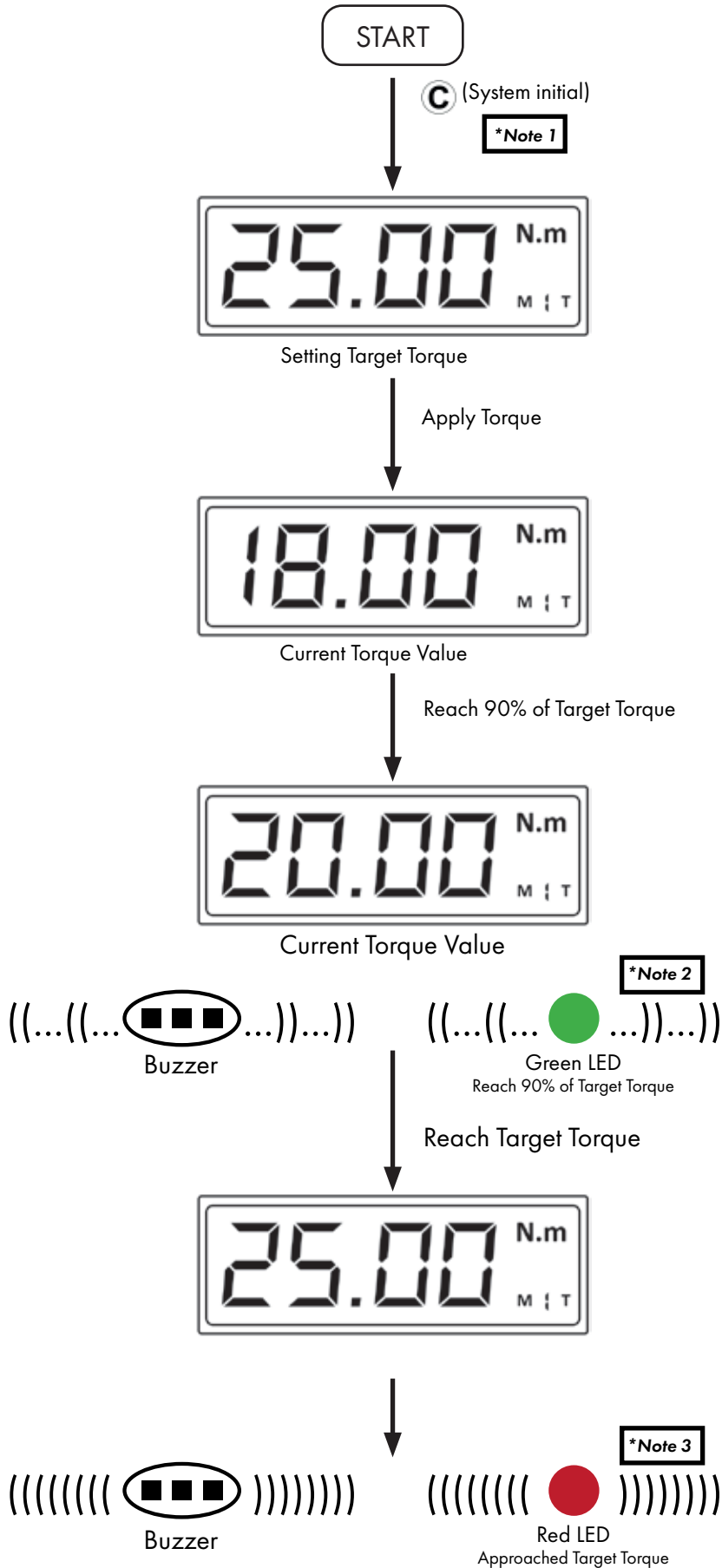


**Note:**

1. Please skip this procedure and continue to the next step.
2. Counting record: This feature counts how many times the wrench has been used, but only counts when applying up to 60% of maximum torque. This record is not erasable until re-calibration. The feature will count up to 65,000 measurements. Reading the number of measurements, the following figure means the recorded count is 10100. (No-1 means 10000 times, No-2 means 20000 times reached and so on...)



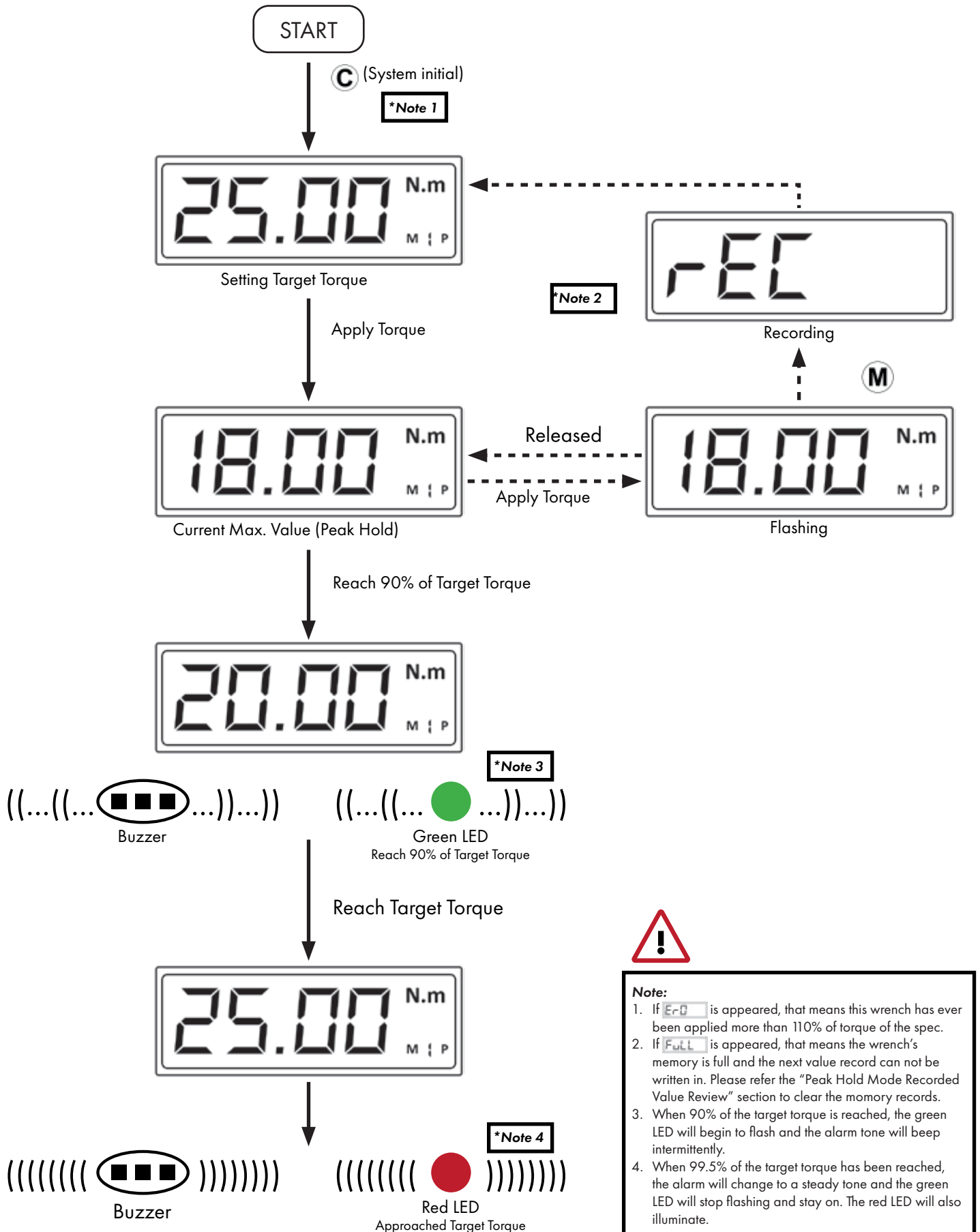
6. TRACK MODE OPERATION



**Note:**

1. If **Er0** is appeared, that means this wrench has ever been applied more than 110% of torque of the spec.
2. When 90% 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.

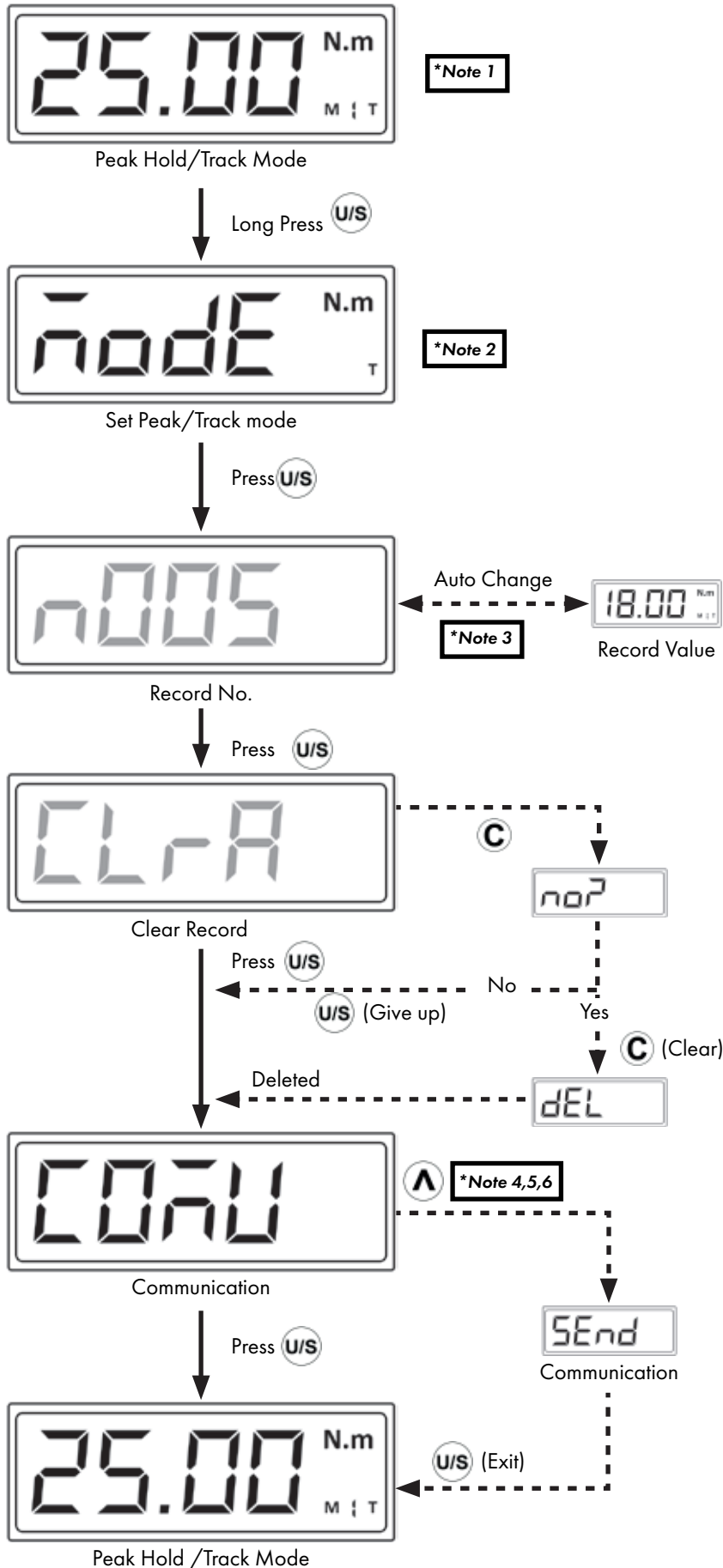
**7. PEAK HOLD MODE OPERATION**



**Note:**

1. If **ErD** is appeared, that means this wrench has ever been applied more than 110% of torque of the spec.
2. 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.
3. When 90% of the target torque is reached, the green LED will begin to flash and the alarm tone will beep intermittently.
4. 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.

8. PEAK HOLD MODE RECORDED VALUE REVIEW (MINI-SERIES)

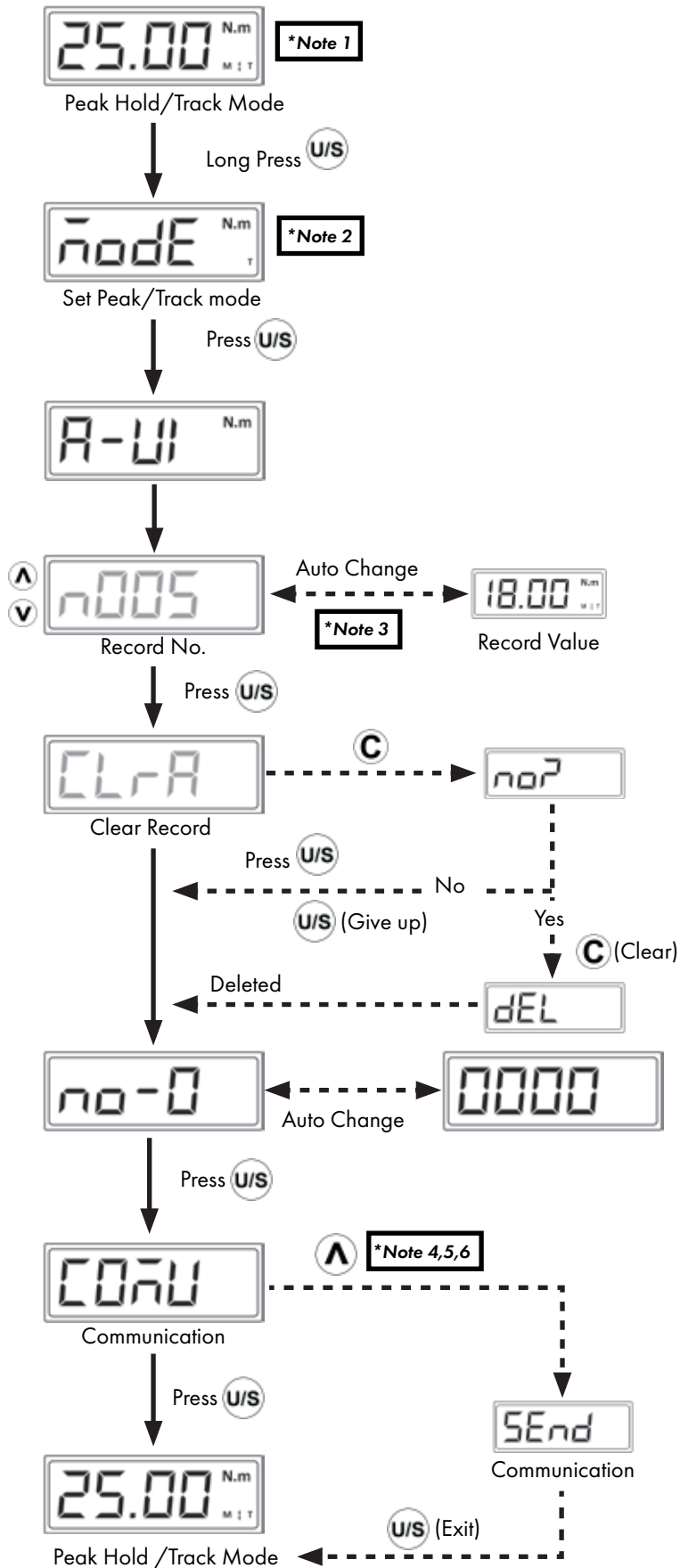


**Note:**

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 nanE and please go to next step.
3. If the record is empty, it will show nanE.
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.



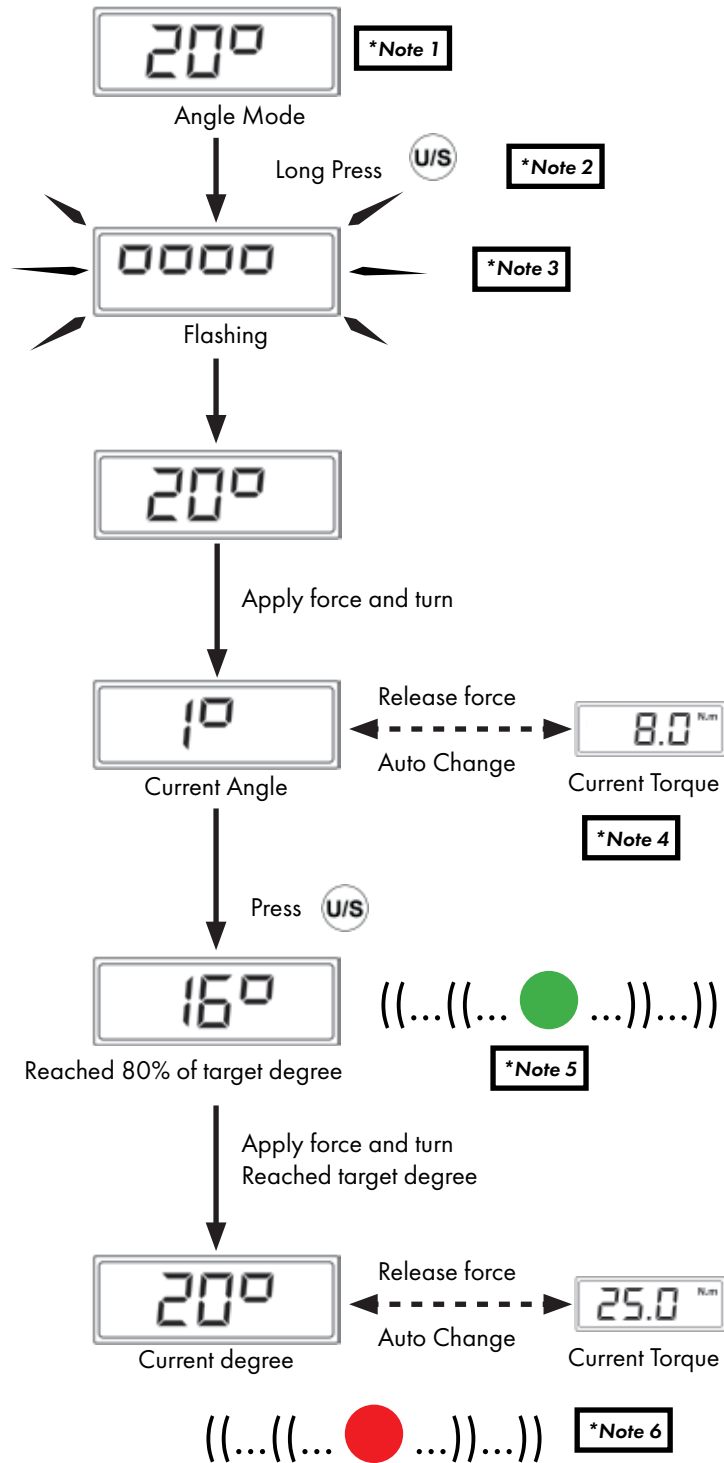
9. PEAK HOLD MODE RECORDED VALUE REVIEW (STANDARD & ANGLE-SERIES)



**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 `nanE` and please go to next step.
3. If the record is empty, it will show `nanE`.
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.

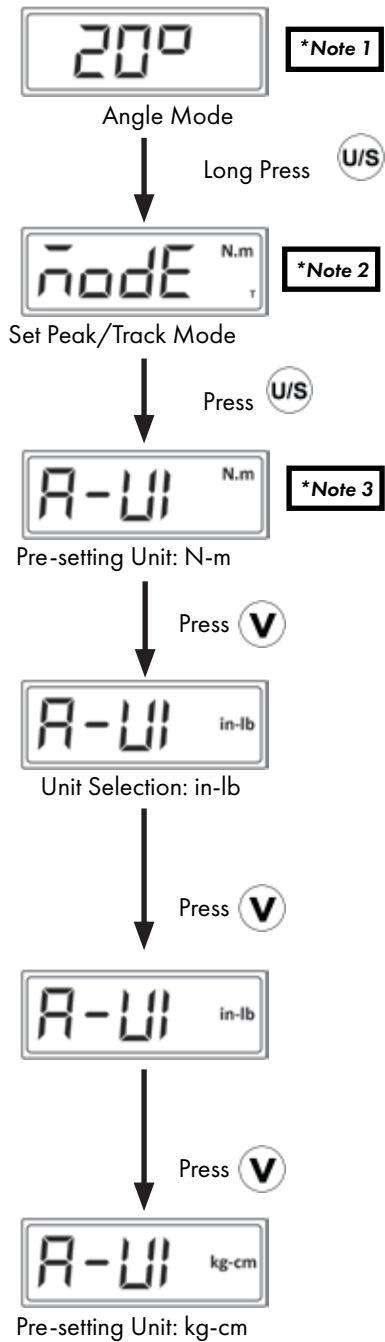
10. ANGLE MODE OPERATION (ANGLE-SERIES ONLY)



**Note:**

1. When entering angle mode, the unit will be degree.
2. When angle is in auto initiate mode, please keep the wrench steady without any disturbance.
3. After a short time, the angle function will enter initiate mode and a flashing **0000** will appear.
4. When releasing force the wrench in angle mode, the display will show the corresponding torque with flashing.
5. When 80% of the target degree is reached, the green LED will begin to flash and the alarm tone will beep intermittently.
6. When 99.5% of the target degree 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.

## 11. TORQUE UNIT SELECTION UNDER ANGLE MODE (ANGLE-SERIES ONLY)



1. The unit setting can also be entered from torque mode.
2. Please skip the procedure and go to the next step.
3. The unit selection cycles through all options.

## 12. COMMUNICATION



**Precaution:**

1. Communication function is only supported on some models. Check the model no. and its specification before using communication function.
2. Do not insert the plug of communication cable into torque wrench that does not support communication function.

## 13. CONNECTING COMMUNICATION CABLE

- Turn off power and then connect the accessory cable between the COM port of PC and torque wrench.

## 14. UPLOADING RECORD DATA

- Make sure the connection between PC and wrench is normal.
- Change the wrench operation mode to "Send". (Please refer to "**Peak Hold Mode Recorded Value Review**" section)
- Use PC to start the uploader program.
- In uploader program, first select the correct COM port No.
- Next, select the file path to save the uploaded data.
- Finally, press "upload" button to transmit the torque records to PC.
- The uploaded data is then shown on the column and saved in the \*.csv file. Use Microsoft Excel to view \*.csv file.



**CAUTIONS:**

Refer to the uploader program user guide for the detail operations.

## 15. MAINTENANCE AND STORAGE

**ATTENTION:**

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



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.
12. When checking the accuracy or calibration, please use the bit head packed inside the blow mold case. (BM/BP series)

## 16. 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. Sweat, oil and water can prevent a battery's terminal from making electrical contact. To avoid this, wipe both terminals before loading a battery.
4. Dispose of batteries in a designated disposal area. Do not throw batteries into a fire.

## 17. Warranty

**TrackWrench® is an independent product group within RAD Torque Systems B.V.. Therefore, all TrackWrench® products fall under the Terms and Conditions of RAD Torque Systems B.V..**

### 17.1. New tool warranty

Any new tool branded with the RAD name and purchased from RAD Torque Systems B.V., or through one of its authorized distributors or agents, is warranted to the original purchaser against defects in materials and workmanship for a period of twelve (12) month from the date of delivery to the end user. This guarantee is valid until fifteen (15) months after the original calibration date.

Furthermore, the warranty conditions determine that no warranty applies if:

1. The defect, wholly or partly, is due to unusual, inappropriate, improper or careless use of the product;
2. The defect, wholly or partly, is due to normal wear and tear or lack of proper maintenance;
3. The defect, wholly or partly, is due to installation, assembly, modification and / or repair by the customer or by third parties;
4. The product is altered, modified, used or processed;
5. The product is transferred to a third party;
6. RAD Torque Systems B.V. has obtained the product, wholly or partly, from a third party, and RAD Torque Systems B.V. can not claim compensation under warranty;
7. RAD Torque Systems B.V. in manufacturing of the product raw materials, and suchlike has used those on the instructions of the customer;
8. The product has a small deviation in it's quality, finishing, size, composition and suchlike, which is not unusual in the industry or if the defect was technically unavoidable;
9. The customer has not fulfilled all obligations under the agreement promptly and correctly towards RAD Torque Systems B.V..

### 17.2. Repaired tool warranty

After the warranty has expired a three (3) month warranty applies to the original purchaser against defective in material or workmanship or both from the date of repair. To qualify for the above mentioned warranties, written notice to RAD Torque Systems B.V. must be given immediately upon discovery of such defect, at which time RAD Torque Systems B.V. will issue an authorization to return the tool. Freight costs must be paid in advance. When returning a tool, the reaction arm/s being used with the tool must also be returned.

For the latest warranty terms, please see our sales conditions on our website [www.trackwrench.com](http://www.trackwrench.com).

Distributed by:

**RAD Torque Systems B.V.**

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**[www.trackwrench.com](http://www.trackwrench.com)**