IST-18WA SERIES

# IST-18WA SERIES
# INTERCHANGEABLE HEAD BLUETOOTH
# DIGITAL TORQUE WRENCH
# (KEYBOARD SIGNAL)
# OPERATION MANUAL

↤INSIZE↦

**www.insize.com**

MN-IST-18WA Series-E

V1

## Attention

◆ Don't use the wrench as a hammer.

◆ Don't use the wrench in water.

◆ Over-torque (105% max. torque range) could cause damage or lose accuracy. If `ErD` is appeared, that means this wrench has ever been applied more than 110% torque of maximum range.

◆ The accuracy of the readout is guaranteed from 20% to 100% of maximum range.

## Description

**1** Function features:

**Torque wrench:**

- Unit: N.m, in.lb, ft.lb, kg.cm
- Clockwise and counter-clockwise operation
- Peak and track working mode
- Can set tolerance with judgement in peak working mode
- 9 target torque values can be set, with audible and visible alarm:
  LED lights up in sequence, and the buzzer gets louder and louder when torque value is 80%~99.5% of target torque
- Power off in 2 minutes automatically
- Non-slip grip handle
- With overload record (once the torque reaches 110% of the maximum range)

**Data transmission:**

- Built-in Bluetooth 4.0 module,which can be connected with computers （with Bluetooth function), mobile phones, tablets and other devices
- Keyboard signal, can be transmitted to Excel, Word, Txt
- Transmission distance is 10 meters (no obstacles, no electromagnetic interference)
- Bluetooth connection and disconnection are respectively shown by indicator lights

**2** Structure:
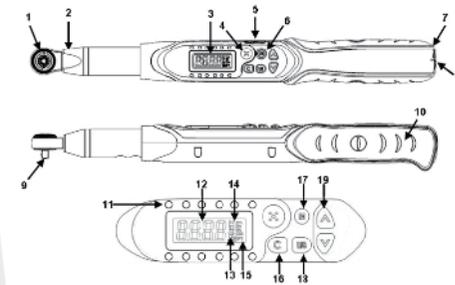


| | | |
|---|---|---|
| 1. | Interchangeable head style bi-directional ratchet head | 11. LED Indicator |
| 2. | Connecting slot section | 12. Torque Value |
| 3. | LCD Display | 13. Pre-setting Index |
| 4. | Buzzer | 14. Units(N-m, ft-lb, in-lb, kg-cm) |
| 5. | Communication Port | 15. Peak/Track Mode |
| 6. | Buttons | 16. Power/Zero Reset/Clear Button |
| 7. | Battery Compartment | 17. Pre-set Switch Button |
| 8. | Battery Cap | 18. Unit/Setting Button |
| 9. | Ratchet Driver | 19. Up/Down Button |
| 10. | Anti-slip Handle | |

## Conversion formula for head replacement

If you want to use various types of heads other than the ratchet head included in this wrench, the torque setting value should be changed depending on the length of the head. Please refer to the following instructions to measure the length of the head you want to use and then calculate the final torque setting value by applying the formula.
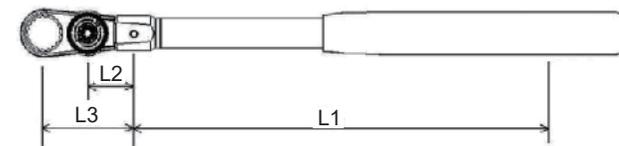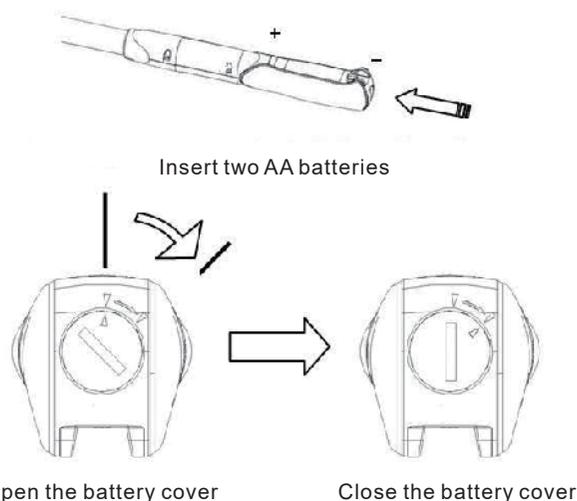


$$D = D1 * (L1+L3) / (L1+L2)$$

D : Actual final torque       L3: Altered length of head

D1: Preset torque value       L2: Length of ratchet head attached to this wrench

L1: Length from tatting contact to grip calibration point

## Operation

**1** Inserting the batteries:



Insert two AA batteries



Open the battery cover          Close the battery cover

**2** Turn on and initialize:

◆ To power on the digital torque wrench, please keep the ratchet head force free, and then press C to power it on.

◆ After power on, auto zero-reset will be processed.

◆ After starting, press C to zero-reset again.

◆ In torque mode, a default target value will show on LCD.

**Note: If Er0 appeared during power-on, it means this wrench has been applied more than 110% of maximum torque.**

**3** Auto power off:

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

◆ Press and hold C to turn off the power of the wrench.

**4** Zero reset:

◆ Better Zero-reset improves the measuring accuracy. To get higher accuracy, please do Zero-reset carefully before each measuring.

◆ After power on, C button used for zero reset.

◆ In torque mode, if an external force is applied to the torque wrench during zero-reset period, an initial torque offset error will occur.

**5** Reset the wrench:

◆ If the wrench does not function normally, please go through the reset process to reset the wrench.

◆ To reset the wrench, loosen the battery cap then tighten it to restart. After reset, remember to press C to power it up again.

**6** Low battery indicator:

When the battery is low, the screen displaying the sign as shown and it will power off in a few seconds.



## Maintenance

**1** Do not shake violently or drop wrench.

**2** Do not leave this wrench in any place exposed to excessive heat, humidity, dust, sand or direct sunlight.

**3** Do not use organic solvents, such as alcohol or paint thinner when cleaning the wrench.

**4** When the wrench is not used for an extended period of time, remove the battery, apply antirust oil on the exposed metal part, put the wrench in box for storing.

## Operation

**Power On**

↓

`0000`

**Zero Reset**

↓

`25.00` N·m

**Target**

↓

Press (M) to change pre-set (STEP1)
Press (U/S) to change unit (STEP2)
Press (∧)(∨) to change target (STEP3)
Long Press (U/S) to change Mode (STEP4)

*Note 1

Press (C) to do Zero Reset

↓

`25.00` N·m

**Start Measuring**

Press (C) to Clear

**Apply Force**

↓

**Force Free**

↓

`24.8` N·m
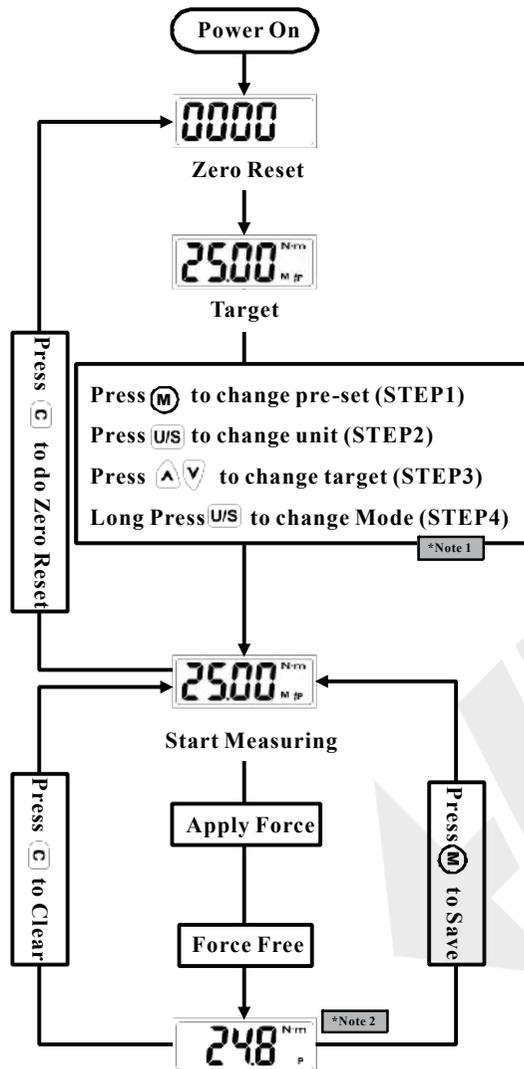
*Note 2

Press (M) to Save

**Note1**：Long Press ___ to enter wrench setup.
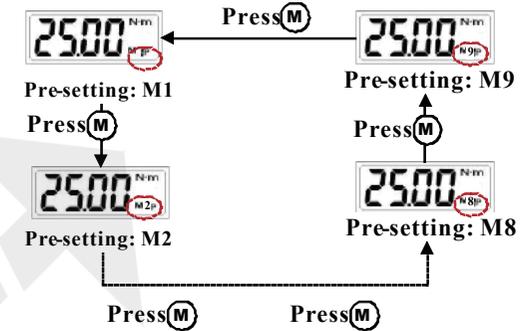**Note2**：Only Peak Mode keep peak torque for save and data tramission.

◆ Step 1：Pre-setting NO.

`25.00` N·m ← Press (M) ← `25.00` N·m

**Pre-setting: M1**      **Pre-setting: M9**

Press (M)      Press (M)

`25.00` N·m      `25.00` N·m

**Pre-setting: M2**      **Pre-setting: M8**

Press (M)      Press (M)

◆ Step 2：Unit selection

**Unit: N-m**      **Unit: kg-cm**

`25.00` N·m ← Press (U/S) ← `255.1` kg·cm

Press (U/S)      Press (U/S)

`22.12` in·lb → Press (U/S) → `18.43` ft·lb

**Unit: in-lb**      **Unit: ft-lb**

◆ Step 3：Set torque value

`25.00` N·m

**Pre-setting torque Value**

↓

Press (∧) to increase torque value

Press (∨) to decrease torque value

↓

`30.00` N·m
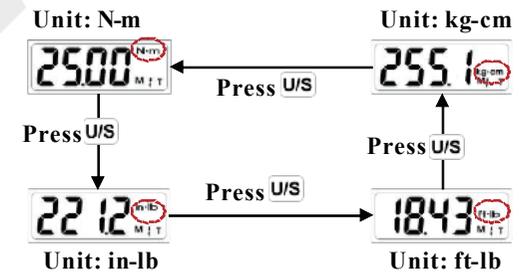
**Pre-setting torque Value**
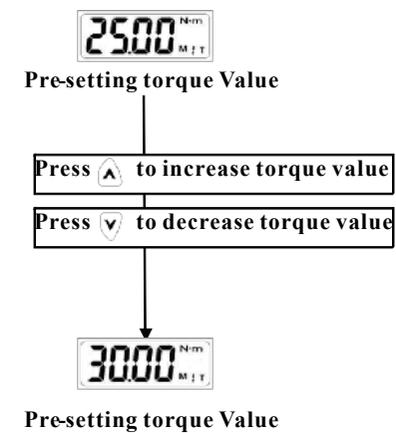
◆ Step 4：Peak Hold/Track mode selection (Wrench Setup)

*Note 1  **25.00** N·m  *Note 2
          M↑T

**After Power on
Zero Reset**

**Long Press |U/S| to enter Wrench Setup**

**ṅodE** ◌  **ṅodE** ◌

**Press ⊙⊙ to change Peak/Track mode**

**ō 15.0** ⌐  **P 15.0** ⌐

**Press ⊙⊙ to set upper/lower tolerance %.**

**LoC**  **bU**

**Press ⊙⊙ to switch key Lock and
buzzer on/off**

**n001**  **25.80** N·m

**Press ⊙⊙ to display recorded values.
Press ⊙⊙ to delete current record.
If no record, show** **nonE**

**CLrA**

**Press ⊙⊙ to clear all records.**

**no-0**  **0001**

**Show wrench usage count, forced over
20% of maximum torque increase this
count.**

**V 1.00**

**Show wrench firmware version.**

**25.00** N·m
          M ⓟ

**Press |U/S| to go next setting.**

**Note1：After Power on Zero Reset.**
**Note2：During measuring and before apply force.**

◆ Track mode operation
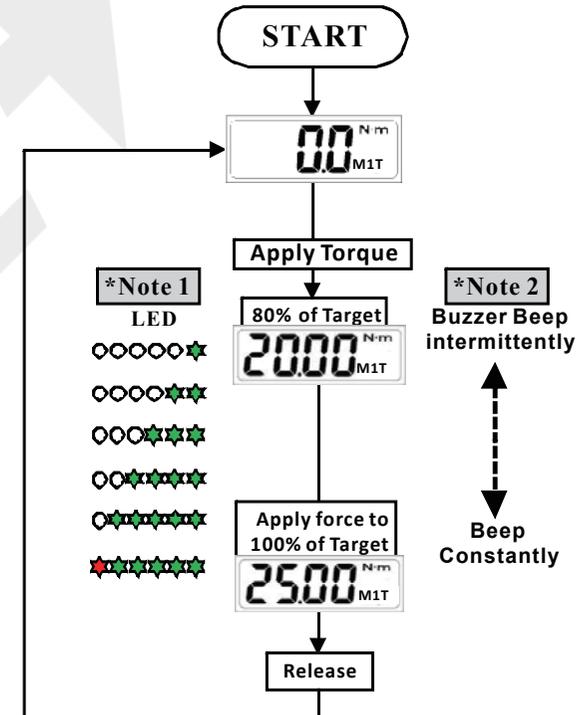
**START**

**0.0** N·m
        M1T

**Apply Torque**

*Note 1                    *Note 2
**LED**   **80% of Target**   **Buzzer Beep
                              intermittently**

○○○○○○✦        **20.00** N·m
                        M1T
○○○○○✦✦

○○○✦✦✦

○○✦✦✦✦✦     **Apply force to
             100% of Target**
○✦✦✦✦✦✦
                     **25.00** N·m    **Beep
✦✦✦✦✦✦✦                       M1T     Constantly**

                     **Release**

**Note1：From 80%~99.5% of target, LED turn on one by one to
all LED on.**
**Note2：From 80%~99.5% of target, buzzer beep intermittently
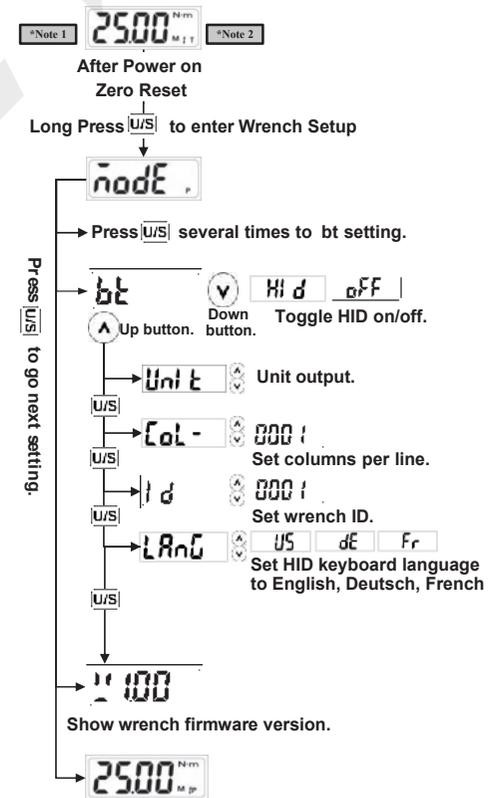to constantly.**

**◆ Peak mode operation**
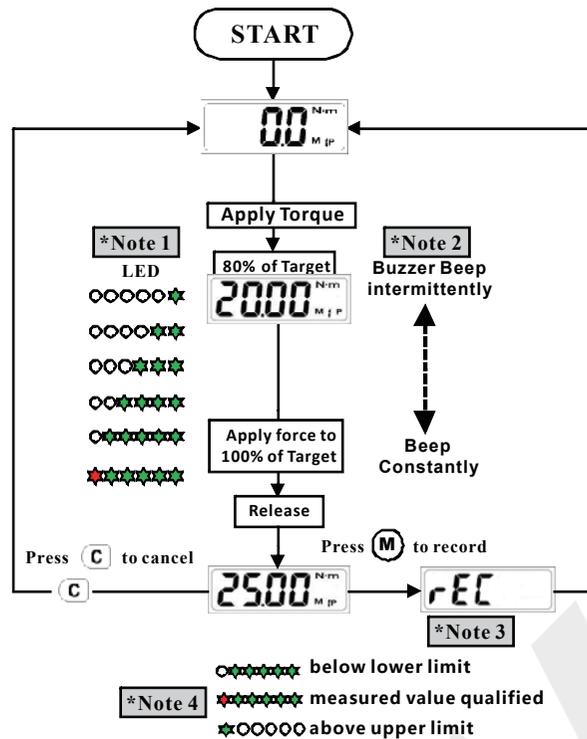


Note1：From 80%~99.5% of target, LED turn on one by one to all LED on.
Note2：From 80%~99.5% of target, buzzer beep intermittently to constantly.
Note3：If bluetooth is connected, press (M) and the wrench will attempt to transmit the measurement to the computer.
Note4：If the lower limit is not reached, 5 green LED lights are on, which means it is unqualified. If it exceeds the upper limit, 1 red LED will be on, which means it is unqualified.

## Keyboard signal output

After connecting the wrench with the computer's bluetooth, operate in peak mode and press the M key to transmit the measured value to EXCEL in real time. If the upper and lower limits are set, the data exceeding the upper and lower limits will not be output.

**◆ Toggle HID language operation**



Note1：After Power on Zero Reset.
Note2：During measuring and before apply force.