CHECKLINE DWA Series Digital Adjustable Spanner Owner's Manual

CHECKLINE®
MADE TO MEASURE

Contents

OWNER'S MANUAL
Digital Adjustable Spanner
DWA Series

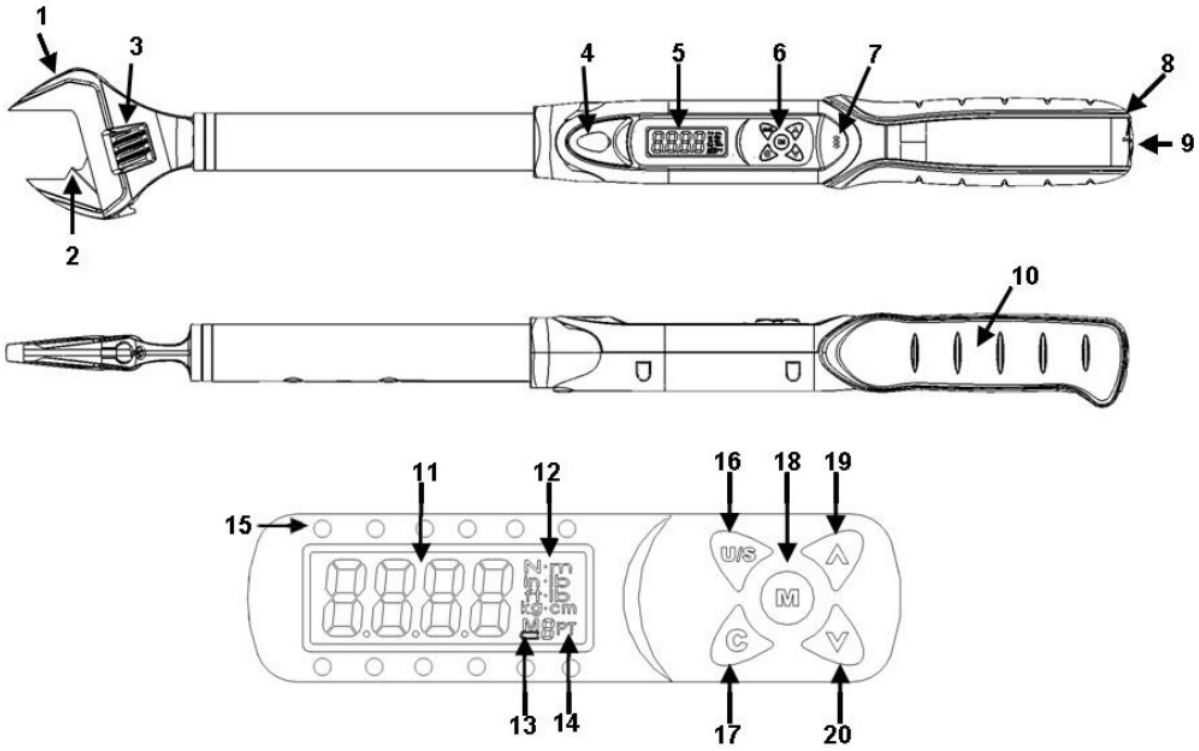
Dear Users

Thank you for using a digitally adjustable spanner. This manual will help you to use the many features of your new digital adjustable spanner. **Before operating the adjustable manner, please read this manual completely**, and keep it nearby for future reference.

MAIN FEATURES

- Digital torque value readout
- +/- 3% accuracy (20%~100% of F.S.)
- CW operation
- Peak Hold and Track Mode Selectable
- Buzzer and LED indicator for the 9 pre-settable target torques
- Four Units Selectable(N-m, ft-lb, in-lb, kg-cm)
- 50 or 250 data memory for recall and joint torque auditing
- Communication functions
- Auto Sleep after about 5 minutes idle
- Both AA and rechargeable batteries are compatible
- The “Moving Jaw” has a special design with the positioning portion for keeping the same constant distance with different size of bolts.(This patent has been approved by several countries)

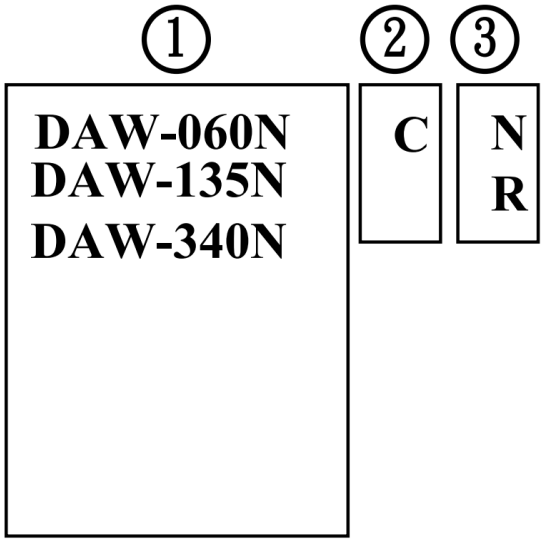
NAMES AND FUNCTIONS OF PARTS



1. Jaw	11. Torque Value
2. Positioning Portion	12. Units Selection
3. Knurl	13. Pre-setting No.
4. Communication Port	14. P(Peak Hold)/T(Track) Mode
5. LCD Display	15. LED Indicator
6. Buttons	16. Unit Selection/Setting Button
7. Buzzer	17. Power On/Clear Button
8. Battery Compartment	18. Pre-setting No. Selection Button
9. Battery Cap	19. Up Button
10. Anti-slip Handle	20. Down Button

SELECTION GUIDE

MODEL NO:



Model	Open Size (mm)	Max. Torque
DAW-060N	— 5 26	60 N-m / 44.24 ft-lb / 530.91n-lb / 612.2 kg-cm
DAW-085N	— 5 26	85N-m / 62.7 ft-lb / 752in-lb / 867 kg-cm
DAW-135N	5-26	135N-m / 99.5 ft-lb / 1195in-lb / 1378 kg-cm
DAW-135N	5-30	135N-m / 99.5 ft-lb / 1195in-lb / 1378 kg-cm
DAW-200N	5-30	200N-m / 147.5ft-lb l 17701n-lb / 2041 kg-cm
DAW-200N	10-41	200N-m / 147.5ft-lb l 1770in-lb / 2041 kg-cm
DAW-340N	10-41	340N-m / 250.7ft-lb / 3009in-lb / 3469 kg-cm

	Accuracy
C	+/-

	Communication
N	
R	

SPECIFICATIONS

Model No.	Max. Torque (N-m)	Torque Measuring Range (N-m))	Length (mm)
DAR'-060N	60	3-60	428
DAW-085N	85	4/2/85	428
DAW-135N	135	6.8-135	428

All Models		
Accuracy *1	CN	CR
	± 3%	
Data memory size	50	250
Communication *2	No	Yes
Bright LED	12 LEDs (2 Red+10 Green)	
he-setting No.	9 sets	
Operation Mode	Peak hold/Track	
Unit Selection	N-m, in-lb, ft-lb, kg-cm	
Head Type	Spanner	
Open End Size(mm)*3	5-27	
Button	5	
Battery. *4	AA X 2	
Operating Temperature	-10°C –60°C	
Storage Temperature	-20t —70°C	
Humidity	Up to 90% non-condensing	
Drop Test	1 m	
Vibration Test *5	10G	
Environmental test *6	Pass	
Electromagnetic compatibility test *7	Pass	

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

Model No.	Max. Torque (N-m)	Torque Measuring Range (N-m))	Length (mm)
DAR'-135N	135	6.8-135	525
DAR'-200N	200	10-200	525

All Models		
Accuracy *1	CN	CR
	+ 3%	
Data memory size	50	250
Communication *2	No	Yes
Bright LED	12 LED (2 Red+10 Green)	
Pre-setting No.	9 sets	
Operation Mode	Peak hold/Track	
Unit Selection	N-m, in-lb, ft-lb, kg-cm	
Head Type	Spanner	
Open End Size(mm)*3	5-30	
Button	5	
Battery. *4	AA X 2	
Operating Temperature	-10″C —60°C	
Storage Temperature	-20°C —70°C	
Humidity	Up to 90% non-condensing	
Drop Test	1 m	
Vibration Test *5	10G	
Environmental test *6	Pass	
Electromagnetic compatibility test *7	Pass	

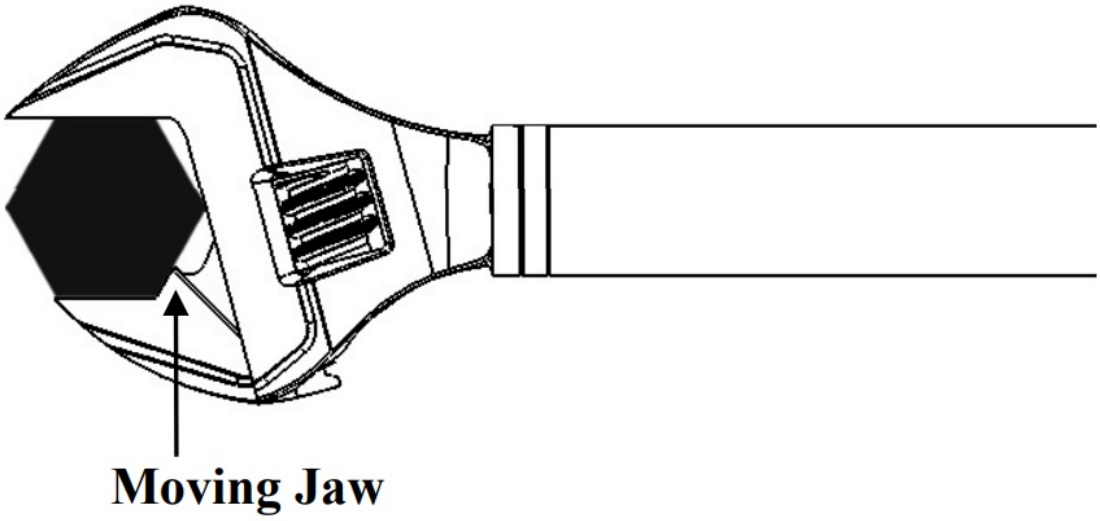
NOTE: Accuracy is guaranteed from 20% to 100% full scale.

Model No.	Max. Torque (N-m)	Torque Measuring Range (N-m))	Length (mm)
DAW-200N	200	10-200	650
DAW-340N	340	17-340	650

All Models		
Accuracy *1	CN	CR
	±3%	
Data memory size	50	250
Communication *2	No	Yes
Bright LED	12 LED (2 Red+10 Green)	
Pre-setting No.	9 sets	
Operation Mode	Peak hold/Track	
Unit Selection	N-m, in-lb, ft-lb, kg-cm	
Head Type	Spanner	
Open End Size(mm)*3	10-41	
Button	5	
Battery *4	AA X 2	
Operating Temperature	-10°C —60°C	
Storage Temperature	-20°C-70°C	
Humidity	Up to 90% non-condensing	
Drop Test	1 m	
Vibration Test *5	10G	
Environmental test *6	Pass	
Electromagnetic compatibility test *7	Pass	

NOTE: Accuracy is guaranteed from 20% to 100% fullscale.

Note:

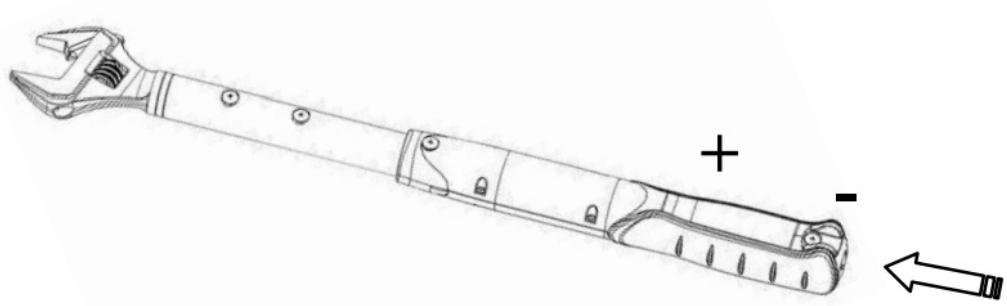
1. The accuracy of the readout is guaranteed from 20% to 100% of the maximum range + /- 1 increment. The torque accuracy is a typical value. The calibration point is at the middle line of the five anti-slip lines on the rubber grip. For keeping the accuracy, calibrate the spanner for a constant period of time (1 year).
2. Use a specially designed RS232 cable (accessory) to upload record data to the PC.
3. The “Moving Jaw” has a special design concept with “Positioning Portion” which keeps a constant distance from the center of the lots to the center of the handle when the bolt head is fixed to“Positioning Portion”. And this will keep the same accuracy with different sizes and specs of bolts.
4. 

   Two AA batteries (Toshiba carbon-zinc battery)
5. Horizontal and vertical test.
6. Environmental test:
   a. Dry heat
   b. Cold
   c. Damp heat
   d. Change of tempered. Impact (shock)
   f. Vibration
   g. Drop
7. : Electromagnetic compatibility test:
   a. Electrostatic discharge immunity (ESD)
   b. Radiated susceptibility
   c. Radiated emission

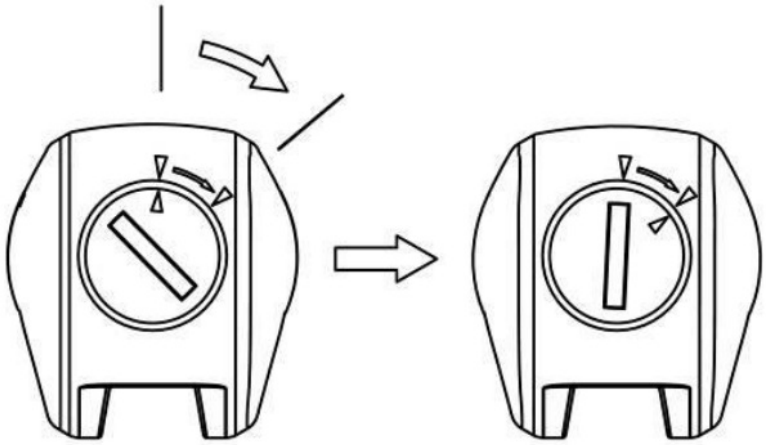
BEFORE USING THE SPANNER

ATTERY INSTALLATION

- Remove the battery cap.
- Insert two R6/AA batteries matching the -/+ polarities of the battery to the battery compartment.
- Put on the battery cap and rotate it tightly according to the following figures.



Direction of Battery and Cap Installation



POWER ON AND RESET THE SPANNER

- Press C to power on the digitally adjustable spanner.
- Usually, press C to reset the digitally adjustable spanner before using it.

ACTIVATION DURING SLEEP MODE

- The spanner will auto sleep after about 5 minutes idle for power saving. Press to wake up the spanner during sleep mode.

  CAUTIONS:

  During the communication period (send appears), the sleep function is disabled.

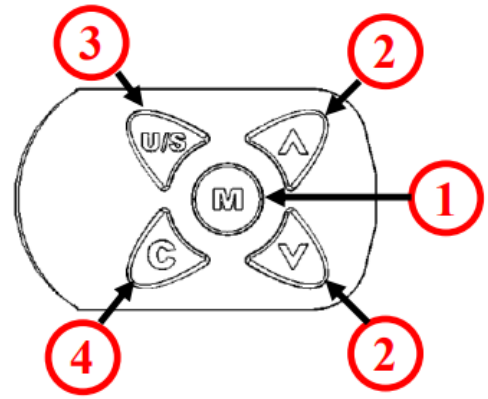
  RESETTING THE SPANNER

- Press C 7 together will reset the spanner.
- If the spanner does not function normally, Press together C 7 to reset the spanner.

LOW BATTERY VOLTAGE PROTECTION

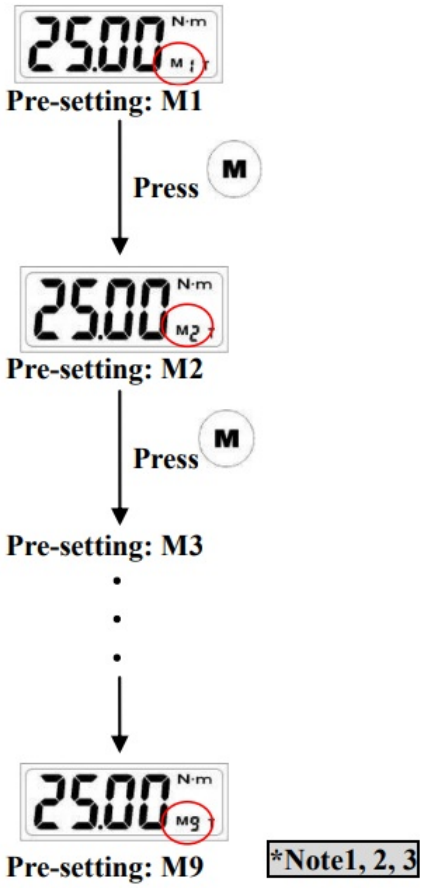
- If the battery serial voltage is in low voltage status, the wrench will display a battery symbol and then turn off after a while.

SETUP



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

STEP 1: PRE-SETTING NO.

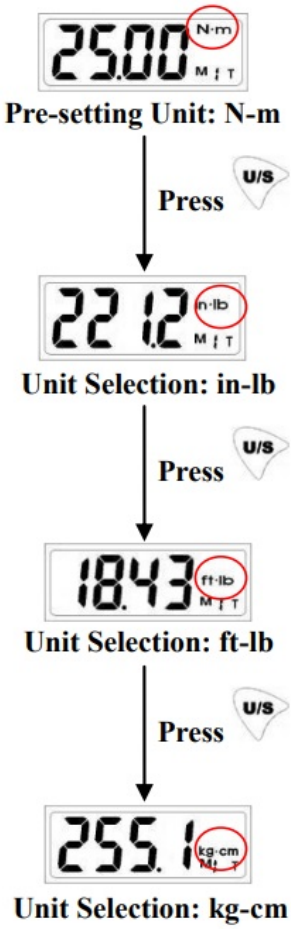


Note:

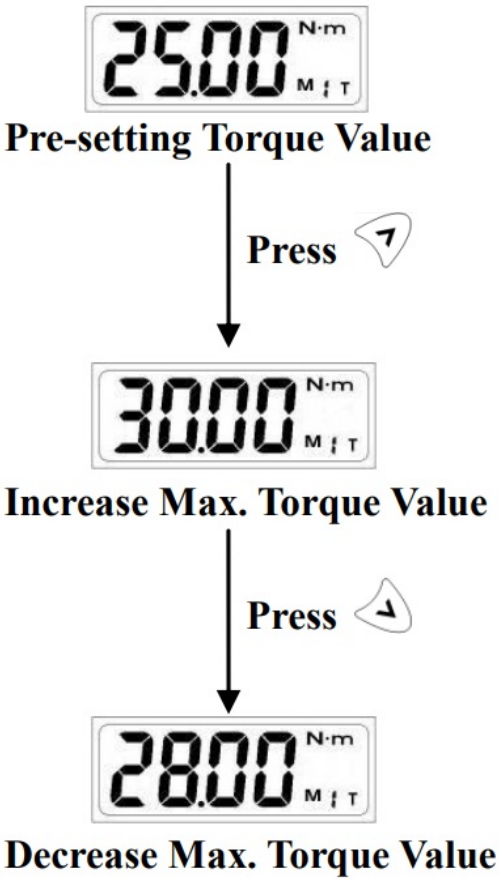
1. If 

is appeared, that means this spanner 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.

UNIT SELECTION



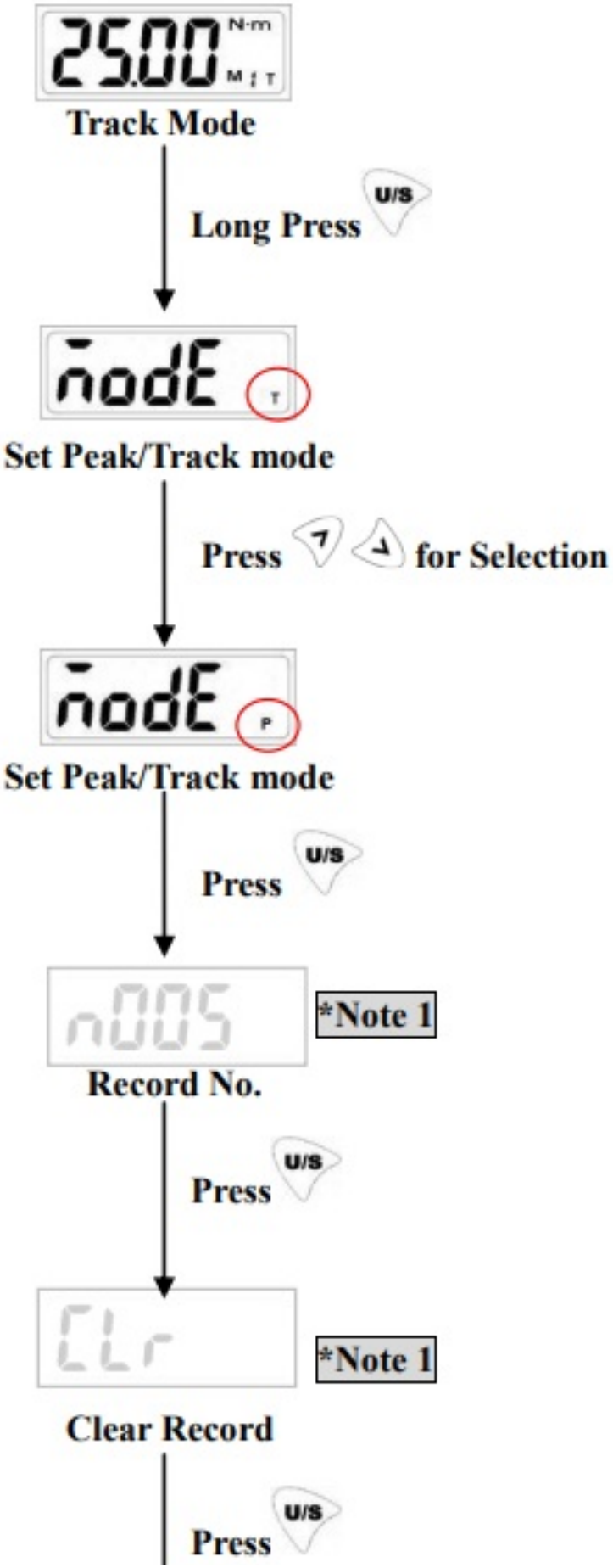
STEP 3: SET TORQUE VALUE



Note:

1. The “Unit Selection” is cyclic.

STEP 4: PEAK HOLD /TRACK MODE ELECTION

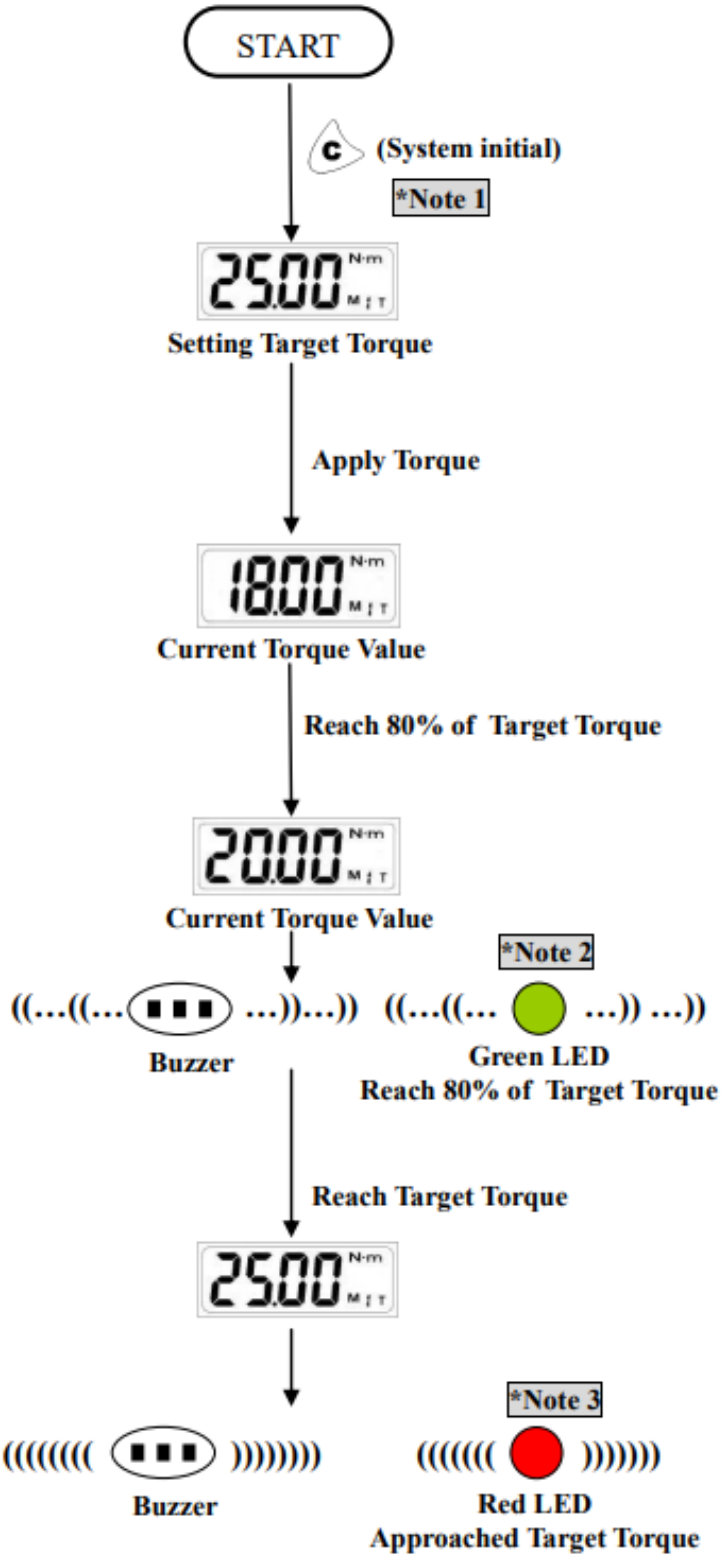


Peak Hold Mode

Note:

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

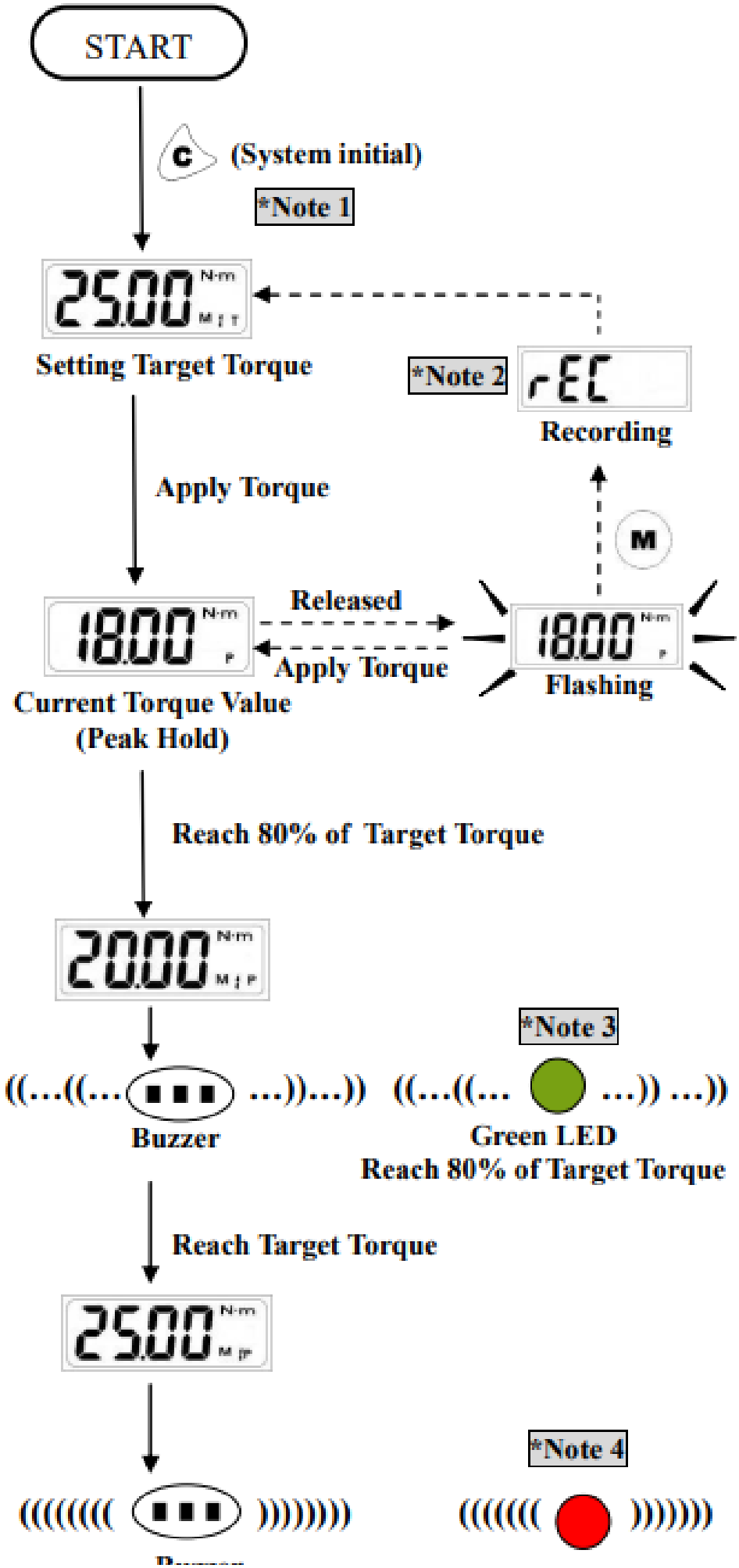
TRACK MODE OPERATION



Note:

1. If  it appeared, that means this wrench has ever been applied more than 110% of torque of the spec.
2. The green LED will be on for 80%, 85%, 90%, 95% and 97.5% of target torque.
3. When reaching the target torque, the green and red LED will be on at the same time.

PEAK HOLD MODE OPERATION



Buzzer

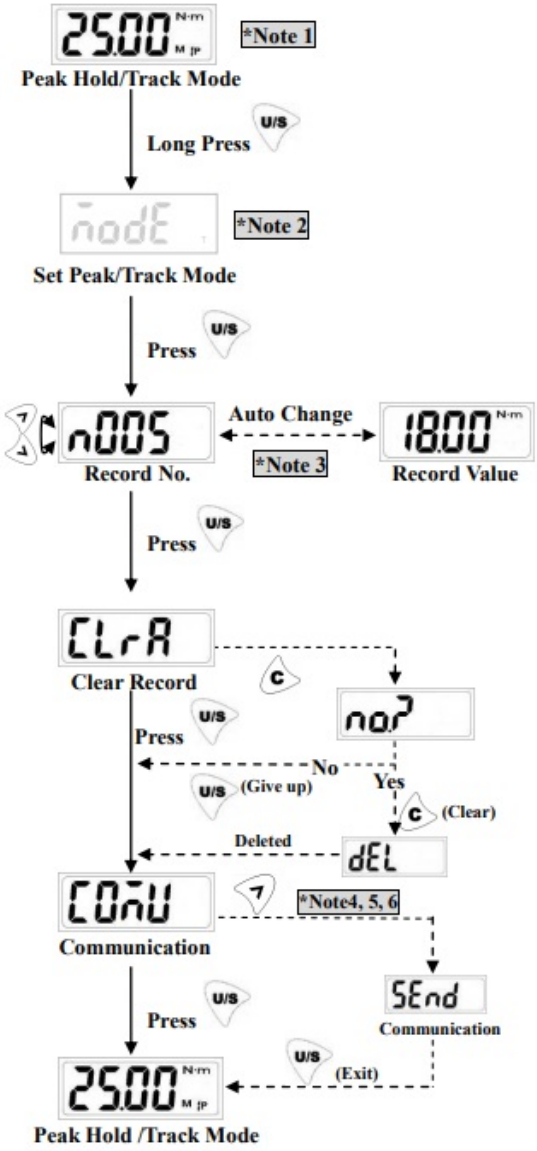
Red LED
Approached Target Torque

Note:

1. If 

is appeared, that means this wrench has ever been applied more than 110% of torque of the spec
2. If 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. The green LED will be on for 80%, 85%, 90%, 95% and 97.5% of target torque.
4. When reaching the target torque, the green and red LED will be on at the same time.

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  and please go to the next step.
3. If the record is empty, it will show.
4. This function is not supported on all types of models.
5. Communication mode is for uploading record data to PC.
6. Communication mode is also for calibration of torque spanner. Please contact your local dealer for more information.

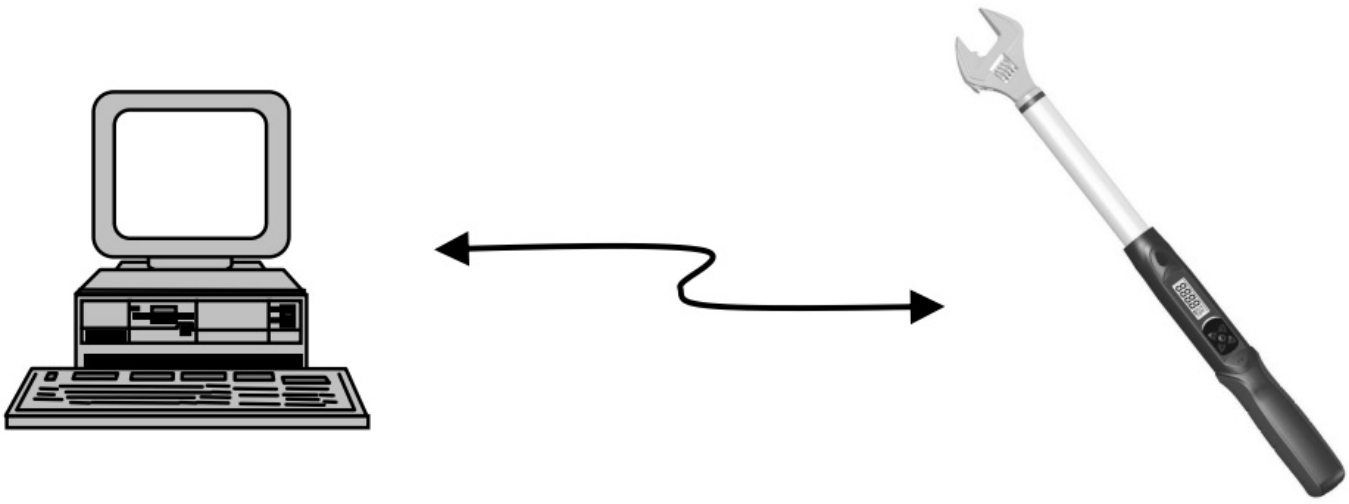
COMMUNICATION

Precaution:

1. Communication function is only on some models. Check the model and its specification before using the communication function.
2. Do not insert the plug of communicable into the torque wrench that does support the communication function.

CONNECTING COMMUNICATION CABLE

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



UPLOADING RECORD DATA

- Make sure the connection between PC and spanner is normal.
- Press  together to reset the spanner.
- Change the spanner operation mode to “Send”. (Refer to “Peak Hold Mode Recorded Value Review ” section)
- Use PC to start the uploader program.
- In the 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 detail operations.

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 loss of accuracy.**
2. Do not shake violently or drop the 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 grasp the center of the handle. Do not apply load to the end of the handle.

BATTERY MAINTENANCE

1. When the spanner 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 too 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.

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Documents / Resources

	**CHECKLINE DWA Series Digital Adjustable Spanner** [pdf] Owner's Manual DWA Series, Digital Adjustable Spanner, Adjustable Spanner, DWA Series, Spanner