

# Owner's Manual & Safety Instructions

**Save This Manual** Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

21j

# ICON<sup>®</sup>

## PROFESSIONAL DIGITAL ANGLE TORQUE WRENCH 1/2" DRIVE



56683

Visit our website at: <http://www.harborfreight.com>  
Email our technical support at: [productsupport@harborfreight.com](mailto:productsupport@harborfreight.com)

When unpacking, make sure that the product is intact and undamaged. If any parts are missing or broken, please call 1-888-866-5797 as soon as possible.

Copyright© 2020 by Harbor Freight Tools®. All rights reserved.

No portion of this manual or any artwork contained herein may be reproduced in any shape or form without the express written consent of Harbor Freight Tools. Diagrams within this manual may not be drawn proportionally. Due to continuing improvements, actual product may differ slightly from the product described herein. Tools required for assembly and service may not be included.

### **⚠WARNING**

Read this material before using this product. Failure to do so can result in serious injury. **SAVE THIS MANUAL.**

## Specifications

Torque Range	12.5 - 250 ft-lb
Drive	1/2"
Clockwise Accuracy	± 2%
Counterclockwise Accuracy	± 3%
Battery	3 AA (1.5V)

## Important Safety Information



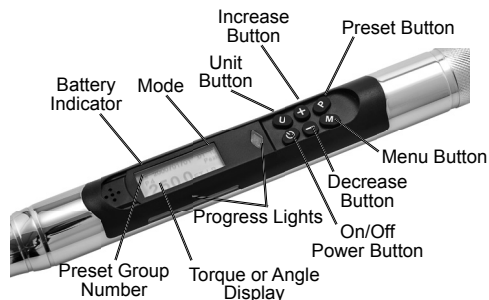
### **WARNING** Read all safety warnings and instructions.

*Failure to follow the warnings and instructions may result in injury.*

### **Save all warnings and instructions for future reference.**

1. Wear ANSI-approved safety goggles during use.
2. Do not use for loosening fasteners.
3. Use only within rated torque range.
4. Use as intended only. Do not use as hammer or pry bar.
5. Do not use handle extension to increase force. Do not use as a breaker bar.
6. Do not use a Torque Wrench that has been dropped. Test before putting back into use.
7. Have the Torque Wrench calibrated and serviced only by a qualified technician.
8. Inspect before every use; do not use if damaged or if parts are loose.
9. Keep away from children.
10. Use only sockets with the correct drive and rated to at least the torque that will be applied to it.
11. Do not mix old and new batteries. Do not mix alkaline, standard, or rechargeable batteries. Position batteries in proper polarity. Do not use swollen or leaking batteries.
12. The warnings, cautions, and instructions in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

## Operation



**Figure A: Layout**

## Controls

---

**U** - Unit Button: Cycle through available Torque Units (ft-lb, in-lb, nm, and kgm), Angle Mode, or Torque then Angle.

**On/Off** - Power Button: Press to turn on Wrench. Press and hold for 3 seconds to turn off Wrench. Wrench will also automatically turn off after 2 minutes of non-usage.

**M** - Menu Button: Press to enter menu.

**+/-** - Increase and Decrease Buttons: Use to increase or decrease torque and angle settings. Also used to navigate menu.

**P** - Preset Button: Used to reset values. After adjusting settings (Torque Value, Torque Units, and Mode), press Preset Select button to set as a preset. After using the Torque Wrench, applied values can be cleared by hitting Preset Button.

## Torque Mode, Angle Mode, Torque then Angle Mode

---

**CAUTION!** Wear ANSI-approved safety goggles during use.

1. In **Torque Mode**, when force is applied, the LCD display will show real applied Torque Value.
2. Applied Torque Value will flash for ten seconds. Torque can be applied until reaching set target. If no torque is applied, screen will revert to displaying target preset values.

**Note:** Flashing can be bypassed by hitting Preset Button. This will return LCD display to preset values.

3. If Torque reaches the set value, the Wrench will vibrate.
4. Press the Unit Button to cycle through to **Angle Mode**. In Angle Mode, the LCD display will show the actual applied Angle Degrees.

5. The display will flash for ten seconds. During this time, force can be applied until reaching set target. If no force is applied, the screen will revert back to preset values.
6. If Angle Degrees reaches set value, Wrench will Vibrate.
7. Press Unit Button to cycle through to **Torque then Angle Mode** (displayed as "T then A" mode on LCD display).
8. In Torque then Angle Mode, you can preset Torque Value. When Wrench reaches preset Torque Value, it will automatically switch to Angle Mode (angle preset value must be individually set in Angle Mode first).

## Progress Lights

---

1. The Progress Lights indicate how close the actual applied value is to the preset value.
2. Progress lights will turn red when real value is between 40% and 79.9% of preset value.
  - a. First Progress Light will light up when actual value is between 40% and 52.9%.
  - b. Second Progress Light will light up when actual value is between 53% and 65.9%.
  - c. Third Progress Light will light up when actual value is between 66% and 79.9%.
3. Progress Lights will turn yellow when real value is between 80% and 95.9% of preset value.
  - a. First and second Progress Lights will turn off. Third Progress Light will turn on when actual value is between 80% and 84.9%.
  - b. Fourth Progress Light will turn on when actual value is between 85% and 89.9%.
  - c. Fifth Progress Light will turn on when actual value is between 90% and 95.9%.
4. Progress Lights will turn Green when the actual value is above 96% of the preset value.
  - a. Third and fifth Progress Lights will turn off. Fourth Progress Light will turn green when actual value is between 96% and 99.9%.
  - b. Fifth Progress Light will turn on when actual value is between 100% and 103.9%.

**Note:** Wrench will vibrate if actual value hits 100%.

- c. Sixth Progress Light will turn on when actual value is above 104%. Lights will begin flashing when applied value is above 104%.

# Menu Navigation and Settings

---

1. Press the Menu Button to display the Menu on the LCD Screen.
2. Use the Increase and Decrease Buttons (+/-) to move up or down between options. Press the Menu Button to select an option.

## Peak and Track Mode

---

1. To change between Peak and Track Mode, open the Menu, select the Mode Submenu, and select the desired mode.
2. Peak Mode: Records the highest actual value applied. After force is applied, LCD display will flash for ten seconds before saving the peak value to its memory. Memory can be reviewed or cleared by accessing the Menu.
3. Track Mode: Displays the actual value, but does not save the value to memory.

## Adjusting Calibration Interval

---

1. The Calibration Reminder can be adjusted from the Menu. Select "Cal Required" to select Date, Cycles, or Off.
  - a. Date: Select between 6 or 12 months. Confirm selection to save choice.
  - b. Cycles: Settings can be adjusted to a certain cycle count, but it must be more than current cycle count. Use the Increase and Decrease Buttons (+/-) to adjust cycle count.
2. The next time the "Cal Required" Submenu is viewed, the selected setting will be displayed.

**Note:** Current cycle count can be viewed by selecting "Cycle Count" from the Main Menu.

## Additional Settings

---

1. Head Length can also be adjusted from the Menu. Use the Unit Button to switch between mm and in for Head Length.
2. Backlight settings can be changed from the Menu. Backlight is always on by default but can be changed to Auto or Off. In Auto, the Backlight will turn on when any button is pressed and remain on for twenty seconds.
3. Date and time can be adjusted from the Menu. Date is in Year/Month/Day format and time is in 24-hour HR:MIN:SEC format.
4. LCD Contrast can be adjusted from the Menu. Use the Increase and Decrease Buttons (+/-) to adjust the contrast (0 - 40).
5. Torque Wrench Key Beep can be turned on or off from the Menu. Use the Increase and Decrease Buttons (+/-) to navigate to your option and then use the Menu Button to select it.
6. The Vibration function can be turned on or off from the Main Menu.
7. Sleep Time can be adjusted from the Menu. Wrench is preset to sleep after two minutes; this time can be increased up to 8 hours.
8. The Language and Decimal Mark can be changed from the menu. After Selecting the Language Submenu, select between English and Spanish. After a language is selected, select between comma or point for the decimal mark.
9. Additional Information can be viewed from the Menu. The Leave Factory Date (LFD), the Calibration Date (CAL), and the In Service Date (ISD) will be displayed in Year/Month/Day format.

## Over Information

---

1. If Torque is over 110% of full value, value will be saved, LCD screen will show "OVER," and Wrench will vibrate continuously.
  2. Press the On/Off Power Button to reset Wrench.
  3. Over Information can be viewed by pressing the Menu Button and selecting "Over Info."
    - a. Counter: The number of times the Wrench has gone over max torque (110%).
    - b. Torque: The max torque value ever reached.
    - c. Date: The date and time the max torque was reached.
- Note:** If the Wrench goes over 125% of the full value, a reminder to recalibrate the Wrench will appear after turning on the Wrench (until the Wrench is recalibrated).
- Note:** If the Wrench goes over 150% of the full value, the LCD display will show "REPAIR" and vibrate continuously. Press the On/Off Power Button to shut down the Wrench. The Wrench must be repaired only by a qualified technician.

## Replacing Batteries

---

1. When battery level is low, LCD Screen will display "Replace Battery" message.
2. Remove Cap (22) from Wrench. Remove old batteries (if applicable) and dispose of properly.
3. Place 3 AA (1.5 V) batteries in correct polarity.
4. Replace cap before using the Wrench.

## Maintenance and Servicing



Procedures not specifically explained in this manual must be performed only by a qualified technician.

### **CAUTION**

To prevent injury from tool failure:

**Do not use damaged equipment.**

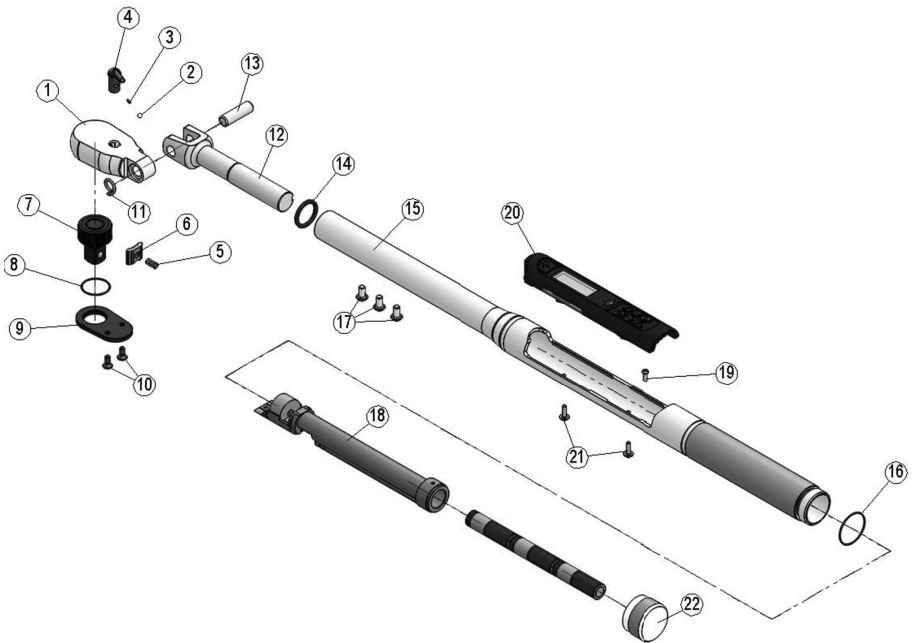
**If abnormal noise or vibration occurs, have the problem corrected before further use.**

1. **BEFORE EACH USE**, inspect the general condition of the tool. Check for:
  - loose hardware,
  - misalignment or binding of moving parts,
  - cracked or broken parts, and
  - any other condition that may affect its safe operation.
2. **AFTER USE:**
  - Pull back Lock Ring and set Wrench to the lowest torque setting.
  - Wipe Wrench with a clean cloth. Do not use liquid on the cloth or immerse wrench in liquid.
3. **EVERY 6 MONTHS**, have the Torque Wrench calibrated and serviced by a qualified technician.

## Parts List and Diagram

Part	Description	Qty.
1	Ratchet Housing	1
2	Steel Ball Ø3.5	1
3	Switch Spring	1
4	Switch Lever	1
5	Pawl Spring	1
6	Pawl	1
7	Square Drive	1
8	Square Drive O Ring	1
9	Cover Plate	1
10	Cover Plate Screw	2
11	Washer	1

Part	Description	Qty.
12	Ratchet Beam	1
13	Neck Pin	1
14	Ratchet Beam O Ring	1
15	Tube	1
16	Tube O Ring	1
17	5 Star Screw, A-12	3
18	Battery Housing	1
19	Hex Socket Screw, M3X4	1
20	PCB Modular Set	1
21	5 Star Screw, D13	2
22	Cap	1



## PLEASE READ THE FOLLOWING CAREFULLY

---

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

**Record Product's Serial Number Here:** \_\_\_\_\_

**Note:** If product has no serial number, record month and year of purchase instead.

**Note:** Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts. Specify UPC 792363566834 when ordering parts.

## Lifetime Guarantee

Harbor Freight Tools guarantees to the original purchaser that this ICON™ torque wrench shall be free from defects in materials and workmanship (excluding calibration) for its useful life. Additionally, this ICON™ torque wrench has been calibrated at the factory and will, when new and unused, meet the out-of-the-box accuracy standard described in the certificate of calibration for a period of 90 days from the date of purchase.

If your ICON™ torque wrench does not perform in accordance with this lifetime guarantee, Harbor Freight Tools will, at its option and expense, repair or replace (or elect to refund the purchase price if we cannot repair or replace), your ICON™ torque wrench, which shall be your sole and exclusive remedy. To obtain lifetime guarantee service, ICON™ products must be returned with proof of purchase to a Harbor Freight Tools retail store or returned by mail after contacting Harbor Freight Tools Product Support at 1-888-866-5797 and receiving a return authorization.

This lifetime guarantee excludes normal wear and tear and does not apply to products subjected to misuse, use or operation other than for the intended purpose or not in accordance with the product manual, abuse, accident, modification or alteration, unauthorized repair, improper storage, neglect, or lack of maintenance (including failure to obtain professional recalibration of the ICON™ torque wrench every six months). This lifetime guarantee is in lieu of all other guarantees. Harbor Freight Tools is not liable for incidental, indirect, special, consequential, or punitive damages or costs arising from the use of this product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you. This lifetime guarantee gives you specific legal rights, and you may also have other rights which vary from state to state.



26677 Agoura Road • Calabasas, CA 91302 • 1-888-866-5797