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# TSD

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Digital Torque Screwdriver

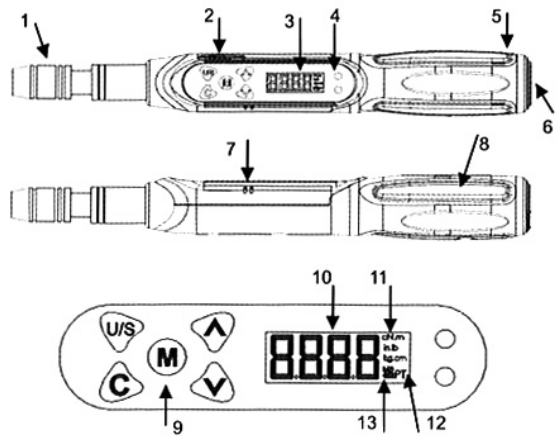


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## Thank you!

Dear Customers,  
Thank you for purchasing the TSD digital torque screwdriver.  
This instruction manual will help you to use the many features of your new digital torque screwdriver. Before operating the torque screwdriver, please read this manual completely, and keep it nearby for future reference.

## NAMES & FUNCTIONS OF PARTS



- |                              |                                     |
|------------------------------|-------------------------------------|
| 1. Autolock Bit Holder       | 8. Calibration Mark <b>Not Used</b> |
| 2. Comm Port <b>Not Used</b> | 9. Function Keys                    |
| 3. LCD Display               | 10. Torque Display                  |
| 4. Go / No-Go Indicators     | 11. Unit indicator                  |
| 5. Anti-slip handle          | 12. Peak / Track Mode Indicator     |
| 6. Battery Cover             | 13. Memory Number                   |
| 7. Buzzer                    |                                     |

## MAINTENANCE AND STORAGE

1. Do not Over-torque (105% of Max. torque capacity). Over-torquing can damage screwdriver or cause it to lose accuracy.
2. If Er0 is displayed when the wrench is powered on, it indicates that it has been overloaded and should be returned to the factory for service.
3. Remove battery when storing for long period of time.
4. Do not use this screwdriver as a hammer.
5. Do not expose to excessive heat, humidity, or direct sunlight.
6. Do not use the screwdriver near water.
7. If the screwdriver gets wet, wipe it with a dry towel as soon as possible. The saltwater can be especially damaging.
8. Do not use organic solvents, such as alcohol or paint thinner when cleaning the screwdriver.
9. Keep this screwdriver away from magnets.
10. Do not expose this screwdriver to dust or sand as this could cause serious damage.
11. Do not apply excessive force to the LCD panel.

## WARRANTY

ELECTROMATIC Equip't Co., Inc. expressly warrants to its buyer for one (1) year from the date of delivery that the goods sold are free from defects in workmanship and materials. ELECTROMATIC Equip't Co., Inc. will, at its option, repair or replace or refund the purchase price of goods found to be defective. This remedy shall be the buyer's sole and exclusive remedy. Any modification, abuse, exposure to corrosive environment or use other than intended will void this warranty. This warranty is in lieu of all other warranties, including implied warranties of merchantability and fitness for an intended purpose. In no event shall ELECTROMATIC Equip't Co., Inc. be liable for any incidental and consequential damages in connection with goods sold or any part thereof.

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## TARGET TORQUE INDICATION

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The TSD screwdriver will alert you to reaching 90% of the target value by an audible beep and a green LED light, when you hit 100% the beep will turn to a steady tone. When the torque applied is greater than the target a red light will illuminate above the green.

## MEMORY

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The TSD can store up to 50 readings in memory for recall on the display.

To store a reading in memory set the screwdriver to **P** (peak) mode and take a reading. When the reading is on the display press the **M** key to store the reading and zero the screwdriver.

To recall stored readings press and hold the **U/S** key for 2 seconds, the display will show **MODE**, then press **U/S** key one time, the display will alternate between **n0XX** (XX = the reading number) and the stored reading. Press the up / down arrows to toggle between readings. Press the **U/S** key twice to return to measurement mode.

To clear the stored readings press and hold the **U/S** key for 2 seconds, the display will show **MODE**, then press **U/S** key two times. CLR will be shown on the display. Press the **C** key twice to confirm the deletion of the readings. **WARNING**, this procedure will delete the entire contents of the memory, it is not possible to delete individual readings.

## CALIBRATION

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We recommended annual calibration of the TSD Screwdriver to ensure it is measuring according to factory specifications. For calibration service please return to:

ELECTROMATIC Equipment Co., Inc  
Attn Calibration Department  
600 Oakland Ave  
Cedarhurst, NY 11516

Please visit [www.checkline.com/repair](http://www.checkline.com/repair) for complete instructions and services rates.

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## SPECIFICATIONS

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<b>Accuracy*</b>	<b>Clockwise:</b> ±2% <b>Counterclockwise:</b> ±3%	
	The accuracy of displayed value is guaranteed from 20% to 100% of maximum range ± least significant digit.	
<b>Capacity</b>	<b>TSD-50</b> 50 cN-m 4.42 lb-in 5.1 Kg-m	<b>TSD-400</b> 400 cN-m 35.39 lb-in 40.82 kg-cm
<b>Resolution</b>	<b>TSD-50</b> 0.1 cN-m 0.01 lb-in 0.01 Kg-m	<b>TSD-400</b> 0.1 cN-m 0.01 lb-in 0.01 Kg-m
<b>Presets</b>	9 Programmable setpoints with both audible beep and Green/Red LED indicator	
<b>Memory</b>	50 readings	
<b>Operating Modes</b>	Peak and Track	
<b>Drive</b>	1/4 Inch - 6.35 mm Hex	
<b>Power Supply</b>	1x AAA Battery (included)	
<b>Battery Life</b>	12 Hours of continuous operation	
<b>Auto Off</b>	Automatic power off after 5 minutes of non-use	
<b>Operating Temp.</b>	-10°C - 60°C	
<b>Storage Temp.</b>	-20°C - 70°C	
<b>Dimensions</b>	Length (without bit): 200mm / 8in Diameter at largest point: 29.5mm / 1.16in	
<b>Weight</b>	430g	
<b>Warranty</b>	1 Year	

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## BEFORE USING THE SCREWDRIVER

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### Battery Installation

- Remove the battery cover
- Insert one (1) AAA batteries with positive end facing the front of the screw driver.
- Reinstall battery cover and rotate to lock it in place. Take care to line up arrows on cap and back of screwdriver when installing.



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## POWER ON AND RESETTING THE SCREWDRIVER

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- Press **C** to power on the screwdriver
- Press **C** to zero the torque screwdriver before use
- **NOTE:** After pressing **C** the target torque value will be displayed

### ATTENTION:

1. If an external force is applied to the screwdriver during power-on or zeroing an initial torque offset will exist in memory.
2. The measuring unit and operating mode (track / peak) are stored in memory. Once set they will be permanently stored.

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## SLEEP MODE

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The screwdriver will automatically go to sleep after 5 minutes of non-use. Press **C** to wake the screwdriver from sleep.

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## INSTALLING BIT

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The TSD screwdriver uses standard 1/4" (6.35mm) hex bits. To install a bit, pull the collar of the auto-locking bit holder forward, then insert the bit. The collar will slide back and the bit will lock in place. To remove the bit pull the collar forward and it will release.

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## SELECTING UNITS OF MEASURE

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The TSD screwdriver can display measurements in Centinewton Meters (**cN-m**), Pound-Inch (**lb-in**) and Kilogram Centimeter (**Kg-cm**). The selected measuring unit is displayed right side of the display.

Press the **U/S** to switch between measuring units.

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## SELECTING TRACK / PEAK MODE

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The TSD can display torque in **TRACK** or **PEAK** mode. When in **track** mode the screwdriver will display the target torque while there is no torque applied, when torque is applied the screwdriver will display real-time torque value until pressure is removed, then the display will show the target value. In peak mode the screwdriver will display the target torque while there is no pressure applied, when pressure is applied the screwdriver will display and hold the highest value measured until pressure is removed from the screwdriver then applied again or the **C** (zero) key is pressed.

To select TRACK or PEAK mode on your TSD screwdriver press and hold the **U/S** key for 2 seconds, the display will show **MODE**, then press the up or down arrow key to select between PEAK or TRACK mode (indicated by a small P or T in the bottom right corner). Then press the **U/S** key three times to confirm your selection and return to measurement mode.

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## SETTING TARGET TORQUE

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The TSD can store 9 preset target torque values. The preset value is displayed in the screen after **C** is pressed. Press the UP / DOWN arrow keys to set the target value. To switch between the 9 presets, press the **M** key. The preset number is displayed in the bottom right of the display next to the letter M. The preset will save both target torque and unit of measure when the screwdriver is powered off.