User Manual of Product 1:

Wheeler Digital Firearms Accurizing Torque Wrench with Interchangeable Bits and LCD Display for Firearm Maintenance and Gunsmithing

User Manual of Product 2:

Wheeler Engineering Level Level Level Scope Mounting Leveling Tool with Magnetic Base and Adaptable Design for Scope Mounting, Gunsmithing and Maintenance

DIGITAL

Wheeler® Engineering
Fine Gunsmithing Supplies

THE F.A.T. Wrench®
FIREARM ACCURIZING TORQUE WRENCH

Instructions #1056501 Rev. D
Product #710909





CONTENTS:
Digital F.A.T.Wrench®
9 drive bits
1 square drive adapter
2 batteries
Storage case

STOP!

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www.aob.com

Have an issue with this product?
DO NOT USE IT OR RETURN IT BEFORE CONTACTING CUSTOMER SERVICE.

Please contact Customer Service
by filling out the form on the contact page of our website at
www.wheelertools.com/ or call us at: 1-833-784-5523.

NOT WARRANTED AGAINST MISUSE, ABUSE, OR COMMERCIAL USE.

Limited Warranty

For complete warranty terms and conditions, please visit www.wheelertools.com/warranty-info.html or contact Customer Service at 1-833-784-5523.

The Wheeler® Engineering Digital F.A.T. Wrench® is a hand driven torque wrench with a digital LCD that is very useful for applying the necessary torque to most firearm and firearm accessory fasteners. The Digital F.A.T. Wrench® features an ergonomic rubber overmolded handle, a standard ¼" hex drive tip, and can be used to apply torque from 15-100 lb-in at 0.1 lb-in increments. Units of measurement can be changed from lb-in to kg-cm or N-m. The digital display is capable of two different modes. The "LIVE" mode displays the torque being applied and increases/decreases as the torque load changes. The "PEAK" mode displays the highest torque applied and will hold this value on the LCD for approximately 5 seconds.

Common uses include, but are not limited to; installation of scope ring and base screws, action screws and trigger guard screws. With proper care and use, the Digital F.A.T. Wrench® will provide you with a lifetime of reliable service. Package includes: Digital F.A.T. Wrench®, 9 drive bits, 1 square drive adapter, and a storage case.

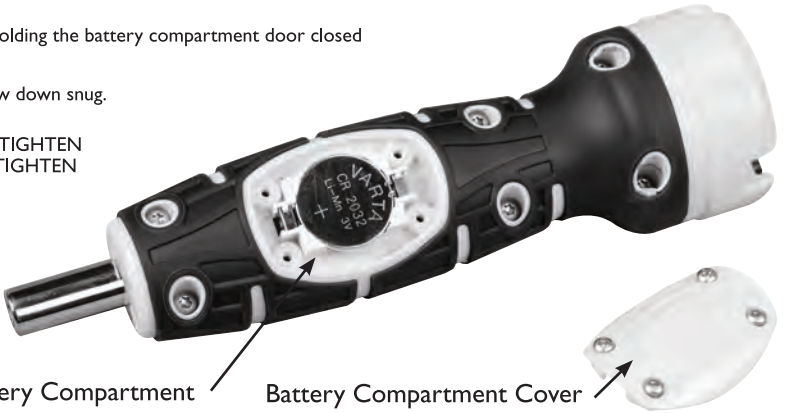
BATTERY AND INSTALLATION

The Digital F.A.T. Wrench® uses a CR 2032 Lithium coin battery.

To install the battery:

1. Unscrew the 4 screws holding the battery compartment door closed
2. Install new battery
3. Replace cover and screw down snug.

NOTE: DO NOT OVER TIGHTEN SCREWS. ONLY HAND TIGHTEN THE 4 COVER SCREWS.

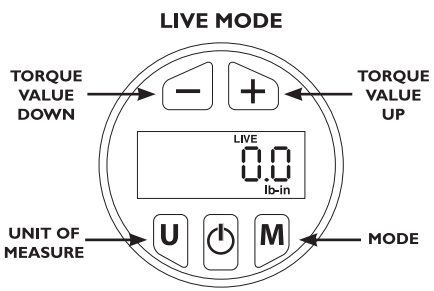


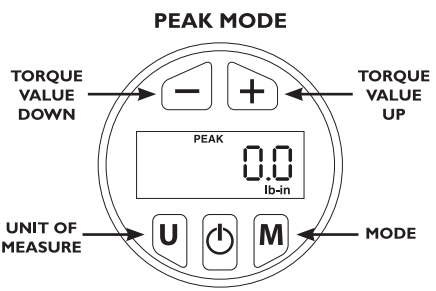
ADJUSTING AND USING THE DIGITAL F.A.T. WRENCH

1. To power the unit ON, press the ⏻ bottom middle button once. The same button will power the unit OFF.

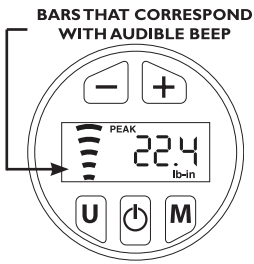
2. Select the units of torque measurement by depressing the bottom left button labeled "**U**". By default, the units are set to lb-in and can be changed to kg-cm or N-m.

3. Select the display mode by depressing the bottom right button labeled "**M**". The "LIVE" mode displays the torque being applied and increases/decreases as the torque load changes. The "PEAK" mode displays the highest torque applied and will hold this value on the LCD for approximately 5 seconds.





5. Select the target torque value by depressing either of the top two buttons labeled "**-**" and "**+**". Depressing the top left button labeled "**-**" will decrease the torque setting. Depressing the top right button labeled "**+**" will increase the torque setting. Pressing and holding either button will rapidly change the value. When the lowest or highest setting is reached, it will loop to the highest or lowest setting and continue until the button is released.



6. Insert the bit needed into the hex drive tip. The Digital F.A.T.Wrench® can now be used to apply torque to the fastener.

7. Tighten the fastener by turning clockwise. As the fastener begins to get tight, you will see the number displayed on the LCD increase as well as the number of bars on the far left side. When 80%-95% of the target torque is reached a slow audible beep can be heard. When 95%-105% of the target torque is reached a solid audible tone can be heard. If you exceed 105% of the target torque a fast audible beep can be heard.

NOTE: Holding at the target torque setting will cause the speaker to draw more power and may result in premature low battery life.

NOTE: It may be difficult for the hearing impaired to detect the high frequency tone produced by the internal speaker. Using the value displayed on the LCD is the best method to confirm accurate torque application.

8. After use, the Digital F.A.T.Wrench® should be turned off and placed in its protective case. The last Units, Display Mode, and Target Torque Value will be stored in memory and ready to use when the device is turned on again.

NOTE: If the device is not used for 5 minutes it will automatically turn off to save the battery. When turned back on, all previous settings will be active.

⚠ WARNING

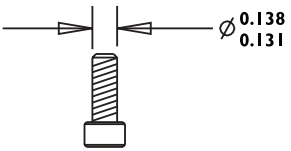
- Always practice safe gun handling procedures when working on firearms.
- Always be sure the firearm being handled is unloaded.
- Most work on firearms should be performed by a qualified gunsmith.
- Perchlorate Material - Special handling may apply, see www.dtsc.ca.gov/hazardouswaste/perchlorate

- This product may contain a CR coin cell lithium battery. The State of California requires the following disclosure statement: "Perchlorate Material - special handling may apply. See www.dtsc.ca.gov/hazardouswaste/perchlorate"

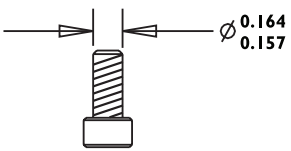
TORQUE RECOMMENDATIONS:

ALWAYS follow torque specifications provided by scope base or ring manufacturer.
Before applying torque to any fastener, consider whether the fastener is lubricated or dry/degreased. Lubricated fasteners require much less torque to achieve consistent clamping power compared to dry un-lubricated fasteners. Keep in mind that most fasteners used for installing gun accessories are coated with oil to prevent corrosion. This oil as well as removable thread-locking compounds that are often applied to screw threads should be considered as lubricant.

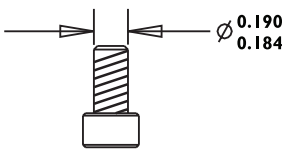
NOTE: The values tabulated on the next page are for high grade (SAE Grade 8 or equivalent) steel fasteners. If you are unsure about the size or quality of the fastener you are installing, start with a lower torque value and only increase to the maximum torques listed if you feel comfortable doing so. Bits are considered "use" items and are not warrantied against bending or breakage.



6-32
6-40
6-48



8-32
8-36
8-40



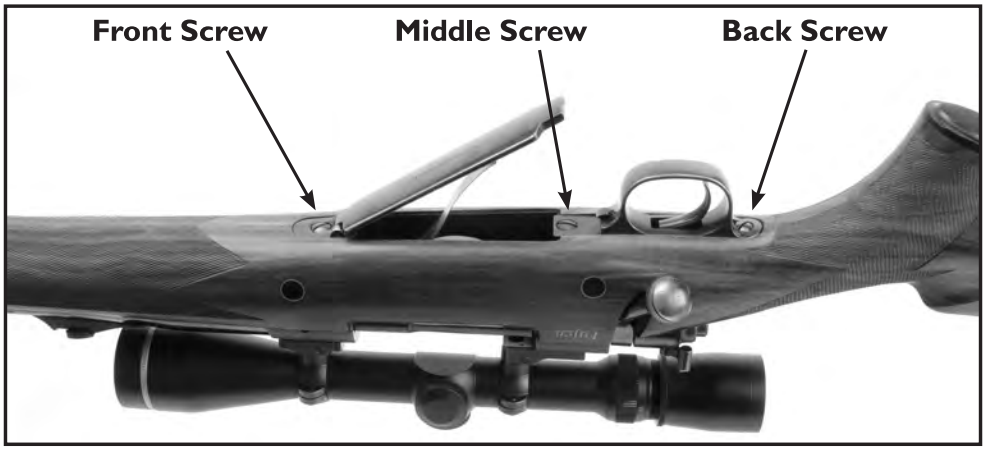
10-24
10-32

Nominal Screw Sizes	Common Uses For These Screws	Screw Diameter at Threads (in)	Lubricated Fastener Torque (in.-lbs.)
6-32 UNC 6-40 UNF 6-48 FINE	Commonly used on scope base mounts	0.131" - 0.138"	18 - 20
8-32 UNC 8-36 UNF 8-40 FINE	Commonly used on scope rings	0.157" - 0.164"	28 - 30
10-24 UNC 10-32 UNF	Commonly used on scope base windage screws	0.184" - 0.190"	40 - 45

TIPS

- The Digital F.A.T.Wrench® is used like a screwdriver; it is not a ratcheting, click, or clutch style torque wrench
- Applying more than 120 lb-in will OVERLOAD the device and potentially damage the internal components
- The Digital F.A.T.Wrench® is designed to be accurate to ±2% for entire torque setting range of 15-100 lb-in.
- The Digital F.A.T.Wrench® can be used to apply torque to any fastener; it is not limited to firearms and firearm accessories
- Always protect the area surrounding screw heads with masking tape to prevent marring of metal and wood finishes – just in case a bit slips out of the screw head while tightening
- Small, inexpensive screws can be damaged with high torque settings. Be sure to comply with recommended settings
- Small bits can be damaged with high torque settings. Replacement bits are available from many of our dealers and through our website

NOTE: The middle screw in a guard that has three screws should only be slightly tightened. Please see the photo below so you can better understand this instruction.



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Level-Level-Level

USER INSTRUCTIONS

The alignment of a rifle scope's crosshairs relative to the axis of the bore is very important, especially at long ranges.

The Level-Level-Level works by aligning a scope's horizontal plane with a horizontal plane on the rifle's receiver. Manufacturing processes of scopes and rifles offer accessible horizontal platforms for alignment.

There are two respects of scope alignment:

1. Alignment of the scope to the rifle.

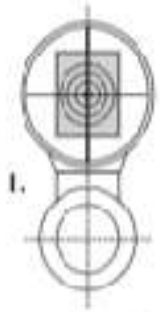
2. Alignment of the crosshairs as controlled by the shooter. An aligned scope reticle has its vertical portion positioned so that if it were extended downward, it would pass through the center of the bore. **See Photo 1.**

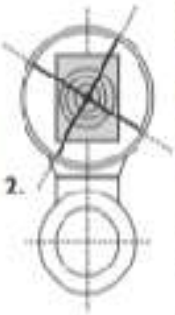
If a scope is misaligned and you attempt to adjust the windage or elevation, the reticle will not track vertically or horizontally with respect to the bore. See **Photos 2.** In this instance, adjusting elevation upwards will also move the point of impact to the right. This is frustrating and wasteful during sight-in.

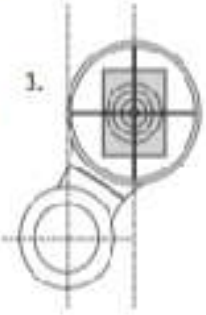
If a scope is misaligned clockwise and you hold the rifle such that the horizontal reticle is level, the rifle can only be perfectly sighted in at one distance. **See Photos 3 and 4.** In this instance where the rifle is sighted in for 100 yards, the bullet will impact left of the point of aim for any distance beyond 100 yards and right of the point of aim for any distance less than 100 yards.

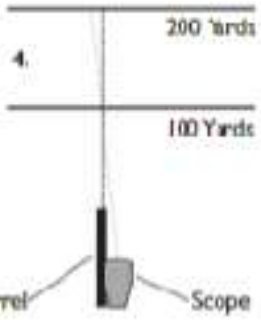
If a shooter is given a zeroed rifle with an aligned scope, but cants the rifle to the right, a shot at a range beyond the sight-in distance will strike to the right and likely low, depending on the cartridge trajectory and range.

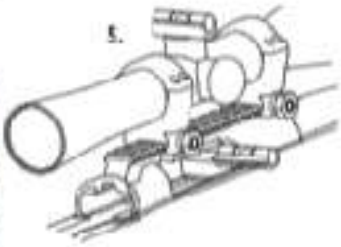
NOTE: It is imperative that every attempt possible is made to ensure the scope crosshairs are properly maintained in horizontal and vertical alignment while shooting. Proper alignment will ensure the scope reticle tracks vertically and horizontally correctly while making adjustments for elevation and windage.









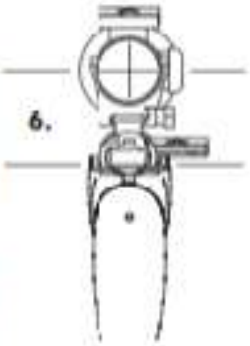


HOW TO USE THE LEVEL-LEVEL-LEVEL

For most bolt-action rifles: See Photos 5 and 6.

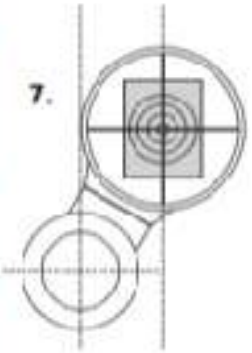
1. Secure rifle in a padded vise, such as the Tipton Gun Vise. Place magnetic base of Action Level across receiver rails and maneuver rifle until bubble is centered.
2. Loosen scope rings and remove turret cover.
3. Place scope level across the elevation adjustment screw and rotate the scope until bubble is centered.
4. Tighten scope rings.
5. Crosshairs are now perfectly level for ultimate accuracy at any distance.

Bolt-action rifles with small receivers, or three-lug systems like the Cooper: Locate another horizontal area to attach the receiver level. The Cooper offers an area immediately behind the rear receiver bridge. (You can use the scope bases although they are not necessarily as accurate as the raceway rails.) AR15 style rifles - On flattops the scope base is machined as part of the receiver; so use it as a platform. The magnetic base of the level does not adhere to the aluminum, but it can be held in place with finger pressure or a rubber band. Carry handle versions offer no surfaces on the upper receiver. The bottom surface that meets with the lower receiver is machined. Position the level crossways on the underside of the receiver using imaginative attachment procedures, such as rubber bands or finger pressure.



Lever-action rifles with offset scopes M1 and M1A: M1 and M1A's have flats behind the rear sight. The level can be attached across the top edges of the receiver on the Winchester M94. Other applications may require imaginative treatment. **See Photo 7.**

Autoloading and pump rifles and dug-shooting shotguns with flat sides: These firearms seldom have a horizontal plane available for attachment of the level, unless you remove the trigger assembly and bridge the underside of the receiver. An unusual, but practical approach is to secure the firearm on its left side, attach the receiver level to the right side of the receiver, level it, and place the scope on level of the windage (side) turret.



Troubleshooting: If you have been shooting for any length of time with unlevel crosshairs before using the Level-Level-Level you may find it disconcerting when you shoulder your firearm and the crosshairs appear skewed. This is normal. You may have been consciously or unconsciously canting your rifle to align the crosshairs horizontally. The Level-Level-Level works and if used correctly, can be trusted to align your crosshairs perfectly. You may have to unlearn your bad habits to get used to shooting a scope with level crosshairs.