

HYTORC

The World's Most Trusted Industrial Bolting Systems



LION GUN® Electric Torque Tool Basic Operations Manual

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Mahwah, NJ 07430
USA

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(800-367-4986)
201-512-9500

hytorc.com

ABOUT THIS DOCUMENT

ORIGINAL INSTRUCTIONS

This document applies to the LION GUN® Electric Torque Tool models LION-.25 and LION-.7.

Notice. The information contained in this document is subject to change without notice. HYTORC makes no warranty of any kind with regard to this material, including but not limited to, the implied warranties of merchantability and fitness for a particular purpose. HYTORC shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material. It is further recommended that the end-user or repair technician insure they have obtained and are familiar with the latest revision of the manual for the equipment outlined in this document.

Restricted Rights Legend. Use and duplication of the information contained within this manual is limited to the purchaser, end user, or licensed HYTORC representative. It is recommended that proper training for the equipment outlined in this manual be conducted by a HYTORC-authorized training representative for any person who is operating or repairing the equipment outlined in this document. Modification of, or disclosure by any other agency or representative is strictly forbidden.

Product Modifications. HYTORC DOES NOT ALLOW any of the products listed in this manual to be modified by any end user without exception. Should an application require a modification to the tool, or any of the standard accessories please consult with your local HYTORC representative and they will be able to obtain the assistance for any modification that may be required.

LION GUN® is a registered trademark of HYTORC.

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NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Printed in the USA. February 2020

WARRANTY INFORMATION

Warranty: This limited warranty gives you specific legal rights and you may also have other rights, which vary from state to state. The limited warranty can also be found online at www.hytorc.com and in the documentation we provide with the product. We warrant that during the warranty period, the product will be free from defects in material and workmanship. We expressly disclaim any and all implied warranties, including without limitation the warranties of merchantability and fitness for a particular purpose to the duration of this express limited warranty. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. Our responsibility for defective goods is limited to repair or replacement as described below in this warranty statement.

Who may use this warranty? The HYTORC Industrial Bolting Company located at 333 State Rt. 17, Mahwah NJ 07430 extends this limited warranty only to the individual who originally purchased the product ("you"). It does not extend to any subsequent owner or other transferee of the product.

What does this warranty cover? This limited warranty covers defects in materials and workmanship of the LION Gun (the "product") for the Warranty Period as defined on the following page.

What does this warranty not cover? This limited warranty does not cover any damage due to: (a) transportation; (b) storage; (c) improper use; (d) failure to follow the product instructions or to perform any preventive maintenance; (e) modifications; (f) unauthorized repair; (g) normal wear and tear; or (h) external causes such as accidents, abuse, or other actions or events beyond our reasonable control.

What is the period of coverage? This limited warranty starts on the date of your purchase and lasts for one (1) year (the "Warranty Period"). The Warranty Period is not extended if we repair or replace the product. We may change the availability of this limited warranty at our discretion, but any changes will not be retroactive.

What are your remedies under this warranty? With respect to any defective product during the Warranty Period, we will repair or replace such product or the defective part free of charge. We will also pay for shipping and handling fees to return the repaired or replacement product to you, if we elect to repair or replace the defective product.

How do you Obtain warranty service? To obtain warranty service, you must call 800-FOR-HYTORC or email our Customer Service Department at info@hytorc.com during the Warranty Period to obtain a Defective Merchandise Authorization ("DMA") number. No warranty service will be provided without a DMA number. Limitation of liability. The remedies described above are your sole and exclusive remedies and our entire liability for any breach of this limited warranty. Our liability shall under no circumstances exceed the actual amount paid by you for the defective product, nor shall we under any circumstances be liable for any consequential, incidental, special or punitive damages or losses, whether direct or indirect. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusion may not apply to you.

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WARNING! Read all safety warnings designated by the  symbol and all instructions.

Save all warnings and instructions for future reference.

The term “power tool” in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

A. WORK AREA SAFETY

- **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
- **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.
- **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

B. ELECTRICAL SAFETY

- **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
- **Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
- **Do not allow battery to get wet.** Do not operate tool in rain, snow or high humidity. Do not splash or immerse in liquids.
- **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.
- **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
- **If operating a power tool in a damp location is unavoidable, use a Ground Fault Circuit Interrupt (GFCI) protected supply.** Use of a GFCI reduces the risk of electric shock.

C. PERSONAL SAFETY

- **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
- **Use personal protective equipment. Always wear eye protection.** Protective equipment such as a dust mask, non-skid safety shoes, hard hat or hearing protection used for appropriate conditions will reduce personal injuries.
- **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.
- **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- **Dress properly. Do not wear loose clothing or jewelry. Keep your hair and clothing away from moving parts.** Loose clothes, jewelry or long hair can be caught in moving parts.
- **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.
- **Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles.** A careless action can cause severe injury within a fraction of a second.

D. POWER TOOL USE AND CARE

- **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.
- **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- **Disconnect the plug from the power source and/or remove the battery pack, if detachable, from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
- **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
- **Maintain power tools and accessories. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.
- **Keep cutting tool sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- **Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.
- **Keep handles and grasping surfaces dry, clean and free from oil and grease.** Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.

E. BATTERY TOOL USE AND CARE

- **Recharge only with the charger specified by the manufacturer.** A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
- **Use power tools only with specifically designated battery packs.** Use of any other battery packs may create a risk of injury and fire.
- **When battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws or other small metal objects, that can make a connection from one terminal to another.** Shorting the battery terminals together may cause burns or a fire.
- **Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help.** Liquid ejected from the battery may cause irritation or burns.
- **Do not use a battery pack or tool that is damaged or modified.** Damaged or modified batteries may exhibit unpredictable behaviour resulting in fire, explosion or risk of injury.
- **Do not expose a battery pack or tool to fire or excessive temperature.** Exposure to fire or temperature above 130 °C may cause explosion.
- **Follow all charging instructions and do not charge the battery pack or tool outside the temperature range specified in the instructions.** Charging improperly or at temperatures outside the specified range may damage the battery and increase the risk of fire.

F. SERVICE

- **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.
- **Never service damaged battery packs.** Service of battery packs should only be performed by the manufacturer or authorized service providers.

G. IMPORTANT TOOL CARE AND HANDLING

- **Inspect all Tool components as they are removed from the shipping container.** If damage is found to any component, contact the shipper immediately. Do not use the tool.
- **Modifying a tool or tool accessory is dangerous and invalidates the warranty**
- **Inspect the tool before each use.** Have any obviously worn or damaged parts replaced.
- **When not in use, store the tool and tool accessories in the plastic storage case supplied with the tool.** Do not store the tool and batteries in an environment outside of the following temperature and humidity range: -4°F (-20°C) to 122°F (50°C), 5% to 95% ambient relative humidity

H. IMPORTANT BATTERY PACK INSTRUCTIONS

- **Do not incinerate the battery pack even if it is severely damaged or is completely worn out.** The battery pack can explode in a fire. Toxic fumes and materials are created when Lithium-ion battery packs are burned.
- **Do not charge or use the battery in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Inserting or removing the battery from the charger may ignite dust or fumes.
- **Contents of opened battery cells may cause respiratory irritation.** Provide fresh air. If symptoms persist, seek medical attention.



WARNING

Burn hazard. Battery liquid may be flammable if exposed to spark or flame.



WARNING

Never attempt to open the battery pack for any reason. If battery pack case is cracked or damaged, do not insert into charger or tool. Do not crush, drop, or damage battery pack. Do not use a battery pack or charger that has received a sharp blow, has been dropped or has been run over or damaged in any way (i.e. pierced with a nail, hit with a hammer, stepped on). Damaged battery packs should be returned to an authorized HYTORC service center for recycling.



CAUTION

The US Department of Transportation Hazardous Materials Regulations (HMR) actually prohibit transporting batteries in commerce or on airplanes, (i.e. packed in suitcases and carry-on luggage). When transporting individual batteries, make sure that the battery terminals are protected and well insulated from materials that could contact them and cause a short circuit. For any other concerns in regarding the transportation of LI-ION batteries, consult your Transportation Carrier.

I. IMPORTANT BATTERY CHARGER SAFETY INSTRUCTIONS

- Before using charger, read all instructions and cautionary markings on charger, battery pack and product using battery pack
- **DO NOT attempt to charge the battery pack with any chargers other than the one in this manual.** The charger and battery pack are specifically designed to work together.
- **These chargers are not intended for any uses other than batteries supplied with LION GUN Tools as described in this manual.** Any other uses may result in risk of fire, electric shock or electrocution.
- **Do not expose charger to rain or snow**
- **To disconnect charger, firmly grasp plug and remove.** Do not disconnect the charger by pulling on the cord.
- **Make sure the cord is located so that it will not be stepped on, tripped over, or otherwise subjected to damage or stress**
- **Do not use an extension cord unless it is absolutely necessary**
- **An extension cord must have adequate wire size (AWG) for safety.** In general the larger the wire size the greater the capacity of the cable.
- **Do not block any ventilation slots on charger power supply**
- **To clean the charger, first unplug from the power source, then wipe with a dry cloth**



WARNING

Burn hazard. Battery liquid may be flammable if exposed to spark or flame.



WARNING

Burn hazard. To reduce the risk of injury, charge only tool batteries. Other types of batteries may burst causing personal injury and damage.



CAUTION

Under certain conditions, with the charger plugged into the power supply, the charger can be shorted by foreign material. Foreign materials of a conductive nature such as, but not limited to, steel wool, aluminum foil, or any buildup of metallic particles should be kept away from charger cavities. Always unplug the charger from the power supply when there is no battery pack in the cavity. Unplug charger before attempting to clean.

J. EMISSIONS

- **The noise emission, measured in accordance with EN 62841-1 I.2, is as follows:**
 - A-weighted sound pressure level L_{pA} does not exceed 70 dB(A)
 - A-weighted sound power level $L_{WA} = 80.9$ dB(A) and its uncertainty $K_{WA} = 3$ dB(A)
- **Wear hearing protection when required by job conditions**
- **The vibration total value and its uncertainty measured in accordance with EN 62841-1 I.3 is as follows:**
 - The vibration total value does not exceed 2.5 m/s²
- **The declared vibration total value has been measured in accordance with a standard test method and may be used for comparing one tool with another**
- **The declared vibration total value may also be used in a preliminary assessment of exposure**
- **The vibration emission during actual use of the tool can differ from the declared total value depending on the ways in which the tool is used**
- **Identify safety measures to protect the operator that are based on an estimation of exposure in the actual conditions of use (taking account of all parts of the operating cycle such as the times when the tool is switched off and when it is running idle in addition to the trigger time)**



FREE SERVICES*

- User safety training upon receipt of merchandise
- Semi-Annual user safety training on request
- Annual safety seminar on appointment
- Loaner tools in event of product failure within 24 hours
- Torque/Tension consultation/seminar
- Half-Day, first-use supervision
- Annual product inspection on request
- Product demonstrations
- 12-Month no-questions-asked warranty
- 5-Year tool housing warranty
- User training for first-time rentals
- Warranty repairs including return-freight
- Upgrades during the lifetime of the tool to enhance safety, durability, and function
- Free calibration with new tool purchase

*Above services are not subject to travel expense charges.

REPAIRS

- All repairs are guaranteed for 6 months
- All repairs are subject to labor and part cost as outlined in the official HYTORC price list
- All repairs will be tested and calibrated to ensure the highest quality repairs
- All warranty repairs are free of all charges including return-freight

TOOL RENTALS

- 100% of all paid rentals will be applied as a discount towards any new purchase in that calendar year
- User training for first-time rentals is free of all cost
- Rental tools are guaranteed to perform and are subject to the free loaner tool policy of HYTORC

HELP

If you require any further assistance, please call your local HYTORC Representative or 1-800-FOR-HYTORC (1-800-367-4986). Please visit us at HYTORC.com.

FOLLOW US ONLINE





The **LION GUN®** Electric Torque Tool is the world's first affordable precision bolting torque multiplier with built-in data recording. Set your desired torque output on the LION GUN's display and pull the trigger to get precise, repeatable torque without excessive noise or vibration.

Tool Type: Electric

RPM: 4.1 - 11.6 RPM

Weight: 7.30 - 8.22 Lbs.

Torque Range: 25 - 700 ft-lbs.

INDUSTRIAL-GRADE POWER

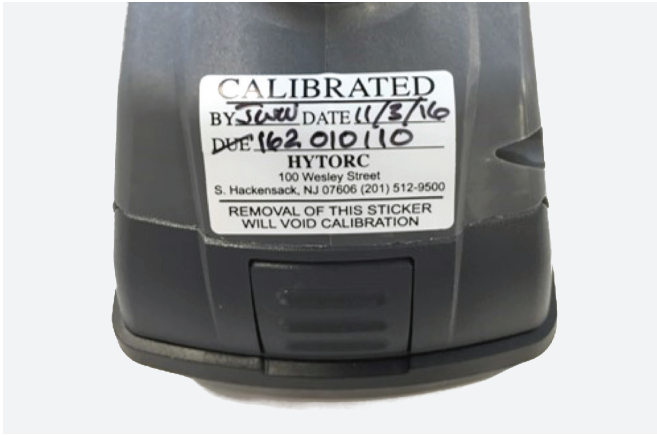
The LION GUN's industrial-strength gear box is driven by a brushless motor connected to a non-impacting gearbox to deliver torque faster, smoother and more reliably than manual clicker wrenches, impact wrenches and other tightening tools.

UNMATCHED PORTABILITY

Through the use of aerospace-grade alloys, the LION GUN packs tremendous power without the weight. The 18-Volt lithium-ion battery provides long lasting operation with a quick recharge time to keep the job going.

DATA RECORDING

Built-in data recording capability allows the user to maintain a log of all completed bolting jobs. For improved quality control and accountability, the information can be saved to a PC or tablet to provide a permanent record of the work performed.



INSPECT TOOLS AND COMPONENTS

- Inspect all components; if damaged report any sign of damage to the shipper and do not use the tool.
- Inspect the tool before each use; repair or replace any obviously worn or damaged parts.
- Maintenance must be performed by a qualified technician.
- Modifying any of the components invalidates the warranty.
- When not in use store all tool components in the plastic storage case.
- Save all instructions and calibration reports in the storage case.



CALIBRATION

HYTORC tools are designed to operate within specific design tolerances to deliver accurate, repeatable results. As with any other measuring instrument, torque tools require periodic testing and recalibration to ensure precise torquing results.

- Check the calibration certificate or label on the tool for the most recent calibration date.
- HYTORC recommends all tools be tested and recalibrated every 6-12 months.
- More frequent calibration may be necessary depending on use.
- Customer/user is responsible for arranging testing and recalibration.
- Contact HYTORC Customer Assistance at 800-FOR-HYTORC for assistance or further information.

ENVIRONMENTAL CONSIDERATIONS

The LION GUN Electric Torque Tool is a rugged industrial tool with an electric motor and electronic control. The following environmental considerations will help maintain reliable tool operation.

- The tool should not be exposed to moisture. Do not operate in rain, snow or extreme humidity.
- The operating temperature range of the tool is -4°F (-20°C) to 140°F (60°C).
- All Cooling Vents should be kept clear of dust, dirt and debris to allow internal fans to maintain airflow to keep the motor and electronics within temperature limits.
- Do not subject the tool to extremely dusty environments. Do not cover or obstruct vents during operation.
- The tool and electronic components are not certified or approved for explosive environments or areas containing combustible chemical materials.
- Secure the tool per local practice to protect from dropping.

5. CHARGE, TEST AND INSTALL BATTERY

CHARGE THE BATTERY

- The Tool is supplied with an 18-volt lithium-ion battery (P002200) and charger (A000791).
- Before charging a battery verify the local voltage supply to ensure capability with the charger; this will typically be 110 Volts or 220 Volts AC.
- Only operate the battery charger between 32°F (0°C) to 104°F (40° C) and with 10% to 90% ambient relative humidity (no condensate).
- Connect the charging cradle to the power supply.
- Connect the power cord to a grounded outlet.
- If necessary connect the plug adapters for the local power outlet.
- Insert the battery by sliding it into the charger and locking into place. The power indicator will be illuminated green when plugged in.
- The charging indicator flashes green while charging and turns solid green when the battery is fully charged.
- The 18 volt battery is fully charged in approximately 90 minutes.

CHARGING/FAULT INDICATOR

- Flashes green while battery is charging.
- Shows continuous green when battery is charged.
- Flashes red to indicate fault/battery not charging.

BATTERY STORAGE

- Only store the battery and charger in the following environmental conditions:
- -4°F (-20°C) to 122°F (50°C) 5% to 95% ambient relative humidity



TEST THE BATTERY



The **LION GUN** Ion battery has a long run life and will power the tool at full speed until the battery is depleted, so there is no gradual drop in power during use.

- For continuous use, have one or more spare battery packs charging while the tool is in use. When needed simply swap batteries from the charger to the tool.
- Batteries can be charged hundreds of times without any noticeable loss in capacity
- Batteries can be returned at no charge for recycling at HYTORC locations or local recycling centers.

INSTALL THE BATTERY



The battery slides onto the tool body and snaps into place.

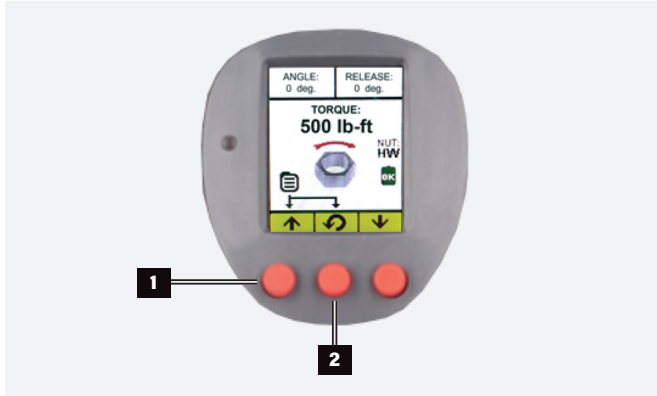
- Press the release button on the battery and slide battery pack off the charger.
- Align the base of the tool with the rails in the battery and slide the battery pack firmly into the handle until you hear (or see) the lock snap in place.
- To remove the battery pack from the tool, press the release button on the battery and firmly pull the battery pack out of the tool.
- Push the TEST button on the side of the battery to display remaining battery life:
 - 1 LED On ≤ 25% Battery Charge Left**
 - 2 LEDs On ≤ 50% Battery Charge Left**
 - 3 LEDs On ≤ 75% Battery Charge Left**
 - 4 LEDs On ≤ 100% Battery Charge Left**

BATTERY RECYCLING

The RBRC (Rechargeable Battery Recycling Corporation) Seal on the LION GUN ion battery (or battery pack) indicates that the costs to recycle the battery (or battery pack) at the end of its useful life have already been paid by HYTORC. The RBRC, in cooperation with HYTORC and other battery users, has established programs in the United States to facilitate the collection of spent LION GUN ion batteries. Help protect our environment and conserve natural resources by returning the spent LION GUN ion battery to an authorized HYTORC service center for recycling. You may also contact your local recycling center for information on where to drop off the spent battery. RBRC is a registered trademark of the Rechargeable Battery Recycling Corporation.

PRIMARY CONTROL FEATURES

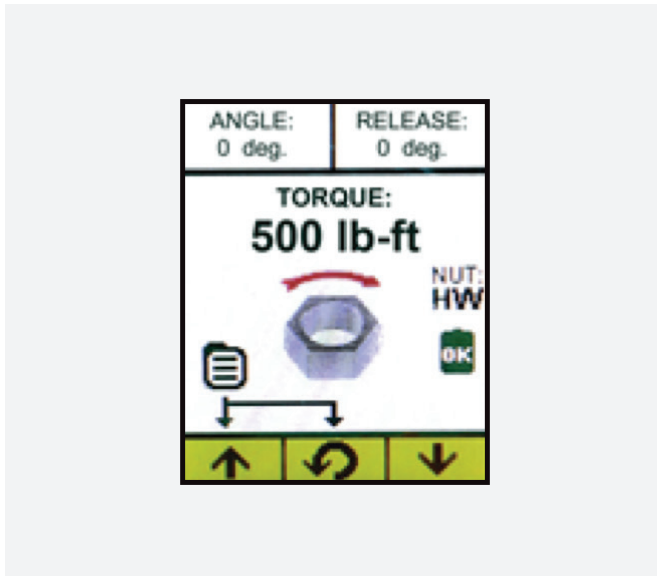
- Press Any Button to Power-On Tool (the tool automatically turns off after 5 minutes of disuse)
- If the tool is new, it will display the factory default settings
- A tool that has been used before displays the last settings used on the tool before it was powered off.
- Left Button Increases the Torque Value
- Right Button Decreases the Torque Value
- Screen Features: Torque, Angle, Release, Direction, Battery Status, Fastener Type, Data Record Indicator



SHORTCUTS

- Press and hold the center button for approximately 3 seconds to display the Job Select menu.
- Press and hold the right and left buttons simultaneously for approximately 3 seconds for system level access.
- From the Home Screen, press and hold the left and center buttons (1 and 2) simultaneously for approximately 3 seconds to display the Main Menu.

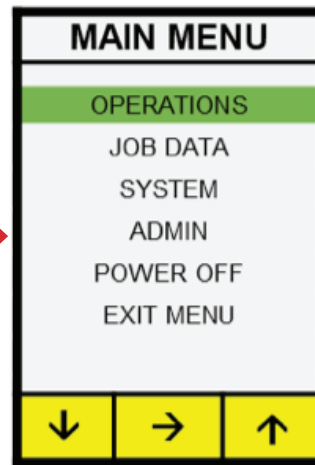
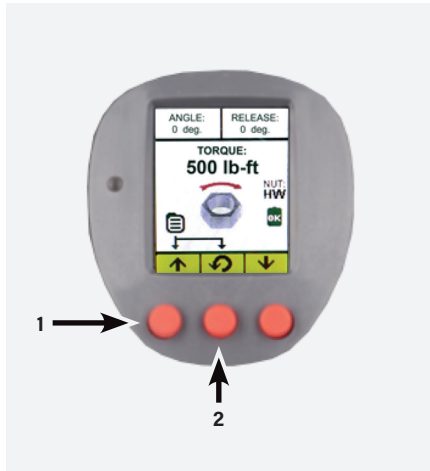
SET TORQUE



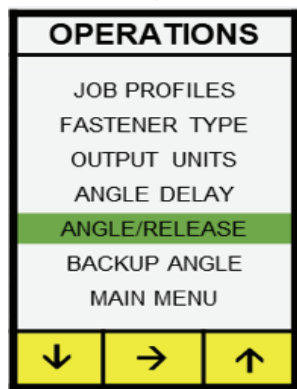
- The Torque Value is set by simply pushing the left button (↑) or increase or right button (↓) to decrease the torque.
- Output units may be displayed in lb-ft, N-m, kgf-m or %. (Refer to Output Unit Settings under the Operations menu)
- The rotational direction arrow and the rotating nut icon indicate the direction associated with the specific fastener type.
- The fastener type may be set under the Operation - Fastener Type menu: Right-Hand, Left-Hand, HYTORC NUT and HYTORC Washer.

SET ANGLE AND RELEASE

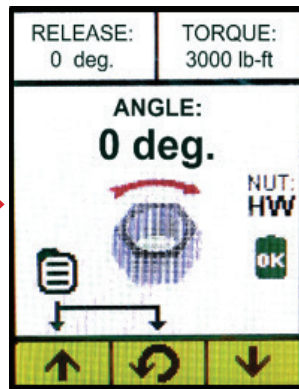
From the Home Screen, press and hold the left and center buttons for approximately 3 seconds to display the Main Menu.



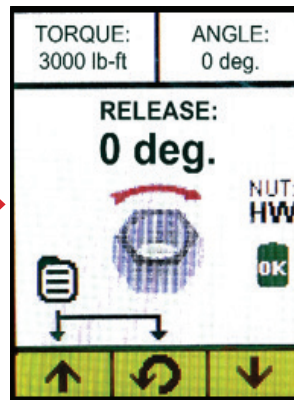
Scroll to OPERATIONS and press the center button to select and advance.



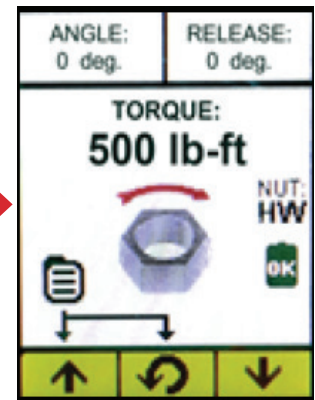
Scroll to ANGLE/RELEASE and press the center button to select and advance.



Select an Angle value anywhere from 0 degrees to 359 degrees. The Angle Value is increased simply by pushing the left or right button to increase or decrease the angle. Press and hold the center button for approximately 3 seconds and release it to access the Release Angle setup screen. The Angle value selected will now be shown in the ANGLE box at the top of the screen.



Press the left and right button to set the release angle between 0 and 359 degrees. Typical release angles for conventional torque are 3 to 7 degrees and for the HYTORC washer 1-to-3 degrees. Press and hold the center button to return to the home screen. The Release value selected will now be show in the RELEASE box at the top of the screen.



Torque is preset to 500ft lbs. If desired, press the left and right buttons to set the desired torque value.

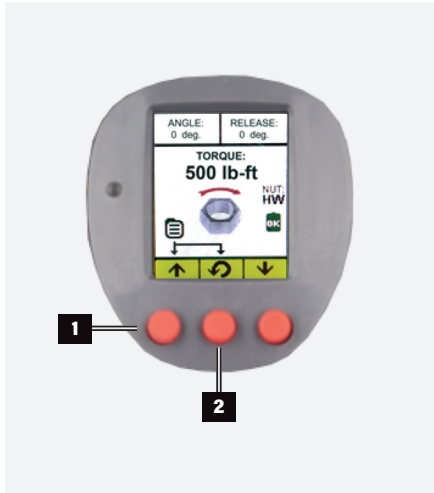
SET ANGLE AND RELEASE (CONT'D.)

ANGLE

- Certain bolt tightening specifications may require an Angle Value in addition to or instead of a Torque Value.
- If an Angle is set the value will be added to the TORQUE-ANGLE sequence by applying additional torque after the completed torque operation to turn the fastener through the specified angle, up to the maximum output of the tool
- The angle feature is actuated by continuing to hold the trigger after the tool completes the TORQUE operation.
- If an angle delay has been set (refer to section 8), the angle is applied after the specified delay (Range 0-3000msec; Default = 500msec).

RELEASE

- After the tool achieves the specified TORQUE value (and ANGLE, if set) the gear box will continue to exert force, essentially locking the tool onto the nut.
- Setting a RELEASE Angle will reverse the motor slightly, taking the applied force off the gear box and reaction point and releasing the tool from the nut without loosening the nut.
- The RELEASE Angle Setting may vary depending on the application and may need to be developed iteratively by testing the value on the application; the objective is to set the minimum RELEASE angle required to release the tool without loosening the nut.
- The automatic release feature is actuated by continuing to hold the trigger after the tool successfully completes TORQUE (and ANGLE, if set).
- During the operation the screen will change to show the release angle and direction, the tool motor will reverse by the desired release angle and then stall again to allow the tool to be removed from the nut
- RELEASE Angle is applied following application of TORQUE (and ANGLE, if set) and after an additional time delay set in the Angle Delay menu (Range 0-3000msec; Default = 500msec).



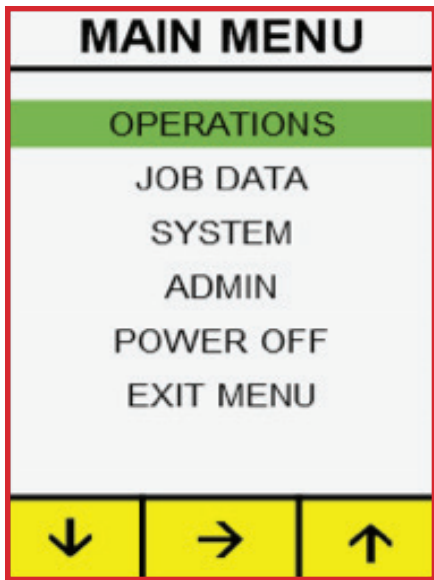
MAIN MENU AND SUB-MENUS

The Main Menu provides Operations, Job Data, System, Admin and the Exit and Power Off options.

From the Home Screen, Press and hold the left and center buttons for approximately 3 seconds to display the MAIN menu.

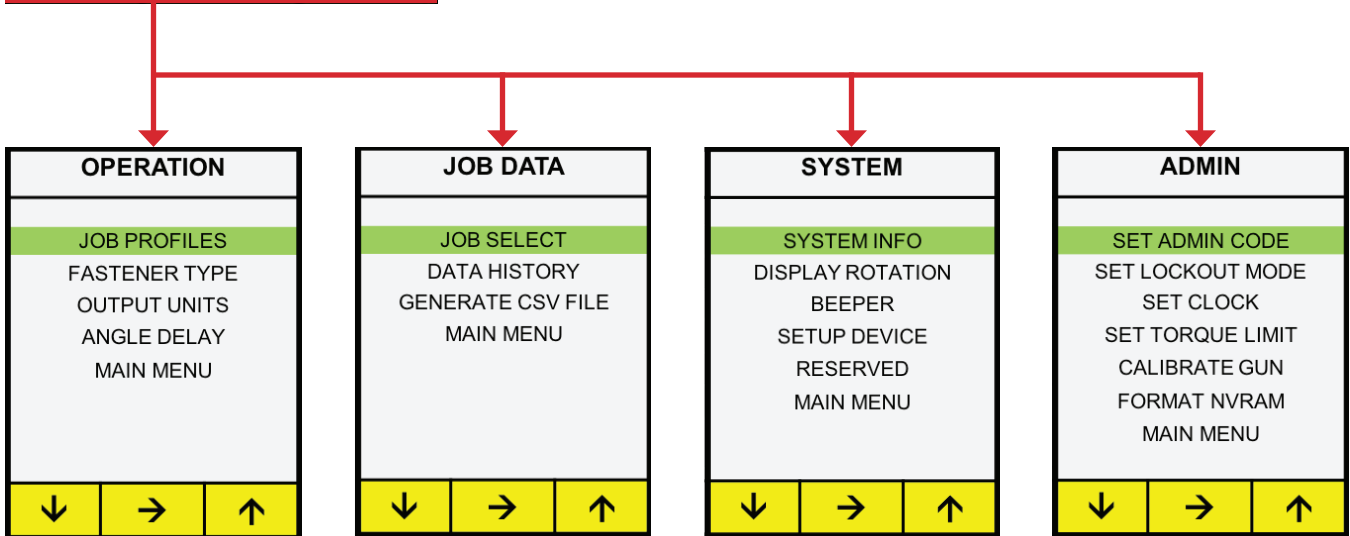
SHORTCUTS

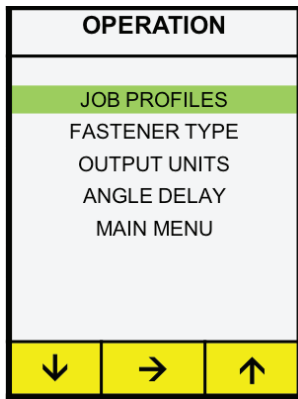
- Press and hold the center button for approximately 3 seconds to display the Job Select menu.
- Press and hold the right and left buttons simultaneously for approximately 3 seconds to enter unlock code for system level access.



MAIN MENU

- The green bar highlights the current position.
- Press left button (↓) to scroll down, right button (↑) to scroll up.
- Press the center button (→) to select and display a sub-menu.

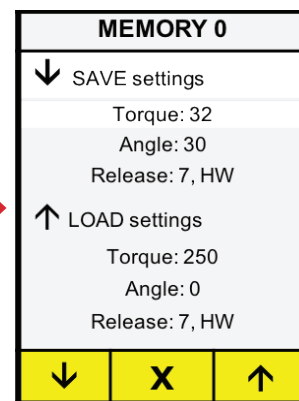
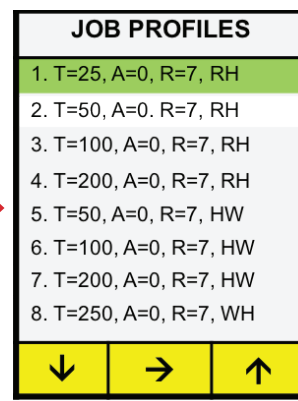
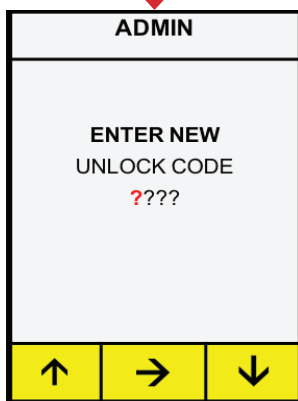




OPERATION MENU

The Operation menu contains most functions for everyday operation.

(Continued on following page)



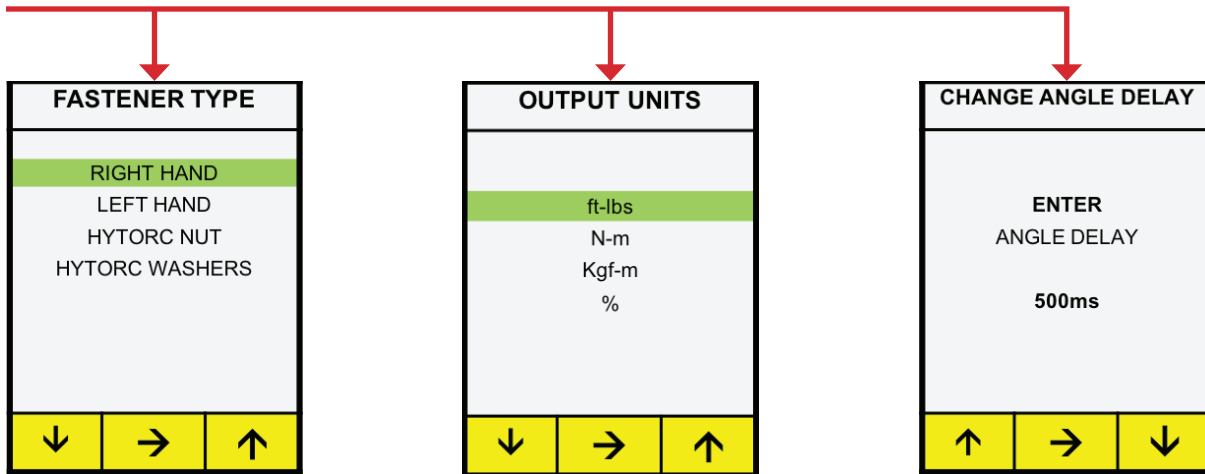
In order to save or load a job profile the user must first enter the 4-digit code to unlock the tool. To enter the code press (↑) to increase the digit or (↓) to decrease the digit. Press (→) to advance to the next digit until the correct code is entered (default 0000). When the 4-digit code is entered correctly press (→) again to advance to the JOB PROFILES screen.

NOTE: Entering the wrong code returns user to previous screen. There is no limit on number of attempts. See administrator for correct code.

Allows the user to save tool parameters to memory as a Saved Job Profile (SJP), or to load previously saved parameters (SJPs) from memory. The tool can save up to 8 job profiles; each profile includes saved values for TORQUE (T), ANGLE (A), RELEASE (R) and fastener type. Scroll and select the desired setup values – then select (→), or if saving new setup values select (→), to access submenu to either SAVE or LOAD settings.

The user can SAVE the current settings by pushing the left button (↓); the profile is added to the top of JOB PROFILES. Alternatively the user can LOAD the selected profile by pushing the right button (↑). Exit without load or save by hitting the center button X. Return to the OPERATION Menu upon completion.

(OPERATION MENU continued from previous page)



Press (↓) or (↑) to scroll up or down, push (→) to select fastener type:

- RH** RIGHT HAND bolts tightened clockwise.
- LH** LEFT HAND bolts tightened counterclockwise.
- HN** HYTORC NUT tightened counterclockwise.
- HW** HYTORC WASHER tightened clockwise.

Any selection → returns users to OPERATION menu.

NOTE: When using the HYTORC Washer or HYTORC Nut the safety feature requiring a push of the button before operation is disabled. Tool should never be used with a reaction arm in this setting.

Allows the operator to select the preferred units of the torque display.

Press (↓) or (↑) to highlight the desired units, press (→) to select desired units and return to the OPERATION menu.

The user can adjust the time delay for applying the ANGLE and RELEASE following the TORQUE operation - the delay can range from 0ms to 3000ms.

Push (↑) or (↓) to decrease the delay. Select (→) to increase or return to the OPERATION menu.

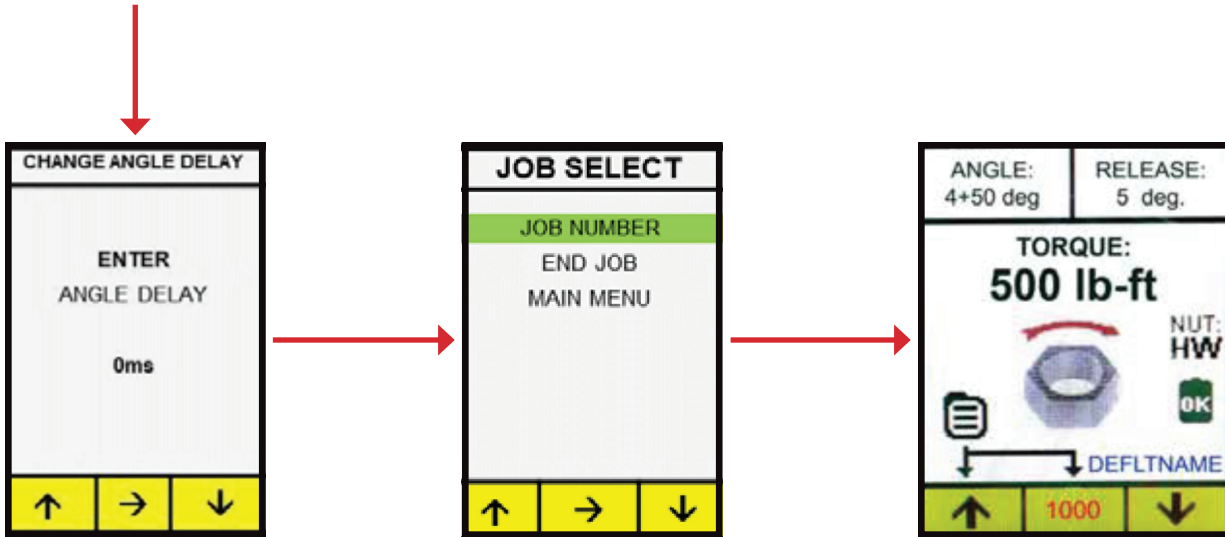


JOB DATA MENU

The Job Data menu contains options for recording and downloading data from the tool.

Press left button (↓) to scroll down, right button (↑) to scroll up

Press the center button (→) to select and display a sub-menu



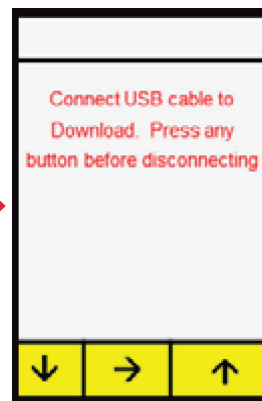
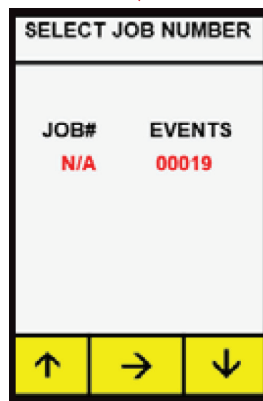
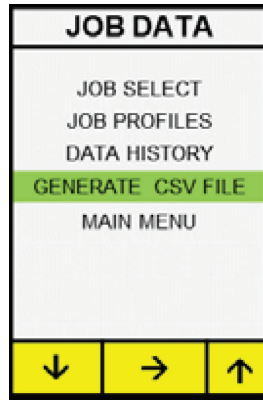
In order to record Job, the user must first enter the 4-digit GENERAL UNLOCK CODE (see Section 7 to unlock the tool). When the correct 4-digit code is entered press (→) again to proceed to JOB SELECT MODE.

NOTE: Entering the wrong code returns user to previous screen. No limit on number of attempts. See administrator for correct code.

Select JOB NUMBER to turn on Data Recording for a particular job. After selecting JOB NUMBER the user is prompted for a 4 digit job number to begin recording data.

Alternatively, if there is an active job (e.g. A Job ID has been previously entered) the user may select END JOBS to stop recording.

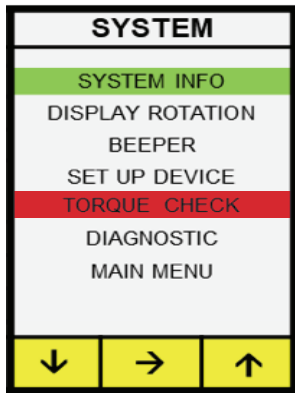
Enter a 4 digit JOB NUMBER (0001 to 9999) to identify the data record. Press (→) to begin DATA RECORDING and return to the JOB DATA menu. The tool is now recording and the JOB ON and JOB NUMBER are now displayed on the home screen.



The DATA HISTORY option provides a summary of jobs and events currently being saved.

Press (↓) or (↑) to scroll through the job numbers to select the data set you want to download. Press (→) to select the job number and to generate the CSV file.

This screen prompts the user to connect a standard USB cable between the PC (Type A) to the tool (Micro A). The tool is discovered by the PC just as any mass storage device. The PC will display a folder allowing the user to click to open the JOB DATA file in Excel format. This file must then be saved to a folder on the PC to provide a permanent record of your Job Data, press (→) to exit the GENERATE CSV FILE mode and return to the JOB DATA menu.



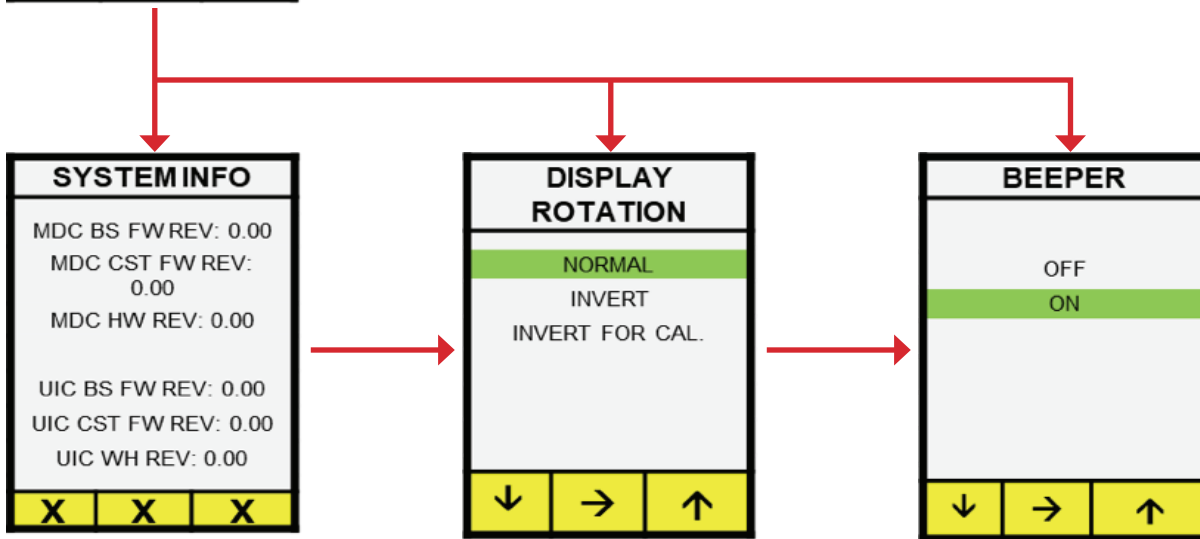
SYSTEM MENU

The SYSTEM menu contains additional settings for tool configuration.

- The green bar highlights the current position
- Press left button (←) to scroll down, right button (→) to scroll up
- Press the center button (↓) to select and display a sub-menu

NOTE: TORQUE CHECK feature not available in this model.

DIAGNOSTIC is not intended for field use. This function is password protected and only accessible by HYTORC in the factory.



Displays Firmware (FW) and Hardware (HW) versions for MDC Motor Drive Control) and UIC (User Interface Control).

Press any button to return to SYSTEM menu.

Lets user orient the display in normal or inverted mode:

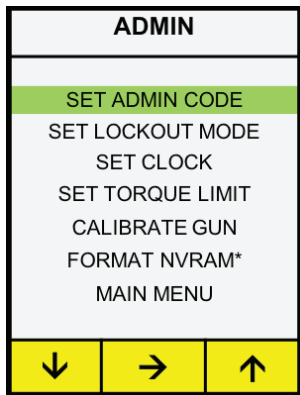
NORMAL: Screen is legible when battery is down.

INVERT: Screen is legible when battery is up.

INVERT FOR CAL: Inverted for calibration

Lets user enable or disable the beeper.

If turned on, the beeper will sound once for each successful operation and 4 times to indicate an error.

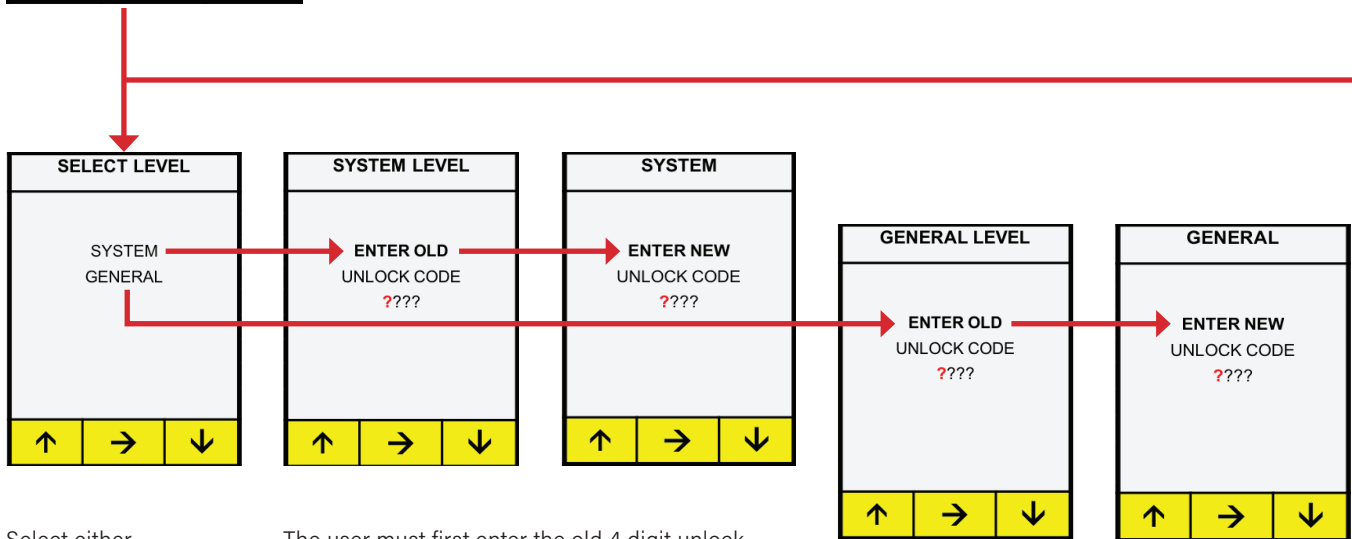


ADMIN MENU

The ADMIN menu contains less seldom used features or those typically only configured by an administrator or supervisor.

- The green bar highlights the current position
- Press left button (←) to scroll down, right button (→) to scroll up
- Press the center button (↓) to select and display a sub-menu

NOTE: The CALIBRATE GUN and FORMAT NVRAM options are not intended for field use, these are only accessed by HYTORC authorized service personnel.



Select either SYSTEM or GENERAL access level.

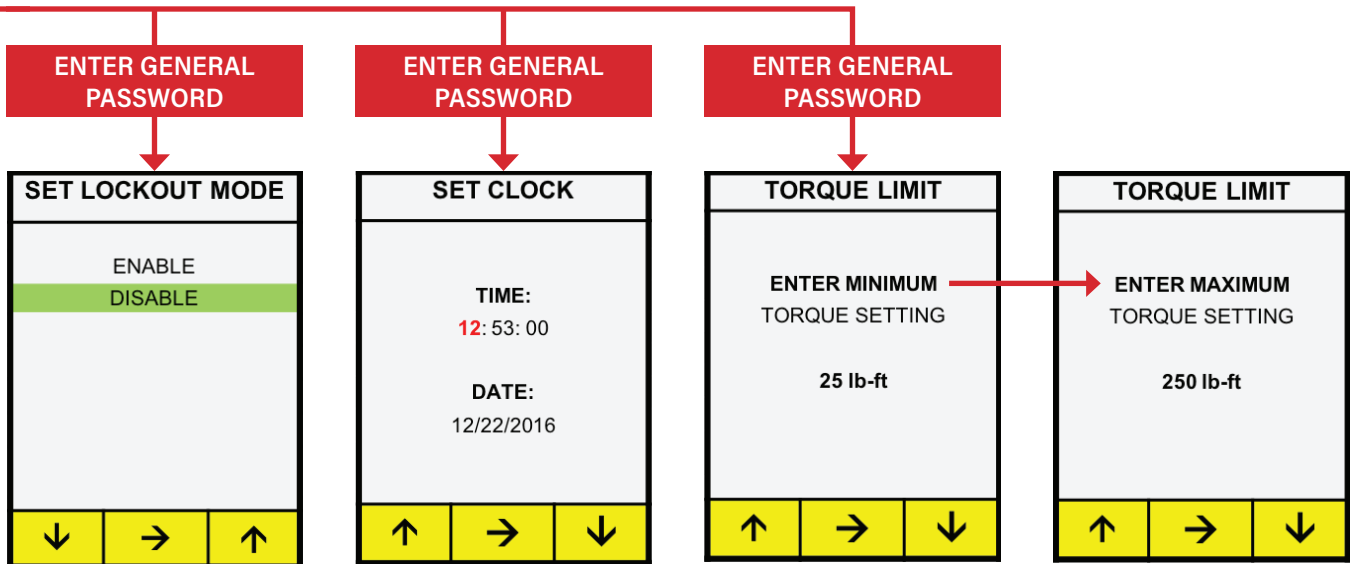
The SYSTEM level is only used by certified personnel for calibrating the tool.

The GENERAL level password is assigned by an administrator to provide security for setting torque limits, setting the clock and putting the tool in lockout mode.

The user must first enter the old 4 digit unlock code (default 0000) for access and then enter a new unlock code for system access.

Note: When System password is entered the General password is cleared to 0000.

General administrator must first enter the old 4-digit unlock code (default 0000) for access and then enter a new unlock code for system access.



The user may enable a lockout mode that prevents changing any parameter except directional control. This allows the administrator to lock the tool at desired settings for various users.

Allows user to set time and date by entering appropriate numerical values.

To adjust the minimum TORQUE limit press button (↑) to increase the value or (↓) to decrease the value.

Press (→) to save the lower torque limit – screen flashes “Saving setting” and then displays the upper torque limit screen.

To adjust the maximum TORQUE limit press button (↑) to increase the value or (↓) to decrease the value.

Press (→) to save the upper torque limit – screen flashes “Saving setting” and then exits to ADMIN menu.



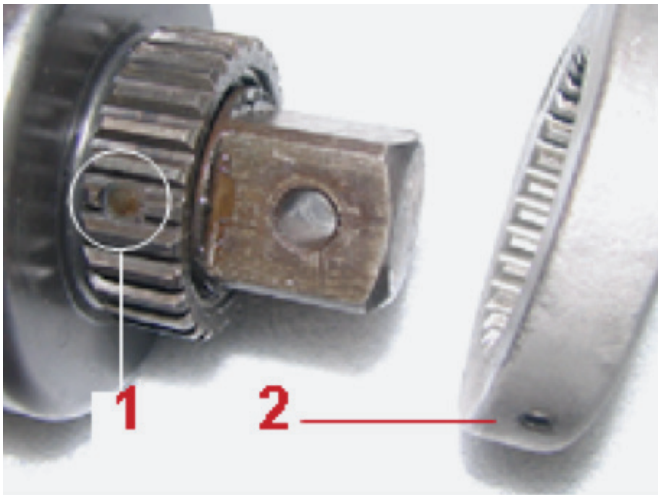
WARNING!

Failure to make sure the reaction arm is in direct contact with an immovable object before fastening could result in serious injury. Make sure that no part of your body is in the path of the reaction arm when the nut is tightened to avoid injury.

INSTALL REACTION ARM



1. FLAT ON REACTION SPLINE. 2. ALLEN SET SCREW



TIGHTEN ALLEN SET SCREW



The **LION GUN** Electric Torque Tool is easily configured for conventional torque applications with standard sockets and reaction arms.

- The reaction arm is quickly secured to the tool
- Slide the reaction arm over the drive while aligning the set screw (2) with the flat (1) on the spline.
- Tighten the set screw to firmly attach the reaction arm.
- Challenge the reaction arm to make sure it is firmly secured.
- Never modify a reaction arm as this may lead to personal injury or damage to the tool.

INSTALL SOCKET



- Make sure the O-ring is installed on the socket. Insert the pin part way into the socket.
- Slide socket on the drive while aligning the pin hole in the socket with the hole in the square drive
- Push the pin through socket and square drive and seat the pin flush against the socket
- Slide O-ring to retain the pin in place.

CONVENTIONAL TORQUE SETUP



- Power on the tool, adjust the settings and select fastener type. For conventional torque applications the fastener will be RH (right hand) or LH (left hand).
- Position a back wrench to prevent turning during tightening.
- Place the socket on the nut, making sure to fully engage the nut.
- Make sure the reaction arm is firmly abutted against a stationary object before applying torque.

CONVENTIONAL TORQUE TIGHTENING



- To begin the TORQUE operation, pull and hold the trigger.
- With Right or Left Fasteners, a message is displayed instructing the user to press any button on the control panel, to ensure the operator keeps both hands clear of the reaction arm.
- As soon as the user pushes a button the drive will turn.
- Once the tool starts, the reaction arm will move to firmly press against the reaction surface and then the tool will begin applying torque and tighten the nut.
- Continue holding the trigger until the tool reaches the desired torque and stops.
- If an ANGLE has been specified, continue holding the trigger; the tool will pause and restart after the angle delay.
- If a RELEASE has been specified, continue holding the trigger; the tool will pause and restart after the angle delay.
- Release the trigger after the tool has completed all specified operations.
- The status light will turn amber during operation. If the operation is successful, the status light will turn green; if unsuccessful, the status light will turn red.
- If the BEEPER is enabled, the tool will provide an audible beep upon completion of the operations.
- Remove the tool socket from the nut.
- Should torque be applied without a release angle, the tool may lock onto the nut. If this happens, set the tool to loosen to free the tool.

CONVENTIONAL TORQUE LOOSENING



- The Tool provides the maximum torque capacity in reverse, providing a powerful breakout capability.
- Toggle the Directional Switch to loosen mode.
- When using conventional torque, install a back wrench to keep the back nut from turning.
- Position the tool over the nut.
- Position the reaction arm against a firm surface.
- Pull and hold the trigger and any button on the rear panel to apply torque to loosen the nut.
- Once the tool starts, the reaction arm will move and firmly press against the reaction surface. The tool will then begin applying torque to loosen the nut.
- The status light will turn amber during operation. If the operation is successful, the status light will turn green, if unsuccessful, the status light will turn red.
- Remove the tool driver from the nut.

INSTALL THE HYTORC WASHER DRIVER



- The **LION GUN** Electric Torque Tool is easily configured for tightening bolts where the HYTORC Washer is used.
- Identify the appropriate size HYTORC Washer Driver.
- Slide the washer driver over the square drive and spline while aligning the thumb screw with the flat on the spline.
- Tighten the thumb screw to secure the Driver.
- Challenge the driver to make sure it is securely attached.

TIGHTENING WITH THE HYTORC WASHER DRIVER



- Power on the tool, adjust tool settings and set the fastener type to HYTORC WASHER.
- Position the tool over the nut and HYTORC Reaction Washer.
- Pull the trigger to apply torque until the tool reaches the desired torque and stops.
- If an ANGLE has been specified, continue holding the trigger; the tool will pause and restart after the angle delay.
- If a RELEASE has been specified, continue holding the trigger; the tool will pause and restart after the angle delay.
- Release the trigger after the tool has completed all specified operations.
- The status light will turn amber during operation. If the operation is successful, the status light will turn green, if unsuccessful, the status light will turn red.



LOOSENING WITH THE HYTORC WASHER DRIVER



- The tool provides the maximum torque capacity in reverse, providing a powerful breakout capability.
- Toggle the Directional Switch to loosen mode.
- Position the driver over the nut and HYTORC reaction washer and hold the trigger to begin applying torque.
- The status light turns amber during operation. If the operation is successful, the status light will turn green, if unsuccessful, the status light will turn red.
- Remove the tool driver from the nut.

INSTALL THE HYTORC NUT DRIVER



- The **LION GUN** Electric Torque Tool is easily configured for tightening the HYTORC Nut.
- Identify the appropriate size HYTORC Nut Driver.
- Slide the nut driver over the square drive and spline while aligning the set screw with the flat on the spline.
- Tighten the set screw to secure Nut Driver.
- Challenge the nut driver to make sure it is securely attached.



TIGHTENING THE HYTORC NUT



NOTE: The HYTORC Nut inner sleeve is tightened in the counter clockwise direction (left hand threads).

- Power on the tool, adjust tool settings and set the fastener type to HYTORC Nut.
- Position the tool over the nut.
- If a RELEASE ANGLE has been specified, continue holding the trigger and the tool will restart and then stall again after completing the RELEASE angle. The tool can then be released from the nut.
- Release the trigger after the tool has completed all specified operations.
- The status light turns amber during operation. If the operation is successful, the status light will turn green, if unsuccessful, the status light will turn red.
- If the BEEPER is enabled, the tool will provide an audible beep upon completion of the operations.
- Remove the tool socket from the nut.
- Should torque be applied without a release angle, the tool may lock onto the nut. If this happens, set the tool to loosen to free the tool.

LOOSENING THE HYTORC NUT



- The tool provides the maximum torque capacity in reverse, providing a powerful breakout capability.
- Toggle the Directional Switch to loosen mode.
- When loosening HYTORC Nuts, position the driver and hold the trigger until the HYTORC Nut is loose.
- The status light turn amber during operation. If the operation is successful, the status light will turn green; if unsuccessful, the status light will turn red.
- Remove the tool driver from the nut.

10/19/2018 - Edition 4 from January 2018 uploaded.

01/04/2019 - French, Italian, Spanish, and Portuguese versions uploaded.

06/12/2019 - .7 LIONGUN specs updated to reflect the correct metric torque range (95 – 950 Nm).

12/06/2019 - General Safety Information updated.

01/31/2020 - Functionality and image updates made on pages 7, 8, and 13.

02/03/2020 - Section 5 updated to reflect that only one (1) battery is included with the Tool.

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