IonDriver 10.8v Impact Driver

User Manual

1/4” HEX Chuck and Locking Collar
2 3 Position Direction Switch (both sides)
3 LED Worklight
4 Variable Speed Trigger
5 +IonBattery Release Button (both sides)
Thank you for investing in a CEL product.

The 10.8V Cordless +IonDriver has been engineered and made to demanding high quality standards; ease of operation and safety have taken a major role in development. Proper care of your product will give you years of trouble-free use.

Normal wear and tear, including accessory wear, is not covered under guarantee. The product is guaranteed for domestic use against manufacturing faults for a period of 24 months. This product is not guaranteed for hire purposes.

If you have any questions, please contact us:
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It is possible to download updated user manuals, view demonstration videos and find information about new products at: www.cel-global.com

Warning: User must read and understand the user manual before using the product to reduce the risk of injury. Failure to follow all instructions may result in electric shock, fire and/or serious personal injury. The product must be used only for its prescribed purpose. Any use other than those mentioned in this manual will be considered a case of misuse. The manufacturer shall NOT be liable for any damage or injury resulting from such cases of misuse, use of force, partially or completely dismantled appliances.

This product contains materials that should be recycled but can not be disposed of with regular household waste. For disposal options contact your local recycling centre, council offices or your place of purchase.
WARNING! Check that both the input voltage on the rating plate and the plug type matches your local mains supply. If it is different contact your supplier immediately and follow their advice. Do not modify the charger or plug in any way.

This product is sold in several configurations. The images and descriptions in this user manual may differ from your product. For features or accessories not covered by this manual or if you are unsure about a feature or function contact your supplier or visit www.cel-global.com where you can find updated user manuals and compatible parts.
IMPORTANT NOTES

GENERAL HAZARD
READ INSTRUCTIONS
PROTECT VISION, HEARING, RESPIRATION
KEEP DRY
BE AWARE OF BYSTANDERS
FLYING DEBRIS
SHARP BLADES
WEAR APPROPRIATE CLOTHING

General Power Tool Safety Warnings

Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury. 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 tools plus compatible chargers and accessories.

1) Work area safety
   a) Keep work area clean and well lit. Cluttered or dark areas invite accidents.
   b) 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.
   c) Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

2) Electrical safety
   a) 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. Always fully uncoil cables to avoid heat buildup.
   b) 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.
   c) Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
   d) 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 and moving parts. Damaged or entangled cords increase the risk of electric shock.
   e) 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. Fully uncoil all cords in use.
   f) If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply. Use of an RCD reduces the risk of electric shock.

3) Personal safety
   a) 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.
   b) Use personal protective equipment. Always wear eye protection. Protective equipment such as dust mask, non-slip safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
   c) 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.
   d) 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.
   e) Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
   f) Dress properly. Do not wear loose
clothing or jewellery. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewellery or long hair can be caught in moving parts.
g) 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.

4) Power tool use and care
a) 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.
b) 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.
c) Disconnect the plug from the power source and/or the battery pack 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.
d) 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.
e) Maintain power tools. 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.
f) Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
g) 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.

5) Battery tool use and care
a) 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.
b) Use power tools only with specifically designated battery packs. Use of any other battery packs may create a risk of injury and fire.
c) 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.
d) 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.

6) Service
a) 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.

Safety Warnings for Impact Driver
• Hold power tool by insulated gripping surfaces, when performing an operation where the fastener may contact hidden wiring. Fasteners contacting a “live” wire may make exposed metal parts of the power tool “live” and could give the operator an electric shock.
• Secure the workpiece. A workpiece clamped with clamping devices or in a vice is held more secure than by hand.
• Always wait until the machine has come to a complete stop before placing it down. The tool insert can jam and lead to loss of control over the power tool.
• Do not open the battery. Danger of short circuit.
Protect the battery against heat, eg. against continuous intense sunlight, fire, water, and moisture. Danger of explosion.
• In case of damage and improper use of the battery, vapours may be emitted. Provide for fresh air and seek medical help in case of complaints. The vapours can irritate the respiratory system.
• Use only original CEL batteries with the voltage listed on the nameplate of your power tool. When using other batteries, eg. imitations, reconditioned batteries or other brands, there is danger of injury as well as property damage through exploding batteries.
The battery is supplied partially charged. To ensure full capacity of the battery, completely charge the battery in the battery charger before first use.

**WARNING!** Check that both the input voltage on the rating plate and the plug type matches your local mains supply. If it is different contact your supplier immediately and follow their advice. Do not modify the charger or plug in any way.

Only use supplied battery and charger or a suitable replacement. Chargers are designed for specific battery types and voltages and are not interchangeable. The information plate on your charger will indicate which batteries can be charged.

The +Ion lithium ion battery can be charged at any time without reducing its service life. Interrupting the charging procedure does not damage the battery. The battery circuitry will allow charging only within a temperature range of 0 °C to 45 °C.

Always remove the battery from the tool/charger and store it in a dry, secure place between 10°C and 20°C (50°F) and (68°F) when not in use. Excessive heat will reduce the lifetime of the battery, cooler conditions are best for lithium ion batteries.

**SPECIAL PRECAUTIONS FOR LI-ION BATTERIES**
The battery will hold its charge for several months without recharge but should never be stored flat as this may permanently damage the battery, to prevent permanent damage place on charge at least once every 3 months.

Never leave the battery on the charger longer than 24 hours due to fire risk.

**Charging the Battery**
1. Place the charger in a safe position away from moisture, heat or any hazard to the charger, people or property.
2. Connect to suitable power outlet and switch on.
3. Turn the battery so the rails slide smoothly into place on the charger.
4. Press it firmly into place.

**Charger Lights**
- Two solid GREEN LED’s show mains connection.
- One solid GREEN & one solid RED LED, shows fast charging.
- When two GREEN LED show again the battery is charged.
- Flashing LED show there is a charging problem.

**Time To Charge From Flat**
- 1.3Ah 80% Charge in 30 mins
- 1.3Ah 100% Charge in 60 mins

**Troubleshooting**
If the charger does not respond when the battery is inserted. Allow the battery to cool. Check there is a good connection between the contacts on the charger and the battery. Check the voltage of the battery, a charged battery will have around 12V DC (3x 4V). A voltage of 8V or lower may indicate a failed cell, please contact your re-seller.
WARNING! When changing battery, driver bits or whenever the tool is not in immediate use the direction switch must be in its central locked position to prevent accidental starting.

Read and understand all safety warnings and all instructions before operating this product. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Intended Use
The machine is intended for driving in and loosening screws and bolts as well as for tightening and loosening nuts up to its mechanical specification with an appropriate accessory fitted. This tool is not intended to provide accurate torque levels, use an appropriate hand operated torque wrench to measure torque.

Inserting the Battery
Insert the charged battery into the handle until it can be felt to engage and sits flush against the handle.

Removing the Battery
To remove the battery, press the two unlocking buttons and slide the battery out of the machine. Do not exert any force.

Charger model number: MT1-CG01
Battery model number: MT1-BP01
4.0 OPERATING THE TOOL

Functional Description

The chuck is driven by an electric motor via a gear and impact mechanism. The working procedure is divided into two phases:

Screwing in and tightening (impact mechanism in action).

The impact mechanism is activated as soon as the screwed connection runs tight and thus load is put on the motor. In this instance, the impact mechanism converts the power of the motor to steady rotary impacts. Each of these impacts turns the chuck in increments until the chuck can no longer be turned or the trigger is released.

When loosening screws or nuts, the process is reversed.

Operating the tool

Move the Direction Selector from the central position to either side to choose the rotational direction. Always return the Direction Selector to the central position before putting it down, this will help prevent accidents. After fitting a charged battery, grip the handle and squeeze the trigger gradually to increase the rotation speed.
Choosing the Driver Bit for the job

There are many types of fixing. Using the correct driver bit is essential for safe work practice. Using the incorrect type or size of bit to drive a fixing can damage both the bit and the fixing. The +Ion Driver accepts a ¼” (6.35mm) hexagon bit. Use a driver bit with a ball catch (DIN 3126-E6.3). Or to use a smaller bit such as the examples below you should first fit a magnetic bit holder with a ball catch.

The images on the left show both Phillips™ and Posidrive™ screw heads and driver bits. These screw heads are often confused. Look for the second cross shape on the Posidrive screw head, for this type of screw use the driver bit with 8 flutes.

Fitting/Removing a Driver Bit

Slide the direction change to the central, locked position to prevent accidental starting. Remove any driver bits already in the chuck by pulling the Locking Collar away from the machine to release the Ball Catch and remove the bit from the chuck. Select an appropriate bit for the fixing and insert it into the chuck, press the bit into place while pulling the Locking Collar away from the machine then release the Locking Collar so it slides back to its position toward the machine.

Before using the tool first check that the bit is held firmly in place and cannot be pulled loose. Operate the tool away from the fixing briefly to check for alignment and correct operation before applying the bit to the fixing. Re-fit and re-test the bit’s fitting if necessary.
The +IonDriver cordless impact driver will quickly become a favoured tool. Impact Drivers are much more efficient at driving/removing screws and other fixings than a rotary drill. Because of this you will see greatly increased battery performance when driving screws.

• Maximum torque is achieved after the impact mechanism has made several rotations.

• Make sure you press the driver bit firmly into the fixing when both tightening and loosening a fixing. This pressure should be enough so as not to allow the bit to “cam” out which may strip the fixing head or damage the driver bit.

• The +IonDriver is capable of very high levels of torque, this torque could easily break a fixing if tightened too much. Broken or damaged fixings are very hard to remove. Use a suitable torque wrench to test torque levels and be aware of the maximum allowable torque of the fixings used.

• A little wax or soap can help a screw go in easier and prevent breakage. Be aware of the effect this can have on both the screw (corrosion) or the material being fixed. Oil based lubricants will help but may penetrate the finish and stain your work.

• Because of the high torque levels achieved by the +IonDriver a high quality driver bit is recommended. Look for “Hardened” driver bits and bits rated for use with impact drivers.

• Drill a pilot hole for long screws to approximately ⅔ of the length of the screw, this will help prevent splitting timber and broken fixings.

• Although impact drivers are designed for fixings, they make excellent drills as well. Look for ¼” hexagon fit drill bits or a ¼” hexagon fit chuck which will allow regular drill bits to be held.

• When doing big jobs that require constant charging of the batteries. Remember that you can swap Li-Ion batteries at any time during a charge/discharge cycle. The 1.3Ah +IonBattery will be charged to 80% of its full capacity in the first 30 minutes on the fast charger, after that the protection circuit reduces the charge current to complete the charge.

• When choosing fixings the fixing length should generally penetrate 2/3 of the combined thickness of the materials being joined. Consider moisture conditions and the makeup of the materials being fastened to avoid corrosion. Use galvanized or other rust-resistant screws where rust could be a problem.

• The capacity of a Li-Ion battery drops faster in warm conditions permanently reducing its working lifetime. Storing the batteries at a stable temperature below 20°C (68°F) and above freezing will allow them to retain a higher capacity throughout their life, avoid keeping them in hot vehicles or storage areas. This is different to other types of battery such as NiCD, NiMh and Pb which last longest in a warmer environment.
General inspection
Regularly check that all the fixing screws are present and tight, they may vibrate loose over time. Keep the tool’s air vents unclogged and clean at all times. Remove dust and dirt regularly. Cleaning is best done with compressed air or a rag.

CAUTION, Do not use cleaning agents to clean the plastic parts of the tool. A mild detergent on a damp cloth is recommended. Water must never come into contact with the tool.

After each use, carefully clean the tool with a brush or rag. Clear any debris from around the battery mount, moving parts and clips.

Lubrication
No Lubrication is necessary, the bearing area is sealed.

Storage
Store the tool, instruction manual and accessories in a secure, dry place. In this way you will always have all the information and parts ready to hand.

The lithium ion batteries should ideally be stored between 10ºC and 20ºC (50ºF) and (68ºF). Other parts should be stored between 10ºC and 24ºC (50ºF) and (75ºF).

Environment
When the time comes to dispose of this product please consider the environment and take it to a recognised recycling facility instead of disposing with general household waste. Call your local council, civic amenity site, or recycling centre for information on the recycling and disposal of electrical products and batteries. If you do not have access to suitable disposal facilities in your area please contact your re-seller, they will advise you on the best way to dispose of your product.

More information
www.cel-global.com or from your supplier.

Maintenance
All electrical parts should be regularly serviced by an approved engineer.
8.0 TECHNICAL SPECIFICATIONS

PRODUCT CODE • ID1
IMPACTS PER MINUTE • 2300/min
MAXIMUM TORQUE • 90 Nm / 800 in-lbs
NO LOAD SPEED • 0-2300rpm
CHUCK SIZE • 6.35mm (¼”)
VOLTAGE • 10.8V DC
BATTERY CAPACITY • 1300mAh
CHARGER INPUT to OUTPUT VOLTAGE • 100-250V AC 28W to 10.8V DC 1.8A
WEIGHT INCLUDING BATTERY • 0.98kg (2.1lbs)

Do not use this product without first reading and understanding all documentation and warning labels. Keep these instructions safe and provide them to all users. For use only as outlined in this document, any other use will be considered as misuse.

If you experience any problems with the product please contact
email: service@cel-global.com
phone UK: +44 8453 889769
phone US: +1 800 233 7592
www.cel-global.com

Wear Eye, Ear and Respiratory protection
Wear appropriate clothing
Be aware of surroundings at all times
General Hazard

This product contains materials that should be recycled but cannot be disposed of with regular household waste. For disposal options contact your local recycling centre, council offices or your place of purchase.

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