GLOWORM

OPERATING INSTRUCTIONS

X one

Congratulations! You are now the owner of a Gloworm X1.

Prepare to Experience the Revolution in LED Adventure Lighting!

Safety Instructions

An alternative light source should be carried at all times.

Heat Generation

The aluminium light-head is designed to draw heat away from the LED. The process works effectively when air is flowing over the light. However, the light can become hot if left stationary on its higher settings. It is recommended that the light is set to a lower setting when stationary for more than a few minutes.

Important! If the light is being used in a stationary state and it begins to become hot it will automatically reduce current as a measure to reduce the light's temperature and protect the electronic components. Constant operation at high is only possible with continuous air flow.

Battery Care

- Never leave a battery unattended whilst charging,
- A battery should never be exposed to direct heat,
- Only use the supplied li-Ion charger when charging the battery,
- Batteries do not need to be discharged before charging, frequent charging will not cause harm to your battery.
- When storing your battery, ensure it is at charged to at least 50% capacity. Store in a cool dry environment inside an airtight container.

Mounting the X1

Helmet Mounting

The X1 comes mounted to the helmet mount, this can be attached to almost any helmet using the supplied Velcro (or cable ties). Attach the light by looping the velcro through the vents of the helmet. Tip: Many helmet vents slope toward the front of the helmet. Mounting the helmet toward the front of the helmet helps prevent the light slipping forward during use.

Bar Mounting

The bar mount is designed to fit flush with the stem. From this position the X1 can be adjusted to any position around the circumference of the bar.

Pre-stretch the o-ring prior to use then loop it over one side of the bar mount. Place the bar mount flush with the stem then stretch the o-ring around the bar and loop it over the opposite side of the mount.

Headstrap

The light is attached to the headstrap by threading the headstrap elastic through the slits in the helmet mount. The elastic is then secured to the headstrap backplate. Adjust the straps to your preference.

Battery

The battery can be attached to/placed in any location that suits the user, i.e. Top tube, back pack shoulder strap, in back pack, in riding jersey etc. To ensure there is enough cable to reach your desired battery location use the provided extension lead. A protective adhesive foam strip is supplied.

Quick Start and Operation

Overview

The X1 is operated using the remote switch. Operation of the X1 is through different types of button press:

CLICK   quick press, less than 1 second

DOUBLE CLICK   similar to that used with a computer mouse

PRESS   2 to 3 seconds

HOLD   hold button in the down position

The X1 is pre-loaded with two default programmes each of which can be customised to your needs (detailed in the next section). Each programme features 'Normal Operation Modes' (NOM) and one 'Special Mode' (SM).

Start

Once the battery is connected, the X1 is ready to be used. **CLICK** to start the light in **TRAIL** programme (Default 1). **DOUBLE CLICK** to start in **COMMUTER** programe (Default 2). NOMs (High, Low, etc) are cycled using a **CLICK**. The SM is accessed with a **PRESS** of the switch from any NOM. A **CLICK** of the switch will return the X1 to NOM.

To turn off the X1, HOLD the remote switch. The light will cycle through SM, then it will turn off.

Programme Matrix (Factory Settings)

	Special Modes	Normal Operation Modes		
Trail Programme (Default 1) **CLICK** to start	Special Mode DIM 100 Lumens 48 hrs runtime	LOW 300 Lumens 8.5 hrs runtime	MED 650 Lumens 3.5 hrs runtime	HIGH 950 Lumens 2.25 hrs runtime
Commuter Programme (Default 2) **DOUBLE CLICK** to start	Special Mode FLASH 700/300 Lumens 6 hrs runtime	LOW 500 Lumens 4.5 hrs runtime	HIGH 700 Lumens 3 hrs runtime	

Light Level/Runtime Matrix (Customised)

10% 48hrs	20% 20hrs	30% 8.5hrs	40% 6.5hrs	50% 4.5hrs	60% 3.75hrs	70% 3hrs	80% 2.75hr	90% 2.5hrs	100% 2.25hrs
100 lm	200 lm	300 lm	400 lm	500 lm	600 lm	700 lm	800 lm	900 lm	950 lm

Special Modes (SM)

DIM (like a flashlight, good for reading, small closeup tasks)	48hrs	**FLASH** (light flashes high-low-high-low every second)	6hrs	**BEACON** (1 bright flash, followed by a 3 second pause)	48hrs

IMT and Programme Customisation

Intelligent Mode Technology (IMT) allows the X1 to be refined for any adventure. The X1 is loaded with two programmes that can be customised on the fly.

DEFAULT 1 - Special Mode and three light level modes
DEFAULT 2 - Special Mode and two light level modes

The user can adjust the brightness of each light level mode in addition to being able to select the type of SM for each programme (DIM, FLASH or BEACON).

Light Level Brightness Customisation (NOM)

1. Switch the light to the NOM (light level) you wish to adjust.   2. **DOUBLE CLICK**, the light will give 2 quick flashes indicating you can commence customisation. 3. Increase the brightess in 10% increments using a **CLICK** (when 100% brightness is reached the light will give 2 quick flashes), dim the brightness by **HOLDING** the button. 4. Once the desired brightness has been reached, **DOUBLE CLICK** to return to normal operation.
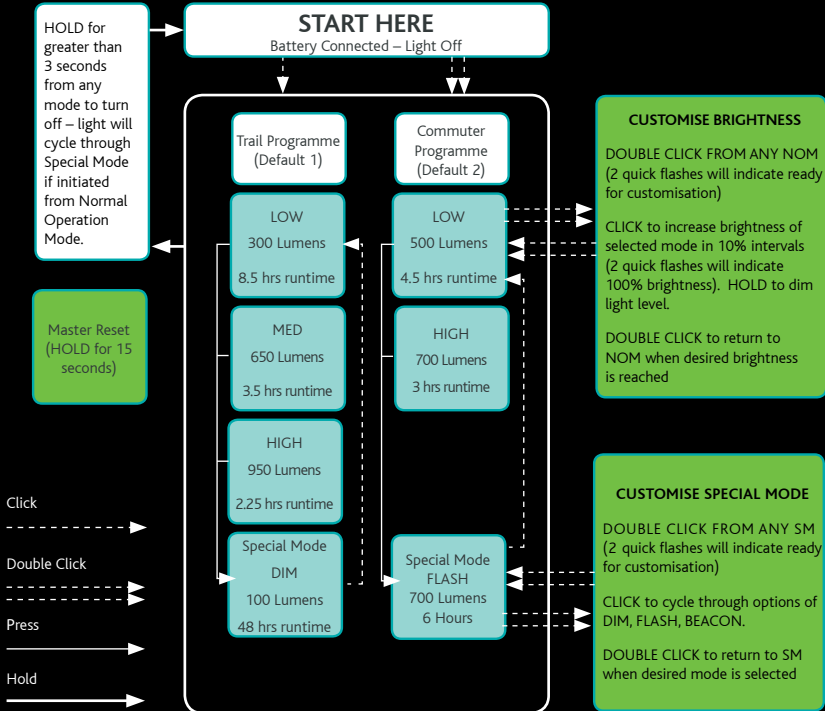
Special Mode Customisation (SM)

1. When in SM, **DOUBLE CLICK** the button. 2. The light will give 2 quick flashes indicating you can select your preffered SM. 3. Cycle through the three options using a **CLICK. DIM** is inidcated by a dim light, **FLASH** is indicated by two flashes every 1 sec and **BEACON** is indicated by a quick bright flash at 2 second intervals. 4. Once the desired SM has been selected, **DOUBLE CLICK** to return to normal operation.

Master Reset

When the light is off, **HOLD** the button for 15 seconds to restore to factory settings. After 15 seconds the light will flash rapidly 10 times and then turn off. This indicates factory settings have been restored.

Operation Chart

START HERE
Battery Connected – Light Off

HOLD for greater than 3 seconds from any mode to turn off – light will cycle through Special Mode if initiated from Normal Operation Mode.

Master Reset (HOLD for 15 seconds)

Click

Double Click

Press

Hold

Trail Programme (Default 1)

LOW
300 Lumens
8.5 hrs runtime

MED
650 Lumens
3.5 hrs runtime

HIGH
950 Lumens
2.25 hrs runtime

Special Mode DIM
100 Lumens
48 hrs runtime

Commuter Programme (Default 2)

LOW
500 Lumens
4.5 hrs runtime

HIGH
700 Lumens
3 hrs runtime

Special Mode FLASH
700 Lumens
6 Hours

CUSTOMISE BRIGHTNESS

DOUBLE CLICK FROM ANY NOM (2 quick flashes will indicate ready for customisation)

CLICK to increase brightness of selected mode in 10% intervals (2 quick flashes will indicate 100% brightness). HOLD to dim light level.

DOUBLE CLICK to return to NOM when desired brightness is reached

CUSTOMISE SPECIAL MODE

DOUBLE CLICK FROM ANY SM (2 quick flashes will indicate ready for customisation)

CLICK to cycle through options of DIM, FLASH, BEACON.

DOUBLE CLICK to return to SM when desired mode is selected

Battery

Voltage Indication

The battery's fuel gauge allows the user to monitor the battery capacity at a glance. There are three LED indicators (40%, 80%, 100%) located on the battery that will glow independently as the voltage decreases. (The 40% LED will glow red when battery voltage is at 20%) Additionally, when voltage reaches a critical level the X1 will alert the user by emitting a flash sequence.

Charger

The X1 is supplied with a Li-Ion Smart Charger. The charger has an LED indicator to let the user know when the battery has completed the charging process. Simply plug the charger into the wall socket (power off) and then connect the battery to the charger – the LED indicator will glow GREEN. Turn the power on at the wall socket and the indicator will glow RED and the charging process will commence. When charging is complete the indicator will glow GREEN.

Important! Always disconnect the battery from the light when not in use! The small amount of power used by the electronics will discharge the battery, additionally the lamp may be switched on accidentally and consequently cause an uncontrolled heat build-up. If you intend not to use the lamp for a longer period of time, fully charge the battery and store in a cool and dry place.

Battery Care

The following steps should be taken to conserve the life of your battery.

- Always store your battery in a cool dry location
- Prior to storage, ensure your battery is charged to 50-70% (not full)
- Your battery will not develop a memory, you can charge and discharge as you like
- Keep your battery away from direct heat sources
- Only charge using a smart charger, an addition to the batteries protective circuit, this will prevent over charging
- Optimal battery use is between 15% and 85%. Our batteries are designed not to exceed these limits. Feel free to charge and discharge as needed
- A battery should be able to complete 500 cycles prior to losing capacity.
- Part charges and discharges are not equal to a full cycle. Several part cycles are better for the battery that 1 'full' cycle.

For more information on your battery go to **www.batteryuniversity.com**

POOR BATTERY CARE WILL VOID WARRANTY

Changing the Optics

The X1 is supplied with one installed optic lens. Additional optics are included in the light system kit. To change optics follow to the process below:

1. Remove the X1 from the battery.
2. Remove the front bezel using the bezel tool (this looks like and is a bottle opener)
3. Now remove the bezel, the protective lens and the o-ring.
4. Carefully remove the optic; you will now see the LED – TAKE CARE: Do not touch the LED or the electronic board/connections, doing so will leave body oils on the surfaces and potentially damage the X1.
5. Place the new optic into the X1 so the top of the optic is flush with the front of the housing.
6. Replace the o-ring, the protective lens and the front plate.
7. Tighten the front screws until the front plate is flush with the housing. Do not over tighten.

ANY OTHER DISASSEMBLY OR MODIFICATION OF THE LIGHTHEAD/BATTERY/ CHARGER WILL RESULT IN VOIDING THE MANUFACTURER'S WARRANTY.

Video Tutorials

Gloworm tutorials can be found at www.youtube.com/glowormproducts

Tell us what you think!

We would really like to hear what you think about your Gloworm X2. You can provide feedback by posting a review on www.mtbr.com or by sending an email to reviews@glowormlites.co.nz.

www.glowormlites.co.nz

EXPERIENCE THE REVOLUTION