

# EXPOSURE LIGHTS

[www.exposurelights.com](http://www.exposurelights.com)

YOU NOW  
OWN  
THE NIGHT



MaXx-D

## 2010 Owner's Manual Exposure Lights Features

- CFD Cable Free Design
- Super LED range
- Li-ion batteries
- Hardwired batteries
- Smart Port Technology
- Smart recharging
- PiggyBack plug in battery option
- Remote switch available
- White Eye accessory
- RedEye rear light accessory options
- RedEye Micro rear light accessory
- Forged alloy quick release bracket
- One size fits all QR bracket
- Fuel gauge battery life indicator
- Light mode indicator
- Long burn times
- Reserve fuel tank
- Collimated lens technology
- Multi-faceted reflector technology
- Dual beam optics
- Lightest weights
- Smallest sizes
- Thermally protected
- Fully weatherproof
- CNC machined aluminium casing
- Anodised finish
- Laser graphics & rider information
- Soft-shell packaging case
- British design and manufactured
- 2 year warranty
- Versatile & multisport



Toro



Strada

**CFD**  
Cable Free Design

**SPT**  
SMART  
PORT  
TECHNOLOGY

## EXPOSURE LIGHTS SPECIFICATION

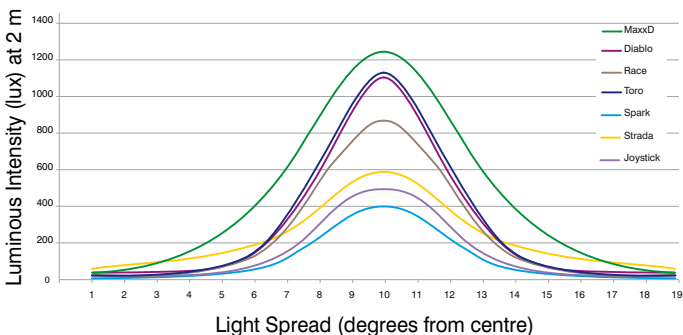
Recommended Operating Temperature Range: -15C / + 40C

	LED's	LED Output	Battery mAh	Mode - Hours			Weight gms
				High	Medium	Low	
Spark CR123A	1	220	2600	2.5	8	15	72
Spark RCR 123A	1	220	1400	1.5	4	10	72
Joystick	1	240	2450	3	10	24	76
Diablo	1	700	2450	1	3	10	102
Race	2	480	4900	3	10	24	190
Strada	2	480	4900	3	10		228
Toro	1	700	7350	3	10	24	276
MaXxD	4	960	9800	3	10	24	298

Spark, Joystick, Race, Strada and MaXx-D Exposure Lights use collimated design Lens technology with Dual Beam Optics. These high-tech resin lenses are specifically designed to optimise light collection from each LED. Dual Beam Optics means you get a great delivery of light from each Lens that includes “flood” and “spot” beam combined – perfect!

Diablo and Toro Exposure Lights use multi-faceted reflector technology with integrated diffuser. This system is specifically engineered for the new P7 LEDs found in these models and delivers the best beam pattern and “blend” of light available from these LEDs.

Test ride lights at your nearest Exposure demo dealer to see for yourself and meet us at many night events throughout the year.  
See [www.exposurelights.com](http://www.exposurelights.com) for details.



## **Please read all instructions before using your EXPOSURE LIGHT**

EXPOSURE LIGHTS - the lightest high output production sports lights. Designed for high performance, EXPOSURE LIGHTS combine the latest LED technology with a powerful Lithium Ion battery. Before using, please familiarise yourself with this manual, so that you understand how to operate and care for your EXPOSURE LIGHT.

### **Warning**

EXPOSURE LIGHTS are a very powerful lighting system. Always use care when operating. Do not look directly into the light. This may cause serious injury. Do not shine directly at others.

EXPOSURE LIGHTS/USE Ltd. accept no liability for any injuries or other damages arising from the use of this product in any circumstances.

### **Important Information**

EXPOSURE LIGHTS are weatherproof under normal conditions but are NOT waterproof.

DO NOT SUBMERGE UNDER WATER. If moisture does appear in the unit do not use it and contact Exposure's service department.

Never attempt to disassemble the light unit. This will invalidate your warranty.

Do not attempt to use any other chargers or batteries with the unit. This will cause damage and is dangerous.

Long periods of non-use will lower the voltage of the battery. Please follow the charging instructions and top-up the charge monthly when not in use.

### **Warranty**

Please register your EXPOSURE. Fill in the form at the back of this manual or register online at [www.exposurelights.com](http://www.exposurelights.com). IMPORTANT: keep your proof of purchase from your retailer. You will require this should you have a claim.

EXPOSURE LIGHTS will give a 2-year warranty to the original owner for the light unit, brackets and charger. This warranty covers material and manufacture. Accidental damage and neglect are not covered by warranty. Modifications or improper use also void the warranty.

All EXPOSURE LED's are covered by lifetime warranty, in accordance with proper use.

Warranty is valid from date of purchase, and to the original owner (proof of purchase is required).

Exposure Lights service department :  
Tel: +44 (0)1798 344471  
E-mail: [service@exposurelights.com](mailto:service@exposurelights.com)

## Soft Shell Pack Contents

Please ensure that the following contents are included with your purchase. If any of the items are missing please contact your place of purchase.

### MAXX-D, TORO, STRADA, RACE



## DIABLO – both bracket types included



Accessories to consider: Piggyback battery; RedEye rear lights

## JOYSTICK with helmet bracket

For 2009 models the Joystick is supplied with either the Helmet Bracket or the Quick Release handlebar bracket and QR Clip. Additional brackets are available from your place of purchase as accessories.



Accessories to consider: White Eye; RedEye micro; QR bracket set.

## Quick Release Bracket – MaXx-D, Toro, Strada (Diablo with clip), Race

The Exposure QR bracket is a triumph in design that brings to life the full benefit of Exposure's principle feature, Cable Free Design (CFD). The light unit is easily and quickly attached and removed. The bracket stays with the bike and the light will be in the perfect position every time it is attached.

- Mounting to a 31.8mm bar – Remove the spacer from the bracket. Peel backing of the rubber strips and attach to the inside of the metal bracket. Fit the bracket to the bar. Tighten the clamp with a 4mm hex key. (Maximum 2.5Nm) **DO NOT OVER TIGHTEN!**
- Mounting to a 25.4 or 26mm bar - Clip the plastic spacer over your bar, attach the bracket over the spacer and tighten the clamp with a 4mm hex key. (Maximum 2.5 Nm) **DO NOT OVER TIGHTEN!**



1 Attach the cleat to the light unit using the provided bolt (Already fitted to new lights).



2 Locate the cleat into the V section of the bracket and slide forward until the steel pin "clicks" into place



3 To adjust the angle of the light, loosen the cleat bolt. A hole in the bracket enables access to the bolt when the light is in the bracket. Use a 4mm hex key to adjust and tighten the bolt securely (Maximum 2.5Nm)



4 To release the light from the bracket push away and down on the red button and gently pull back the light with your hand. This is a simple one-hand operation.

- Warning - Make sure that brake and gear cables cannot catch on or interfere with the light or the bracket or release button.

- Warning: Racers beware - check number boards do not interfere with bracket button. If the steel pin can not pop-up fully the light will not be fully engaged to the bracket and may come off.

QR bracket also available as accessory:

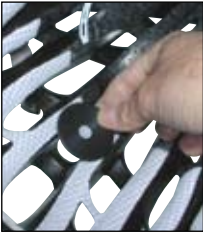
EXPQRBK-10 Bracket Only (no cleat or bolt)

EXPQRBKSET Bracket with clip for Joystick/Diablo/Spark

## Helmet Mount – Diablo, Joystick, (Spark)

The highly acclaimed Joystick helmet bracket works as a ball joint. Follow these instructions for set up and position of the light for riding. The clamp is made up of three parts: Lower clamp disc, upper clamp with ball joint socket and a nylon clamp bolt.

- Put the shorter plastic bolt through the lower clamp disc and align with a selected vent on the inside of your helmet.
- Place the upper clamp through the top of the vent to meet the bolt.



- Tighten the bolt. Take care not to damage your helmet.

Use the shorter bolt first and if not long enough then go to the longer bolt. Do not use the long bolt on thinner section helmets, as this will stop the ball joint working or possibly pop it out.

- Clip the Joystick body into the top part of the clamp

• The Joystick can be adjusted by rotating the ball joint when holding the light and is easy to do when you are riding to get the best position.

We suggest you attach a lanyard through the holes provided at the back of the light unit and loop the lanyard through a vent in your helmet or round the handlebar if using it there. This is for added security of your light.

## Handlebar clip - Diablo, Joystick, (Spark)

The QR Clip allows you to mount your Joystick, Diablo or Spark light to the Quick Release.



Simply press the light into the QR clip with the point of the clip towards the front of the light



Now engage the clip and light into the QR.

A simple cable tie handlebar bracket is also available as an accessory, as supplied with the Spark light.

EXPOSURE LIGHTS/USE accepts no liability for any injuries or other damages to person or equipment arising from the use of the clamps.

## LIGHT OPERATION

### Multi Function Button

Located on the back of the light unit is the function button (on top of body for Spark light). This operates the light unit and informs you of the mode setting and the battery power status.



When the light is on and function button is pressed, the colour of the button for the first two seconds informs you which mode has been selected. Thereafter the colour of the button is your fuel gauge.

Green (High) – Amber (Medium) – Red (Low)



On the Strada model there are just two main modes  
Green (High) – Red (Dipped)

### Mode Function

- To turn on the light, double click the button; the light is now operating in the brightest Max mode.
- To switch between the constant settings, press the button once.
- To activate the flashing mode, press and hold the button for 1 flash (approx 1 second) and release. The flashing mode can be activated from any of the constant modes. To return to the Max mode, press the button once.
- To turn off the light, press and hold the button down. After 2 flashes (approx 2 seconds) the light will turn off. The function button will rapid flash red as the light shuts down.

### Fuel Gauge Function

After two seconds the function button becomes the fuel gauge. The colour of the button now indicates the approximate percentage of battery power left.

Button	Battery
Green	100% - 50%
Amber	50% - 25%
Red	25% - 5%
Red Flash	5% - Empty

When the battery has only 5% charge remaining in whichever mode, the light will automatically switch to the low setting. Modes available are restricted to Ride and Low. The function button will flash red. Light output will slowly dim over 3 hours and this is the extended burn time on reserve power.

Mode and Fuel Gauge functions will operate as normal when using a remote switch. When using a Piggyback Battery the function button will only flash green to indicate the light is charging.



## Smart Charging Exposure Lights

Before using your Exposure Light please charge it fully.

Use only genuine Exposure Lights chargers. International chargers are available, also in-car charger and USB top-up cable.

EXPOSURE LIGHTS use the highest quality Lithium Ion batteries. This allows them to be recharged at any point during the discharge cycle. Burn times will not be affected by multiple re-charging.

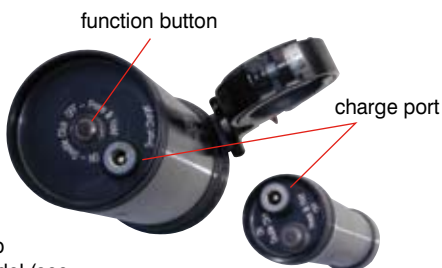
### Re-charging instructions

- Ensure the light unit is turned off.
- Plug the Smart Charger into the power supply and switch on the supply. The LED on the charger will show green (operational).
- Insert the charger connection plug into the light's charge port, located on the back of the light. The charger's LED will show red when the light unit is charging up to 90% full.

The function button on the light will continuously flash green to inform you that the charger is connected and functioning.

From empty the light unit will rapid charge to approximately 90% capacity - at this point the LED on the charger will go from red to green.

To 100% charge the light leave the charger plugged in and turned on for a further 1 to 4 hours depending on the model (see below). You can leave the light on charge as long as you like (like your mobile phone).



	Charge Capacity	
	Rapid (red)	Trickle (green)
	90%	Final 10%
Joystick	3 Hrs	1 Hrs
Diablo	3 Hrs	1 Hrs
Race	6 Hrs	2 Hrs
Strada	6 Hrs	2 Hrs
Toro	9 Hrs	3 Hrs
MaXx-D	12 Hrs	4 Hrs

Long periods of non-use will lower the voltage of the battery. If the unit is being stored for long periods, please ensure the battery is periodically charged. We suggest once per month.

All the Exposure Lights from 2008 (MaXx range) and 2009 (MaXx-2 range) and 2010 use the same Smart chargers.

## PIGGYBACK BATTERY

An outstanding feature of the Exposure range is the ability to extend burn times with Piggyback batteries.

Piggyback batteries are available as single or triple cells and are supplied with Velcro attachment strap and fitting block. They can be mounted under the stem, to the helmet, on the light unit itself (walking) or carried in your pocket or backpack.



Piggyback battery triple cell



Piggyback battery single cell



Piggyback battery single cell

Piggyback batteries give you peace of mind for safety and security by extending your burn times.

If plugged in when the light unit is fully charged, all the light modes are available. If the light's internal battery is below 50% charge then only Medium and Low settings will be available when the Piggyback battery is connected. The Piggyback battery works by recharging the light as you use it.

When the Piggyback battery is plugged in, the fuel gauge will not be operative; the function button will flash green as when charging.

Options available: EXPPB1 – Single cell Piggyback battery

EXPPB3 – Triple cell Piggyback battery

### BURN TIMES (hours approx) WITH PIGGYBACK BATTERIES

	Mode	CFD	1 Cell	3 Cell
Joystick	High	3	6	12
	Med	10	20	40
	Low	24	48	96
Race	High	3	4.5	7.5
	Med	10	15	25
	Low	24	36	60
Diablo	High	1	1.5	2.5
	Med	3	4.5	7.5
	Low	10	20	40

	Mode	CFD	1 Cell	3 Cell
Toro	High	3	4	6
	Med	10	13.3	20
	Low	24	32	48
Strada	High	3	4.5	7.5
	Dipped	10	15	25
MaXxD	High	3	3.8	5.3
	Med	10	12.5	17.5
	Low	24	30	42

### Remote Recharging

When the light is switched off and the Piggyback battery is plugged in it will pass charge into the light unit. The cells will average out the available power between the light unit and the Piggyback battery.

## Remote Switch

Smart Port Technology (patent appl.) allows you to run various accessories with your Exposure light such as the Remote Switch.

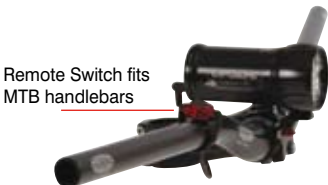
Available as an accessory, the remote switch simply plugs into the Smart Port on the back of the light unit. Using the Velcro strap supplied, fit the Switch to your handlebar near the grip or where you want it. You can now turn the light on/off and switch between modes as normal, without having to touch the light itself. The Function and Fuel Gauge indicators on the button remain operative when using the Remote Switch.

Use the Remote Switch for easier switching in the dark, especially when wearing winter gloves, taking advantage of the larger button on the Remote Switch.

Dip your lights. Just as cars dip their headlights for oncoming traffic and cyclists, we recommend that Exposure Light users respect others in the same way. On the road or on the bike path our lights are so bright in Max mode that it is recommended to “dip” down to Low light mode when someone is coming towards you. With the Remote Switch this can be easily and quickly done with two clicks of the button. One more click and you are back up to Max mode. Be seen but also respect others and be safe in the dark.

Strada model is designed with just two main modes: High Beam and Dipped Beam. It is supplied as standard with the remote switch. On Low Beam the Strada displays a flat (horizontal) beam pattern that will not dazzle on-coming traffic or cyclists. It is simple to “toggle” quickly between the two modes.

Warning: Do not plug in the Remote Switch with the Power Port active as the remote switch will not operate in this case.





## Power Port: how to activate [RedEye rear lights and White Eye]

With Smart Port Technology (SPT) there is the option to run various accessories from the Power Port such as the RedEye rear light or the WhiteEye.

All SPT accessories work on 2009 (MaXx-2) and 2010 model lights which display the “SPT” logo etched on the bodywork of the light. They will NOT work on 2008 MaXx model lights.

If you are a cyclist using the Exposure Light you will be aware of how important it is to be seen from behind as well as from the front to remain safe from other road users. Smart Port Technology enables Charge Port to become a Power Port to power the RedEye rear lights or WhiteEye.

To activate Power Port: When the light unit is off, press and hold the function button until the main LEDs rapid flash then release button.

Now turn on the light unit in the normal way with double click. A rapid flash shows as the light turns on. This indicates you now have the light on with the Power Port activated.

Now plug in RedEye or WhiteEye accessory and you will get a bright, constant output from the accessory.

With Power Port activated you can use all the front LED light modes as normal. When you turn off the light unit it will reset the Power Port. You will need to repeat the switch-on procedure to activate the Power Port again. You can not run two Smart Port Technology accessories at the same time.

### BURN TIME REDUCTION WITH SPT ACCESSORIES

Model and Accessory	High Setting	Med Setting	Low Setting
Joystick with RedEye	2hr 15min	5hr 30min	8hrs
Joystick with WhiteEye	1hr 30min	2hr 15min	2hr 40min
Diablo with RedEye	55 mins	2hr 15min	5hr 20min
Race with RedEye	2hr 30min	7hrs	12hrs
Strada with RedEye	2hr 30min	7hrs	n/a
Toro with RedEye	2hr 45min	7hr 45min	14hrs
MaXxD with RedEye	2hr 45min	8hr 15min	16hrs

## RedEye rear light accessories and White Eye accessory.

**RedEye rear light:** Encased in a tough CNC machined aluminium body and fully waterproof, the RedEye is possibly the brightest (80 Lumens) rear light on the market. It uses the same P4 LED as the Joystick but in red. Burn times will be reduced on your front light when running the RedEye.

The RedEye is Velcro attached to helmets, seat posts or racks where you like and is provided with power cable to reach from post to handlebars. Excess cable is wound round the light body.

Be clearly seen from the rear both Day and Night. RedEye comes highly recommended to road cyclists even in daylight hours. It is so bright you can easily be seen with this accessory.

**RedEye Helmet rear light:** A neat solution. Same as RedEye but with clip and short cable. Attach to body of Joystick or Diablo. Only used when light is on helmet or handheld.

**WhiteEye front accessory:** A 240 Lumen white P4 LED that clips to Joystick (or Diablo) in same way as RedEye Helmet accessory. Used to boost output.



WhiteEye fitted to Joystick



RedEye fitted to seat post

**RedEye Micro** is a very affordable plug-in rear light for the Joystick or Diablo. Activate the Power Port as described on page 12 and plug in the RedEye Micro. There is minimal drain on burn time for main light when using RedEye Micro. It is a very focused beam of light. As your head moves about it will catch the eye of the driver behind you. It is very effective but should be thought of as a supplement to your main rear light on the bike when cycling.



## Spares and Accessories

See your dealer for accessories to enhance your night time experience.

EXPRS	REMOTE SWITCH with cable
EXPWE	WHITEEYE front light with short cable
EXPRE	REDEYE rear light with long cable
EXPREH	REDEYE HELMET rear light with short cable
EXPREMIC	REDEYE MICRO red rear plug-in LED
EXPQRBK-10	QR Handlebar bracket 25.4-31.8mm
EXPQRBKSET	QR Handlebar bracket set with clip for Joystick etc
EXPQRCLIP	QR CLIP (Diablo / Joystick / Spark)
EXPCLEAT	Cleat and head bolt to fit QR brackets
EXPHM	HELMET-MOUNT Kit (Diablo / Joystick / Spark)
EXPHB	HEADBAND (Joystick / Spark)
EXPPB1	PIGGY BACK BATTERY - Single Cell
EXPPB3	PIGGY BACK BATTERY - Triple Cell
EXP/CHARGER/USBCABLE	Top-up charger cable for USB port
EXP/CHARGER/CAR	IN-CAR SMART CHARGER
EXP/CHARGER/UK	SMART CHARGER UK3pin
EXP/CHARGER/EURO	SMART CHARGER EURO2pin
EXP/CHARGER/US	SMART CHARGER US2pin
EXP/CHARGER/ASIA	SMART CHARGER ASIA2pin

In-Car Charger



QR Bracket with clip



Piggy Back Batteries



EU Charger



## **MAINTENANCE**

Inspect and test your EXPOSURE light before every outing in the dark.

Keep your EXPOSURE light clean, and the lenses free of dirt. The lenses are made of hi-tec plastic but can be scratched. Be careful when cleaning any mud or dirt from the lens. Never use a high pressure spray or hose on your EXPOSURE light. Do not use harsh abrasive or corrosive materials to clean your EXPOSURE light.

Follow all charging instructions. If the unit is being stored for long periods, please ensure the battery is periodically charged fully. We suggest once every month. The same applies to Piggyback batteries.

### **Thermal protection circuit**

EXPOSURE LIGHTS are equipped with a thermal protection circuit. If the unit detects that it is getting too warm, it will dip to next lowest setting and then back to your chosen setting when temperature is correct. This is to protect the circuitry inside the unit, as well as the LED's. It is not normal for this to ever happen at night when air temperature is low. It may happen if running the light unit on High inside a warm room.

### **History**

Exposure Lights are designed and manufactured to exacting standards in the UK by USE Ltd (Ultimate Sports Engineering). We have been riding and racing bikes in the dark since 1997. Unsatisfied with other lighting systems we recognised that the future of lighting was LED technology. In 2005 we launched the Exposure Lights brand and a revolution in lighting technology began. Our 2010 range is the most advanced, compact, lightweight and complete lighting range available to day. Thank you for investing in your Exposure Light. We wish you many happy years of use from it. Welcome to a better night time experience. Many of our dealers run night cycle rides. Why not join in or take part in one of the many night events we sponsor.

### **We design them. We make them. We are here to help.**

If you are experiencing any problems with your Exposure Light or accessories please contact us directly at:

Tel: Exposure/USE Ltd +44 (0)1798 344477  
or Service: +44 (0)1798 344471

e-mail: [info@exposurelights.com](mailto:info@exposurelights.com) or [service@exposurelights.com](mailto:service@exposurelights.com)

Alternatively contact your Exposure Dealer/Distributor - check web for details [www.exposurelights.com](http://www.exposurelights.com)

Exposure Lights are  
designed  
and made by:



[use1.com](http://use1.com)



**Race**



**Diablo**



**Joystick**



**Spark**

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