



## IN Series User Manual

IN1600L / IN1600LB





### EXIN Light by Deeps Engineering

Phone: 02 4982 0094  
Phone Int: +61 2 4982 0094  
Email: [info@deepsengineering.com.au](mailto:info@deepsengineering.com.au)  
Address: 6 George Road  
Salamander Bay, NSW, 2317  
Web: [www.exinlight.com](http://www.exinlight.com)  
[www.deepsengineering.com.au](http://www.deepsengineering.com.au)

### Service & Maintenance

For information regarding service and maintenance, please contact your Authorized Representative or the Manufacturer at:

Email: [info@deepsengineering.com.au](mailto:info@deepsengineering.com.au)  
Phone: +61 2 4982 0094

**EXIN Light** is a division of **Deeps Engineering Pty Ltd.**

All EXIN Light products are manufactured, tested, and assembled by Deeps Engineering at our facility in Salamander Bay, NSW, Australia.

For more information, please visit [www.exinlight.com](http://www.exinlight.com) or [www.deepsengineering.com.au](http://www.deepsengineering.com.au)





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***The information contained within this Manual is based on the latest information and technical specifications available at the time of printing. Deeps Engineering reserves the right to make changes to product specifications without notice.***



## 1. Equipment Safety Guidelines

Every year many accidents occur which could have been avoided by a few seconds of thought and adopting a more careful approach when planning a job or simply using equipment. You as the operator can avoid many accidents or even damage to the equipment by observing and following the precautions and instructions contained in this Manual.

- a) Ensure that you have fully read and understood this Manual prior to setting up, installing, operating, or charging the equipment.
- b) Never operate this equipment if under the influence of alcohol or drugs.
- c) This equipment is only to be operated by a competent person.
- d) If the ability of this equipment to carry out its intended function is in doubt, then remove it from service and return it to an Authorised Distributor for repair.
- e) When charging from mains power, please ensure that the charging procedure is adhered to, and only charge with a power supply between 100-240V. If supplying power outside this voltage range, it may cause serious injury or damage to the equipment.
- f) Never allow any person to mount, use or charge this equipment until they have developed a thorough understanding of the safety precautions on how it operates.
- g) In some jurisdictions, operator training or equipment documentation may be required. Please check with your local regulatory authority prior to use.

## 2. Introduction

Thank you for purchasing an EXIN Light by Deeps Engineering. The information contained in this manual covers charging, setting up, operation and maintenance of the EXIN Light IN Series. This manual needs to be fully read and understood prior to the IN Series light being charged and used.

The EXIN Light IN Series has been developed to help with the lighting needs of the mining sector, hire industry and service providers such as utilities (gas, water, electricity), railway trades, road maintenance, emergency services, disaster control and other industrial uses. The EXIN Light removes the need for generators and power extension leads, also reducing set up time and running costs.

When removing the EXIN Light from its packaging, remember to dispose of all packaging materials including the plastic covering of the lens in an environmentally correct manner, then, follow charging instructions in this manual to ensure that the full use of the battery is realised.

### 3. Charging

The battery charge level can be checked at any time by pushing the battery level indicator button located on the rear of the EXIN Light. Holding the button in for at least three seconds, one of three colours will be displayed.

- Green = charged
- Yellow = 50% charged
- Red = low battery, charge now.

The LED indicator light on the black box of the external charger will display:

- Red for charging
- Green for 90% charged, continue charging for an additional 3 hours to achieve a full recharge.

The EXIN Light can be charged in two ways:

1. Mains Charger suitable for 100-240 volt AC 50-60Hz supply. The charger should only be used indoors and not exposed to the weather. 100-240 volt AC: Insert the Charger into a 3 pin outlet (outlet needs to be on a protected circuit fused / circuit breaker / RCD). Never charge the unit in a hazardous environment (i.e. a wet environment poses numerous risks including electrocution).
2. Standard 12/24 volt DC vehicle system (**Sold Separately** - plugs into standard vehicle closed space socket / lighter plug). 12/24 volt DC: Insert the male plug into a fused 12/24 volts (negative earthed) power socket. Please check that the socket selected is on a constant supply. Some plugs may be connected to a circuit on the vehicle's accessory supply. This means that the keys would need to be left in the vehicle with the ignition switch in the accessory position and this may constitute an unacceptable risk; for both safety and theft.

To charge your EXIN Light, ensure that it is placed on a firm level surface. Open the lid of the EXIN Light by pushing the button in the middle of the carry handle. Raise the light head, lift the sealed storage lid located inside the body of the EXIN Light which contains the charger. Remove the appropriate lead (100-240 volt AC or 12/24 volt DC). Place the relevant end of the charging lead into the socket located at the bottom rear of the EXIN Light. This socket has a keyway which allows easy entry for the plug. Turn the circular collar of the plug clockwise and this will lock the plug into place.



To ensure optimum battery life the unit must not be left in the discharged (flat) condition. The battery must be recharged within 48 hours of being discharged to avoid permanent battery damage. To achieve a speedy charge, ensure that the light is off when recharging, however, if necessary, the EXIN Light can be used while on charge in a safe environment.

Please charge the battery after each use. When the battery is fully charged turn off the power to stop the charging process, disconnect the charging cable and place back in the charging cable compartment. If the light is being stored or not being used for long periods at a time, ensure the battery is fully charged before storing and check the charge level at least once every 3 months, then charge if necessary.

If the EXIN Light is left on charge for long periods it is advisable to check the light operation approximately every 3 months by switching the Light ON/OFF after disconnecting the charger from the power source, this will ensure the EXIN Light and the power source has had no interruptions during this process. Once this check is completed it may be put back on charge again.

It also must be noted that when following these instructions, the battery will still operate the light source at the battery age of 12 months; however, the battery warranty is not applicable after this 12-month period.

## 4. Operating Instructions

Place the IN Series unit on a firm level surface. Push the button in the middle of the handle; keep the button pressed in which you choose the lower or full height. If selecting the lower height, the arms must be fully extended first before lowering. Once you have released the push button in the middle of the handle, you will hear and feel the pins go into place, remove your finger from the push button and if the handle cannot move up or down you are in the locked position.

The ON/OFF switch (black) and the function switch (red) are located on the underside of the Light Head. To start, press the black ON/OFF switch, this will turn on the front side of the light head only. The function of the EXIN Light IN Series will change with each press of the red switch. The order of the function is as follows:

- Press the first time for the back of the light head only to turn on.
- Press a second time for both sides; front and back to turn on.
- Press a third time for the front of the light head only to flash.
- Press a fourth time for the back of the light head only to flash.
- Press a fifth time for both sides; front and back, to flash at the same time.

The IN1600L DS and IN1600LB DS will flash at a speed of 1 flash per second. After pressing the red function switch a sixth time you will return to the original function. The red switch will not turn the EXIN Light completely off, you must press the black main power switch for complete shutdown.

**REMEMBER: The EXIN Light should be recharged after each use to avoid Battery damage.**

The angle of the light head can be adjusted by 60° downwards. This can be achieved by tilting the light head forward (only) by standing at the back of the EXIN Light and pulling the bottom of the back side of the light head towards you. The light head must be put back into position (by standing in front of the EXIN Light and pulling the bottom of the front side of the light head towards you) before the EXIN Light can be closed.

To close the EXIN Light, push the button in the middle of the handle, hold in and lower the lid until the lid meets the top of the light body. Release the button and you will hear and feel the locking pins go into place; it is then locked in the closed position allowing you to carry the fully integrated EXIN Light, ready for your next job.





## 5. Battery & LED Performance

The battery life cycle of the EXIN Light is approximately 400 life cycles when charged according to the instructions in this manual. The battery is a Lead Acid Gel style (12-volt 9Ah or 12-volt 18Ah) and does not need water or service, only to be charged in accordance with the instructions provided.

Figures based on a fully charged battery, the LED light source supplied with the EXIN Light has approximately 60,000 life hours when the light is used in accordance with this manual.

### **WARNING:**

- Never use a non-standard charger for the EXIN Light. This may damage the light and void your warranty. Never leave the battery fully discharged as this may permanently damage the battery.
- The battery must be stored in a cool, dry environment. High temperatures or wet environments will increase the self discharge rate. Lead Acid Gel batteries must always be kept in a fully charged condition. Check the battery voltage with a good digital volt meter every 3 months and charge if it falls below 12.8 volts.

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## 6. Battery Removal

- a) Whilst in a safe environment disconnect all charging cables.
- b) Unscrew the 8 screws surrounding the battery compartment and remove the battery compartment cover slowly.
- c) Remove the battery and take note of the way the battery was packed. You must return it to the same position.
- d) Disconnect the Red (positive wire) and Blue (negative wire). Replace with the new battery.
- e) Connect the wires to the corresponding connection on the battery.
- f) Ensure that the Battery is returned to the original position including foam and replace the cover.
- g) Re-install the 8 screws by hand screw driver.
- h) Place the EXIN light on charge to bring the Battery to full charge.
- i) Dispose of the Old Battery by following the guidelines and laws within your State or Territory.

## 7. LED Replacement

Please consult your local distributor or the manufacturer for LED replacement.



## 8. Specifications

	IN1600L DS	IN1600LB DS
Gross Weight (kg)	9.1	12.6
Net Weight (kg)	8.0	11.3
Open Height (mm)	1,150	
Closed Height (mm)	580	
Width (mm)	335	
Depth (mm)	220	
Voltage AC/DC	100-240V AC - 12-24V DC	
Battery	Lead Acid Gel	
Light Type	LED	
Light Head	Double Sided	Double Sided
Lumens	1600 each side	1600 each side
Charging Time (hrs)	7-8	7-8
Battery Run Time (hrs)	Single Side: 16-18 Double Side: 8-10	Single Side: 28-30 Double Side: 16-18

\*Battery Runtime is based on the condition of the battery.

## 9. Spare Parts

Replacement parts are available from Deeps Engineering. Please consult your place of purchase.

## 10. Accessories

As standard the EXIN Light comes with a 1.0 metre 100-240 volt (voltage depending on country requirements) charging cable and a 1.5 metre 12 volt charger. These cables are able to be stored within the body inside the charging cable compartment.

Optional extras are available to purchase separately, these include additional charging options and safety & protective clip-on lenses. We are continually expanding our Accessories range, please view our website ([www.exinlight.com](http://www.exinlight.com)) to keep up to date with the latest Accessories available for your EXIN Light as some accessories may not have been available at time of printing this manual.

## 11. Attachments

The attachments mentioned in this manual are to be used for mounting EXIN Lights only. They are not to be used for any other purpose. All attachments are covered by our normal manufacturer's warranty. The warranty does not cover damage by intentional misuse or neglect.

Our attachments include: Pole Attachment (SI-PA1) suitable for mounting on telegraph poles or any other suitable upright pole like structure. A stabilizing plate (SI-SP1) that will provide extra stability of the EXIN Light. A scaffold attachment (SI-SA1) an adjustable product that will attach to most scaffold type poles (opening dimension 7cm). A tripod (SI-TP1) the heavy duty construction of the tripod allows it to stand 1100mm in height with a leg span of 70cm, weighing 3.2kg (without its base plate). EXIN Light is continually expanding our attachments range, so please view our website ([www.exinlight.com](http://www.exinlight.com)) to keep up to date with the latest attachments available for your EXIN Light as some attachments may not have been available at the time of printing this manual.

## 12. Product Warranty

### **International Product Warranty**

The EXIN Light is covered by a 12 month Limited Warranty (the “EXIN Light Warranty”).

### **Proof of Purchase**

The EXIN Light Warranty can only be claimed with a copy of the dated sales receipt as proof of purchase.

### **The EXIN Light Warranty**

EXIN Light makes every effort to ensure that its products meet high quality and durability standards and warrants to the original Customer/Purchaser of our products that each product be free from defects in materials and workmanship as follows:

The EXIN Light Warranty is a 1 year limited warranty from the time of purchase by the end-user on this EXIN Light product. This Warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence or accidents, repairs or alterations outside of our facilities or our Authorised Service Agents or due to a lack of maintenance or to light tubes or LED's.

To proceed with a Warranty claim; the product must be returned via normal freight pre-paid to Deeps Engineering for examination with proof of purchase and an explanation of the problem.

### **To the extent permissible by law, EXIN Light:**

1. Excludes all implied conditions or warranties and consumer guarantees; and
2. Limits its liability for breach of the EXIN Light Warranty or for breach of any non-excludable warranty, condition or consumer guarantee to:
  - a. Replacement of the defective good; or
  - b. Repair of the defective good.
3. Excludes all liability for death, injuries to persons or property or for incidental, contingent, special or consequential damages arising from the use of our Products.

## Local Laws

It is the responsibility of the Distributor to ensure that EXIN Light's Products, Packaging and Labelling comply with any laws in the Distributor's jurisdiction that impact on the distribution of the EXIN Light in such jurisdiction. Should such laws impact on such issues as labelling, registration or certification of the product or warranties, it is the

responsibility of the Distributor to provide full details of such issues to EXIN Light before orders are placed. Any changes required to EXIN Light's labelling or products will be at the cost of the Distributor.

Date of Warranty Claim: \_\_\_\_\_

Purchaser's Name: \_\_\_\_\_

Purchase Date: \_\_\_\_\_

Purchased from (Company Name): \_\_\_\_\_

Product Name: \_\_\_\_\_

Product Model: \_\_\_\_\_

Serial No: \_\_\_\_\_

**NOTES:**