



for Professionals

RedBack Lasers
2L360R/2L360G

2X 360 Multi Line Laser - 2L360

Instruction Manual



www.redbacklasers.com.au

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User Safety

- Laser output sign lies near the output aperture.
 - Do not stare directly into laser beam.
 - Do not disassemble the instrument or attempt to perform any internal servicing. Repairs and service should be performed only authorised service centres of Redback Lasers.
- This instrument complies with the safety Classification standards of laser radiation.



2L360R CAUTION: Class 3r laser <5mW at 635nm.
2L360G CAUTION: Class 3r laser <5mW at 522nm.

Do NOT stare into laser beam or aim at another person.

Follow relevant Australian Standards

2L360™ INTRODUCTION

Congratulations on purchasing one of the RedBack 2L360™ Auto Levelling 2x 360 line laser models. These instructions cover both the 2L360R (red beam) and 2L360G (green beam) models. Please note that some of the features described in this manual may be specific to just one of these models and will be indicated as so.

Both the 2L360R and 2L360G feature two full 360° lines, one horizontal and one vertical. The 2L360R has a red beam laser and the 2L360G has a high visibility green beam laser.

The 2L360 models are ideal for all manner of internal fit out and installation application by providing a fast self levelling horizontal line around the whole room as well as a vertical line again 360° coverage for alignment. In addition the 2L360R (red) model has pulse mode and so can be used outdoors with an optional line receiver such as the LLR705 by RedBack.

The 2L360's Comes with superior Li-ion rechargeable batteries and charger as well as being able to operate with standard "AA" Alkaline batteries.

The 2L360's feature manual mode for setting on a manual slant and comes with an elevating magnetic base which can also be mounted on an optional tripod such as the RedBack IET68.

2L360™ Kit Included Accessories

- a 2L360™ Laser Unit (either R or G)
- Protective Carry Case
- Rechargeable Li-ion Batteries
- Charger
- Std Battery Compartment
- Elevating Magnetic Base
- Laser Target (either Red or Green)
- Instruction Manual



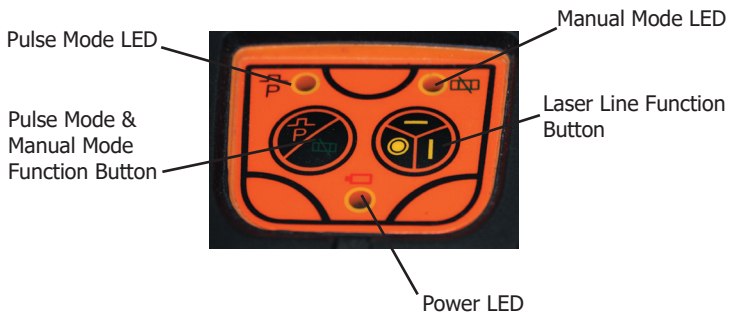
2L360™ DIAGRAMS

2L360R & 2L360G™ Laser Units



Keypad

2L360R (red beam)

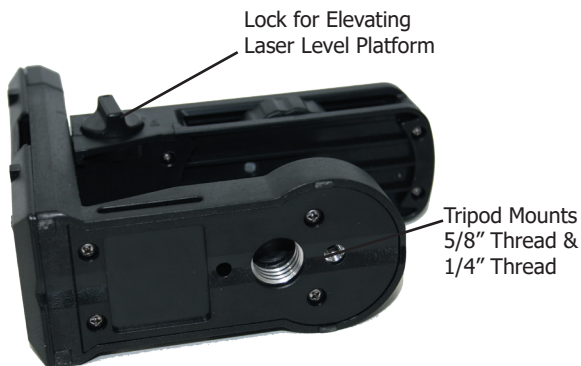
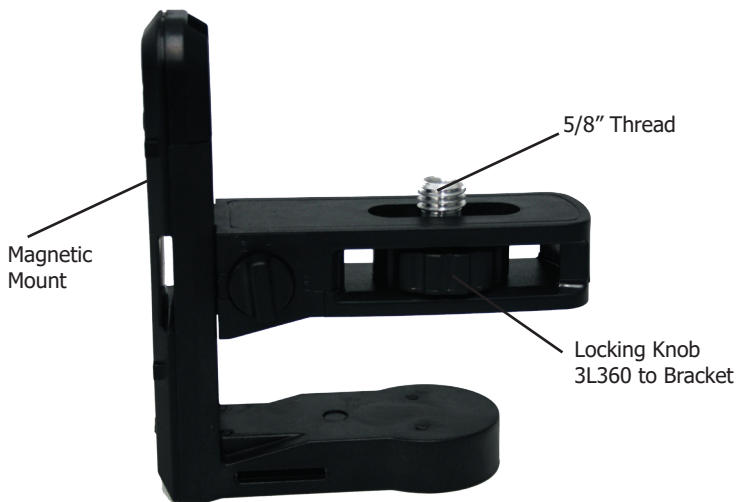


2L360G (green beam)



2L260™ DIAGRAMS

Mounting Bracket



2L360™ OPERATING INSTRUCTIONS

Battery Instructions

The 2L360's have two battery options either 4 x standard "AA" size Alkaline or the Li-ion rechargeable pack. For standard 4 x "AA" alkaline operation simply insert "AA" batteries into standard battery holder in the direction indicated and slide the holder into battery recess and close the battery compartment cover.

To use the rechargeable battery pack first remove standard pack if inserted and place into the same battery recess in direction indicated and close the battery compartment cover.



To charge this battery pack simply insert the charger plug into the charging socket on the Li-ion battery pack itself. The LED on the charger is illuminated red during the charging process and will turn green once the battery is fully charged.

When the power LED on the keypad flashes, the rechargeable battery pack needs recharging or standard "AA" batteries need replacing. Note the charger will only charge the supplied rechargeable battery pack.



Handy Hints

- *Prior to initial use, fully charge the rechargeable battery.*
- *If when you insert a battery pack the laser does not power up try re-loading the battery pack to make sure there is a good connection.*
- *Remember the 2L360™ can operate using standard "AA" batteries when rechargeable pack is out of charge or charging.*
- *When laser is not going to be used for an extended period of time it is best to remove both "AA" and Rechargeable pack if installed.*

2L360™ OPERATING INSTRUCTIONS cont.

Turning On the 2L360

To power up, simply unlock the pendulum by moving it to the "ON" position, this will automatically self level the laser and power up the horizontal beam. If when you unlock the pendulum all laser flash and a beeping sound is emitted then the laser is out of self levelling range, place the laser on a more level surface for the device to self level and power up.

2L360R
(red beam)



2L360G
(green beam)



To power up the vertical laser press the right function button on the keypad, each press will cycle through the different lasers. 1st press powers up the vertical, 2nd press both vertical and horizontal laser lines. To power down the laser level simply re-lock the pendulum by switching it to the "OFF" Position.

Always transport the 2L360 laser level with the pendulum in the locked "OFF" position to protect the device when not being used.



Manual Mode

Manual mode allows you to turn on one or more of the 360 degree lines with the pendulum in the locked position and so allows you to set up a laser line at an angle such as for installing balustrades. Manual mode is activated by pressing the manual mode left button when the pendulum is in the locked "OFF" position. The manual mode LED light will flash warning you that the laser is not self levelling. You can turn on the various lines in the normal way by using the right laser function button.

Note that the 2L360R left button has two functions, Manual Mode and Pulse Mode. See page 10



Unit featured is 3L360R in manual mode. Also pictured is an optional iet68 elevating tripod and optional GD12 grade dial plate; a camera style tripod with pan and tilt will provide a similar result.

2L360™ OPERATING INSTRUCTIONS cont.

Pulse Mode (3L360R only)

Pulse mode is only available on the 2L360R red beam model. Pulse mode allows the 2L360R to be used with a line receiver such as the RedBack LLR705 and so allowing the laser to be used outside for general site levelling, patios, decking etc.



To enable pulse mode you press the left function button once when the laser is powered up. The Pulse LED light on the left will indicate when pulse mode is enabled, to disable once again press the left function button.



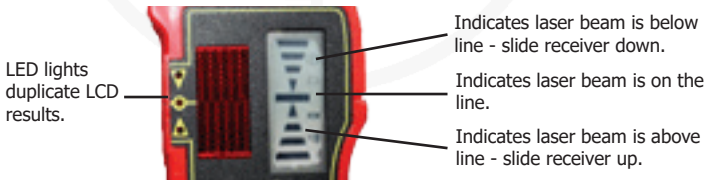
Laser Receiver LLR705 (OPTIONAL Accessory for 2L360R only)

The RedBack LLR705 is an OPTIONAL receiver for the 2L360R (red beam) model. It allows the laser beam to be picked up outside at up to 150m in any lighting conditions. Ideal for decking, sheds, slabs, framing and much more.

The receiver can be used hand held or together with the staff clamp with a staff. The LLR705 has a 1mm level zone for maximum accuracy.

- A press of the Power button  on the receiver will turn on and off the receiver.
- Pressing the Speaker button  toggles speaker on and off.

The LLR705 has 3 LED light displays which indicate laser is above, below and on level and a large LCD display which has a progressive display indicating when the laser gets closer to the level mark. If the receiver is left turned on without a laser being received it will auto power down after 10 minutes. For picking up horizontal lines hold the receiver as shown below, for picking up vertical lines place on its side.



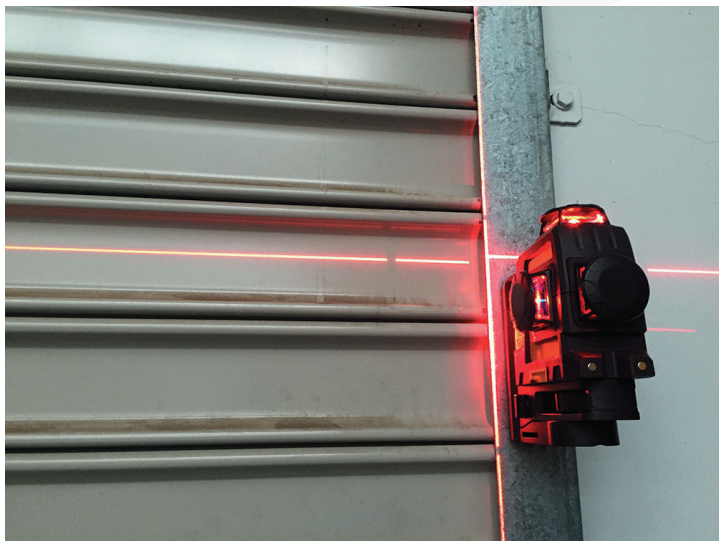
2L360™ OPERATING INSTRUCTIONS cont.

2L360 Mounting Options

The 2L360's come with a magnetic mounting bracket and this mounting bracket features an elevating plate which allows the height of the horizontal laser line to be finely adjusted. The elevating plate also features a locking knob to prevent the lasers height changing once set.

The bracket and laser housing features a 5/8" survey thread which allows the 2L360 to be mounted onto an indoor elevating tripod such as the RedBack Lasers IET68 or outdoor heavy duty tripod HDF94. The bracket and housing of the laser level also feature a 1/4" thread allowing it to be mounted onto a camera style tripod.

Finally the bracket features strong vertical magnets that allow mounting onto ferrous metals for installation applications.



Unit pictured above is the 3L360R three line laser level. Housing and magnetic bracket is the same as supplied with the 2L360 models

2L360™ TECHNICAL SPECIFICATIONS

Technical Specifications

2L360R - Red Beam

Laser Wavelength	635nm Red
Laser Class	3r <5mW
Visible Range (light dependent)	Up To 30m
Range with Optional Receiver	Up to 150m radius (300m diam)
Accuracy	±2mm/10m
Number 360° lines	2
Self Levelling Range	±3°
Temperature Range	-10°C - +40°C
IP Dust Water Resistance	IP55
Power	4 x "AA" Alkaline or Li-ion pack
Low Power	Power LED Flash
Size	132x122x75mm
Weight	1.0Kg

Range with Receiver as tested with RedBack LLR705 receiver; range may vary depending on type of line receiver used.

2L360™ TECHNICAL SPECIFICATIONS

Technical Specifications

2L360G - Green Beam

Laser Wavelength	522nm Green
Laser Class	3r <5mW
Visible Range (light dependent)	Up To 40m
Accuracy	±2mm/10m
Number 360° lines	2
Self Levelling Range	±3°
Temperature Range	-10°C - +40°C
IP Dust Water Resistance	IP55
Power	4 x "AA" Alkaline or Li-ion pack
Low Power	Power LED Flash
Size	132x122x75mm
Weight	1.0Kg

Calibration & Self Check

All Redback Lasers have been checked for calibration and certified by one of our technicians here in Australia prior to despatch and should under normal conditions not go out of calibration. A calibration certified sticker with the date and name of technician is located on the laser itself. It is worth checking calibration from time to time particularly after any known knocks or drops. An easy way to continually check calibration is to always double check you work with the laser located in a different position or use an alternate vertical line. Various other methods for checking calibration can be found at www.redbacklasers.com.au/downloads or the laser can be returned to our service department for checking and re-calibration. We at Redback Lasers provide a once off free calibration and check within the duration of the warranty period see page 16 for details.

Care & Maintenance

- Keep laser and accessories stored in protective case.
- Make sure laser is stored dry, dry out before storage to prevent damage.
- Remove batteries when not used for an extended period of time to prevent leakage. (battery leakage not covered by warranty)
- The 2L360™ is a precision instrument and should not be subjected to excessive knocks, drops or vibrations.
- Self check calibration from time to time. See page 14
- For service contact Redback Lasers. www.redbacklasers.com.au



REDBACK LASERS WARRANTY

Duration of warranty is fixed and automatic, when we advertise 2 years on a particular model, its two years. No drop down to a lesser time if you forget to register, registration is NOT required just proof of purchase showing date.

Although the duration of our warranties are for a particular period it does not mean we will charge you for a genuine warranty failure a month or two outside that warranty period, we believe in a fair go.

Even though a product shows signs of accidental damage, scratches and the like, we will not automatically fail the warranty claim, if the fault is NOT caused by a drop or misuse and is a genuine warranty failure then we will cover it.

Calibration is not covered by warranty much the same as the wheel balance on your car is not covered by warranty, we do however offer a one off free re-calibration service during the period of warranty, conditions and details below.

CMI Industries Pty Ltd provides consumers with a warranty to our products, this is in addition to requirements of any relevant legislation such as the Competition and Consumer Act 2010. Definitions:

"CMI", "We" or "Our" refers to CMI Industries Pty Ltd (ABN 29 102 713 922) of 18b Tarkin Ct, Bell Park, Victoria 3215 ph (03) 5240 3999

"You" or "Consumer" refers to the initial purchaser of the product.

"Product" refers to goods manufactured by or for CMI Industries Pty Ltd under the brands of RedBack Lasers, LevelLaser and CMI Lasers.

"Material" refers to material or component used in the construction and manufacture of the product.

"Workmanship" refers to handling, assembly and manufacturing processes done by or for CMI Industries Pty Ltd in order to manufacture the products.

"Warranty Period" For the 2L360R and 2L360G is Two Years. Warranty period is from original purchase date, no extension is made in the event of warranty replacement products supplied or time spent being repaired.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure. LLR705 receivers 2 Year warranty, Ni-Mh Battery/Charger 1 Year Warranty.

CMI warrants that our products will be free from defects in material and workmanship for the warranty period.

CMI promises to repair or replace, free of charge, the product or part of product if found to be faulty due to defective workmanship or materials within the duration of the warranty as long as the following terms and conditions are met;

- Product must not have been misused or abused, must not have incurred accidental damage or had un-authorised repair or tampering that has caused or contributed to its fault or failure.
 - You must contact CMI by phone, mail or email immediately when a fault or defect has become apparent and within the warranty period.
 - Product must be returned to store of purchase or directly to CMI, we will cover cost of postage only when sent by our reply paid Australia Post service (Australian Main land and Tasmania only) details will be provided upon phone, post or email communications with us.
 - CMI will cover cost of freight back of repaired or replaced product to original purchase store or you directly (depending on how it was sent Australian Main Land and Tasmania only).
 - CMI will determine whether to repair or replace the product or part of product on a case by case basis.
 - Further exclusions in this warranty include damage or defect caused by use of non-original accessories or parts, damage in transportation, normal wear and tear, damage through moisture, damage due to electric surge, failure due to neglect or damaged caused by adjustments not outlined in CMI's instructions.
- Subject to the requirements of all applicable Australian Acts or legislation and to the extent permitted by law, CMI accepts no liability (whether expressed or implied) of any nature whatsoever for any loss of earnings, hiring of replacement equipment, inaccurate work carried out by the consumer or agent, damage or injury arising as a result of any fault in the product. It is the consumers responsibility to maintain good working practices and regularly test their tools for accuracy and serviceability.
- Calibration of the product is not covered by warranty subject to the requirement of all applicable Australian Acts or legislation and to the extent permitted by law, CMI does however offer a free re-calibration service (once within the period of the warranty) you are liable for the cost to send the product to us then we will recalibrate and return the product to you free of charge. Note this offer is invalid if the product shows signs of misuse or accidental damage that has caused it to go out of calibration.
- A CMI product returned that fails to fall within the terms and conditions of this warranty will be quoted for repair.

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