



for Professionals

# RedBack Lasers MR706/8

Machine Mounted Receiver - MR706/8

# Instruction Manual



[www.redbacklasers.com.au](http://www.redbacklasers.com.au)

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# MR706/708 INTRODUCTION

Congratulations on purchasing the MR706/D or MR708/D. A machine mounted rotating laser receiver suitable for all red rotating lasers.

The MR706 features a magnetic mount, allowing placement on suitable booms on earthmoving machinery. This version can also be purchased as the MR706D which also includes in-cab repeater unit and connection cables.

The MR708 is essentially the same machine receiver but with a clamp mount allowing mounting to a bar or rod on your machine. Again can be purchased as the MR708D with in-cab repeater unit and cables.

This machine receiver features an in-build Ni-mh rechargeable battery and can also run from a 12V or 24V machine. Note that on a 12V system the receiver will need an occasional charge from the mains 240V charger.

Warranty on receiver is Two Years. (See page 12)

## MR706/8 Included Accessories

- MR706/8 Receiver Unit
- Protective Carry Case
- 12/24V Connection Cable
- 240V Mains Charger
- Instruction Manual



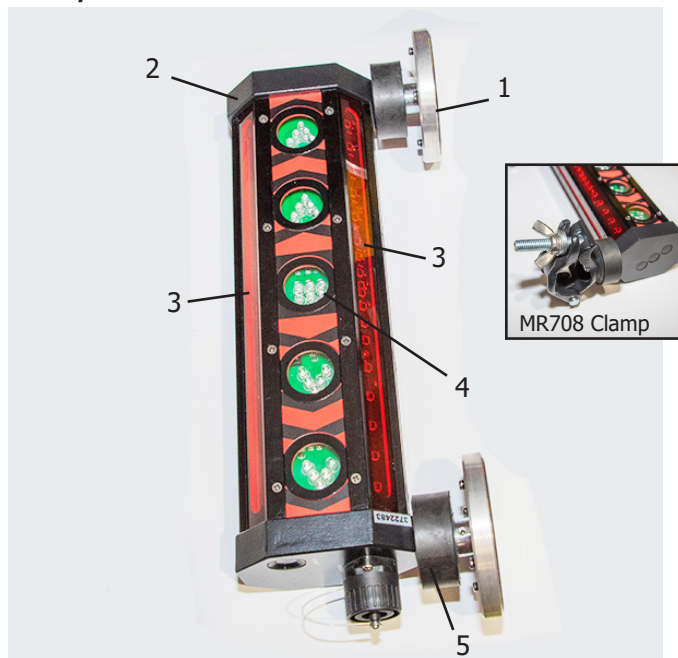
## MR706D/8D Included Accessories

- MR706/8 Receiver Unit
- In-Cab Repeater Unit
- In-Cab Connection Cable
- Protective Carry Case
- 2x 12/24V Connection Cables
- 240V Mains Charger
- Instruction Manual



# MR706/8 DIAGRAMS

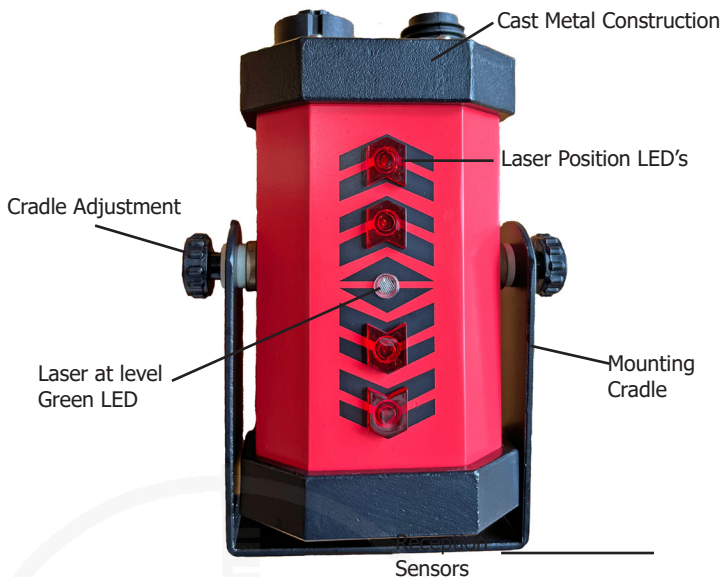
## MR706/8 Receiver Unit



1. Magnetic Mount (MR706)
2. Cast Metal Housing
3. 4x Laser Sensor Pickups
4. Laser Height Display LED'S
5. Rubber Shock Absorbers
6. Charging/Connection Socket
7. Power Button



## In-Cab Repeater (MR706/8D models only)



# OPERATING INSTRUCTIONS

## Battery Instructions

The Ni-mh rechargeable battery for the MR706/8 range of lasers is built into the receiver unit and is sealed for life. The battery is replaceable at one of our service centers if required in the future.

There are two options for charging the battery in the MR706/8 machine receivers.

- First with the included 240V mains charger unit. Note that the mains charger has a 7 pin plug which plugs in the 7 pin socket on the laser receiver itself. When charging the light on the charger is red and turns green when fully charged.
- Secondly with the 12/24V crocodile cable. For the MR706/8 models plug the 7 pin crocodile clip cable directly in to the laser receiver. For the MR706/8D when using the incab repeater plug the 4 pin crocodile cable into the repeater unit. The receiver will automatically determine when it is plugged into a 12V or 24V system.

**NOTE:** when connecting the receiver on a 12V machine the battery in the receiver will not completely charge and so it will be necessary to remove the receiver from the machine and charge it with the main charger from time to time.



### Handy Hints

- *Prior to initial use, mains charge the receiver for at least 10 hours or to when the light turns green on the mains charger.*
- *Running rechargeable batteries completely flat occasionally will help to improve battery life.*

## Mounting the Receiver

The MR706/D comes with magnetic mounts and the MR708/D comes with clamp mounts.

The magnets on the MR706/D can be placed onto any steel flat surface on your machine. The magnets are very strong and the magnet assembly includes anti slip rubber rings. Under normal operation the magnets should keep the receiver solid. Be aware that a major sharp impact may shift the position of the receiver. Keeping the area the receiver mounts clean and oil free will help the receiver remain solid.

The clamps on the MR708/D can be attached to any tube or bar between 40mm and 55mm in diameter. The bar (not included) should be mounted onto your machine in a suitable position and the bar should be long enough to allow adjustment to the height the receiver is mounted.



Both the MR706/D and MR708/D have a rubber shock absorber between the mount and the receiver itself. This helps to reduce any harsh vibrations and knocks to the receiver and helps maintain longevity of the device.



# OPERATING INSTRUCTIONS

## Powering up the Receiver

To power up the receiver short press the black power button on the one end of the receiver. The receiver's LED lights will flash in a sequence indicating successful powering up. If the receiver then repeats the sequence and self powers down immediately then the battery is in need of charging.

To power off the receiver you need to press and hold the power button, the receiver's LED lights will flash from center green to next two red LEDs and then finally the outer two red LEDs. Let go of the power button after the two outer red LEDs have flashed. Check that the receiver has indeed powered down.

## Fine and Coarse Mode

The MR706/8D features a fine and coarse mode. This mode determines how accurate or fine the level Green LED band is. The receiver by default always powers up in coarse mode. If you wish to have a narrower band that shows as level then short press the power button whilst the receiver is powered on. Each short press toggles between Coarse and Fine mode. Coarse mode is indicated by the two outer red LED's flashing once and Fine mode is indicated by the two inner red LED's flashing once.

- Coarse Mode 25mm level band
- Fine Mode 12mm level band



Coarse Mode



Fine Mode



# RECEIVER INSTRUCTIONS

## Receiver's LED's when picking up a laser

If the receiver is powered up and no LED lights are showing on the receiver then the receiver is not picking up any rotating laser within its 250mm height reception window.

If one of the receivers LED's are flashing slowly and no rotating laser is striking the reception window then the position of the slowly flashing LED indicate the last known position/height of the laser.

A fast flashing of a particular LED indicates that a rotating laser beam is being detected in the position indicated. So if the fast flashing is above the center LED then the laser is located above the Center. The closer the LED is to the center (level point) then the closer the laser is to the center (level point)

Generally you will set the level/center height on the receiver as the depth of cut or height of fill you require. When watching the lights on the receiver or in-cab repeater if purchased you can continually monitor that you operating at the correct height.

**NOTE:** If you have the MR706D or MR708D and have the incab unit installed then all the lights will be also repeated on the in-cab repeater. Note that the power for the repeater comes from the receiver unless the 12/24V cable is attached to your vehicles power supply.



Fast Flashing Red LEDs indicate laser is being picked up above the level indicator - FILL

Fast Flashing Green LED indicates laser is being picked up on level indicator - LEVEL

Fast Flashing Red LEDs indicate laser is being picked up below the level indicator - CUT

# MR706/8™ TECHNICAL SPECIFICATIONS

## Technical Specifications

Receiving Distance	up to 200m radius
Receiving Range (top to bottom)	250mm
Receiver pick Up (angle)	360 Degrees
Internal Battery	7.2V 3500mAH Ni-mh
Battery Life	Up To 40hrs (without 12/24V input)
Input Voltage (from machine)	12V or 24V
Charge Time (mains 240V charger)	16 Hours
IP Dust Water Resistance	IP66
Working Temp	-20 to +50 Degrees C
Accuracy Fine	+/- 3mm to 12mm
Accuracy Coarse	+/- 5mm to 25mm
Laser Compatibility	Red Rotating Beam either class2 or class3r (Not green)

## Notes

## Care & Maintenance

- Keep receiver and accessories stored in protective case.
- Make sure receiver is stored dry, dry out before storage to prevent damage.
- Give receiver a full charge from 240V mains charger from time to time when operating off machine 12V system
- Do not pressure wash - The receiver is highly watertight but excessive water pressure may cause water to ingress into the receiver.
- For service contact Redback Lasers. **[www.redbacklasers.com.au](http://www.redbacklasers.com.au)**

## Trouble Shooting - FAQ

**Q. *I see random Flashing of the LED lights!***

**A.** *This is normally an indication that the battery is low on power and requires re-charging.*

**Q. *The Receiver is not picking up the rotating laser!***

**A.** *Check that the laser is still rotating. Make sure you are operating the receiver at the same height as the laser output. Make sure nothing is between the laser and the receiver shadowing it, including parts of the machine.*

**Q. *The Receiver does not power up!***

**A.** *Place the receiver on the 240V mains charger and re-test.*

**Q. *Using the receiver I get multiple heights showing as level!***

**A.** *This is a common problem with all laser levels and is usually due to the laser being reflected off a window or other reflective surface. So the original laser beam plus the reflection are both hitting the receiver at slightly different heights. To prevent this, set the laser unit up so that you cannot see a reflective surface from where you are holding the receiver i.e. Any glass behind receiver not the laser.*

# 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.

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 Court, Bell Park, Victoria 3215 ph 1800 769 858

"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, Level1Laser 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 MR706/8 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. Ni-Mh Battery & Charger if supplied have 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.

RedBack Lasers™ distributed by CMI Industries Pty Ltd  
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