

**MR701 - Machine/Staff Mounted Receiver
For Red Beam Rotating Lasers**



MR701

Instruction Manual



www.redbacklasers.com.au

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Introduction

Congratulations on purchasing the MR701™ Hand Held, Staff Mounted and Magnetic Machine Mounted Universal Receiver. An indispensable accessory designed for use with a red beam rotating laser unit.

This receiver detects the position of laser signals transmitted by a red rotating laser unit providing quick and precise horizontal and vertical references.

The MR701™ features a large scale detecting window, LCD and LED display, 240° 150mm window reception, range of 200m, and sound indication for precise leveling.

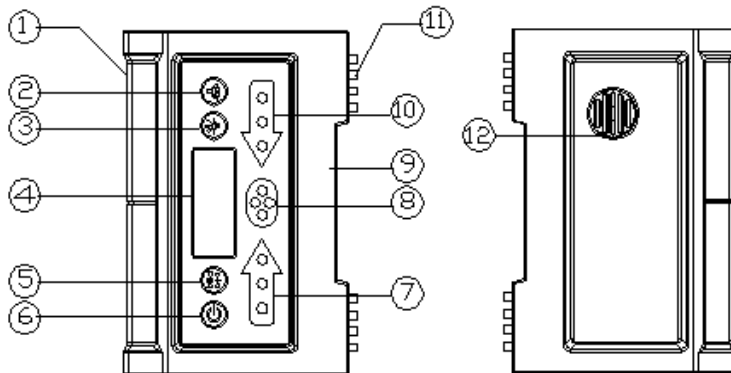
It can be used with a variety of red beam rotating laser instruments.

MR701™ Accessories

- MR701™ Laser Receiver
- Protective Case
- Instruction Manual

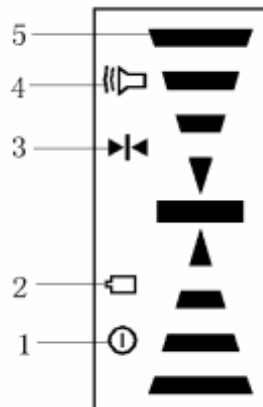


Diagram



- 1. Receiving window
- 2. Sound switch
- 3. Illumination Button
- 4. LCD display window
- 5. Coarse/Fine Button
- 6. Power Button

- 7. Upward LED display
- 8. Middle LED display
- 9. Battery cover
- 10. Downward LED display
- 11. Magnet
- 12. Alarm



LCD Display

- 1. Power indicator
- 2. Low voltage indicator
- 3. Course/Fine indicator
- 4. Sound indicator
- 5. Detection position indicator

Operating Instructions

Battery Installation

- Use a flathead screwdriver to rotate battery-box cap counterclockwise to open.
- Install 4 AA batteries as indicated in compartment and rotate battery-box cap clockwise to close.
- When the battery voltage is low, the unit will display a low voltage sign and the alarm will buzz every 2-4 seconds. Please change the batteries.

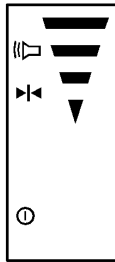
Note

- Take the battery out when the unit is not in use for a long time.
- When displaying low voltage, change the battery as soon as possible

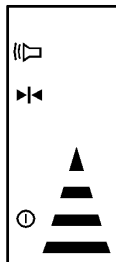
Detecting Horizontal Laser Signal:

- Place the unit vertically, detector window facing the rotating laser to receive the laser signal.
- Press the Power Button

If the LCD displays the down arrow, the LED flashes and there is a slow short sound, the laser signal is lower than the mid mark.

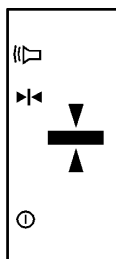


If the LCD displays the up arrow, the LED flashes and there is rapidly short sound, the laser signal is higher than the mid mark.



If the LCD displays the mid mark, and simultaneously the middle green LED flashes and there is lasting sound, the laser signal is on target

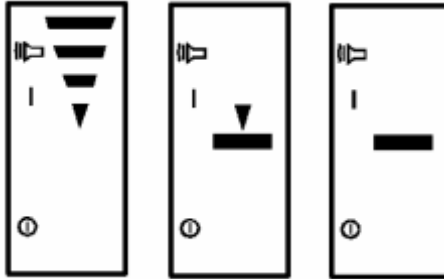
Example of coarse detector



Example of fine detector



Note: In the fine direction mode, when the laser signal is near the mid position, the displaying arrow will decrease along the mid direction till display the mid signal.



Sound Function

- Turn on the MR701™.
- Press the sound button.

The receiver can alternate between sound-on and sound-off (the sound display will change in the LCD screen).

When the MR701™ displays the up arrow, a rapid short sound will occur.
When the MR701™ displays the down arrow, a slow short sound will occur.
When the MR701™ displays the mid part, a long lasting sound will occur.

Coarse/Fine Receiving Switch

- Turn on the MR701™.
- Press Coarse/Fine Receiving Switch Button.

The receiver can alternate between coarse and fine detecting.

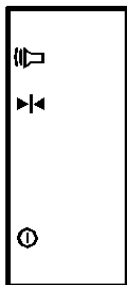


Figure 1

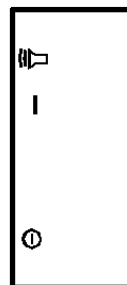


Figure 2

Fig 1 shows the coarse detecting which will show level within 12.5mm
Fig 2 shows the fine detecting which will show level with 5mm

Illumination Function

- Turn on the MR701™.
- Press illumination button. The backdrop illumination function of LCD will be ON/OFF.

Automatic Power Off Function

- Press the illumination/switch button for more than 1 second. The middle green indicator will flash three times, which means the function of automatic power off is working. When the MR701™ does not receive a laser signal for 30 minutes, and there is no operation during the past 30 minutes, the unit will turn off automatically to prolong the battery's life.
- Press the illumination/switch key for more than 1 second, the middle green indicator lights for 1 second, which means this function of automatic power off is off.

Low Voltage Indicating Function

If the LCD blinks the battery sign it is a reminder to change the battery as soon as possible.

Memory State Function

The receiving window remembers the last laser reception for 5 seconds (letting you know where the laser is should it be outside the sensor range of the receiver).

Machine Mount

To mount MR701™ onto a machine, remove magnetized staff clamp and attach receiver to machinery via the row of magnets on side of MR701™. Simply pull the staff clamp from the receiver.

Technical Specifications

Detecting Range:	200m
Detecting Accuracy:	Fine $\pm 5\text{mm}$ Coarse $\pm 12.5\text{mm}$
Receiving Range:	4.8" 12cm Receiving window
Receiving Angle:	240° available
Time for Automatic Power Off:	30 minutes (when set)
Power:	4 x AA
Operating Temperature °	-20°C to 50°C
Water/Dust Resistance	IP66
Dimensions:	170x115x42mm
Weight:	680g
Working Condition	Temperature °C -20°C- +50°C Rainproof, Dustproof and Shake Resistant

Care and Maintenance

- Redback Lasers recommends that the MR701™ is always stored in its protective case.
- Keep the instrument clean. Remove dust by gently wiping with a soft clean cloth.
- Remove batteries when the instrument is not in use for an extended period.
- The MR701™ is a precision measuring device and will provide many years of accurate reception providing it is not subjected to excessive forces such as dropping or shaking.
- If servicing is required please contact your nearest Redback stockist.
- The MR701™ should not be immersed in water or left outdoors in extreme weather conditions.

Trouble Shooting

- *The receiver will not power up.*

Check the batteries are installed correctly. If still not working, try new batteries. Always use new batteries. Do not mix old and new batteries together.

Warranty – 2 Years

This warranty does not cover damage or defects caused by or resulting from misuse, accidental damage, unauthorized repair, abnormal use or calibration after dispatch.

For further warranty information please visit

www.redbacklasers.com.au