MMR-W300R

MACHINE MOUNTED RECEIVER

WITH WIRELESS IN-CAB DISPLAY

INSTRUCTION MANUAL

SAFETY

Read the following safety instructions before attempting to operate this product.

Keep these instructions in a safe place or store in the carry case for future reference.

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE.

WARNING!
Read and understand all instructions.

- Use the tool only with the specifically designated batteries.
- Store the tool out of reach of children.
- Use only accessories that are recommended for your model.
- Tool service must be performed only by qualified repair personnel. Repairs, service or maintenance performed by unqualified personnel will void the warranty. Only approved and authorised service technicians can carry out warranty repairs.
- Do not remove or deface warning labels.
- Position the tool securely. Damage to the receiver or serious injury could result if the tool falls.

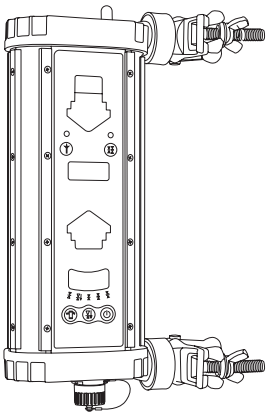
WARNING!
Do not disassemble the tool.

There are no user serviceable parts inside. Disassembling the tool will void all warranties on the product. Do not modify the product in any way.

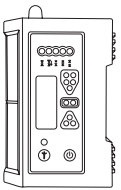
WARNING!
Refer to the instruction manual for your laser tool and adhere to all safety precautions. Never look into the laser beam directly and intentionally.

ITEM CHECKLIST

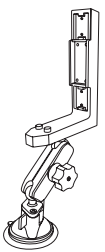
Please ensure the following items are included with your laser level.
If anything is missing please contact your retailer.



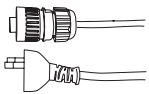
Spot-on
MMR-W300R



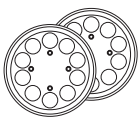
Spot-on ICD-W300



Suction mount

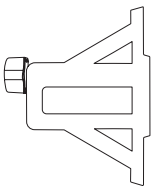


Charger

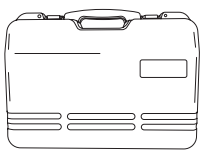


2x Magnets

4x AA alkaline
rechargeable batteries

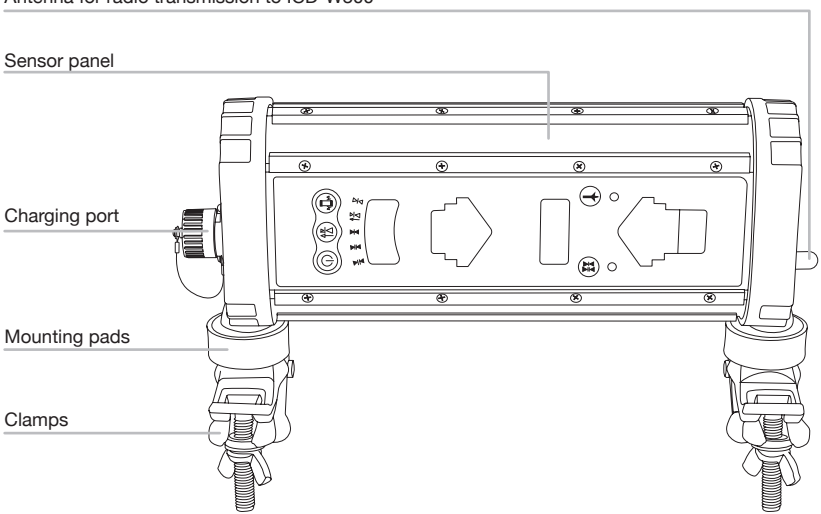


Clamp

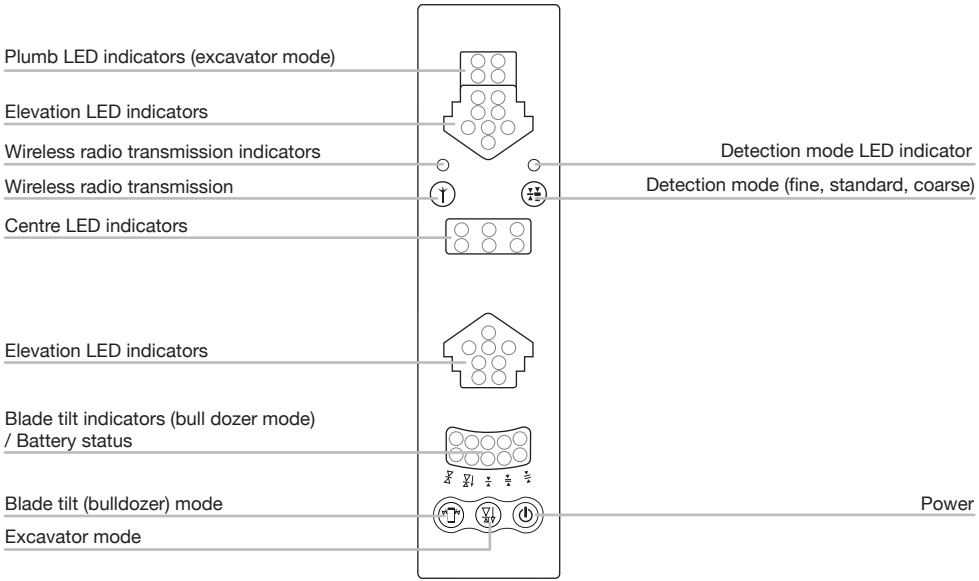


Carry case

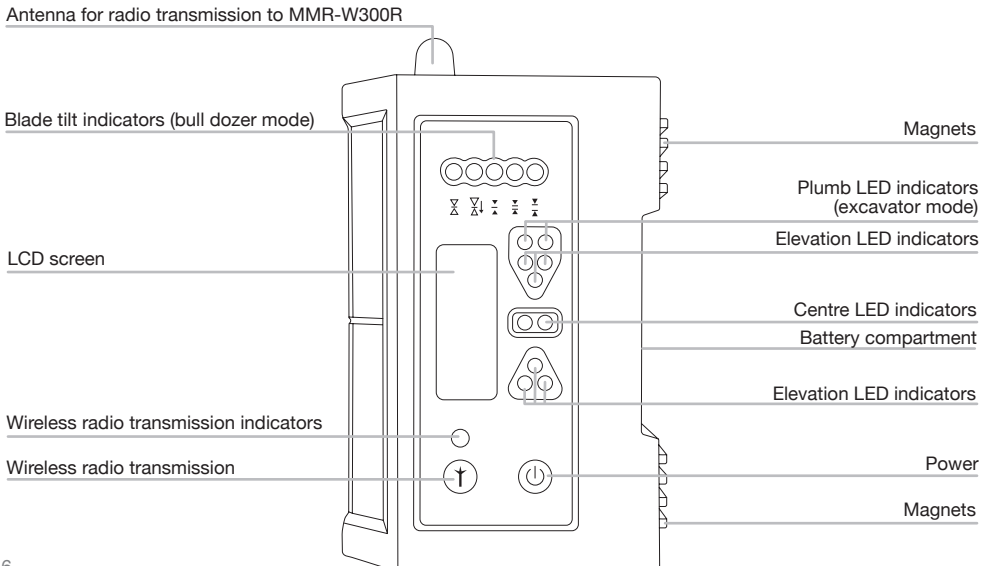
RECEIVER OVERVIEW: FRONT



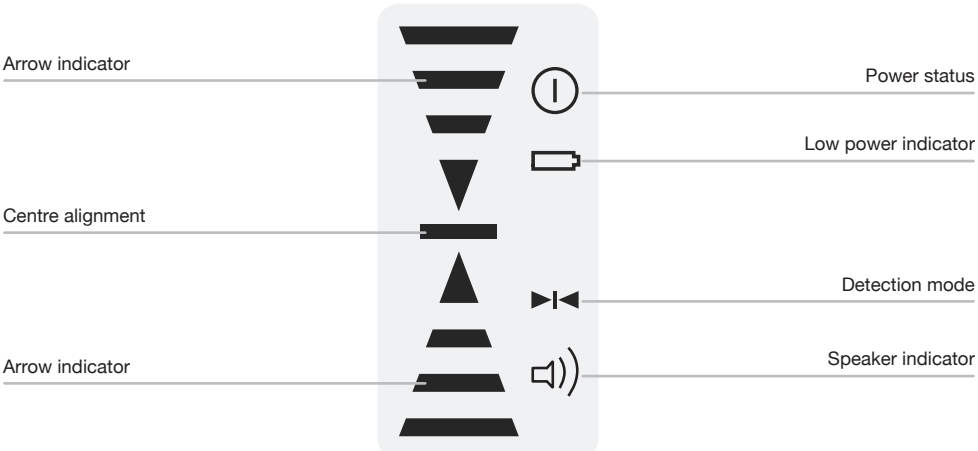
RECEIVER OVERVIEW: CONTROL PANEL



IN-CAB DISPLAY OVERVIEW: FRONT



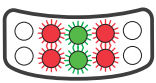
IN-CAB DISPLAY OVERVIEW: DISPLAY SCREEN



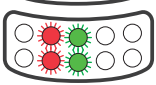
USING THE RECEIVER

POWER SUPPLY

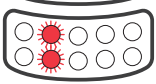
- The instrument includes an in-built rechargeable Ni-MH battery pack.
- The rechargeable battery pack is supplied only partially charged. Charge the rechargeable battery pack before use.
- When the receiver is powered on, the LED lights will show the battery status as below:



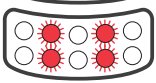
80-100% battery life



30-79% battery life



5-29% battery life



Low power

Charging the rechargeable battery pack

- Unscrew the cap on the ***charging port***.
- Align the pins on the charger and screw into place. Plug into a power source.
- The battery indicator progress will be shown via the battery indicator light on the charger as below:

Red = Battery is charging

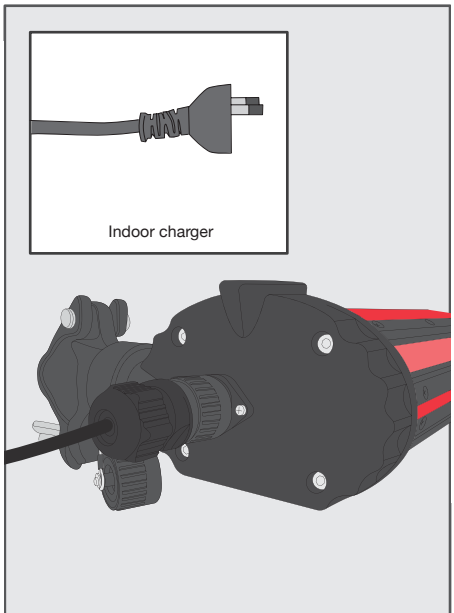
Green = Battery is charged

- Charging time is approximately 5 hours for a depleted battery.

When at low power the tool will power off automatically.

WARNING: Only use the supplied charger. Using an incorrect charger will void the warranty.

WARNING: Do not attempt to access the battery pack. Due to the weather sealing protection, the in-built battery pack is non-user serviceable. Only approved service technicians are qualified to perform servicing and repairs.



Charging the rechargeable battery pack

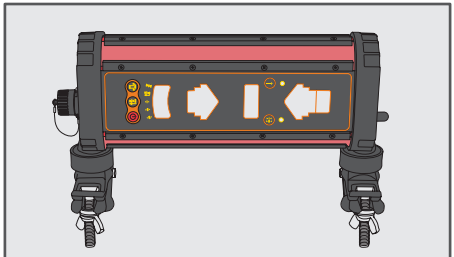
SET UP

Connection via clamps

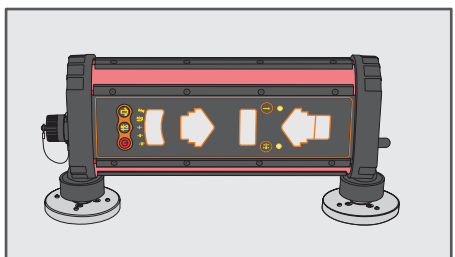
- By default, the receiver comes with clamps attached.
- Use the clamps to attach the receiver directly to the machine mast (diameter 40-50mm).

Connection via magnets

- To attach the receiver to a metal surface on the machinery, replace the clamps with the included magnets.
- Remove the nuts and washers that secure the clamps to the mounting pads.
- Screw the magnets onto the mounting pads and secure tightly with the locking grub screw.



Receiver with clamps



Receiver with magnets

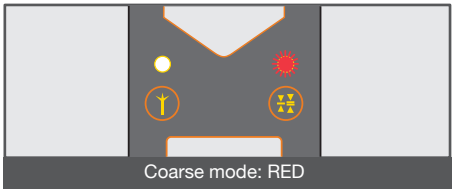
OPERATION

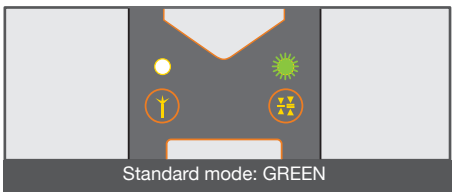
Powering on and off

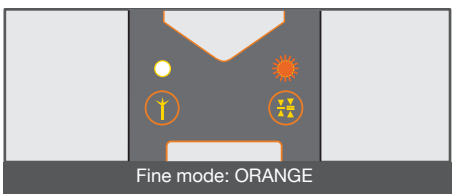
- To turn the receiver on, press the ***power button***. All the LED lights will blink sequentially to indicate that the receiver is on. The ***plumb LED indicator*** lights will show the battery status (see page 8). The ***detection mode LED indicator*** will illuminate to indicate the device is on.
- The receiver will automatically enter into 'standard' detection mode.
- To turn the receiver off, press and hold the ***power button*** until the LED lights flash.

Detection mode

- The detection mode can be changed between 'coarse', 'standard' and 'fine' mode.
- Press the ***detection mode button*** to cycle through the detection modes. The coloured LED indicators will display the detection mode setting (see illustration, right).

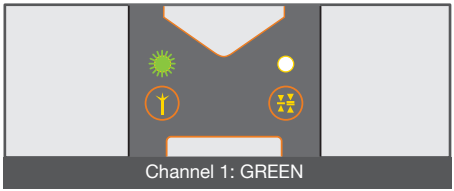


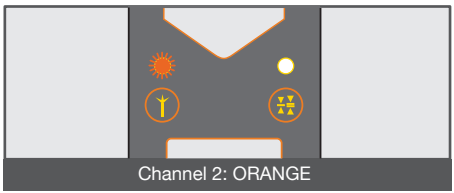


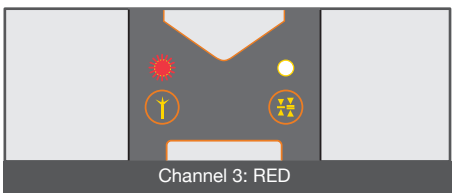


Connecting the receiver and in-cab display

- To connect the MMR-W300R receiver to the ICD-W300 in-cab display, press the ***wireless radio transmission button*** on the receiver.
- The receiver will automatically be set to channel 1. To cycle through the radio transmission frequencies, press and hold the ***wireless radio transmission button*** until the coloured LED light changes (see illustration, right).
- Position the in-cab display as desired where it can be observed by the operator. Press the ***wireless radio transmission button*** on the in-cab display.
- The in-cab display will automatically be set to channel 1. To cycle through the radio transmission frequencies, press and hold the ***wireless radio transmission button*** until the coloured LED light changes.



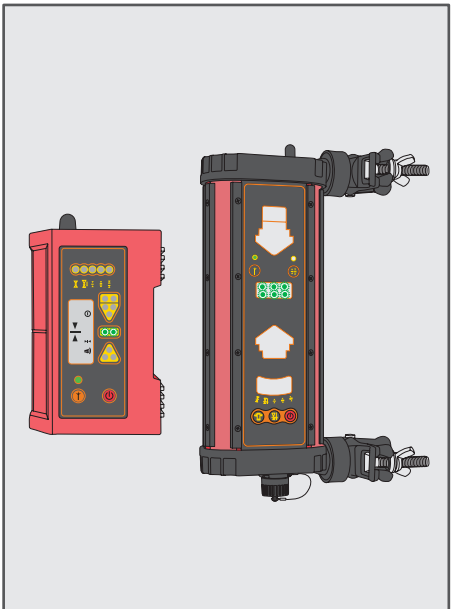




- Ensure that the receiver and in-cab display are both on the same channel. The in-cab display will duplicate the reading on the receiver.
- For detailed set-up of the in-cab display, see page 22.

If there are multiple receivers in use on the job-site, ensure that each receiver and corresponding in-cab unit is set to the same radio transmission channel to prevent miscommunication between devices.

If the in-cab display is not in use, it is recommended to turn off radio transmission on the receiver to conserve battery life.

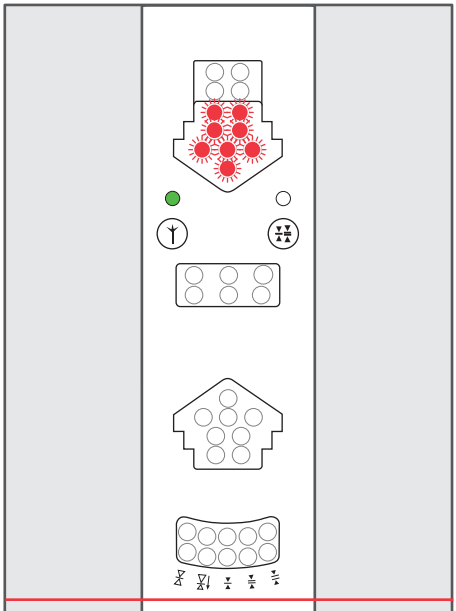


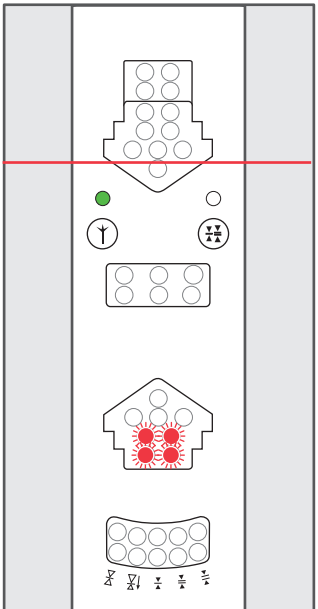
Receiver and in-cab display

Standard Detection

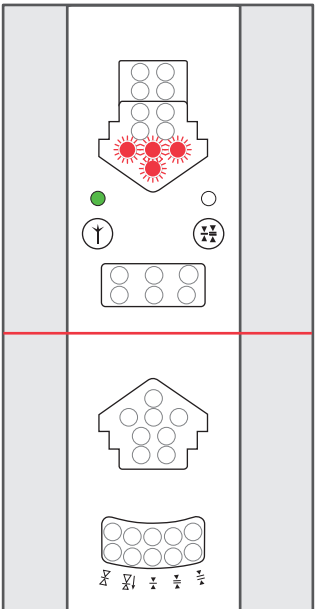
The MMR-W300R is compatible with most red beam rotary lasers.

- Ensure that the desired detection mode setting is selected (see page 11).
- When the receiver sensor panel is in the path of the beam, the LED light indicators will flash (see illustration, page 15). The LED lights that illuminate may vary depending on the detection mode selected (coarse, standard or fine).
- The LED indicators will flash green to indicate centre alignment (see illustration, page 15).
- If the receiver cannot detect the beam, the red LED lights will flash slowly in the direction of the last detection point (see illustration, right).
- The in-cab display will duplicate the reading on the receiver (to connect the in-cab display, see page 12) The in-cab display will not show any reading if the laser line is not detected.

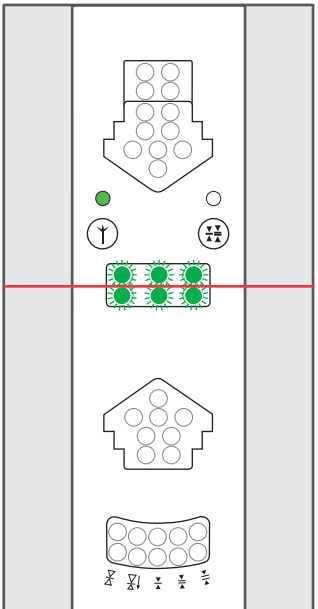




Laser line is not centred.



Laser line is not centred.

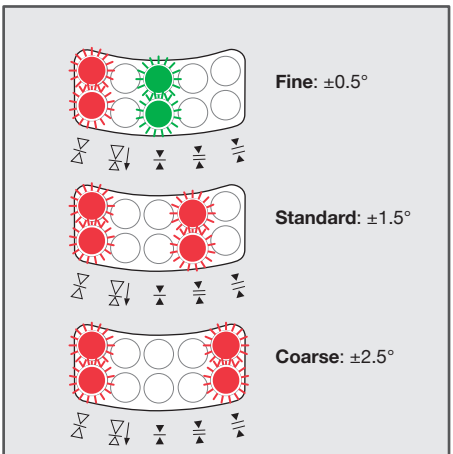


Laser line is centred.

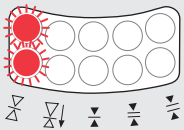
Blade tilt (bulldozer) mode

When the receiver is mounted onto a blade of a bull dozer or grader it can display the level position of the blade.

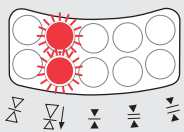
- To activate the blade tilt mode display, press the ***blade tilt mode button***.
- As default, the detection mode is set to 'fine'. To change the selected mode, press and hold the ***power button*** and the ***excavator mode button*** to cycle between each mode ('coarse', 'standard' or 'fine'). The LED indicators will light up to display the detection mode setting (see illustration, right). Release the buttons when the desired mode is selected.
- The centre LED indicators will illuminate green to indicate the level position (see illustration, page 16).
- The red LED indicators will illuminate to indicate the tilted position (see illustration page 16).
- The in-cab display will duplicate the reading on the receiver (to set-up the in-cab display, see page 8).



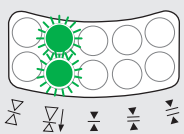
Blade tilt mode accuracy setting



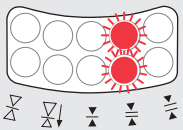
Tilted Far Left
Fine: >-1°
Standard: >-3°
Coarse >-5°



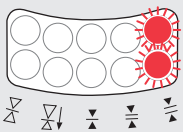
Tilted Left
Fine: -0.6° - -0.9°
Standard: -1.6° - -2.9°
Coarse: -2.6° - -4.9°



Centred
Fine: ±0.5°
Standard: ±1.5°
Coarse ±2.5°



Tilted Right
Fine: +0.6° - +0.9°
Standard: +1.6° - +2.9°
Coarse: +2.6° - +4.9°



Tilted Far Right
Fine: >+1°
Standard: >+3°
Coarse >+5°

LED blade tilt display and accuracy

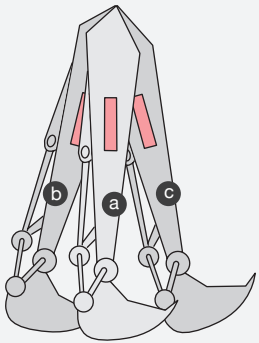
Excavator mode (plumb)

When the receiver is mounted onto an arm of an excavator or backhoe it can be used to display if the arm is tilted away from or towards the cab and plumb position.

- To activate excavator mode display, press the ***excavator mode button***.

Tilt indicators

- The tilt of the excavator arm is indicated by the speed of the lights flashing (see illustration, right).



a) Solid LED lights
Fine: ±0.5° | Standard: ±1.5° | Coarse ±2.5°

b) Quick flash LED lights
Fine: >0.5° | Standard: >1.5° | Coarse >2.5°

c) Slow flash LED lights
Fine: >0.5° | Standard: >1.5° | Coarse >2.5°

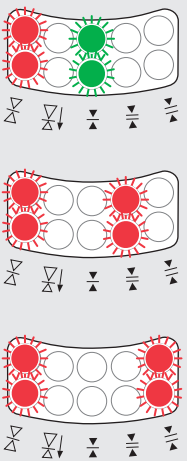
Excavator mode tilt indicators

Plumb indicators

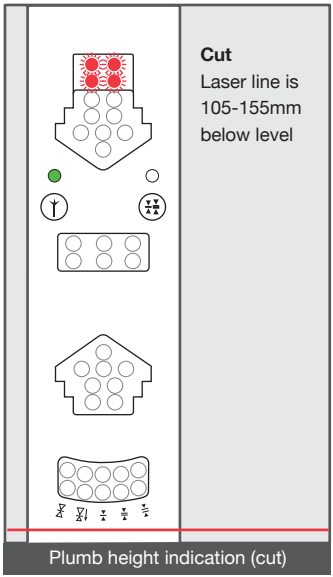
- In excavator mode, the receiver displays a more precise height indication that shows how much to cut and / or fill.

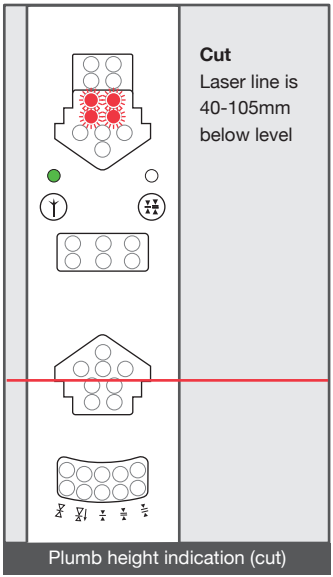
- As default, the detection mode is set to ‘fine’. To change the selected mode, press and hold the ***power button*** and the ***blade tilt mode button*** to cycle between each mode (‘coarse’, ‘standard’ or ‘fine’). The LED indicators will light up to display the detection mode setting (see illustration, right). Release the buttons when the desired mode is selected.

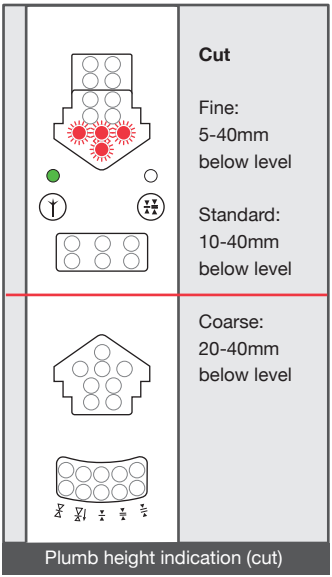
- The LED indicators will illuminate to indicate the height position (see page 20-21).

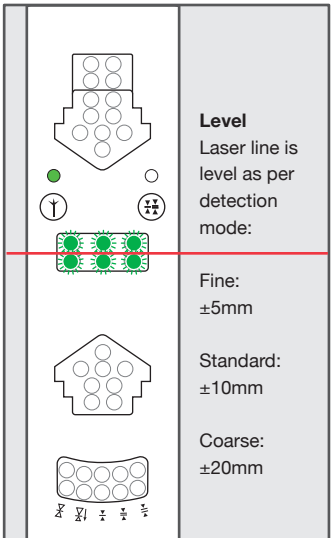


Blade tilt mode accuracy setting

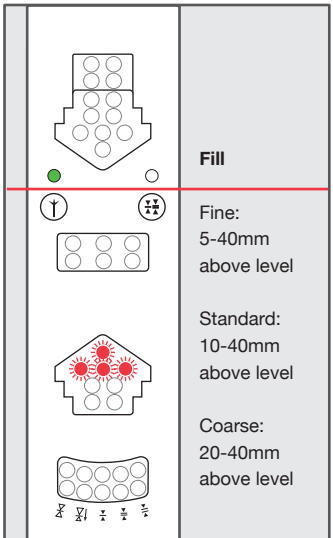

Cut
Laser line is
105-155mm
below level
Plumb height indication (cut)


Cut
Laser line is
40-105mm
below level
Plumb height indication (cut)

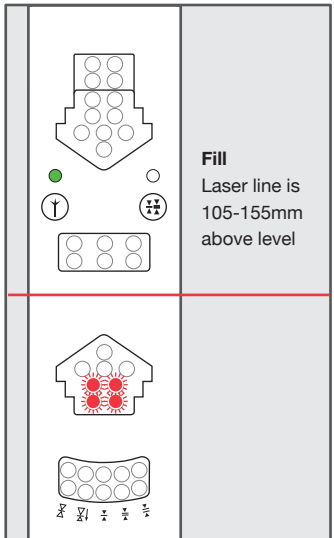

Cut
Fine:
5-40mm
below level
Standard:
10-40mm
below level
Coarse:
20-40mm
below level
Plumb height indication (cut)



Plumb height indication (level)



Plumb height indication (fill)



Plumb height indication (fill)

USING THE IN-CAB DISPLAY

POWER SUPPLY

- The in-cab display is powered by 4 AA alkaline batteries.
- The ***low power indicator*** on the ***LCD screen*** will be displayed when the battery voltage is low. Replace the batteries as soon as possible.

Battery Replacement

- Use a screwdriver to remove the ***battery compartment door.*** Remove the batteries.
- Insert the batteries according to polarity and use a screw driver to replace the ***battery compartment door***.

Remove the alkaline batteries when the device is inactive for extended periods.

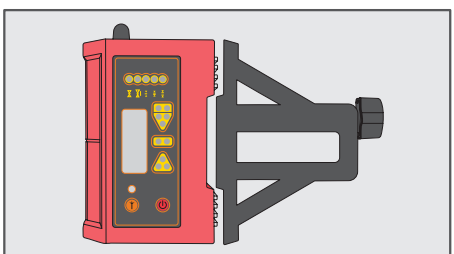
SET UP

Attaching via the magnets

- Use the magnets to attach the in-cab display directly onto various magnetic surfaces.

Attaching via the clamp

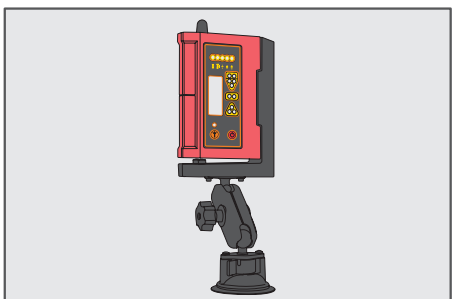
- Use the magnets to attach the clamp to the in-cab display. The device can be clamped onto various surfaces (see below illustration).



In-cab display attached to the clamp via magnets

Attaching via the suction mount

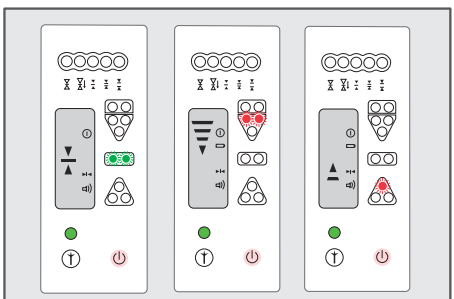
- Use the magnets to attach the suction mount to the in-cab display. The device can be suctioned on to a windscreen.
- To adjust the position of the in-cab display, loosen the adjustment knob on the side and reposition the angle of the device. Tighten the adjustment knob to secure in place.



In-cab display attached to the suction mount

Standard detection

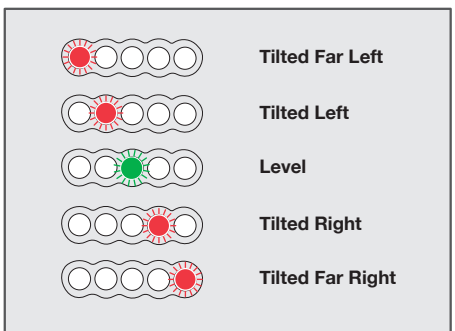
- The in-cab display will duplicate the reading on the receiver. Refer to page 14 for more information on standard detection.
- The in-cab display will not show any reading if the laser line is not detected.



In-cab display: standard detection indicators

Blade tilt (bulldozer) mode

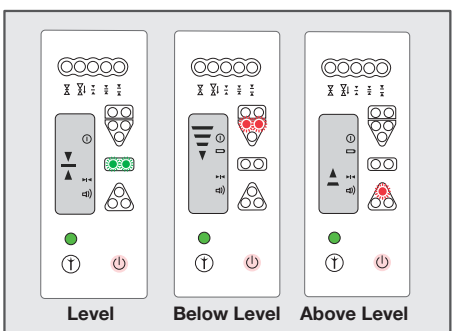
- When the receiver is mounted onto a blade of a bull dozer or grader it can display the level position of the blade. Refer to page 16 for more information on blade tilt (bulldozer) mode.
- The in-cab display will duplicate the reading on the receiver (see illustration, below).



In-cab display: blade tilt indicators

Excavator mode (plumb)

- When the receiver is mounted onto an arm of an excavator or backhoe it can be used to display if the arm is tilted away from or towards the cab and plumb position. Refer to page 18 for more information on excavator mode.
- The in-cab display will duplicate the plumb reading on the receiver (see illustration, below).



In-cab display: excavator mode indicators

TROUBLE SHOOTING

Error	Cause & Solution
Receiver does not turn on	• Check the battery pack. The battery pack may require charging or need to be replaced due to age and/or a high number of charging cycles. To replace the battery pack, please contact us for servicing. • Check the receiver for signs of damage.
Receiver not detecting the beam	• Check the battery pack. The battery pack may require charging or need to be replaced due to age and/or a high number of charging cycles. To replace the battery pack, please contact us for servicing. • Check the laser settings. Please refer to the instruction manual for your laser level. • Check the laser and receiver are within operating range. • Check the line of sight and ensure there is no interference.
In-cab unit not displaying readings from the receiver	• Check that the wireless radio transmission is active on both the receiver and the in-cab display. Ensure they are both operating on the same channel. • Check the receiver and in-cab display for signs of damage.
Battery pack will not charge or is not lasting long in use	• Check to ensure that the charger and receiver are being operated within the specified operating temperature. • The battery pack may need to be replaced due to age and/or a high number of charging cycles. To replace the battery pack, please contact us for servicing.

CARE AND MAINTENANCE

- Whenever possible, store the instrument in a dry, shady location.
- Remove the alkaline batteries before storing the in-cab display for extended periods.
- Clean the instrument with a dry, soft cloth after use in dusty, damp or wet conditions before storing.
- Handle with care and store and transport within the carry case provided.
- Smudges and fingerprints may be removed with a damp tissue or a soft, lint-free cloth.

WARRANTY

3 YEAR STANDARD WARRANTY PERIOD

1. The warranty period for your tool is 3 years from the date of purchase.
2. The warranty period for batteries, battery packs and chargers is 1 year from the date of purchase.
3. All products have a standard warranty period, you do not have to register your products to obtain the standard warranty period.
4. To claim under this warranty, the date of purchase of the tool must be documented by an invoice/ receipt.

7 YEAR EXTENDED WARRANTY PERIOD

1. The extended warranty is available on selected tools only.
2. You may extend the warranty period for your tool to 7 years from the date of purchase. This excludes batteries, battery packs and chargers (if included with the tool).
3. To obtain the extended warranty, the registration process must be completed within 30 days from the date of purchase.
4. Failure to register your product online and/or submission of a valid invoice/receipt will void the warranty extension.
5. Please ensure ALL information submitted/ uploaded is correct.
6. Extended warranty is ONLY available via online registration, offline (mailing in of warranty registration) will not be accepted.

WARRANTY (continued)

AUSTRALIA

“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.”

For more information please visit consumerlaw.gov.au

NEW ZEALAND

For more information please visit consumerprotection.govt.nz

CUSTOMER SUPPORT

To assist you with any queries or technical questions please contact customer support

Australia: 1300 658 338
New Zealand: 0800 367 527

SPECIFICATIONS

Spot-on MMR-W300R	
Product code	50530
Warranty	7 Years*
Accuracy	Fine: ±5 Standard: ±10mm Coarse: ±20mm
Laser class compatibility	2 Red & 3 Red
Operating temperature	-10°C to +40°C
Blade tilt accuracy	Fine: ±0.5° Standard: ±1.5° Coarse: ±2.5°
Bucket tilt accuracy	Fine: ±0.5° Standard: ±1.5° Coarse: ±2.5°

Battery life	40 hours+ (when wireless communication is not active)
Battery type	4x C Ni-MH battery pack (sealed)
Automatic power off	60 minutes
IP rating	66
Weight (kg inc. batteries)	Receiver: 2.44 In-cab display: 0.52
Dimensions (mm)	Receiver: 245 x 384 x 92 In-cab display: 109 x 187 x 39

*With online registration (3 years without registration). Please refer to page 27 for details.

NOTES

www.spoton.com.au