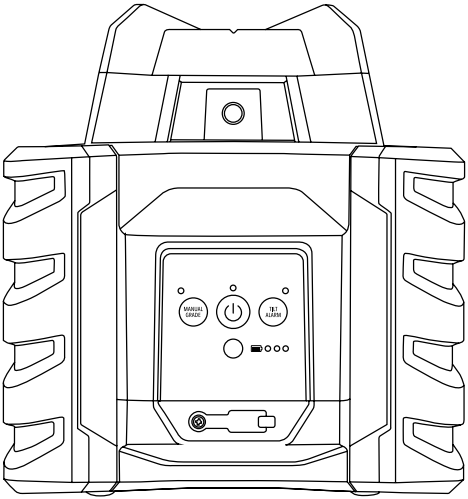
Lasertec

HV2R Mk II
ROTARY LASER LEVEL

Product Code: 91350



INSTRUCTION MANUAL

Laser Safety

Read the following safety instructions before attempting to operate this tool.
Keep these instructions in a safe place or store in the carry pouch for future reference.

WARNING! SAVE ALL WARNINGS & INSTRUCTIONS FOR FUTURE REFERENCE.
Read and understand all instructions.

- Use the tool only with the specifically designated batteries.
- Store the tool out of reach of children and other untrained persons. Laser tools are dangerous in the hands of untrained users.
- 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 use optical tools such as a telescope or transit to view the laser beam. Serious eye injury could result.
- Do not place the tool in a position which may cause anyone to intentionally or unintentionally stare into the laser beam. Serious eye injury could result.
- Do not position the tool near a reflective surface which may reflect the laser beam toward anyone's eyes. Serious eye injury could result.
- Do not set up the tool at a position where the laser beam can cross any person at head height.
- Do not let children come in contact with the tool.
- Turn the tool off when it is not in use. Leaving the tool on increases the risk of staring into the laser beam.
- Do not operate the tool around children or allow children to operate the tool. Serious eye injury may result.
- Position the tool securely on a level surface. Damage to the laser or serious injury could result if the laser falls.
- Do not remove or deface warning labels.

WARNING!
DO NOT DISASSEMBLE THE LASER.

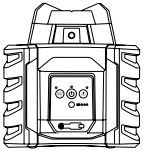
There are no user serviceable parts inside. Disassembling the tool will void all warranties on the product. Do not modify the tool in any way. Modifying the tool may result in hazardous laser radiation exposure.

CAUTION!
CLASS 2 LASER PRODUCT

- Never look into the laser beam directly and intentionally.
- Do not use optical tools to view the laser beam.
- Do not set up the tool at a position where the laser beam can cross any person at head height.
- Do not let children come in contact with the laser.

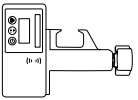
Item Checklist

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



Lasertec
HV2R Mk II

Lasertec IRC3
remote control



Lasertec RDH4
detector & clamp

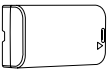
Laser glasses
(red)

Laser target
(red)

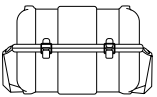
2x AAA Alkaline
batteries (remote)

9V Alkaline
battery (detector)

USB-C to USB-A cable



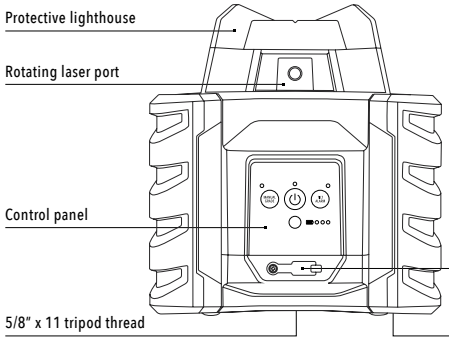
Li-ion battery pack
(laser level)



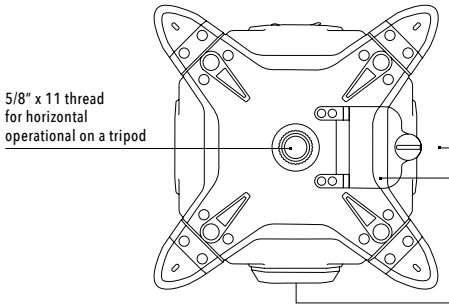
Hard carry case

HV2R Mk II KIT

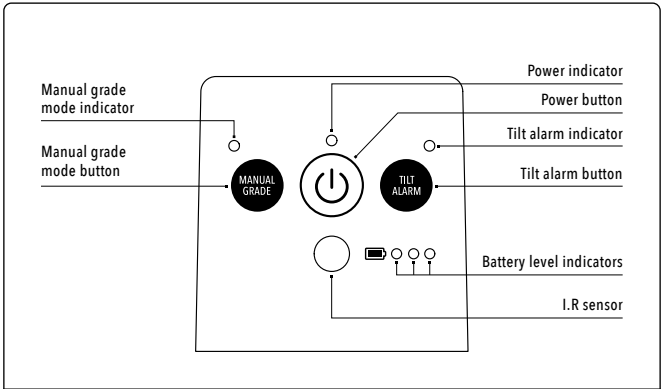
Using the Laser



FRONT OVERVIEW



BASE OVERVIEW



CONTROL PANEL

POWER SUPPLY

Rechargeable battery pack

- The laser level is supplied with one rechargeable Li-ion battery pack that is located in the base of the laser level.
- The rechargeable battery pack is supplied only partially charged. Charge the rechargeable battery pack before use. Keep the rechargeable battery pack in the carry case when not in the laser level.
- The battery level indicator lights will show when the battery is low. The laser level should be re-charged as soon as possible.
- Battery pack capacity decreases at low temperatures; a depleted pack may not function when cold.

UBS charging cable

- The USB charging cable is for indoor use only.
- Do not store in locations where moisture can be present or where the chargers could be exposed to extreme temperatures.
- If a cable becomes damaged, stop using immediately and seek a replacement.

Charging the rechargeable battery pack

- Insert the USB charging cable into one of the two charging ports. The charging ports are located underneath the control panel (Fig.1) and on the battery pack. Charging progress will be shown by the battery indicator lights on the laser. Lights will flash from right to left whilst charging and remain a solid green when fully charged.
- Charging time is approximately 5 hours for a depleted battery.

The battery pack does not need to be inserted in the laser level whilst charging via the port on the battery pack.

Removing and inserting the rechargeable battery pack

- Loosen the battery thumb screw on the base of the laser level and remove the battery pack.
- Insert the battery pack. Tighten the battery thumb screw.

WARNING! Do not attempt to disassemble the battery pack.

HORIZONTAL MEASUREMENT SETUP

Level surface set up

- Select a place as close and practical to the work site as possible, and ensure that the location is clear of traffic.
- Place the laser level onto a reasonably level surface with the control panel facing upwards.

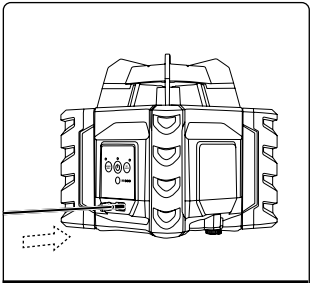


FIGURE 1

VERTICAL MEASUREMENT SETUP

Level surface set up

- Select a place as close and practical to the work site as possible, and ensure that the location is clear of traffic.
- Place the laser level onto a reasonably level surface with the lighthouse facing upwards.

OPERATION

Powering on

- Press the power button once and the laser level will power on and begin automatically self-levelling. When this levelling process is complete, the penta prism inside the lighthouse will start rotating.
- If the laser level is outside the self levelling range the laser level will not level causing the laser beam to flash continuously. If this occurs, reposition the laser level onto a level surface until the laser level can level off.

In bright outdoor conditions, visible distance will be significantly reduced. For outdoor use, it is recommended to use the included detector.

Powering off

- Press the power button once and the laser level will power off.

Tilt alarm

- Once the laser level has been levelled off the tilt alarm can be enabled by pressing the tilt alarm button. The tilt alarm indicator light will flash continuously whilst active.
- If the laser level is disturbed while the alarm is active the laser level will stop rotating and will need to be powered off and on again to reset to a level position.

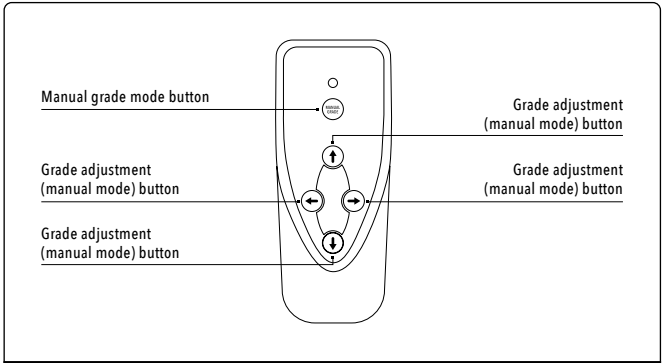
Setting up a manual grade / slope

- To create a manual grade / slope, press the manual grade mode button on the laser level control panel or remote control. The manual grade mode indicator on the instrument will light up when manual mode is active.
- To adjust the grade, press the grade adjustment arrows on the remote control. These arrows will adjust the grade on either the x-axis or y-axis.
- To cancel manual grade mode, and return to normal levelling press the manual grade button on either the instrument or remote control.

When in manual mode the laser level will not self level and correct for vibrations and/or disturbances.

Grade adjustments can only be made by pressing the grade adjustment arrow buttons on the remote control.

Using the Remote Control



FRONT OVERVIEW

REMOTE CONTROL OPERATION

Power supply

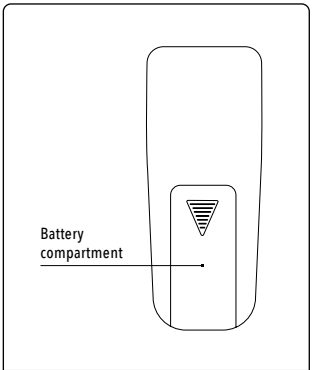
- The remote is powered by two AAA alkaline batteries.

Battery replacement

- Remove the battery cover door and the batteries.
- Insert the batteries according to polarity and replace the battery cover door.

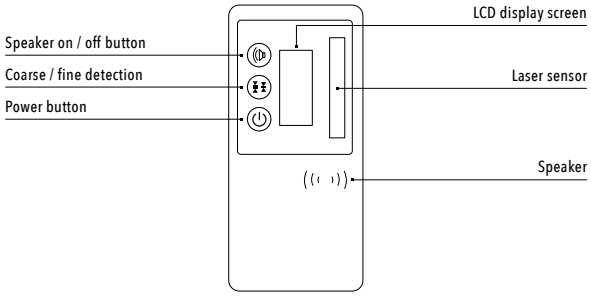
Operating the remote control

- Ensure the laser level is turned on and the laser head is rotating.
- To set up a manual grade / slope refer to page 7.

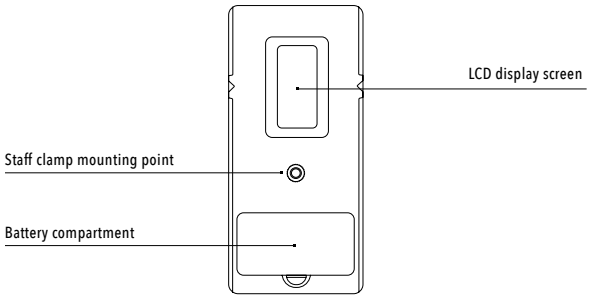


BACK OVERVIEW

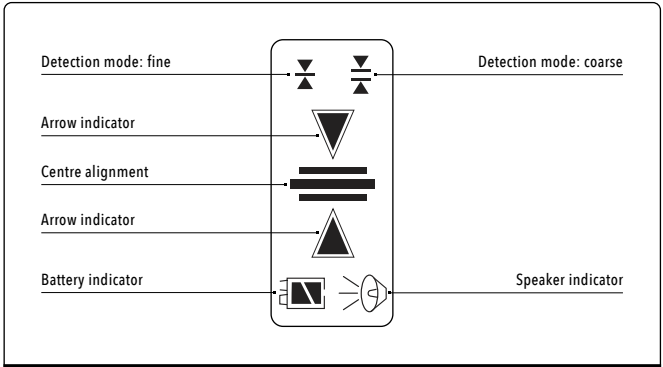
Using the Detector



FRONT OVERVIEW



BACK OVERVIEW



LCD SCREEN OVERVIEW

POWER SUPPLY

- The detector is powered by one 9V alkaline battery.

Battery replacement

- Remove the battery cover door and the batteries.
- Insert the batteries according to polarity and replace the battery cover door.

MOUNTING TO THE STAFF CLAMP

- Insert the staff clamp screw into the staff clamp mounting point.
- Rotate the staff clamp thumb screw until the clamp is secured in place.

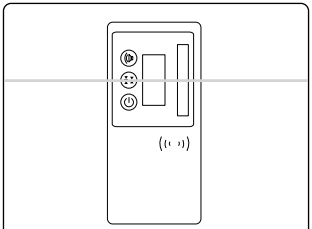


FIGURE 2

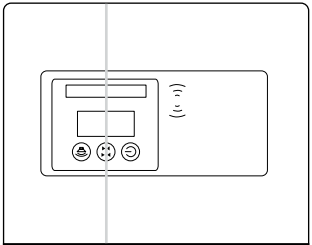


FIGURE 3

DETECTOR OPERATION

- Power the detector on by pressing the power button. The LCD screen will turn on and the speaker will emit a small tone to indicate the detector is operating.
- The LCD screen will display the battery level,detection mode and speaker function.
- To change between broad, coarse and fine mode press the detection mode button.
- To change the speaker volume or turn the speaker off, press the speaker button.
- Move the detector into the path of the laser beam.
- Hold the detector upright for horizontal beams (Fig. 2) or rotate 90° for vertical beams (Fig.3).
- The direction arrows or level line on the LCD screen will indicate the position of the laser beam. The detector will emit a constant beep once the level position has been located.

Mounting to a Construction Tripod

NOT INCLUDED

A construction tripod (flat, domed or elevating) can be purchased from your nearest measurement tool dealer. The below instructions are generic only and set-up methods may vary between models. Refer to the documentation from the tripod manufacturer for details.

- Extend the tripod legs to the required height and ensure the legs are spread wide enough so that the tripod platform is stable. Secure the legs in place (refer to the documentation from the tripod manufacturer for details).
- Place the laser level onto the tripod with the lighthouse facing upwards and mount the male 5/8" thread into the base until firm. Do not over tighten as this may cause damage to the laser level or tripod.
- If using an elevating tripod with a measuring scale on the centre column, the height can be adjusted as required.

WARNING! Attaching the laser level to a tripod without the correct thread size may cause damage.

Calibration Check

Before doing any precision levelling it is advised to check the calibration of the laser level.

- Set up the laser level on a tripod at about 30m facing a wall or staff with a detector.
- Allow the laser to level.
- Detect and note laser position on the wall or staff.
- Without moving the tripod, rotate the laser level 180°.
- Detect and note laser position on the wall or staff.
- Calculate the distance between the two readings.
- The difference should be within 6mm at 30m.
- If the laser level is out of calibration it is advised to send it to an authorised service centre.

Care & Maintenance

1. This is a precision measuring tool and should always be handled with care and transported within the carry case provided.
2. Always turn the tool off when transporting the laser level or moving around the job site.
3. Whenever possible, store the tool in a dry, shady location.
4. When the tool is not in use or is being stored, it is highly recommended to remove the batteries.
5. Calibration of the tool is recommended: every six months, if ongoing accurate levelling is required, or an impact has occurred.
6. The operator should check the accuracy of the tool before precision levelling is attempted. Failure to do so may result in inaccurate measurements.
7. Clean the tool with a dry, soft cloth after use in dusty, damp or wet conditions before storing.
8. Smudges and fingerprints may be removed with a damp tissue or a soft, lint-free cloth.

Trouble Shooting

ERROR	CAUSE & SOLUTION
Laser does not turn on	• Check the battery pack. It may be inserted in the wrong way or require charging or need to be replaced. • Check the battery compartment for signs of damage and ensure that the compartment is clean and that the battery terminals are not bent.
Laser turns on but does not rotate	• Check the battery pack. It may be inserted in the wrong way or require charging or need to be replaced. • Check the battery compartment for signs of damage and ensure that the compartment is clean and that the battery terminals are not bent. • Instrument may be outside its self levelling range. Adjust the instrument or tripod so it is level.
Laser does not remain on for long periods of use	• Check the battery pack. It may require charging or need to be replaced. • Check the battery compartment for signs of damage and ensure that the compartment is clean and that the battery terminals are not bent.
Laser does not level off	• The tool may be outside its self levelling range and may require an adjustment before self-levelling can commence. • The tool may have impact damage.
Detector does not detect the laser beam	• Check the battery. • Check the laser is operating correctly.
Detector speaker is not functioning	• Check the sound is on. • Check the laser is operating correctly and producing a beam.

Warranty

This tool comes with a standard 3 year warranty. Extend the warranty of your laser level to 7 years by registering online. See website for terms and conditions.

www.spoton.com.au/warranty-information

All Spot-on measurement tools are carefully checked and tested to our precise quality assurance standards. We offer a warranty in accordance with the following conditions:

1. Our warranty provides the correction of deficiencies to the tool once verified by an authorised service centre that the deficiencies were caused by a manufacturing fault within the warranty period.
2. The standard warranty period is 3 years from the date of purchase. The warranty period can be extended to 7 years upon registration of the tool within 30 days of purchase.
3. The warranty does not cover:
   a) Calibrations and components that are subject to wear and tear.
   b) Defects in the tool caused by non-compliance with the operation instructions, improper use, abnormal environmental conditions, inappropriate operating conditions or insufficient maintenance.
   c) Defects caused by using accessories or spare parts other than approved parts.
   d) Services or repairs carried out by non-authorised persons.
4. Defects recognised by an authorised service centre as being covered by the warranty shall be corrected either by repair or replacement of the tool.
5. The warranty claim must be lodged within the warranty period. This requires the complete tool with the original sales receipt containing the purchase date and place of purchase. Partial or disassembled tools cannot be submitted for a warranty claim.
6. Services provided under warranty do not lengthen or renew the warranty of the tool.

"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 www.consumerlaw.gov.au

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. Calibrations are not covered under warranty as they are deemed wear and tear.
4. All products have a standard warranty period, you do not have to register your products to obtain the standard warranty period.
5. 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.
3. Calibrations are not covered under warranty as they are deemed wear and tear.
4. To obtain the extended warranty, the registration process must be completed within 30 days from the date of purchase.
5. Failure to register your product online and/or submission of a valid invoice/receipt will void the warranty extension.
6. Please ensure ALL information submitted/ uploaded is correct.
7. Extended warranty is ONLY available via online registration, offline (mailing in of warranty registration) will not be accepted.

Specifications

SPECIFICATIONS	HV2R Mk II
Product code	91350
Warranty	7 Years (with online registration)
Accuracy	±1.5mm at 30m
Operating range	250m (diameter)
Levelling range	±9% / ±5°
Laser class	2 Red
Battery life	24 hours (max per battery pack)
Battery type	7.4V 2600mA Li-ion battery pack
IP rating	65
Weight (kg)	1.56 (inc. battery)
Dimensions (mm)	170 x 170 x 185

Customer Support

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

1300 658 338

Visit www.spoton.com.au for more information.

Spot-on Laser & Tool Company

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