

# **extreme**

## **A3 Red Rotary Laser**



# **INSTRUCTION MANUAL**

# SAFETY

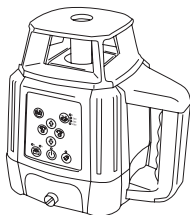
Please read this instruction manual before operating this product.  
Please store this instruction manual in the carry case for future reference.

## **CAUTION: Class 2 Laser Product**

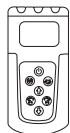
Do not stare directly into the laser beam from apertures.  
Do not disassemble the instrument or attempt to perform any internal servicing as this will void your warranty. No user serviceable parts included.  
Only approved and authorised service technicians can carry out warranty repairs.

# ITEM CHECKLIST

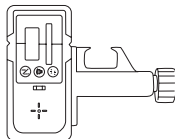
Please ensure the following items are included with your laser.  
If anything is missing please contact your retailer.



Extreme A3



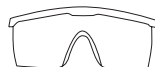
Remote control



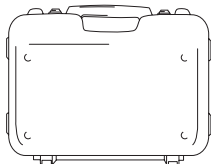
Detector and clamp



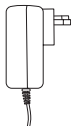
Laser target



Laser glasses



Carry case



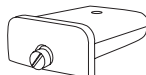
Charger



Rechargeable  
battery pack

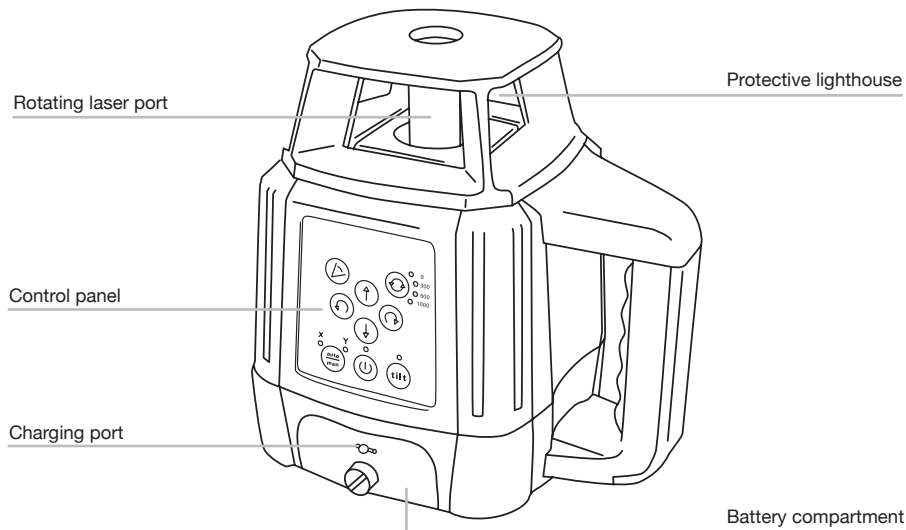


Car charger

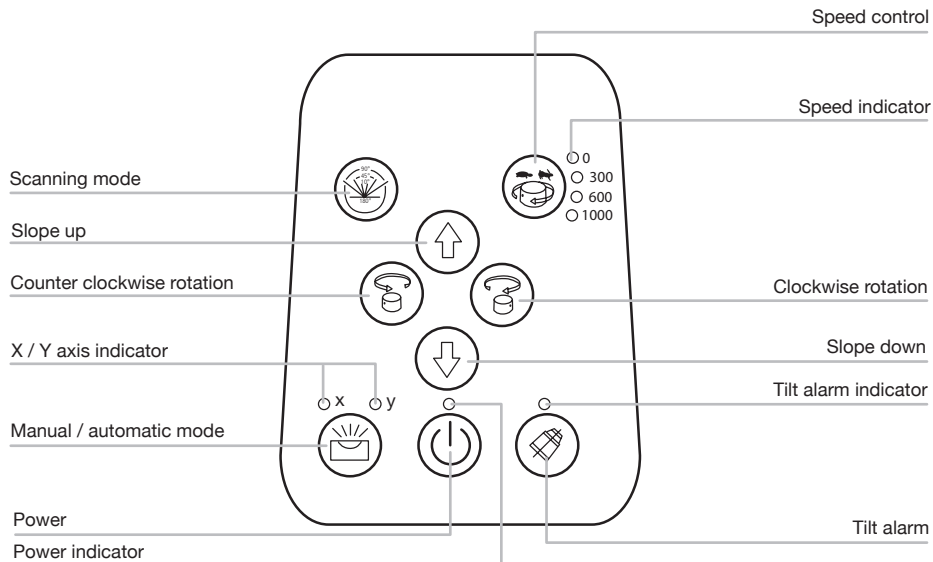


Alkaline  
battery pack

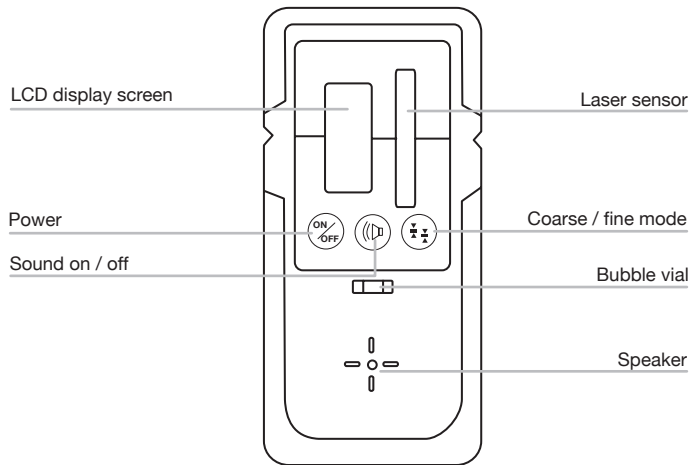
# PRODUCT OVERVIEW



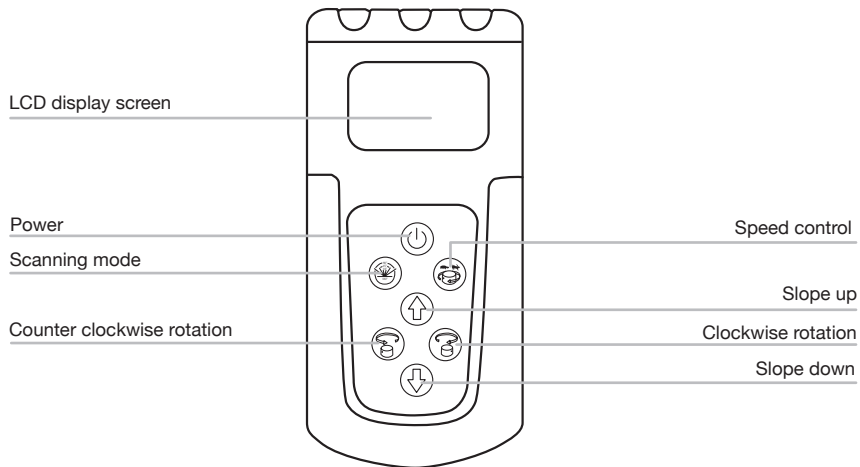
# CONTROL PANEL



# DETECTOR CONTROL PANEL



# REMOTE CONTROL PANEL



# USING YOUR LASER

## Power Supply

- The Extreme A3 is supplied with a rechargeable Ni-MH battery pack that is located in the base of the unit.
- It is recommended that the battery pack be completely charged before use.
- Charging time is approximately 5 hours.
- Use of the unit over time and changes in temperature may cause increases or decreases in charging and operation time.
- The power indicator light will flash when the battery is low. The unit should be re-charged as soon as possible.
- To charge the unit insert the charger into the port on the battery pack.  
Progress will be shown by the power indicator display on the charger as below:

**Red (flashing) = Charger and battery are not connected.**

**Red (constant) = Battery is charging.**

**Green (constant) = Battery is charged.**

- There is an additional alkaline battery pack included in you kit which may be used in place of the rechargeable pack.



## Horizontal Set Up

- ▶ Select a place as close as practical to the work site.  
Ensure the location is clear of traffic.
- ▶ Attach the laser to a tripod and place on a level surface.  
Ensure the unit is secured correctly and tightened in position.

## Vertical Set Up

- ▶ Select a place as close as practical to the work site.  
Ensure the location is clear of traffic.
- ▶ Place the laser onto a level surface with the control panel facing upwards.

## Operation

- ▶ To turn the unit on press the *power* button. Self levelling will commence and the laser will begin to rotate.
- ▶ If the unit is outside the self levelling range the unit will not level the manual mode indicator will flash repeatedly. The laser will shut off after 5 minutes if the unit is unable to level.

### **Speed control**

- ▶ Press the *speed control* button to cycle through various rotational speeds, indicated by the speed indicator light.

### **Scanning mode**

- ▶ To focus the laser beam between two points press the *scanning mode* button. Pressing the button multiple times will adjust the angle of the beam.
- ▶ To cancel scan mode press the *scanning mode* button several times to cycle through to full rotation.

### **Rotation**

- ▶ Whilst the unit is in scanning mode press the *clockwise rotation* or *counter clockwise rotation* button to change the rotation of the laser head.

### **Tilt alarm**

- ▶ Once the unit has been levelled off the tilt alarm can be enabled by pressing the *tilt alarm* button. The tilt alarm indicator light will flash for approximately 15 seconds. Once the light is constant the alarm is enabled.
- ▶ If the unit is disturbed while the alarm is active the unit will need to be powered off and on again to reset its level position.

## Setting up a grade

- ▶ Once the unit has levelled off and started rotating you can begin a slope or grade.

### Adjusting the X-Axis

- ▶ Position the unit so that the X1 direction (see top of laser) is facing the direction you wish to grade.
- ▶ Press the *manual / automatic mode* button on the control panel.
- ▶ The unit is now in manual mode and the X-axis indicator will be lit.
- ▶ Press the *slope up* or *slope down* arrows to adjust the grade accordingly.
- ▶ Once the grade is set exit out by pressing the *manual / automatic mode* button. The laser will now adjust itself accordingly.

### Adjusting the Y-Axis

- ▶ Position the laser so that the Y1 direction (see top of laser) is facing the direction you wish to grade.
- ▶ Press the *manual / automatic mode* button twice on the control panel.
- ▶ The unit is now in manual mode and the Y-axis indicator will be lit.
- ▶ Press the *slope up* or *slope down* arrows to adjust the grade accordingly.
- ▶ Once the grade is set exit out by pressing the *manual / automatic mode* button. The laser will now adjust itself accordingly.

### **Dual grade**

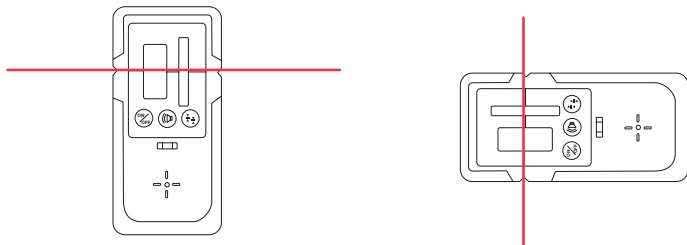
- Position the unit so that the X1 direction (see top of laser) is facing the direction you wish to grade.
- Press the *manual / automatic mode* button on the control panel.
- The unit is now in manual mode and the X-axis indicator will be lit.
- Press the *slope up* or *slope down* arrows to adjust the grade accordingly.
- Press the *manual / automatic mode* button on the control panel to set the Y-axis.
- Press the *slope up* or *slope down* arrows to adjust the grade accordingly.
- Once the grade is set exit out by pressing the *manual / automatic mode* button. The laser will now adjust itself accordingly.

### **Vertical grade set up**

- Whilst in vertical mode a grade can be set in Z-axis.
- Press the *manual / automatic mode* button on the control panel.
- Press the *slope up* or *slope down* arrows to adjust the grade accordingly.
- Once the grade is set exit out by pressing the *manual / automatic mode* button. The laser will now adjust itself accordingly.

## Using Your Detector

- ▶ Switch the detector on by pressing the *power* button. The speaker will beep once and the screen will turn on indicating the unit is operating.
- ▶ The LCD screen will display the battery level, detection mode and speaker function.
- ▶ To change between coarse and fine mode press the *coarse / fine mode* button.
- ▶ Move the detector into the path of the laser beam.
- ▶ Hold the detector upright for horizontal beams. Rotate the detector 90° for vertical beams.
- ▶ 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.



## Using Your Remote

- ▶ Ensure the unit is turned on and the laser is rotating. The remote must be used whilst facing the control panel of the unit. The remote control has a range of up to 100m.
- ▶ Press the *speed control* button to increase or decrease the speed of the lasers rotation.
- ▶ To focus the laser beam between two points press the *scanning mode* button. Pressing the button multiple times will adjust the angle of the beam.
- ▶ Press the *clockwise* or *counter clockwise* button to change the rotation of the laser head while the laser is in scan mode.
- ▶ To create grades press the *manual / automatic mode* button on the laser. Press the *slope up* and *slope down* arrows to adjust the angle of the grade. (See page 11-12)

# CHECKING CALIBRATION

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

- Set up the laser on a tripod at about 30m facing a wall or staff with a detector.
- Allow the unit to level.
- Detect and note laser position on the wall or staff.
- Without moving the tripod rotate the unit 180°.
- Detect and note laser position on the wall or staff.
- Calculate the distance between the two readings.
- The difference should be within 3mm at 30m.
- If the unit is out of calibration it is advised to send it in to *Spot-on*.  
(see [www.spoton.com.au](http://www.spoton.com.au) for details)

# **TROUBLE SHOOTING**

## **Laser does not turn on**

- Check the batteries. They may be in the wrong way or need replacing.
- Check the battery compartment for signs of damage. Ensure they are clean and not bent.
- Connect the main power adaptor.

## **Laser turns on but does not rotate**

- Check the batteries.
- Check the battery compartment for signs of damage. Ensure they are clean and not bent.

## **Laser does not remain on for long periods of use.**

- Check the batteries.
- Check the battery compartment for signs of damage. Ensure they are clean and not bent.
- Connect the main power adaptor.

## **Laser does not level off**

- Unit may be outside its self levelling range. Adjust the unit or tripod so it is level.
- Unit may have low power
- Unit may have impact damage.



# CARE AND MAINTENANCE

- ▶ Reflective surfaces such as glass may reflect the beam, causing two beams to strike the detector at the same time. This may create inaccurate reference points.
- ▶ This is a precision instrument and should always be transported within the carry case provided.
- ▶ Whenever possible, store the instrument in a dry, shady location.
- ▶ The A3 should be calibrated every 6 months, if ongoing accurate levelling is required or an impact has occurred.
- ▶ The operator should check the A3 for accuracy before precision levelling is attempted.
- ▶ The supplied charger is specific to this product. Do not purchase or use any other type of charger or power adaptor.
- ▶ Clean the instrument with a dry, soft cloth after use in dusty, damp or wet conditions before storing.
- ▶ Smudges and fingerprints may be removed with a damp tissue or a soft, lint-free cloth.

# WARRANTY

## **The Extreme A3 comes with a 10 year manufacturers warranty.**

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.

Separate to the above Australia Consumer Law, *Spot-on* offers a global warranty.

## **30 Day Free Service**

If your laser is out of calibration within the first 30 days of purchase you are entitled to a free calibration adjustment. For more information please contact your retailer or *Spot-on*.

## **Customer Support**

To assist you with any queries or technical questions please contact the customer support line: 1300 658 338

# SPECIFICATIONS

Specifications	Extreme A3
Product code	60047
Warranty	10 Years
Accuracy	$\pm 1\text{mm}$ at 30m
Range	800m
Levelling range	$\pm 9\%$ / $\pm 5^\circ$
Laser class	2 Red
Battery life	20 hours
Battery type	4x C (sealed pack)
IP rating	65
Weight (kg)	3.50
Dimensions (mm)	225x220x160

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

