

i77R

ROTARY LASER LEVEL



QUICK START INSTRUCTION MANUAL

Introduction

Purchase	<p>Congratulations on your purchase of an Imex i77R Rotary Laser.</p> <p>These lasers have been designed for the professional and incorporate the latest laser technology with a robust and simple construction for years of trouble-free use.</p> <p>This manual contains important safety directions as well as instructions for setting up the product and operating it. Read carefully through the User Manual before you switch on the product.</p>
Product Identification	<p>The serial number of your i77R is indicated on the product. Please keep these recorded in your manual and always refer to this information should you need to contact your Imex distributor.</p> <p>Serial number:.....</p>
Validity of this manual	<p>This manual applies to the Imex i77R laser and contains instructions required to operate this laser at a basic level.</p> <p>For more information: www.imexlasers.com</p>

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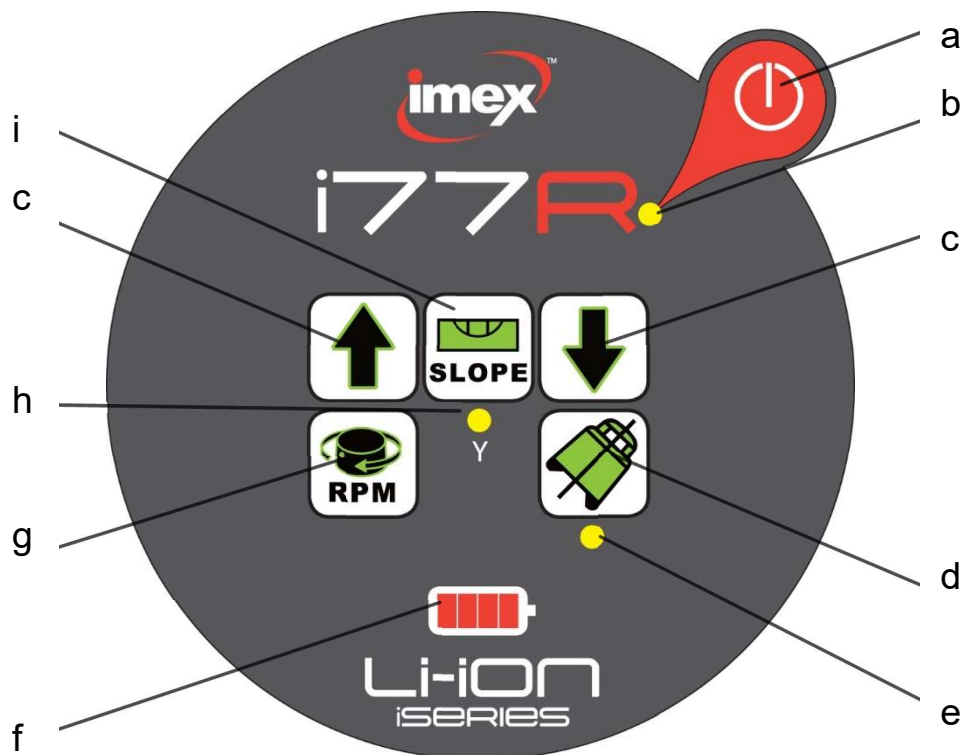
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Instrument Overview

i77R Laser Unit



Control Panel



- | | |
|----------------------------------|--------------------------------|
| a. On/off | f. Battery level indicator |
| b. On/Off indicator light | g. Laser head rotation speed |
| c. Grade slope adjustment arrows | h. Grade slope indicator light |
| d. Tilt Warning System (TWS) | i. Grade slope button |
| e. TWS indicator light | |

LRX10 Laser Detector



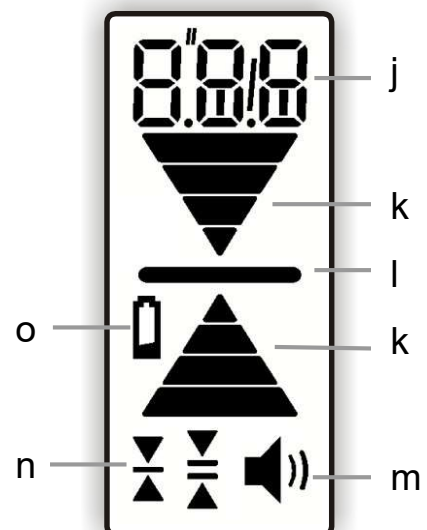
LRX10 Detector

- a. Magnet
- b. Laser Sensor Window
- c. LCD Display
- d. LED Grade Indicators
- e. Detector Clamp
- f. On/Off
- g. Volume
- h. Accuracy (dead bands)/Alternate RL
- i. Grade LEDs

Display

- j. Numeric Digit Display
- k. Grade Indication Arrows
- l. On Grade Indicator
- m. Beeper Volume Indicator
- n. Accuracy Display
- o. Battery Indicator

LCD Display



2. Directions of Use

2.1 Set Up

Location	<ul style="list-style-type: none">• Keep the location clear of possible obstructions that could block or reflect the laser beam.• Place the i77R on stable ground. Ground vibration and extremely windy conditions can affect the operation.• When working in a very dusty environment place the 66R up-wind so the dirt is blown away from the laser.
Setting up on a Tripod	<ul style="list-style-type: none">• Attach the i77R securely to a tripod or mount on a stable level surface.• If a tripod has chains, they should be slightly loose to allow for thermal expansion during the day.• Secure the tripod on extremely windy days.

2.2 Turning On/Off

Turning on and off	<p>Press the power button (a) to turn on/off the i77R</p> <p>After turning on:</p> <ul style="list-style-type: none">• If set within the 5° self-levelling range, the i77R will self-level, once the unit has self-levelled the laser head will start to spin emit a rotating laser beam.• If the unit is bumped or senses interference the laser head will stop spinning and re-level. Once unit has re-levelled the laser head will begin to spin again, emitting a level line• Warning - If the unit has been bumped or moved and the laser recommences spinning the instrument may not be at the original level position. Please recheck you RL/datum point.
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2.3 Tilt Warning System (TWS)

Description of (TWS) Mode	<p>To prevent the possibility of the i77R giving a different reading than is expected due to a knock or the laser being moved by a third party the TWS function can be used and will prevent the unit re-levelling and spinning in the event of a knock or movement.</p>
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Using TWS Mode

Press the TWS button (c) (TWS on/off) to turn on the TWS. When activated the LED (d) will light.

When the TWS is activated on the i77R, if the unit is knocked or interfered with, the laser will stop spinning and the TWS indicator light (d) will flash. The laser will then need to be reset by the operator before the laser will begin to spin again.

To reactivate TWS, press the TWS button again, and the laser will re-level and begin to spin again. It is advised to check RL/Datum point when unit re-levels.

2.4 Manual / Grade Slope Mode

Description of Manual/Grade Slope Mode

The Imex i77R has an incorporated grade slope function to manually set grades/slope up to 9% on the Y axis



The grade function only works in the 'Y' axis



In Manual / Grade mode the self-levelling will be deactivated. After turning off the Manual mode the i77R will return to automatic self-levelling mode.

Using Manual/Grade Slope Mode

- Turn the i77R on and allow self-level.
- Once laser is level and spinning press the Grade slope button (i) to activate manual mode, Grade slope indicator will light and the self-levelling function of the level will deactivate.
- Using the arrows you can now adjust the slope of the laser beam along the 'Y' axis to your desired slope.
- To return to level mode, press the Grade slope button again, the grade slope light will turn off and laser will self-level to level position.

3. Detector

3.1 LRX10 Detector – Refer to page 3, LRX10 Manual and www.imexlasers.com.au

4. Remote Control

General	All functions that can be performed on using the buttons on the i77R key panel, can be performed using the corresponding buttons on the remote control
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5. Batteries

General	The i77R is supplied with 2 x 9Ah 3.7 v Li-ion battery with USB-C fast charge capability, a full battery has approximately 40 hours run time. The battery can be charged by plugging the charging chord directly into the USB-C port on the battery.
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Charging	<p>Please charge the battery prior to use. Full battery charge time is approx. 3.5 hours</p> <p>The charging temperature range is between 0°C and +40°C</p> <p>The battery may feel warm whilst charging.</p> <p>Please only charge with the Imex chargers supplied with the unit.</p> <p>When battery is charging, red battery charging indicator light will light, when battery is fully charged green indicator light will light.</p>
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Battery Placement

When putting battery into the laser unit, please ensure correct polarity of terminals.

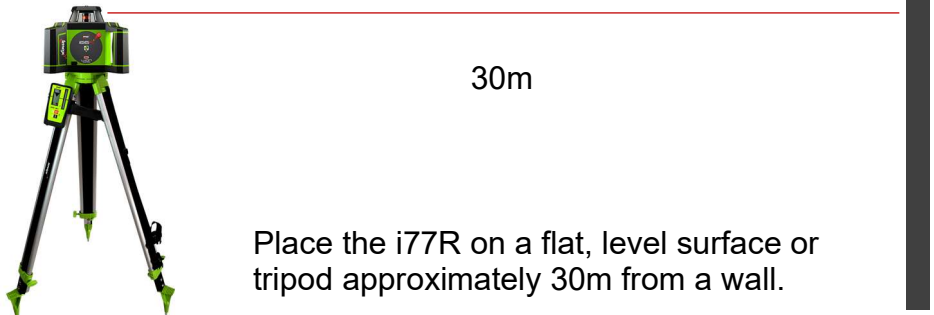
6. Laser Accuracy

General

The Imex i77R is calibrated at point of manufacture and re checked prior to despatch to $\pm 1.5\text{mm}/30\text{m}$. It is the responsibility of the user to follow operating instructions and to periodically check the accuracy of the laser. If your i77R requires adjustment then please contact your nearest dealer

6.1 Checking the accuracy

Accuracy check steps

Step	Description
1.	 <p>Place the i77R on a flat, level surface or tripod approximately 30m from a wall.</p>
2.	Align the first axis so that it is square to the wall. Allow the i77R to self-level completely and it will begin to rotate.
3.	Mark the position of the beam on the wall. (centre of the point)
4.	Very carefully rotate the laser on the tripod 180° and allow it to rotate and self-level.
5.	Mark the position of the beam on the wall. (centre of the point) if different from the original mark.
6.	Align the second axis so it is flat to the wall by carefully rotating the laser on the tripod by 90° . Allow the i77R to self-level completely.
7.	Mark the position of the beam on the wall. (centre of the point) if different from the previous marks.
8.	Very carefully rotate the laser on the tripod 180° and allow it to rotate and self level.
9.	Mark the position of the beam on the wall. (centre of the point) if different from the previous marks.



The i77R is within accuracy if the four marks are within 1.5mm from the centre (3mm max extreme edges) at 30m

7. Care and Maintenance

Transport

When transporting the i77R always ensure that it is carried in the original foam lined carry case.
Never transport the unit loose in your vehicle as the shock and vibration will affect the accuracy and could knock it out of calibration.
If the unit is to be transported overseas by sea or air it is the operator's responsibility to ensure the correct procedures are adhered to for transporting batteries.

Storage

Ensure the unit is stored within the recommended temperatures of -10°C to +50°C After long periods of storage check the charge of the batteries
Always clean the unit before storing. Even if the unit is in regular use.
If the unit has been used in damp weather ensure it is dried prior to placing it back in its carry case. It is important to keep the carry case dry to prevent any ingress of moisture.

8. Laser Specification

Specification	
Operating Range	600m with detector
Accuracy	±1.5mm/30m
Self –levelling range	± 5°
Rotation Speed	0, 60, 120, 300, 800 rpm
Laser	635nm Class 2
IP Rating	IP66
Power	9Ah 3.7v Li-ion Battery
Working time	Approx 40 hours
Battery charger	240v AC, 5v USB-C Car Charger
Working temperature	-20°C - +50°C (-40°C - +70°C storage)
Unit weight	2.2kgs



www.imexlasers.com