



Tunnel Laser

with focusable beam via expander

LD.60x25 External power

LD.60x25.B Internal batteries



**Operator's
Manual**





This manual is an important part of your purchase. Please read it thoroughly before using your Tunnel Laser.

We recommend that you record details of your purchase here so that the information is readily available if you ever need to contact your supplier.

Serial Number:

Date of Purchase:

Purchased from:

Telephone:

Facsimile:

Published By:
MOBA Mobile Automation Australia Pty Ltd
90 Willandra Drive
Epping 3076
Victoria
Australia

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WARRANTY

STATEMENT OF LIMITED WARRANTY

The Tunnel Laser is warranted to be free from defects in performance and workmanship for a period of twelve months from date of purchase. The warranty covers all costs of repair or replacement at the manufactures option.

LIMITS AND EXCLUSIONS:

The warranty will not apply to any damage resulting from negligence, accident, damage, misuse, repair, storage, or abnormal use.

The warranty is considered void if any attempt is made to repair or modify the unit whatsoever. If the warranty is made void, manufacturer reserves the right to charge the customer for costs incurred in repair or replacement of the unit.

MOBA Australia is not liable for:

- 1 Freight charges incurred in return of defective unit to manufacturer.
- 2 Loss of income or inconvenience relating to defect in performance of the unit.
- 3 Leasing charges of alternative equipment during repair of a defective unit.

MOBA Australia requires that the customer makes reasonable attempts to inform MOBA Australia of problems with the product prior to returning the unit for repairs.



USING THE LASER

CONDITIONS FOR USE

- 1 Do not view this laser beam along its axis, do not stare into the beam.
- 2 Never view the beam through optical instruments such as dumpy levels, which increases laser density.
- 3 Do not use the laser beam against highly reflective surfaces except for targets.

SET UP AND MOUNTING

- 1 For mounting of the laser, decide position. This is usually a ceiling or a side wall.
- 2 The mounting bracket for the LD.60x25 should be secure.
- 3 Height and direction of the laser should be decided in reference to the projection target.
- 4 The laser should be slid in to the mounting bracket and secured via knob.

USE

- 1 The laser can be switched on by pressing the switch on the back of the LD.60X25.B or if unit has a connector mounted to it LD.60x25 will automatically switch on upon connection to 12VDC via power cord
- 2 The projected laser dot should be aligned and positioned in two axes using the knobs for X & Y laser direction alignment. This alignment should be done in reference to the target.

REPLACING THE BATTERIES

Batteries are able to be replaced in the LD.60.x25.B,

Batteries must be Alkaline D Cell batteries,.

- 1 Remove the rear rubber bumper around the switch.
- 2 Unscrew the rear switch assembly to access the battery compartment by turning counter clockwise.
- 3 Replace the batteries according to the polarity indicated in the battery compartment. Note that if the batteries are installed incorrectly, the laser has electrical and mechanical polarity protection.
- 4 Replace the rear switch assembly by turning clockwise until the rubber seal compresses firmly against the rear of the laser.
- 5 Replace the rear rubber bumper around the switch.



FOCUSING OF BEAM VIA EXPANDER

The beam size of the LD.60x25 can be focused via the beam expander. This is achieved by rotation of the expander.

1. When looking towards the front of the unit rotate the expander clockwise until it can not be rotated any further. This is the start position.
2. Now start to rotate the expander anticlockwise until a suitable beam size is achieved at your working distance . Example: at 35 meters the unit will need to be rotated anticlockwise from its start position approx 7 times to obtain a small workable beam size of approx 10mm .
3. Note that it is possible to pass the focal point if you keep rotating the expander. If this happens, the beam size will start to increase as you keep rotating. Return to step 1 and repeat the process.



This is how the expander will look when it 's in the start position



This is how the expander will look when it's at the end position (can not be focused any more)



Rotate the unit anti clockwise to obtain a small workable beam diameter. Note it's important to start from the start position as illustrated in the first image



MAINTENANCE AND REPAIR

The LD.60.x25 should be returned to the manufacturer MOBA Australia for any repair or service. Repair and service of this laser is carried out under strict procedures. In the event of any defect, return the laser to the manufacturer for service and repair.

TECHNICAL SPECIFICATIONS

Beam diameter	Focusable
Operating range	850 meters
Output power	3 mW
Operating time	300hrs for LD.60x25.B
Laser source	Laser diode, red, 658nm
Power supply	4 x 'D' cell batteries (model LD.60x25.B) or 12VDC external supply (model LD.60x25)
Diameter	60 mm
Weight	3.7 kg with batteries 2.2kg with connector
Operating	-20°C to +50°C

CARE AND HANDLING

- 1 Always store and transport the LD.60x25 and accessories in their carry case.
- 2 You must always keep your LD.60x25 and its accessories dry and clean after use. Do not store your instrument in its case if the instrument or the case are wet to avoid water condensation inside the instrument.
- 3 Although the components are rated from -20°C to +50°C, the recommended operating temperature is 0°C to +40°C.
- 4 Keep the aperture lens clean. Use a soft cloth and glass cleaner.



OPTIONAL ACCESSORIES



**Horizontal Gimbal
A.60.004**

The gimbal must be securely mounted before use. This should be done through use of either the two mounting holes or through the central 5/8 inch mounting thread.

Once the laser is inserted through the gimbal, ensure that it is securely tightened and held in position.



**Rubber bumper
A.60.001**

