

GENERAL

24x Optical Level



INSTRUCTION MANUAL

SAFETY

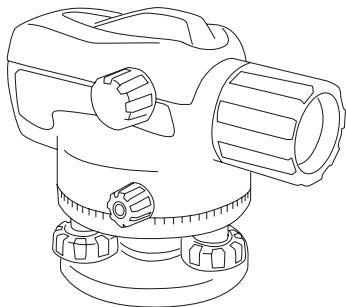
Please read this instruction manual before operating this product.
Please store this instruction manual in the carry case for future reference.

Do not disassemble the instrument or attempt to perform any internal servicing as this will void your warranty. No user serviceable parts included.

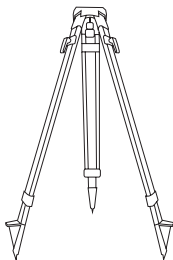
Only approved and authorised service technicians can carry out warranty repairs.

ITEM CHECKLIST

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



General 24x



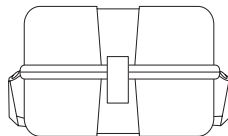
Tripod



Plumb bob

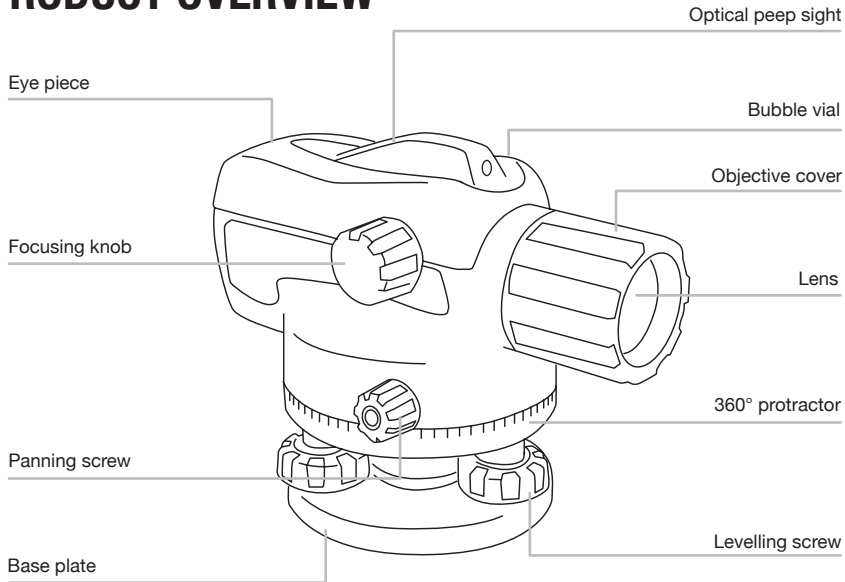


Staff



Carry case

PRODUCT OVERVIEW



USING YOUR LEVEL

Setting Up

- ▶ Set up a tripod on a surface as level as possible.
- ▶ Adjust the tripod legs until the tripod is level.
- ▶ Attach the optical level by tightening the tripod fixing screw.
- ▶ Centre the bubble vial by turning the levelling screws.

Operation

- ▶ Point the optical level towards the desired area. Use a bright background or hold a white sheet of paper in front of the area. Turn the eyepiece until the cross hairs are a sharp black.
- ▶ Turn the level towards the staff using the peep sight.
- ▶ Turn the panning screw to set the vertical hair down the centre of the staff.

Measurement

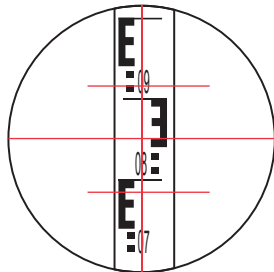
- Read the staff where it is cut by the middle hair.

Distance Measurement

- Read the staff where it is cut by the upper and lower hairs.
- The difference between them multiplied by 100 is the distance from the unit to the staff.

Angle Measurement

- Point optical towards desired area.
- Set protractor to 0°
- Point optical towards second desired area.
- The angle will be in the protractor reading.



CHECKING ACCURACY

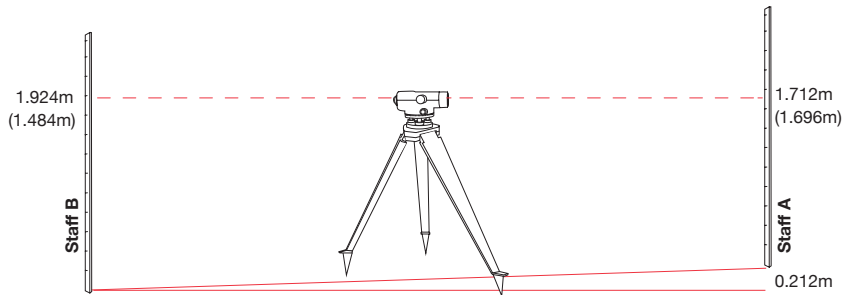
Bubble Vial

- ▶ Centre the bubble by adjusting the levelling screws until level.
- ▶ Turn the unit 180°. If the bubble moves out of centre it will need further adjustment.

Compensator

- ▶ To check the compensator accuracy, place the optical level onto a solid tripod between two staves spaced 30m to 50m apart.
- ▶ Level off the optical using the bubble vial.
- ▶ Take an accurate measurement reading from staff A. (Example. 1.924m).
Take an accurate measurement reading from staff B (Example. 1.712m)
- ▶ Subtract the measurement of staff B from staff A.
(Example. $1.924\text{m} - 1.712\text{m} = 0.212\text{m}$). This calculation shows that staff B is 0.212m higher than staff A.
- ▶ Position the optical level and tripod 1m from Staff A while keeping it in between both Staff A and Staff B.

- ▶ Take an accurate measurement reading from Staff A. (Example. 1.696m. Subtract the height difference that was calculated in step 3 from the current measurement reading. (Example. $1.696\text{m} - 0.212\text{m} = 1.484\text{m}$)
- ▶ Take an accurate measurement reading from staff B. The measurement reading for staff B should be approximately 1.484m based on the calculation above.
- ▶ If the compensator accuracy is less or greater than 3mm after following the measurements and calculations shown in the steps above, a service and calibration is required.



CARE AND MAINTENANCE

- ▶ This is a precision instrument and should always be transported within the carry case provided.
- ▶ Whenever possible, store the instrument in a dry, well ventilated location.
- ▶ The operator should check the optical for accuracy before precision levelling is attempted.
- ▶ The instrument should be cleaned with a dry, soft cloth after use in dusty, damp or wet conditions before storing. Use lens paper to clean the lens. Do not use your finger.
- ▶ Smudges and fingerprints may be removed with a damp tissue or a soft, lint-free cloth.

WARRANTY

The General 24x Optical comes with a 3 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	General 24x
Product code	70040
Warranty	3 Years
Accuracy	±1mm at 1km (double run)
Compensator range	±15°
Magnification	24x
Minimum focus	1m
Objective aperture	36mm
Weight (kg)	1.35
Dimensions (mm)	135x210x145

www.spoton.com.au

