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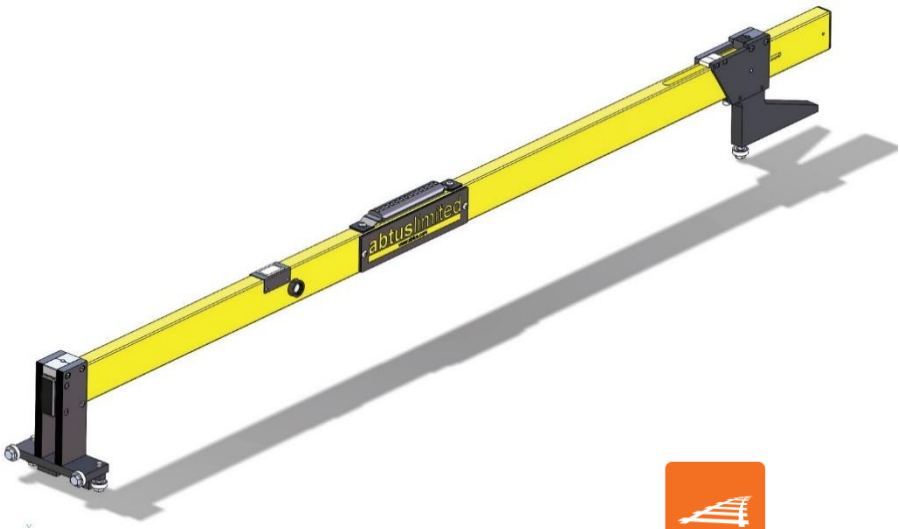
ABT 4550 Prism Track Gauge



Track Geometry

Static/Kinematic measurement equipment for track alignment and inspection.

Instruction Manual

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2.0 Overview

Abtus track gauges have been designed with a sprung gauging foot, with all measurements displayed on the useable end of the gauge, ensuring improved repeatability and accuracy of measurements, whilst minimising potential for user error.

Constructed from hard-wearing glass reinforced plastic (GRP) and polyvinyl chloride (PVC), the ABT4550 is electrically non-conductive and will not interfere with the track signalling circuit. These therefore are suitable for use in areas of 3rd and 4th rail electrification. The ABT4550 is available in both imperial and metric versions for multiple track widths. The standard mushrooms measure 14mm below the top of the rail (TOR), alternative P-points should be specified when an order is placed.

Super-Elevation is measured electronically and is shown on an LCD display. The expected battery-life for normal, average usage is 12 months. The unit is powered by 2 standard 9v PP3 battery which can be easily by replaced by the operator when required.
Track Gauge is measured mechanically with readings displayed through a clear polycarbonate window on a linear scale.

3.0 Technical Specification

Weight	-	3.2Kg	Size	-	1660mm x 135mm x 150mm
Cant	-	Range: ± 199mm Accuracy: ± 1mm Resolution: 0.1mm	Gauge	-	Range: 1410 – 1490mm Accuracy: ± 1mm Resolution: 1mm

Table 1-Technical Specification table

*Dependent upon Gauge Type & Gauge Size

Gauges manufactured in compliance with NR/L3/TRK/4900 Track Gauge Specification

Adapter M8 male thread to 12mm Leica spigot Length – 40mm

4.0 Functionality

4.1 Track Gauge

Track gauge or rail gauge is the distance between the inner sides of the heads of the two stock rails, as shown in Figure 1.

Figure 1 - Track Gauge/ Rail Gauge

Once the gauge has been positioned in the track, the Track Gauge reading can be read from the window indicated in Figure 2.

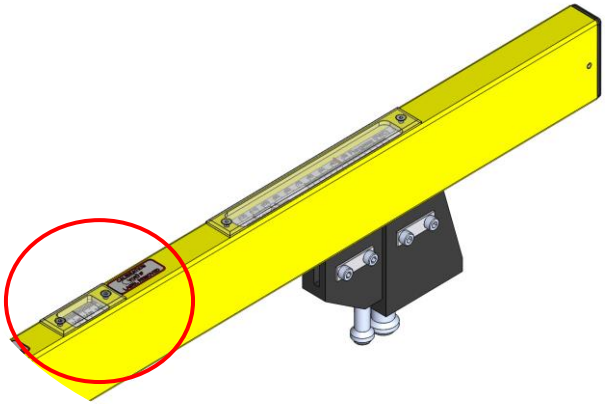

Figure 2 - Track Gauge Reading

4.2 Cant

To measure Cant, press the button located on the side of the gauge, a measurement will appear on the screen above. Wait for a few seconds before taking a reading to ensure that the gauge is settled. The display will turn off within a minute of pressing the button.

5.0 Maintenance

5.1 User Advice

The ABT 4550 series gauges are a piece of precision measurement equipment. Whilst it has been designed for use in an engineering environment due care should be taken not to cause damage to the equipment when in operation, storage or transit. Excessive trauma to the moving parts of the gauge may invalidate the calibration and lead to possible measurement inaccuracies.

5.2 Every 3 Months

Visually inspect the ABT 4550 series gauges for signs of damage. If necessary, contact your local distributor for help.

5.3 Annual

The ABT 4550 series gauges must be returned annually for re-calibration to ensure measurements are within specification.

The condition of all components will be checked at this time and replaced as required.

5.4 Replacing the PP3 Batteries

To replace the PP3 batteries, carefully remove the battery compartment from the front of the gauge as shown in Figure 7. Visually inspect the gasket for signs of wear/damage and replace if necessary, contact your local distributor for help.

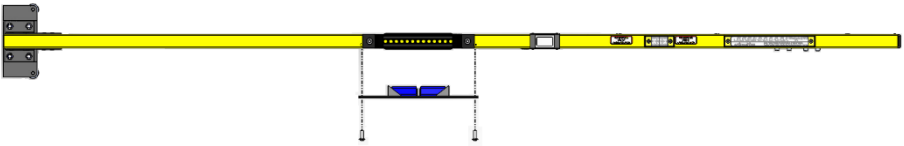

Figure 3 - Battery Replacement