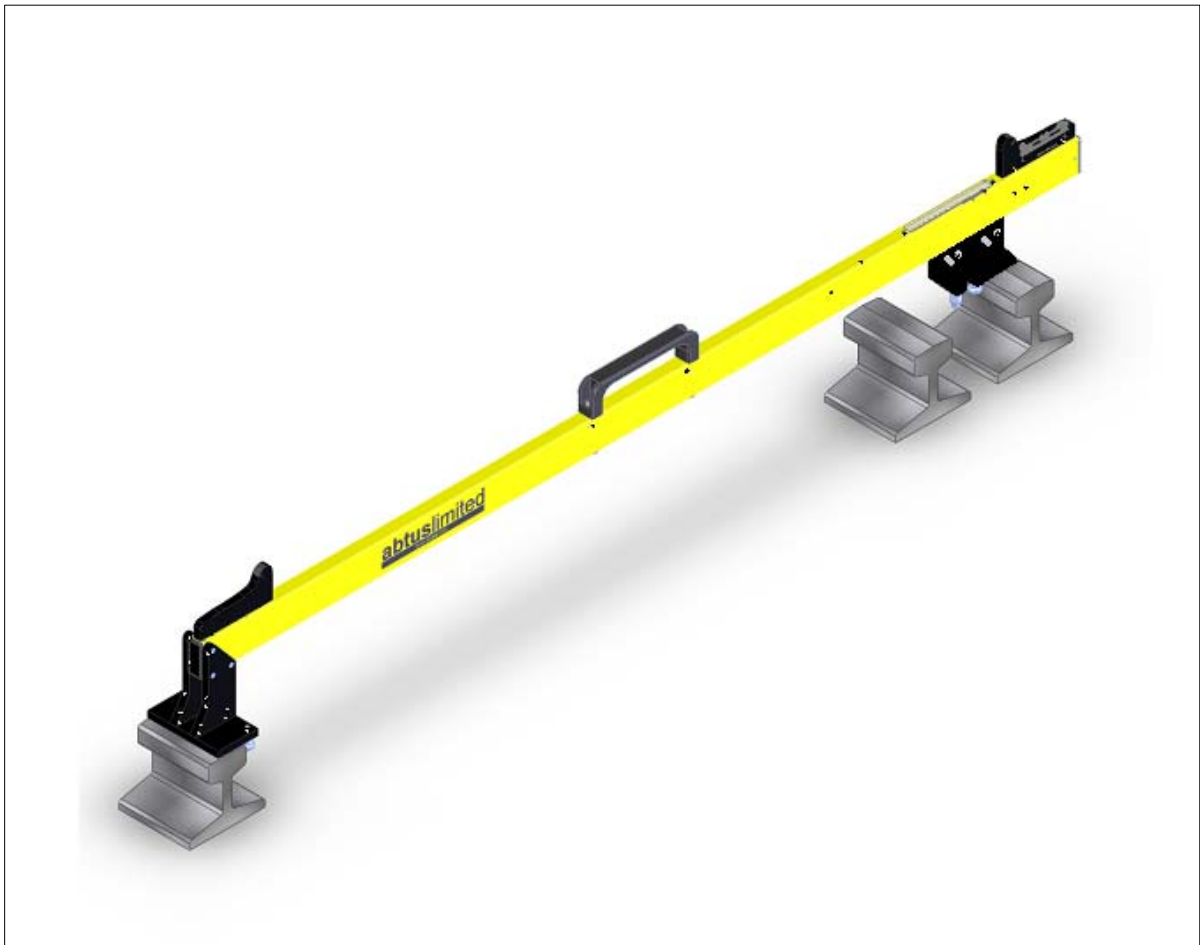




# ABT4670 S&C Confirmation Gauge



## Instruction Manual



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## **2.0 Overview**

The ABT4670 S&C Confirmation Gauge has been developed specifically for the undertaking of dimensional checks within the moveable part of a switch unit.

Constructed from hard-wearing GRP and Nylon, the S&C Confirmation Gauge is electrically non-conductive, making it suitable for use in areas of 3rd and 4th rail electrification and will not interfere with the track signalling circuit.

The gauge measures the following parameters:

**Free-Wheel Clearance (FWC)**

**Free-Wheel Passage (FWP)**

**P8 Measurement**

### 3.0 Specification

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Weight - 2.8kg

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Size - 1500mm x 300mm x 200mm (gauge only)

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Free-Wheel Clearance - Range: 35mm > 125mm  
Accuracy:  $\pm 0.5$ mm  
Resolution: 1mm

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Free-Wheel Passage - Range: 1360mm > 1400mm  
Accuracy:  $\pm 0.5$ mm  
Resolution: 1mm

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Switch Opening - Range: 35mm > 125mm  
Accuracy:  $\pm 0.5$ mm  
Resolution: 1mm

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P8 Wheel Profiles - Back to Back Dimension: 1360mm

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## 4.0 Getting Started

To position the S&C Gauge onto the track begin by placing the fixed end of the gauge square to the running edge of the stock rail (as indicated in Figure 1).

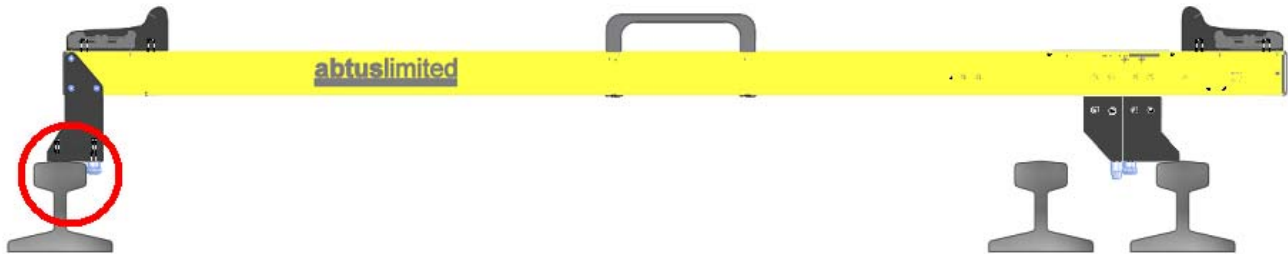


Figure 1

Whilst holding the gauge proceed to pull the Gauging Foot manually across to the running edge of the opposite stock rail using the shaft provided (as indicated in Figure 2).



Figure 2

## 4.1 Measuring Free-Wheel Clearance

Free-Wheel Clearance is the dimension between the running edge of the stock rail and the rear face of the adjacent switch rail (as indicated in Figure 3).



Figure3

To measure Free-Wheel Clearance pull the Flangeway Foot manually across to the rear face of the switch rail using the shaft provided (as indicated in Figure 4).

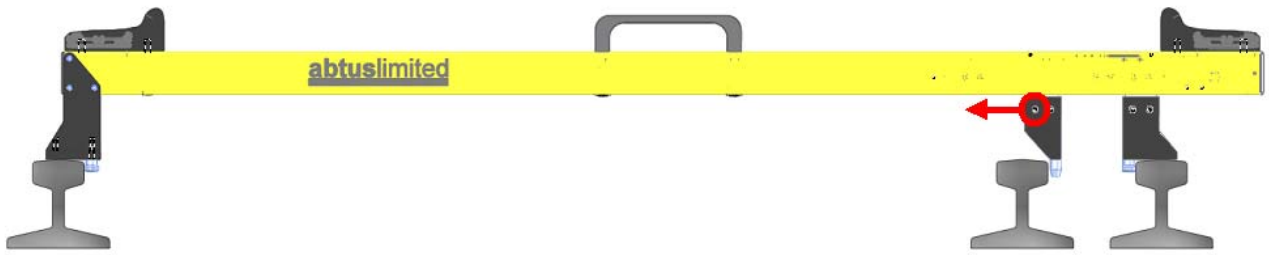


Figure 4

The measurement readout will be displayed on the upper half of the Scale Window (as indicated in Figure 5).

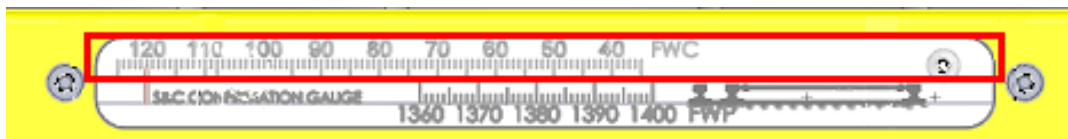


Figure 5

Switch Opening can be measured using the same method as above.

#### 4.2 Measuring Free-Wheel Passage

Free-Wheel Passage is the dimension between the rear face of an open switch and the running edge of the closed switch (as indicated in Figure 6).



Figure 6

This measurement is taken from the same position as Free-Wheel Clearance, the readout will be displayed on the lower half of the Scale Window (as indicated in Figure 7).

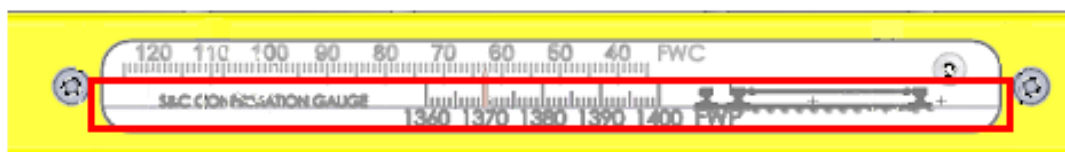


Figure 7

### 4.3 P8 Measurement

The ABT4670 is fitted with P8 wheel profiles on its upper face to aid the visual inspection of switch rail wear when the gauge is turned upside down (as indicated in Figure 8).

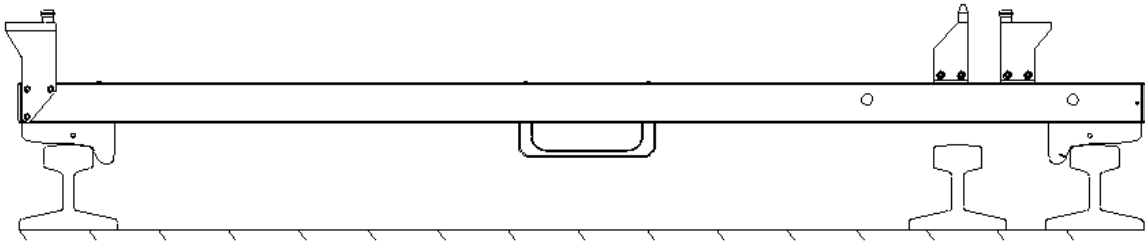


Figure 8

**PLEASE NOTE:** The diagram located upon the face of the P8 profiles shows that the profile sits upon the stock rails. Switch rail wear is indicated on the side where the switch is closed.

## 5.0 Maintenance

### 5.1 User Advice

The ABT4670 is 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 ABT4670 for signs of damage. If necessary, contact your local distributor for help.

### 5.3 Annual

The ABT4670 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.