



Wi-Fi-enabled LaserSweep™

LRLS05 Wi-Fi specification. The new lightweight portable gauging laser scanner



Omnicom
Balfour Beatty



LaserSweep™

Modern lightweight rail measurement device designed to deliver accurate measurement structure data directly from your smart device.

LaserSweep™ has long been a trusted and versatile portable measurement device used by rail operators including Network Rail, London Underground and Rail consultancies.

This versatile, portable measurement system measures the spatial position of railway structures and features to determine clearances on both mainline networks and metro systems.

The system is rail mounted and enables the user to undertake accurate spatial measurements on a range of railway infrastructure such as tunnels, overbridges, platforms, signals, station canopies and discrete points such as overhead line equipment (OLE), cable brackets and platform edges

Balfour Beatty's rail teams have now devised a modern method of operating the LaserSweep™ without the need of a dedicated PDA.

Features:

- It can be operated using any wireless enabled smart device (includes devices that run on iOS/Android/Windows Platforms).
- Intuitive software application for ease of use on site
- Data can be instantly transferred to the maintenance depot for clearance analysis
- System is completely insulated and can be used in 3rd rail and 4th rail environments
- Light weight unit approx 10kg
- Export of surveyed data to Network Rail standard TEF spreadsheets
- Ability to measure platform edge and datum plates
- Inclusion of track geometry
- Provides an array of setting configurations and editing tools
- Suitable for use in 3rd Rail areas
- Structure data imports directly into ClearRoute™ software

Key Benefits:

- No costly repairs to hand held PDA
- Ability to use an array of Wireless devices
- Better screen viewing capability
- Ability to view survey data upon completion
- Export of surveyed data to Network Rail standard TEF spreadsheets
- No blue tooth connectivity required
- Using wifi enabled devices offers flexibility and improved battery life compared to traditional PDA devices.

Ergonomic features

The new Lasersweep™ comes complete with a hi-visibility rucksack carrying case with the following features:

- Water resistant
- Pre-cut internal foam sections
- Reflective material
- Separate pocket for manuals



Easy to assemble and carry on site



Hi visible waterproof ruck sack for protection



NO PDA required. -uses hand held portable WIFI devices

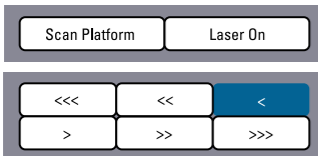
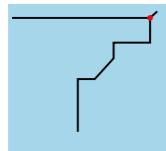
Platform edge functionality

Datum plate functionality

iSweep

Home / Survey / Plat

Position the laser within the adaptor's red zone and click the Platform button again.



The new adaptor and software provides the following benefits:

- Improved accuracy
- Additional structure points can be added within the same platform profile
- Faster processing speed with measurement
- Direct export to Network Rail standard TEF 3034 spreadsheet
- Platform profile can be imported directly into ClearRoute™ gauging software
- Suitable for most platform construction types
- Can be purchased for use with earlier models of the LaserSweep™

Platform edge functionality

LaserSweep measures points on both the angled and vertical faces of the adaptor. Once completed, the software calculates the intersection point and subsequently the platform edge value.

Datum survey features include:

- The ability to calculate the vertical and horizontal offset measurement relating to the position of the datum plate from the rail head.
- The ability to export the surveyed data on to a National Rail standard datum monitoring sheet (TEF 3050)
- Ability to include datum plate parameters in structure/platform surveys

Datum plates are fixed to trackside structures (platforms, bridges etc.) to identify the relative position of the track so that it can be monitored for movement. This includes information on the horizontal and the vertical "offset" distances measured from the plate/slider block to the running edge of the nearest rail of the relevant track.

Balfour Beatty's newly designed "Datum plate adaptor" combined with Lasersweep™ Software, has the ability to automatically calculate the required parameters and the output can be exported directly into the TEF3050 and TEF3034 spreadsheet.



Datum plates

Platform edge functionality adaptor and software improves accuracy and offers faster processing speed with measurement



Platform edge functionality



Datum plate functionality



Ideally suitable for any track gauge

Why choose LaserSweep™?

- Lightweight – approximately 10kg
- Instant transfer of surveyed data onto the cloud environments
- Suitable for use in third rail electrified environments
- Improved setting-out software
- Inclusion of track geometry
- Platform edge measurement capability
- Weekly and weekend hires

Lasersweep™ specification

Temperature range

Operating temperature range -10°C to +50 °C

Distant range

0.5 – 30m

Specified accuracy range

Accuracy better than $\pm 2\text{mm}$ (to sd)

Actual Range

0.5m – 30m

Angle range

20-240 degrees

Angle resolution

0.18 degrees, 0.2 grads

Angle accuracy

$\pm 0.09^\circ$ – 0.1 grad (to 2 sd)

Co-ordinate accuracy

$\pm 4\text{mm}$ at 4m distances
 $\pm 10\text{mm}$ at 9m distances

Cant measurement

Accuracy typically $\pm 2\text{mm}$ (to 2 sd)

Measuring speed

1-6 seconds per reading depending on surface reflectivity. Approximately 2 minutes for a typical complete profile.

Training and Support

New users can benefit from attending a LaserSweep™ course by learning the most efficient ways of surveying a structure.

Various courses are available:

- A full day course
- ½ day basic course
- 2 hour appreciation course

For more information please contact on 01629 760 750.

A LaserSweep™ course could help you get the most from your expenditure

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