Why choose Opti-cal Survey Equipment?

Opti-cal Survey Equipment is a well-established industry-leading supplier of land survey and precision measurement technologies based in the UK. We sell, hire and service new and re-conditioned land survey and laser equipment.

Our partnership with Leica Geosystems, FARO Technologies, GeoSLAM and SPX Radiodetection means that we match world-class instrumentation with efficient service and unrivalled technical expertise. Serving an increasingly diverse market, Opti-cal is constantly evolving to provide innovative solutions to meet the ever-changing requirements of our customers, whatever their application.

Business with us isn’t just an exchange; it’s a working partnership, and above all we maintain a serious commitment to the success of all our clients’ projects – however large or small!

- Industry-leading supplier of land survey and precision measurement technologies
- Service and distribution partnership with Leica Geosystems, FARO and SPX Radiodetection
- Supporting professionals from Engineering, Construction, Archaeology and Forensics
- Our state-of-the-art hire fleet consists of the very latest equipment available
- Comprehensive instrument calibration, servicing and repairs on a wide range of survey equipment
- Certified technical experts, to guide you through your project
- Finance packages for business offer you ultimate flexibility when purchasing new equipment
- Six offices nationwide with 15 delivery drivers and 20 field sales representatives; we have the whole of the UK covered

Sales:
- Free demonstrations
- Full training
- Finance packages available

Hire:
- Nationwide coverage
- Free on-site training
- Dedicated technical support

Service:
- 18 factory-trained technicians
- 5 day service turnaround
- 6 fully accredited service centres
- Calibration and repair available
- Warranty repair available

Finance options:
- Finance lease
- Hire purchase
- Contract hire
UK Offices Nationwide

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Robotic Total Stations

Offering a complete site solution, total stations allow professionals of all technical abilities to perform accurate, efficient measurements with minimal fuss. Opti-cal offers a full range of models to suit all levels of project requirements.

Leica total stations are equipped with unsurpassed angle, distance and reflectorless technology, and come with a powerful suite of onboard programs and multiple sensor and accuracy settings, which provide ultimate reliability both on and off site.

Leica Viva TS12 Robotic Total Station with CS15 Controller

The Leica TS12 Performance Robotic package is packed with features, such as the unique PowerSearch sensor which finds prisms regardless of their location in seconds, and the lightweight Leica CS15 controller provides secure wireless connectivity to the total station. Together with the easy-to-use Leica SmartWorx Viva software, robotic surveying has never been so easy and productive.
Leica Viva CS15 Controller

Designed for extreme environments, you can always rely on the CS15. The controller fits comfortably in the hand, and is easy-to-use for all tasks.

- IP67 and operating temperature -30°C to 60°C
- Tactile, fully illuminated, rubber alphanumeric QWERTY keypad
- 2 Megapixel camera
- Colour, VGA touch screen, illuminated

Leica Viva TS15 Robotic Total Station with CS15 Controller

The Leica TS15 builds on Leica’s experience of creating top quality measuring tools. Bringing you the world’s best total station with; sensors, angle measurement, long distance surveying and the patented PowerSearch prism recognition.

Leica Viva TS16 Total Station with CS20 Controller

Automatically adjusts to any environmental conditions, the Leica Viva TS16 locks onto your, and only your target, regardless of how challenging the task or the amount of distractions in the field. This total station sees exactly what you see; capture exact conditions for any worksite through the self-learning capability of the Leica Viva TS16.

Leica Viva CS20 Controller

Providing ultimate control and convenience with complete mobility, the touch screen technology allows for comfortable and quick data processing, while a stunning 3D view transforms your Leica Viva GNSS and Leica Nova scanning experiences.
Total Stations

Making measurement capture easier than ever before, the easy-to-use total stations supplied by Opti-cal are fast and reliable. With accurate angle measurements, quadruple axis compensation, powerful reflectorless EDM and data output in any format, they are perfect for all surveying and engineering work.

Leica TS06 5" R500 – Total Station – Comes with Bluetooth®

The TS06 offers complete flexibility, and is designed for mid-accuracy applications. As standard, this total station comes with an alphanumeric keyboard and a complete set of application software. To make usage more convenient, the TS06 uses Bluetooth wireless technology to connect to any data collector.

Precise Prism Station

The below is supplied to form a complete Prism Station package, to ensure high point accuracy.

Leica GDF321 Professional Tribrach – without optical plummet

Leica GZR3 Precise Carrier – with stub fitting and optical plummet

Leica GPR121 Professional Reflector Prism
Opti-cal offers GPS surveying systems that combine state-of-the-art technology with powerful data management capability, which provide unsurpassed versatility and usability, enhancing efficiency on all types of field work.

Leica GS08+ GNSS Net Rover – available with CS15 Controller

The Leica Viva GS08+ provides you with the most compact and cable-free GNSS receiver setup. Lightweight but flexible, the GS08+ is the right choice for a wide range of surveying tasks.

Leica GS15 GNSS SmartRover – available with CS15 Controller

The Leica GS15 is suitable for any surveying task and is designed for the most demanding environments, while delivering all the hallmarks of Leica GNSS reliability and accuracy.

Leica GS14 GNSS SmartRover – available with CS15 Controller

The GS14 is the most compact and powerful GNSS receiver available. The integrated mobile communications and UHF modem means it is suited for any measuring task.

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Opti-cal understands that Laser Scanning is an increasingly popular tool for collecting vast amounts of accurate spatial data within a short amount of time. With this in mind, we have a selection of Laser Scanners and Hand-held Scanners available, with software and accessories to complement these products from FARO Technologies.

These scanners collect millions of individual point measurements within minutes; the measurements are then plotted within a single XYZ coordinate system to form a ‘point cloud’ of the object’s external surface. With the addition of GPS data, these points can be geo-referenced and transformed into a global reference system.

Multiple data clouds collected from different viewpoints can also be combined (“registered”) using common features in order to create one 3D dataset. For example, a building could be scanned to include all external walls and then registered together to include scan data from inside the building.

The resulting 3D data can be used for visualisation, modelling and planning in 3D e.g. BIM, geomorphological change and heritage projects. Additionally, the point cloud data can be exploited in order to take any number of measurements without having to physically take each measurement on site. Furthermore, point cloud data can form the basis of a rich dataset containing more than purely spatial information (XYZ). For example, intensity or photographic imagery could be applied to create a coloured point cloud and 3D vector data can be overlaid to map pipes and cables.
FARO Focus 3D X130 Laser Scanner

The ultra-portable Focus 3D X130 enables fast, straightforward and accurate measurement of objects and buildings. It records architectural façades, complex structures, production and supply facilities, accident sites, and large-volume components.

FARO Focus 3D X330 Laser Scanner

The Focus 3D X330 can scan large and distant objects up to 330 metres away and in direct sunlight. With its integrated GPS receiver, the laser scanner is able to correlate individual scans in post-processing, making it ideal for surveying-based applications.

FARO Scanner Freestyle 3D

The Freestyle 3D is the only industrial grade hand-held device allowing you to scan all kinds of surfaces and environments. With its versatile design, small size, and light weight it can be used flexibly to perform scanning tasks, especially in hard to reach areas.

GeoSLAM ZEB1 3D Laser Scanning System

Using Simultaneous Localisation and Mapping (SLAM) technology, GeoSLAM’s ZEB1 automatically creates 3D point clouds without the need for external positioning data such as GNSS.

We have the UK’s largest laser scanning fleet, with over 25 FARO Focus 3D X130 and X330 scanners available.
Opti-cal has been supplying precision measurement technology to Surveyors and Engineers for the last 20 years. We stock the most comprehensive range of surveying levels available on the market today, in order to give you the widest choice when it comes to selecting the right instrument for your project.

We offer Leica Geosystems Levels, both Optical and Digital, from Automatic (Dumpy) Levels through to precise optical or digital Levels – all at extremely competitive prices – and with their ease of use there is no need to spend significant time in training.

Leica’s ergonomic optics are among the finest in the world, ensuring absolute accuracy even in extreme light conditions, and can be configured to suit individual working preferences. With truly shock-resistant housing, the levels will continue to work even after a fall.
Leica NA720 Automatic Level

Nothing stops the Leica NA720 Automatic Level – not even a short drop onto the ground, a fall into water or vibration from heavy machinery – it just carries on working. The ‘best-in-class’ optics enable you to always work as precisely as possible, even in twilight.

Built for Builders, Engineers and Surveyors

Leica DNA03 Digital Level

For height measurements with 0.3mm standard deviation per km double levelling (invar staff). All components required for appropriate levelling jobs are at your disposal. The program “Meas & Rec” is suited for elementary staff reading and distance measurements or to survey a lot of points.

The second generation of digital levels

Leica NA2 Precise Automatic Level

The NA2 meets all the requirements of precision levelling. As soon as it is set up on a tripod and levelled with the bubble, the automatic compensator ensures that the line-of-sight is horizontal so that each staff reading is reliable.

Top-class optical quality

Optional tripod and staff available

Leica GST103 Aluminium Tripod

Telescopic Staff

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Leica Piper 100 Pipe Laser

The Piper 100 Pipe Laser comes with optional remote control, rechargeable Li-Ion battery, charger and target assembly, making this laser powerful and compact. The unique design means that the laser can fit inside a 100mm (four inch) pipe. The Piper 100 is fully loaded with features that will improve productivity and minimise downtime on projects.
Leica Rugby 880DG Laser Level

The Leica Rugby grade laser provides contractors with ultimate grade reliability and accuracy. The Rugby 880DG is the only grade laser on the market that guarantees continuous high laser accuracy, even under harsh conditions. Increase productivity by using the axis alignment and smart targeting functions – let the laser do the job for you!

Continuous high laser accuracy

Leica Rugby 810 Laser Level

The Leica rotating self-levelling horizontal laser provides accurate results with just one click. The Rugby lasers are the toughest rotating lasers in construction, making levelling, aligning and squaring much quicker than ever before, eliminating costly errors and downtime.

Intelligent, versatile and a clever solution

Leica Rugby 280DG Laser Level

The Rugby 280DG is a multipurpose laser ‘plus’ with fully automatic, dual grade capability. It has a bright red beam, plumb, scan mode as well as horizontal and vertical self-levelling, plus dual grade up to 15% on both axes.

Multipurpose laser

Leica Rod Eye Laser Receivers

The Leica Rod Eye family of receivers offers solutions for general construction and interior applications. They are engineered to the highest standard and work seamlessly with the Leica Rugby laser portfolio.

A complete solution
Whether you are looking for Cable Avoidance, Precision Location or Cover Meter equipment, Opti-cal has a wide range of instrument options to suit your individual needs.

These innovative tools have been engineered to deliver a step change in capabilities, with minimal change in work practices and training requirements.

**Radarteam Cobra Ground Penetrating Radar**

Just like X-ray and ultrasound can image the inside of your body, the Cobra Locator GPR can be used to image the inside of different materials and structures.

**Fully integrated multi-frequency system**

**Hilti Ferroscan**

The Hilti Ferroscan PS 250 provides a non-destructive means of locating reinforcing bars and measuring the depth of concrete cover. This complete, easy-to-use cordless detection system consists of a scanner, monitor and PC software.
SPX Radiodetection CAT 4+ and eCAT 4+

The CAT 4 and Genny 4 range represents the latest evolution of the highly popular Cable Avoidance Tools, pioneered by Radiodetection, enabling operators to work more efficiently and safely.

Depth estimation capability with data logging

SPX Radiodetection Genny 4

The Genny 4, with a new integrated logic design, provides an industry first, simultaneous dual-frequency signal output design. Alongside the familiar 33KHz locate signal for general purpose locates, the Genny 4 transmits a second frequency designed to facilitate the location of small diameter cables such as telecoms and street lighting.

Simultaneous dual frequency

SPX Radiodetection RD8000

The multifunctional RD8000 range represents Radiodetection's most advanced pipe, cable and RF marker locators, offering a wide choice of locate functions and advanced connectivity options. The RD8000 improves on speed, accuracy and reliability, yet remains a cost-effective solution delivering unique user features. Powered by a digital architecture, RD8000 delivers a highly controllable and reliable locate solution to service any industry, anywhere in the world.

Most advanced marker locators

SPX Radiodetection T Series Genny

Based on a fully digital platform, the family of Radiodetection transmitters has been designed to support the range of RD7000 and RD8000 cable, pipe and RF marker locators.

High current and induction capability
Opti-cal offers the most reliable and site tough equipment for the rail industry. Through a wealth of experience we have partnered with many of the major contractors on prestigious projects. We offer a wide range of equipment to suit your needs from Track Renewals and Tamping to Rail Associated Infrastructure projects.

**Leica Rugby 410DG Laser Level**

The Leica 410DG Dual Grade Laser is ideal for measuring slopes as it has an operating range of 2,600 feet and can be used in any indoor or outdoor application. Capable of tilting on both axes, the Rugby 410DG gives accurate measurements.

**ABT5100 Track Measurement Device**

The Track Measurement Device used in conjunction with AiC’s 4Site Software and a Leica Geosystems Total Station/Prism; the ABT5100 enables measurement and analysis of the 3D track position for railway design construction and maintenance.

*Approved for use by Network Rail*
Bance Platform Gauge

The Bance Platform Gauge is designed to help set the platform coping stones to the rail. It achieves this by measuring both height and distance from the outside rail running edge, on a level between both rails.

Non-conductive – for use in 3rd and 4th rail areas

Bance Track Gauge

Bance Track Measurement Gauges can be manufactured for both broad and narrow gauge tracks. Digital, Bluetooth and data logging gauges are also available.

Wide range of standard models available

MQ Tripod

MQ Statieven is the Rail Industry standard for machine control tripods. The tripod is strong, robust and with internal leg stabilisers it gives your equipment a sturdy platform to operate from.

- Min height 1.57m
- Max height 3.31m
- Transport height 1.73m
- Weight 12kg

Rail industry standard

Motorola DP4400 Radio Series

Motorola offers the best, two-way radio functionality with the latest digital technology. The DP400 Series integrates voice and data seamlessly to offer enhanced features that are easy to use.

Your voice just got clearer
Inspection Camera

Opti-cal offers you the latest in imaging and recording, making contractors’ lives easier when underground pipework needs to be inspected.

vCam-5 Inspection Camera

The vCam-5 Inspection Camera System gives you the flexibility to cover a range of inspections including indoor drain lines, municipal collection systems, residential plumbing, indoor commercial lines from 3 inches up to 8 inches in diameter.

Vivax Camera System uses the latest technology packaged in a rugged, lightweight, compact profile made specifically for the harsh conditions related to sewer lateral inspections. The vCam-5 Camera System gives you the features you want as standard equipment, at a competitive fair price.
When noise or dust becomes an environmental issue, site boundary monitoring is essential. Multiple parameters can be monitored using one simple system. The Casella Guardian series can cater for dust and/or noise as well as meteorological agents in one simple enclosure.

Casella Boundary Guardian / Casella Dust Guardian / Casella Noise Guardian

Boundary Guardian is a fully-automated, stand-alone system for web-based monitoring of noise and/or dust emissions to ensure compliance with regulatory limits.

The system collects noise and dust measurements from appropriate positions on site and uploads them via the latest communication technology (3G-4G-Ethernet) to the secure servers.

A report can be readily produced for compliance purposes and in addition the system provides alerts via text message or an email should limits be exceeded.
As well as supplying Survey Equipment, Opti-cal also supplies Safety Equipment – we know that the safety of your employees is the number one priority when working on project sites. So, why not protect your workers with the below safety equipment, designed for use on all work sites.

Abtech Safety Two Person Tripod

The tripod is the basis of a confined space and rescue system giving strong, stable and portable anchorage points for fall arrest and recovery systems. The T3 has 6 anchor points which are tested to EN795 specifications.
**Abtech Rescue Harness**

A full body harness with three attachment points. Dorsal (rear) and chest attachment points are both suitable for fall arrest and extended attachment points, which maintain the user at a near vertical suspension when being lifted or lowered in a work or rescue situation with limited access.

**Full body harness**

**Abtech Fall Arrest Recovery Block**

TORQ 15m Fall Arrest Recovery Device is designed to provide fall protection from falls at height. Anchored above the user, it gives the user a safe work area, and the retracting line pays in and out of the device as the user moves. In the event of a fall, a break engages, arresting the fall of the user with a controlled deceleration force.

**Recovery device**

**ALTAIR Multi-Gas Detector**

The ALTAIR is an extremely durable multi-gas detector, simultaneously measuring up to four gases from a wide range of XCELL sensor options, including combustible gases, O₂, CO, H₂S, SO₂ and NO₂.

**Built on durability**

**Sabre ELSA 15 Minute Escape Kit**

Renowned as the world’s leading constant flow escape set, the ELSA (Emergency Life Support Apparatus) from Scott Safety is designed for rapid escape from hazardous industrial and marine environments. Featuring a 3 litre 200 bar cylinder manufactured to CE specifications, and a combined pressure reducer and cylinder valve assembly. Automatic activation of value upon opening of the bag and a uniquely designed hood provides optimal vision which can work over spectacles and long hair.

**Emergency life support apparatus**
Opti-cal offers both Technical Support and Training. We understand that these are crucial to unlocking the full potential of your survey equipment. We offer structured training programs that enable you to take full advantage of your instruments’ capabilities, and help to improve the workflow both in the field and in the office. Opti-cal offers a flexible selection of training packages to suit your company’s needs, experience and time frame.

On Site Training

We are able to offer ongoing training for Lasers, Total Stations, Scanners and GNSS/GPS Systems to ensure that employees are trained, developed and supported to deliver a superior level of work quality.

Learning on the job

Modern Equipment

With continuous training, employees stay up-to-date with the very latest advances in the equipment used.

Staying ahead of the times
Total Stations – Getting Started (1 day)
Workflow training for any Leica total station, including data exchange with popular CAD packages. Learn the standard functions of your TPS instrument and be able to perform common survey tasks, including detail and set-out surveys.

Total Stations – Advanced TPS (1 day)
Understand how to customise your instrument, perform advanced field coding, create/edit data, export formats and the more advanced onboard applications. Import data into Leica Geo Office (LGO) or Leica Infinity Software, edit and export to the required format and generate jobs using Design to Field.

Learn the standard functions of your instrument

GPS/GNSS – Getting Started (1 day)
Learn the basic concepts of GPS/GNSS positioning. This course looks at workflow training in RTK including detail surveys, coding and export of data, as well as performing site transition to gain an understanding of coordinate systems.

GPS/GNSS – Advanced (1 day)
Explore the advanced settings of the Leica GPS/GNSS. Learn complete equipment configuration, static data capture and basic processing, as well as field coordinate transformation, and the more complex applications such as how to create data field reports.

Equipment configuration & field coordinate transformation

Certified CAT & Genny Training (half day)
Opti-cal is able to offer a certified training course on advanced theoretical and practical instruction in the techniques and use of Radiodetection CAT & Genny Series Locators. The half day course can facilitate up to eight people and includes all equipment. The course can be run at any of our six locations or at your location.

Learn to use cable and pipe locators in wide range of situations

Additional Courses
All published courses may be customised to your company’s requirements, allowing you to get the most from your training investment.

Choose between training onsite, at your office or our locations. Alternatively, let us know what training you need and we will do our best to accommodate.

Customised company training