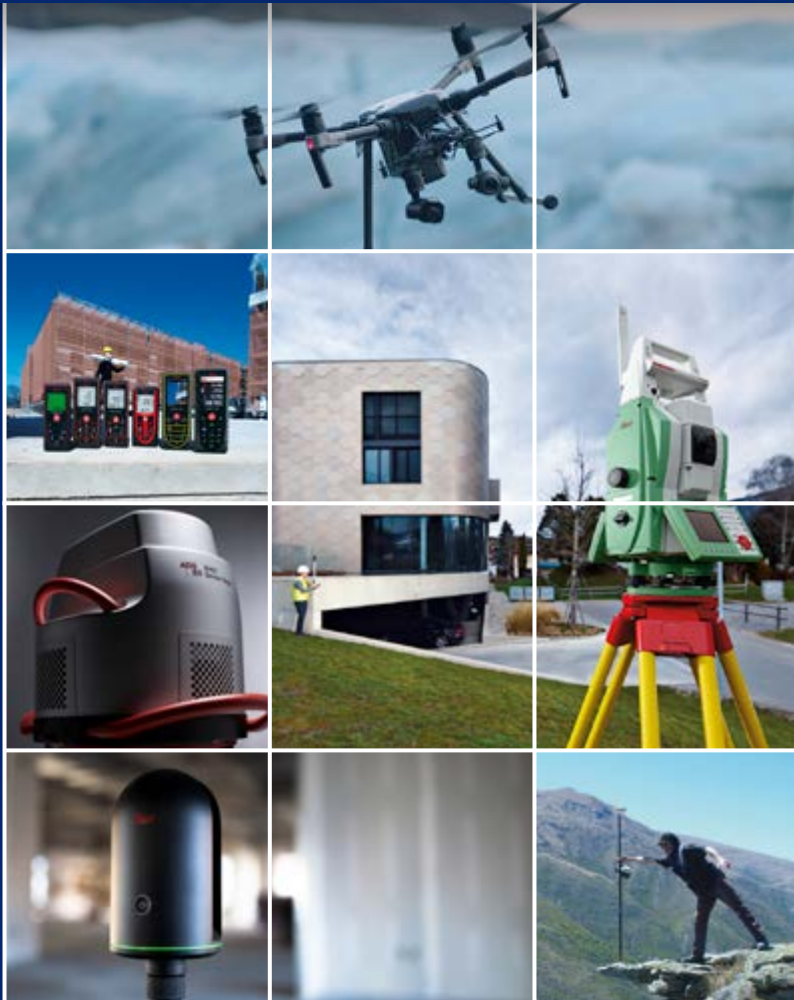


 **C.R. Kennedy**  
| SURVEY SOLUTIONS |

**2017-18 CATALOGUE**





## Pentax AP-200

Rugged and dependable, ideal for engineering and construction use.

AP224: #TBA, AP228: #TBA  
AP230: #TBA, AP241: #TBA

- 20, 24 or 28x magnification
- Short focusing of 0.4m
- IP54 weather proof



## Jogger 20/24

For construction levelling.

Jogger 20: #LG762263, Jogger 24: #LG762264,  
Jogger 28: #LG783739, Jogger 32: #LG783740

- Jogger 20: 1km d run, 2.5mm
- Jogger 24: 1km d run, 2.0mm
- Jogger 28: 1km d run, 2.0mm
- Jogger 32: 1km d run, 2.0mm
- 20, 24, 28 OR 32x magnification
- IP54 weather proof
- Operating temp -20°C to +40°C
- 1m shortest focusing distance
- 1 year warranty



## NA700 series

Mid range levelling.

NA720 #LG641982, NA724 #LG641983,  
NA728 #LG641984, NA730 #LG641985

- NA720: 1km d run, 2.5mm
- NA724: 1km d run, 2.0mm
- NA728: 1km d run, 1.5mm
- NA730: 1km d run, 1.2mm
- Shortest focus range of 0.5m
- 3 year warranty
- IP57 – weather proof
- Operating temp -20°C to +50°C



## Sprinter 50/150M/250M Digital Level

Simply aim, focus and press measure. Fast and error free digital levelling

Sprinter 50: #LG762628, Sprinter 150: #LG762630, Sprinter 250: #LG762631

- Sprinter 50 accuracy: 1km d run, 2mm
- Sprinter 150/250 Accuracy: 1km run, 1mm
- Measures bar coded staff up to 100m away
- 1000 point memory for M models
- 2 year warranty



## DNA 03/10 Digital Level

Up to a 50% time saving over conventional levels.

DNA03: #LG723289, DNA10: #LG726540

- Alphanumeric keypad
- DNA03 accuracy: 1km d run, 0.3mm (with Invar) 1km d run, 1mm (with standard)
- DNA10 accuracy: 1km d run, 0.9mm (with Invar) 1km d run, 1.5mm (with standard)
- 6,000 measurement internal memory
- Rechargeable or Alkaline
- Measures bar coded staff up to 110m away
- 2 year warranty



## NAK2

For survey grade levelling.

#LG352038

- Auto level
- Accuracy 1km d run, 0.7mm
- 0.3mm accuracy with parallel plate micrometer
- 32 x magnification
- Operating temp -20° to +50°
- IP53 weather resistant
- 3 year warranty



## Prexiso T.0.2

#LG789311

- 2" accuracy
- Laser plummet
- Dual LCD screens
- Audible notice for 90° turns



## Leica Builder 109

#LG772727

- 9" accuracy
- Laser plummet
- Dual axis compensator
- Audible notice for 90° turns



## Pentax ETH-510

#519237

- 10" accuracy
- 30x optical magnification
- Dual LCD screens
- Optical plummet



## Tamaya TD-4

- Designed for weather balloon tracking
- Optional printer for real time print outs
- 18x optical magnification
- Create graphs showing relationship between altitude, wind speeds, and wind directions



## Leica Builder 100

if you need to trust angles and alignments  
#LG772727

With a laser plummet for simple and fast setup over control line, dual axis compensation for accurate plumbing, endless drives eliminating steps, audible notice for 90° turns, graphical levelling aid for fast and convenient setup and IP55 rating, the Leica Builder 100 is an outstanding theodolite.

## Leica Builder 200

when tapes are a thing of the past  
#LG772730

Traditional layouts require many steps and manipulations. The Leica Builder reduces these steps. As such the Leica Builder 200 adds benefit by reducing the number of set-ups and offers laser-aided layouts up to 80m/260ft. Its serial interface allows connection to any 3rd party device/program. 3 languages loadable.

## Leica Builder 300

when a construction plan goes digital  
#LG772731

Call up plan data and record points eliminates read and write errors, data exchange via industrial grade USB stick simplifies data handling, a direct DXF download function, tracking mode, setup any-where function, optional volumes calculation and laser distance measurements up to 120m/400ft make the Leica Builder 300 a real workhorse.

## Leica Builder 400

if performance makes the deal

With an extended working range to prisms of up to 500m/1600ft (optional 3500m/2.2mi), a full alpha-numeric keyboard for rapid entry/recall of point numbers (cell phone style use), short range laser distance measurements with 15m/50ft for quick as-builts of inaccessible points and a huge memory of 50,000 points, Leica Builder 400 is the high performer in its league.

## Leica Builder 500

when versatility meets efficiency  
#LG772736

The “flagship” of the Leica Builder Series equipped with all of the above features plus wireless communication via Bluetooth, full laser distance measurements up to 250m/820ft and up to 1.5mm accuracy at 100m covers the full range of tasks to be performed on any construction site. An -30°C option is available additionally.

Builder Specifications	Leica Builder 100	Leica Builder 200	Leica Builder 300	Leica Builder 400	Leica Builder 500
Full Power Site Software					✓
Wireless Communication					✓
Prism Measurement Mode				✓	✓
Full alphanumeric keyboard				✓	✓
Volumes Calculation			✓	✓	✓
Data Im/Export to USB Stick			✓	✓	✓
PC/Handheld Interface		✓	✓	✓	✓
Laser Distance Measure		✓	✓	✓	✓
Control Line Setup		✓	✓	✓	✓
3 Languages	✓	✓	✓	✓	✓
Levelling Aid	✓	✓	✓	✓	✓
Dual Axis Compensator	✓	✓	✓	✓	✓
Laser Plummet	✓	✓	✓	✓	✓
Li-Ion Batteries	✓	✓	✓	✓	✓
Internal Memory [points]	–	–	15'000	50'000	50'000
Angular Accuracy	9", 6"	9", 6"	9", 6"	9", 5"	9", 5", 3"
Distance without reflector (90% reflective)	–	80 m	120 m	150 m	250 m
Distance to reflective tape (60mm x 60mm)	–	250 m	250 m	250 m	250 m
Distance to glass prism	–	–	–	500 (3500) m	500 (3500) m





## For basic to advanced users with the need for flexibility and performance.

To ensure that you stay one-step-ahead, Leica Geosystems has developed a new generation of Total Stations using the latest technology, the Leica FlexLine. For the first time, hardware and software options can be simply selected so that the FlexLine Total Station exactly meets your requirements.

### Leica FlexLine TS02plus

#### Best-In-Class Precision

The ideal Total Station for standard measurement tasks. Designed especially for mid-to-low accuracy applications. It comes complete with a standard set of application software that guide you through your daily work.

### Leica FlexLine TS06plus

#### Top Precision meets High Efficiency

Ideal for mid to high accuracy applications. The full alpha-numerical keyboard and built-in Bluetooth, USB host and device board offer highest user friendliness.

### Leica FlexLine TS09plus

#### Full Precision at High Performance

The brilliant colour display with touch operation, built-in Bluetooth, USB host and device board offer the highest performance and ease of use.

	TS02	TS06plus	TS09plus
1" angular accuracy	–	–	✓
Enhanced measurement accuracy to prism Reflectorless measurement range	1.5 mm + 2 ppm 500 m option	1.5 mm + 2 ppm 500 m included / 1000 m option	1.5 mm + 2 ppm 500 m included / 1000 m option
Display with graphics and display illumination	Black & White high resolution	Black & White high resolution	Q-VGA Colour & Touch
Full alpha-numerical keyboard with function keys	–	✓	✓
Second Keyboard	0	0	0
Keyboard illumination	–	–	✓
Electronic Guide Light	–	0	✓
USB Type A and mini B	–	✓	✓
Bluetooth® Wireless	–	✓	✓
SD Card	–	–	–
Imaging capability	–	–	–
Smart Station capability	–	–	–
Onboard software (package content)	FlexField plus (standard)	FlexField plus (advanced)	FlexField plus (full)

**3 included**

**0 Optional**

**– Not Available**

## We know that making the right decision is not always easy.

Wrong decisions are costly and can have long lasting implications. That is why Leica have invented Leica Nova which merges all they are famous and trusted for. In a single instrument, Leica Nova MultiStation combines digital imagery, total station capabilities and 3D laser scanning.

Coupled with the latest Point Cloud Software Technology, Leica Nova gives you access to a new dimension in measuring technology. We cannot decide for you, but Leica Nova can help you to make the right decision when it really matters.

Take pride, make the right decision! Every time. Everywhere.



### Integrated scanning of every detail

The Leica Nova MS60 integrates 3D point cloud measurements into a regular survey workflow. This lets you collect and visualise your topographic survey data together with detailed high-precision scans. Save time by checking your data for integrity and relevance and avoid costly reworking or returns to the field. Benefit from better decisions with richer and more detailed data.



### Precise long-range scanning

- 1000 pts/sec up to 300 m
- Scan range up to 1000 m
- Millimetre scan precision

### Fast pinpoint r2000 edm

- Reflectorless range beyond 2000 m
- Significantly reduced measurement times

### Wide angle overview camera

- Target acquisition with 20 Hz live video stream
- Simple and comprehensive image-assisted documentation
- Automatic capture of panoramic images

### High resolution telescope camera

- 30x magnification for high resolution images & precision target acquisition
- Automatic focussing

### Robust ip65 design

- Highest protection rating in the industry
- Withstands MIL standard blowing rain test

### In-field point cloud processing

- Automatic point cloud registration
- 3D point cloud viewer
- On-board surface modelling

### Ultra-dynamic automation

- Best-in-class in speed and acceleration
- Automatically find prisms with PowerSearch
- Maximised service intervals



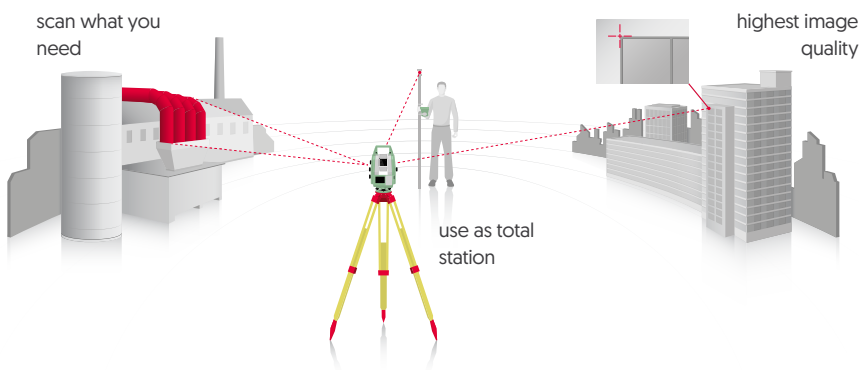
### Proven technology for unmatched versatility

The Leica Nova MS60 provides proven total station functionality with superior sensor integration for highest precision, performance and full automation of measurement procedures. Together with the benefits of GNSS connectivity, the Leica Nova MS60 offers complete versatility by delivering reliable results wherever and whenever you need them.



### Image assistance for every situation

The Leica Nova MS60 features an overview camera and a telescope camera with 30x magnification and autofocus. State-of-the-art image processing technology delivers live fluid video streaming of highest image quality. The imaging capabilities of the Leica Nova MS60 open up new opportunities of operating the MultiStation in an almost infinite range of applications.



## The latest generation of surveying technology concentrates on a central factor: precision.

In order to address every challenge and make fast decisions, you need the ultimate in precision and perfection that today's technologies can offer. And that is precisely what you get with the Leica Nova TS60.

The Leica Nova TS60 redefines the meaning of precision with its optimum combination of angle and distance measuring. At the same time, it offers extraordinary acceleration and speed for highest efficiency, integrated overview and telescope cameras and the latest intuitive SmartWorx on-board software. True perfection: discover the Leica Nova TS60..



### Image assistance for every situation

The Leica Nova TS60 features an overview camera and a telescope camera with 30x magnification and autofocus. State-of-the-art image processing technology delivers live fluid video streaming of highest image quality. The imaging capabilities of the Leica Nova TS60 open up new possibilities for operating this perfect total station in an almost infinite range of applications.



### Leica Smartworx

The Leica Nova TS60 is equipped with the latest Leica SmartWorx software to provide unparalleled ease-of-use and performance. No matter how complex the application, Leica SmartWorx has functionality to complete every task with ease. With identical operation for TPS and GNSS, changing between Leica TPS and GNSS instruments is smooth and simple.



### Proven technology for unmatched versatility

The Leica Nova TS60 provides proven total station functionality with superior sensor integration for highest precision, performance and full automation of measurement procedures. Together with the benefits of GNSS connectivity, the Leica Nova TS60 offers complete versatility by delivering reliable results wherever and whenever you need them.

### Unrivalled angular accuracy

- 0.5" Angular accuracy
- 0.5" Automatic Aiming accuracy (ATR)

### Pinpoint edm-accuracy

- 0.6 mm + 1 ppm to prisms
- 2 mm + 2 ppm to any surface

### Wide angle overview camera

- Target acquisition with 20Hz live video stream
- Simple and comprehensive image-assisted documentation
- Automatic capture of panoramic images

### High resolution telescope camera

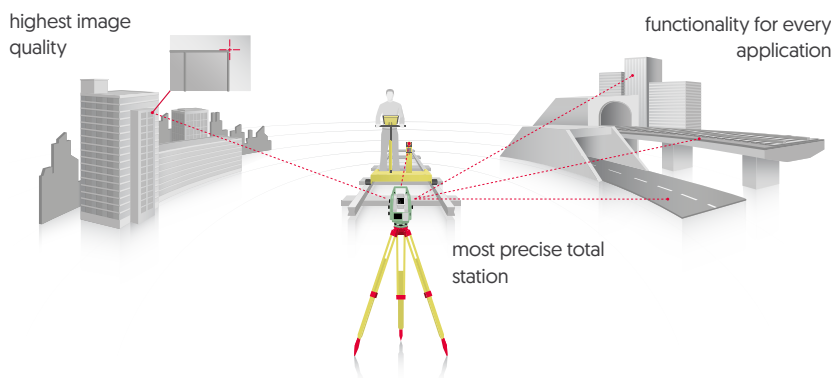
- 30x magnification for high resolution images and precision target acquisition
- Automatic focussing

### Leica Smartworx software

- Complete suite of applications
- Easy-to-use with clearly laid out graphics, logical menu structures and simplified workflows

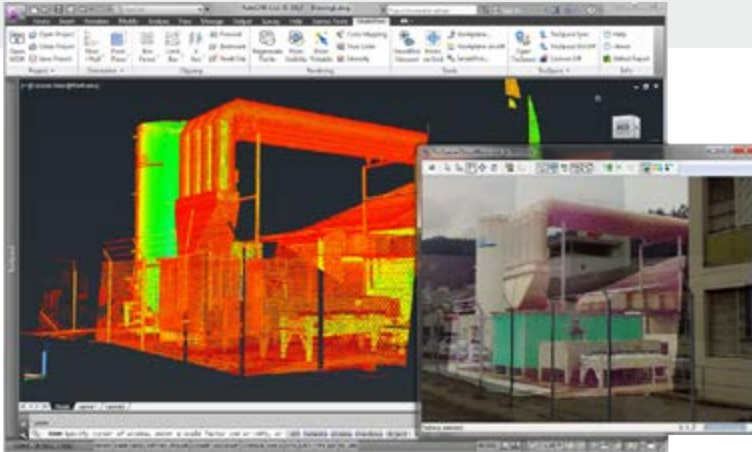
### Ultra-dynamic automation

- Best-in-class in speed and acceleration
- Automatically find prisms with PowerSearch
- Maximised service intervals



## Leica MultiWorx

Leica MultiWorx for AutoCAD is for point cloud processing newcomers using Leica Nova MS60's integrated laser scanning capability. This plug-in for AutoCAD and Civil 3D lets drafters and designers work with rich, 3D point clouds in a familiar CAD environment. It also provides simpler and more powerful tools for navigating point clouds and creating deliverables than native CAD capabilities.



## Point Cloud Management

Simplified opening of point cloud data; 3D limit boxes, slices, interactive visualisation of all size data sets.

## Rendering

Level of Detail (LOD) graphics, «Single pick» point cloud density control

## Visualisation

Intensity mapping, true colour; limit boxes, slices. TruSpace panoramic viewer: Select view point from keyplan; Drive CAD viewpoint from TruSpace; Quick limit box in CAD from single pick; Send point picks from TruSpace to CAD command; Includes background images

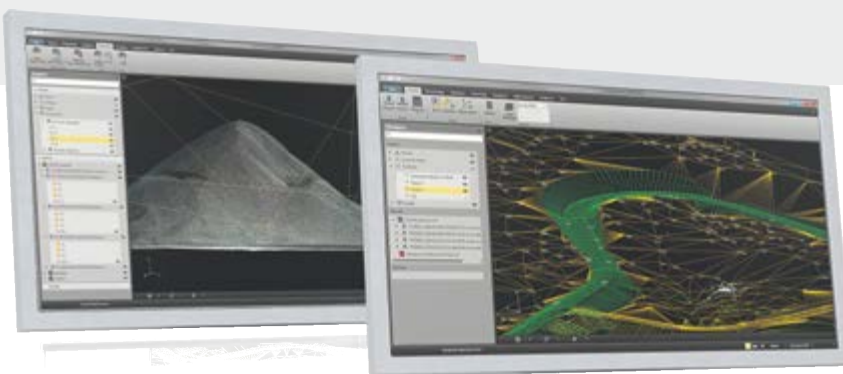
## Drafting Support

Automatically orientate UCS to walls and floors; UCS Orientation Support with a few simple picks on the point cloud; High point, low point and ground point SmartPick Snapping; Creation of COGO points on a user specified Points on a Grid; Project linework to Workplanes

## Leica Infinity

TPS, GNSS, images, scans and more:

so many different kinds of data come together on a field project – no problem at all for Leica Infinity. Numerous data formats can be edited, archived and exported to CAD applications – easily, without data loss and without the hassles involved in conversion. This not only for data from different instrument types, but also from multiple sites and survey teams. Leica Infinity differentiates between and transparently processes all data – for simplified, automated and logically expanded workflows, and a faster overview of the project as a whole.



## General Components

- Data and Project Management
- Data Import
- Data Export
- 3D viewing
- Editing
- Reporting

## Feature Code Processing

- Code Manager
- Feature Code Processing

## Data Processing options

- TPS data-processing
- 3D Network Adjustment
- Surfaces
- Scanning
- Imaging



## Total Viva Solution - Leica TPS together with CS controller, GNSS and SmartStation.

The Leica Viva TS11 and TS15 are the fastest imaging total stations in the world. Productivity and documentation rises to the next level. Complete every project easier and faster than ever before. Designed to work seamlessly together, Viva controller, Viva GNSS, Viva TPS, and Viva SmartStation offer a comprehensive system.



### TS11 – Manual Total Station

#### The most advanced manual total station

Leica Viva TS11, is the most advanced manual total station with the inclusion of advanced imaging functionality and the Leica SmartWorx Viva easy-to-use onboard software. Leica Viva TS11 raises productivity to the next level with imaging and Leica SmartWorx Viva software. The unique capture-sketch-link functionality enables high resolution total station images to be captured, enhanced with sketching and then linked to any point of interest. Costly revisits can be avoided to significantly improve productivity. Every vision on every scale becomes reality with ease.

### TS12 - Robotic Total Station

#### Robotic performance on a budget

Leica Viva TS12 is packed with features, such as the unique PowerSearch sensor which finds prisms regardless of their location in seconds and the light weight Leica CS10 controller which 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.

### TS15 – Robotic total station

#### The fastest imaging total station

The Leica Viva TS15 is a state-of-the-art total station that provides advanced imaging functionality combined with dynamic tracking capabilities for one-person surveying. Furthermore, Leica Viva TS15 features the easy-to-use Leica SmartWorx Viva onboard software.

The Leica Viva TS15 adds a high-resolution camera to further enhance total station productivity. Traditional robotic operation is significantly improved with imaging features through Image Assisted Surveying and Documentation.

Thanks to live streaming of the total station view on the robotic controller, remote points can be easily measured with the tap, turn & measure functionality without returning to the total station.



### SmartStation & SmartPole

Extend the TS15 by integrating full GNSS functionality to further improve productivity. The TS15 can be used as a Leica SmartStation for TPS setup without the need of control points, traverses and resections, or as a Leica SmartPole to save time with setup 'On-the-fly' and measure parallel with TPS and GNSS for double productivity.

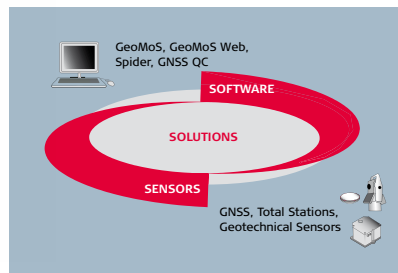


Whether you monitor the movement of a volcanic slope, the structure of a long bridge or track the settlement of a dam; whether you measure, analyse and manage the structures of natural or man-made objects: the monitoring systems by Leica Geosystems provide you with the right solution for every application.

Our solutions provide reliable, precise data acquisition, advanced processing, sophisticated analysis and secure data transmission. Using standard interfaces, open architectures and scalable platforms, the solutions are customizable to meet individual requirements – for permanent and temporary installations, for single sites and monitoring networks.



Leica TM50



## Monitoring Software

**Leica GeoMoS software provides a highly flexible automatic deformation monitoring system that is able to combine geodetic, geotechnical and meteorological sensors to match the needs of your monitoring project, whether it is large or small, temporary or permanent**

With the addition of the GeoMoS Web service, visualisation and analysis of monitoring data can be performed anywhere and anytime using a web browser, mobile phone or tablet. Make important decisions with Leica GeoMoS.

## GeoMoS Scanning – Read between the lines

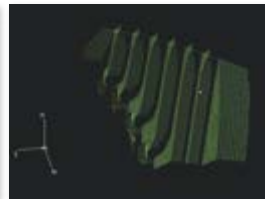
**The Leica Nova MS60 with Leica GeoMoS: A break-through in deformation monitoring**



Automatic deformation scanning



Seamless workflow with brand new n.Vec Technology



3D visualisation of deformation clouds



## Monitoring Prism

GMP104 #LG641762  
GMP104 Replica #A1002

Mini Prism with L-bar : Mini monitoring prism mounted in metal holder. Supplied with L-bar for fixed installations. The prism offset is dependant on the mounting position. Max. IR range of 2000m (7000ft).



## Monitoring Prism

GPR112 #LG726295  
Omni 1100-C #54106  
CST 63-3011 #533011

Large diameter monitoring prism for long range measurements. For installation on M8 or 5/8" threaded bolts. Built-in filter prevents condensation on the reflecting surface. Rain/snow cover available separately. Max. range with IR of 2500m.

## Continuous operation and reliability

The Leica Nova TM50 meets the challenge of 24 hours, 7 days a week monitoring applications. It is designed to withstand the roughest use in the most severe environments. The Leica Nova TM50 will operate throughout a wide temperature range and is protected against wind driven rain, sand and dust. The Leica Nova TM50 is fully operational in bright sunlight and complete darkness.

## Highest measurement accuracy

- 0.5" Angular accuracy
- 0.6 mm + 1 ppm distance accuracy
- 0.5" Automatic Aiming (ATR) accuracy and 3 km range

## Robust IP65 design

- 20°C to +50°C operating temperature
- IP65 protection against wind, dust & rain

## High resolution overview and telescope camera

- Automatic capturing of panoramic images
- 30x magnification for high resolution images and fine aiming
- Automatic focus

## Flexible connectivity

- Wireless LAN
- USB port
- Bluetooth®, RS232

## Power management

- External power supply
- Internal battery charging

## High dynamic piezo drives

- Best-in-class speed and acceleration
- Zero noise pollution
- Maximum service intervals



Leica Viva GS16



Leica Viva GS10



Leica Viva GS15

**Leica Viva GNSS is a complete range of versatile GNSS solutions for you. From completely integrated, to totally modular solutions; Viva GNSS provides a system to master all of your tasks.**

## Leica Viva GS16 – Delivering the most accurate positions

The Leica Viva GS16 is the most compact and powerful, self-learning GNSS smart antenna. Working with the leading RTK technology, the Viva GS16 meets the highest standards in measurement excellence with RTKplus and SmartLink. The growing number of signals from an ever increasing satellite constellation demands a GNSS receiver to be smarter than ever before. RTKplus intelligently adapts to changing conditions by selecting the optimal signals to deliver the most accurate positions.

## Leica Viva GS10 / GS15 Work as you want to

The Leica GS10 and GS15 are designed to suit any surveying task

- Exchangeable communication devices for field base stations and RTK rovers with removable SIM cards (Built-in for GS15).
- Fully scalable sensor allows you to buy only what you need today and upgrade with additional functionality as you need it.
- Integrated web server to configure the logging of Leica or RINEX raw data and measure with one button press in the field.

## Proven GNSS technology

Built on years of knowledge and experience, the hallmarks of Leica GNSS – reliability and accuracy.

- SmartCheck – RTK data-processing to guarantee correct results.
- SmartTrack – advanced four constellation tracking of all GNSS satellites today and tomorrow.
- SmartRTK – delivers consistent results in all networks.

## Leica Viva GS08 Plus NetRover – Simple “Turn-on & Measure” GNSS solution

The Viva NetRover using the new Leica Viva GS08 GNSS receiver has been designed to create an ideal RTK network rover. Consisting of a GS08 GNSS receiver and a CS10 3.5G field controller to create an easy to use all-in-one GNSS Network Solution. The Leica Viva NetRover is optimised for RTK network use. All components work seamlessly together, creating a lightweight and cable-free network rover. The NetRover automatically connects to any reference station network, and with full support of the RTCM 3.1 transformation message, it is no longer necessary to measure control points for the determination of a local transformation, saving time and reducing errors.



## Leica Viva GS12 SmartPole – Complete freedom of choice

The Viva GS12 is a lightweight receiver that ergonomically combines GNSS and TPS for a SmartPole setup, an integrated ‘All-on-the Pole’ system for productive one-person surveying. By combining the GS12 GNSS receiver and a 360° prism, you can use GNSS to orientate your TPS and easily switch between GNSS and TPS to measure any point with total flexibility. With the SmartPole there is no need to first measure orientation points. By starting the survey and conducting setup on-the-fly whilst completing measurements, you save time in survey planning and execution. Viva GS15 GNSS receiver can also be used with Viva SmartPole.



## Leica Viva Uno

Packed with features and designed for use in extreme environments.

- IP67, operating temperature -30 to +60° C
- SD and CF cards and USB stick support
- Camera, WLAN, Bluetooth, colour VGA touch screen
- Easy to use, handheld GNSS data collector
- 14 channel L1 GPS, GLONASS & SBAS sensor
- Post processing accuracy 10mm 2ppm
- DGPS accuracy < 0.4m
- Wide range of apps for all surveying work

Leica Viva Uno CS15 (left) and CS10 (right).







## Leica Viva Controller

CS-15 #LG771877

Full 65 key QWERTY keyboard.



## Leica Viva Controller

CS-10 #LG771874

26 alpha-numeric keys.

## ACTIVE ASSIST

Imagine being in the field and coming across a problem that prevents you from finishing the job. You call your local support engineer, but have trouble explaining your exact problem.

By simply pressing a button in Leica SmartWorx Viva, you can activate Leica Active Assist, and your local support engineer can securely access your device and see exactly what you see. By pressing the buttons for you, your support engineer can guide you back to full productivity within minutes.

You can continue with confidence to complete the survey, and know if the problem ever arises again, you can solve it yourself after being guided step-by-step through a solution.



**Leica Viva contains a unique portfolio of wirelessly connected field controllers. With a complete range of easy-to-use software your work can start immediately and be finished faster than ever before.**

**Your benefit - Simply select your perfect controller and software for unrivalled efficiency.**



## Simply productive surveying software

With clear graphics, non-technological terminology and simplified workflows SmartWorx Viva is incredibly easy to use.

- Survey, coding and line work
- Advanced coordinate system handling
- Wide range of apps for all surveying and staking tasks

## 3.5G Modem

The Viva CS10 3.5G and CS15 3.5G field controllers include a fully integrated high-speed 3.5G modem to connect to RTK reference networks and allow mobile broadband internet connectivity for field-to-office data transfer.

## Built for the field

Designed for extreme environments, you can always rely on your CS10 & CS15. Comfortable in the hand, and easy-to-use for all tasks.

- IP67 and operating temperature -30 to 60° C
- Tactile, fully illuminated, rubber keypad (numeric on CS10, alphanumeric QWERTY on CS15)
- 2 Megapixel camera

(Perfectly placed for taking pictures when in hand or mounted on pole)

- Colour, VGA touch screen, illuminated

## Flexible communication and data handling

Stay connected with a wide range of communication and data storage options. Your CS10 & CS15 is ready for all challenges.

- Fully integrated wireless Intenna technology (Bluetooth, WLAN, TPS Radio, GSM/UMTS 3.5G)
- Choice of 2 connector modules

**Lemo module:** Lemo (USB and serial), USB A host, 7-pin connector, power

**RS232 module:** RS232, USB A host, USB mini AB OTG, 7-pin connector, power

- Data storage using SD Card, CF Card, USB memory stick

## Work how you like

Designed as part of the Leica Viva series, but versatile to work with many instrument and software combinations.

- Ideal for use with all Leica Viva Series Total Stations and GNSS sensors.
- Perfectly designed to be used with SmartWorx Viva surveying software.
- Powerful ARM core processor for many software applications.







CS20

## Leica Viva Controller – Zeno5, Zeno20 & CS20 GNSS

Leica Zeno 10, Zeno 15 & CS25 GNSS are designed for high-accuracy mapping in real-time and post-processing.



Zeno20

### The most rugged and versatile GNSS/GIS Handhelds in the market

High performance GNSS/GIS handhelds give you all the power you need. The perfect field tools for maintaining your GIS whether you are working for a utility company, local government, federal agency, or for anyone managing or mapping infrastructure or assets. Leica Zeno GIS series delivers the quality and reliability you can trust.

- IP67 and -30 to 60° C operation
- Combine GIS and Survey equipment



### High-Performance sub-meter GNSS/GIS Handhelds

Delivering consistent sub-meter accuracy both real-time and post-processed. Leica Zeno 10 and Leica Zeno 20 handhelds combine a high-performance sub-meter GNSS sensor with a rugged handheld for anyone who needs accurate and reliable data even in the most demanding environments.

- DGPS <0.4 m
- SBAS <1.2 m
- Post-processed sub-meter – decimetre



### Packed with power for outstanding performance

The optional docking station ensures quick, direct and easy access to the data you have measured in the field. Just plug in and field data is downloaded, post-processed and updated in Zeno Office, with just one simple click. Together with full support of all survey equipment, data maintenance has never been so easy.

- Convenient wireless or wired data download & upload.



### Leica Viva GIS Communications

The Zeno models are available with 3.5G built-in communication modules (integrated 3.5G modem, WLAN and Bluetooth). The Leica Zeno GPS/GNSS and its integrated compatibility with RTK reference station networks enables GIS users to map features in high-accuracy anywhere and anytime, without requiring an external Bluetooth mobile phone.



Zeno5 GIS controller.

### Leica Zeno Software

The Leica Zeno GIS series offers an ideal set of tools for anyone who needs more accurate data in a GIS database. All GNSS post-processing is automated; GIS and GNSS technologies are seamlessly combined in one easy solution.

#### Leica Zeno Office

Available as Leica Zeno Office and Leica Zeno Office on ArcGIS – an extension to ArcGIS Desktop. Leica Zeno Office is a software package to maintain, manage and post-process GIS, GNSS and surveying data. Zeno Office also provides an easy interface between the field and CAD/GIS applications such as MobileMatriX, AutoCAD, ArcGIS or Microstation.

### Leica Zeno Field

Leica Zeno Field is an OEM version of ArcPad 8 and provides in addition to the well known ArcPad™ functionality:

- GNSS raw data logging,
- Easy handling of GNSS configurations (such as DGPS settings), surveying technology made available to the GIS user.
- Automated re-dial to real-time source in case connection gets interrupted.
- Feature accuracy management

### EasyIn and EasyOut

Leica Zeno GIS introduces the new EasyIn/EasyOut workflows to simultaneously:

- Check-in feature and GNSS raw data
- Post-Process and
- Update feature vertices







Whether providing corrections from just a single reference station, or an extensive range of services from a nationwide RTK network - innovative reference station solutions from Leica Geosystems offer tailor-made yet scalable systems, designed for minimum operator interaction whilst providing maximum user benefit.



## Leica GR25 GNSS Reference Server

With integrated internal and external device management, multi-user management, high end security, modular and scalable design, the new GR25 GNSS Reference Server will grow with your needs and keep your GNSS applications and networks fully up to date.

Through Leica Geosystems' design, the GR25 allows upgrades of all the key hardware parts, such as tracking, memory, power and communications.

Designed for numerous permanent and semi permanent GNSS network installations and monitoring applications, including RTK and static networks, single base station, field campaigns, structural monitoring, atmospheric and seismic studies and offshore positioning.



## Leica GR10 Plug and Play GNSS Receiver

The Leica GR10 is a next generation GNSS reference station receiver that combines the latest state-of-the-art technologies with a streamlined "plug and play" workflow. Designed for a wide variety of GNSS reference station applications, the Leica GR10 offers new levels of simplicity, reliability and performance. The GR10 provides excellent low noise code and phase data with logging and streaming rates up to 50 Hz. The powerful onboard RefWorx software features flexible data handling and communication, ensuring high performance and secure long term operation.



## Leica AR10 Multi-Purpose GNSS Antenna with Integrated Radome

Wideband reference station antenna with a large ground plane and integrated radome. The AR10 is the ideal antenna for a wide range of high accuracy permanent and mobile base station applications. Using state-of-the-art technology it offers near choke-ring level performance but without the weight, size and cost. An all new antenna design, together with a large ground plane and integrated radome, ensures that the AR10 provides exceptional signal tracking, phase centre accuracy and multipath suppression.



## Leica AR20 Visionary 3D Choke Ring Antenna

The Leica AR20 is designed for permanent and semi-permanent reference network installations, and meets all requirements for a reliable and long lasting antenna. It is future proof for all GNSS satellite signals.

The AR20 provides superior tracking performance by using different depth and width choke rings. The precision design also allows for very low and stable phase centre offsets and very smooth symmetry of the phase centre variations versus azimuth and elevation.



## Leica AR25 3D Choke Ring GNSS Antenna

Revolutionary 3D choke ring that sets new standards in low elevation tracking and multipath reduction. The new AR25 has been designed for all existing and currently planned signals of the GPS, GLONASS, Galileo and Compass (Beidou) systems. The AR25 uses a new ultra-wideband Dorne-Margolin element, the industry standard for high accuracy and performance. Designed for a variety of applications, including reference stations, monitoring, seismic studies, scientific and atmospheric studies, the AR25 is a robust high performance antenna, built to last.



**You've collected your data.  
The hard work is done.  
Or so you think. Without the right software to process that data you could end up in a real mess.**

## Leica Geo Office

One Office Software for all your instruments  
Seamlessly import and combine data from all your instruments to produce the final results.  
Manage and combine your data with Leica Geo Office to ensure you get the best results.

- GNSS instrument support
- TPS instrument support
- Level instrument support

**Best-in-class Processing Options** Years of experience in the fields of surveying and GNSS data processing resulted in the world's most powerful processing options.

- GNSS data processing using SmartCheck techniques
- TPS processing – from simple station

- updates to complex traverses
- Level processing
- Combined network adjustments
- COGO calculations, Datum transformations and Volume calculations

All components integrated in one software. Leica Geo Office enables you to manage your project in an integrated way. No need to transfer data between the various modules.

- Use GNSS processing to automatically update SmartStation setups
- Combine GNSS and terrestrial data with an integrated Least Squares Adjustment
- Benefit from volume calculations being instantly updated whenever coordinates change



## Leica Exchange

Transfer objects easily between the field and the office with Leica Exchange. The yearly Leica Exchange Service allows an unlimited number of exchanges to an unlimited number of users.



### Leica Viva CS15/CS10

With an integrated WiFi and/or 3.5G module (GSM/GPRS/UMTS), your Leica Viva CS15/CS10 simply connects directly to the Internet to easily send and receive objects directly in the field using Leica Exchange. Leica Viva CS15/CS10 devices without a 3.5G module or WiFi can also benefit from Leica Exchange via a Bluetooth™ wireless connection to a mobile phone for Internet access.



### Leica Exchange Office

Leica Exchange Office is the ultimate data organisation tool. Easily select data from your local computer, storage media or network and send it directly to any office or field crew. Work directly with objects with no limitations on file sizes. Dataflow is perfectly optimised with an integrated solution that does not rely on complex ftp systems or limited email systems.



### Leica SmartWorx Viva

Leica Exchange is seamlessly integrated into the easy-to-use Leica SmartWorx Viva software to allow you to work with objects rather than individual files. Once you've logged on via a secure connection, you are instantly notified once objects have been sent to you, and you can easily send completed jobs back to the office... all without leaving Leica SmartWorx Viva.



### Leica Viva TS15/TS11

Simply connect your Leica Viva TS15/TS11 to a mobile phone with a Bluetooth™ wireless connection to gain Internet access and easily send and receive objects directly in the field using Leica Exchange.

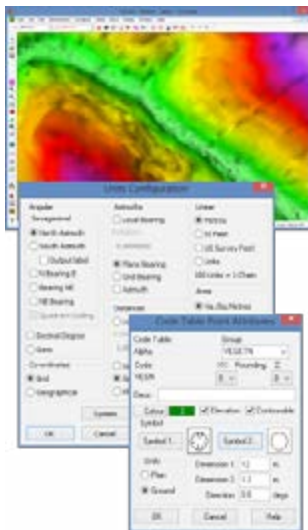
## LISCAD is a complete field-to-finish system, used by thousands of customers worldwide. LISCAD is designed and developed by LISTECH.

LISCAD interfaces with all popular surveying, engineering and CAD systems.

New users find LISCAD intuitive, easy to use and quick to learn, with comprehensive tutorials and fast technical support. FREE evaluation licences allow real-world use before purchasing. The modular design means you only purchase the functionality you require, keeping costs down.

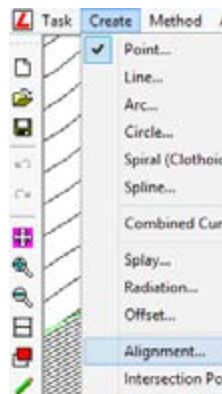
Features include rigorous geodetic computations, unlimited model size, traverse and least squares network adjustment, 2D/3D transformations, volume computations, geo-referenced background images, 3D Visualisation, profiles, impressive engineering design capability for easy generation of virtually any design, Survey Live for real-time surveying and set-out with Total Stations or GNSS equipment, and Point Cloud for importing, viewing, editing and digitisation of point cloud data.

LISCAD is a portfolio of integrated Land Surveying and Civil Engineering software modules. These include:



### Utilities

Configure, organise, manage and report on your projects with the Utilities module. (FREE with all LISCAD systems)



### Computations

Full geodetic coordinate geometry (COGO) computations based on a selected map projection can be performed using the Computations module to create, edit and examine points, lines, polygons, text and alignments.



### Transformations

The Transformations module can be used to compute least squares transformation parameters on coordinate data sets using a variety of methods and then transform coordinates to the new datum.



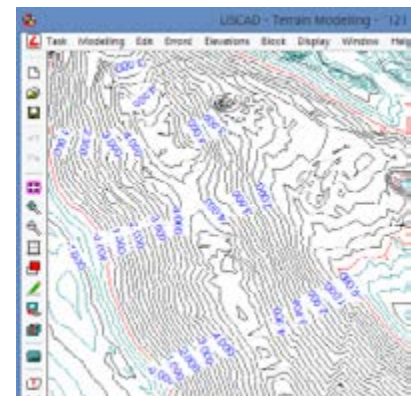
### Input/Output

Use the Input & Output module to transfer data to and from all popular, total station, data logger, GPS and digital level field surveying devices as well as other software systems including AutoCAD DWG, MicroStation DGN and LandXML.



### Least-squares adjustment

The Adjustment module utilises rigorous least squares solutions to adjust your field surveying measurements. Adjust traverse or network frameworks for both horizontal and vertical control.



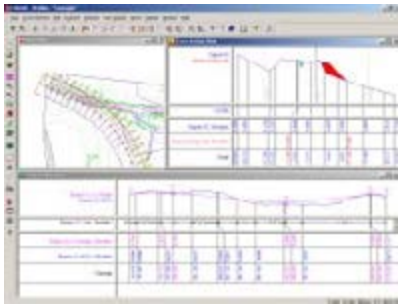
### Digital Terrain Modelling (DTM)

Digital Terrain Model (DTM) formation is achieved using a geographically indexed data base to ensure fast and accurate formation of triangles on data sets of any size. Once a digital terrain model is formed the contours can be instantaneously displayed at any interval.



## Volumes

The Volumes module can be used to compute an earthworks volume between surfaces, determine surface intersections, create height difference data sets and compute progressive volumes between planes.



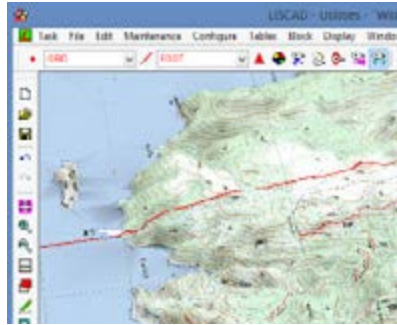
## Profiles & Design

Use the Profiles & Design module to create and edit long section and cross sections for CAD output and end area volumes. The Profiles & Design module incorporates an impressive new condition based system for easy generation of virtually any civil engineering and road design.



## Background Images

The Background Images module can be used to import orthophotos, satellite images and maps that can be georeferenced to allow for correlation of raster images to your vector geometry and for on-screen digitizing.



## 3D Visualisation

The 3D Visualisation module gives you a realistic 3D view of your project. Models can be coloured, textured or have Background Images draped over them and individual triangles can be easily coloured or textured to give a realistic representation of the model. Extensive tools for examining, editing and creating in the 3D environment.

## CAD

The CAD module is a CAD application designed specifically for land surveyors and civil engineers to enhance your plan and map production process.



## Resource Editor

Use the Resource Editor module to create or edit your own symbols, line styles and fonts for use in all the LISCAD modules.



## Liscad Lite

LISCAD Lite is an abbreviated, low cost version of LISCAD designed for data exchange to and from AutoCAD dwg, MicroStation dgn, total station, data logger, GPS and digital level field surveying devices.



## Survey Live - Field Surveying Software

Survey Live is for real-time field surveying and stakeout using total stations and GNSS receivers. Designed for small format tablet computers, the graphical interface combines finger or stylus operation with CAD type viewing controls, to clearly see your survey build as you go. Survey Live lets you have the power of your office software in the field as you can still access all your other LISCAD functionality.



## Point Cloud

Point Cloud is for importing, viewing, editing and digitisation of point cloud data. View point clouds in the 3D view and use them to create point and line objects.

FREE Evaluation available at: [www.listech.com](http://www.listech.com)



We carry software solutions for every step in your workflow. Data collection in the field is just the beginning.

## MicroSurvey<sup>®</sup> FIELDGenius<sup>®</sup>

### MicroSurvey FieldGenius

The most powerful and productive data collection software for land surveyors. Code-free linework, smart points, and live graphics make FieldGenius the choice of organisations that value productivity.

- Code-free linework
- Best-in-class UI
- Most device support
- Productivity tasks
- Calculation tools
- Part of the perfect workflow



FieldGenius works with many GPS receivers and on a multitude of handheld data collectors. We believe you shouldn't have to buy all new equipment just to upgrade one component.

## MicroSurvey<sup>®</sup> STAR\*NET

### MicroSurvey STAR\*NET

An easy-to-use Windows application that adjusts 2D/3D survey networks using rigorous least-squares techniques. It handles networks containing conventional observations with up to 10,000 adjustable stations and GPS vectors.

If you have used STAR\*NET before, you will recognise the same powerful network adjustment functionality that has been used by survey professionals for more than two decades. With this latest version, you will find better organisation of the reports and plot windows, as well as new workflow tools.

Offered as core software with your choice of add-on modules in order to meet your precise needs:

### Total Station Module

Unlock all total station controls and smart-menus. When connected to a total station you will have easy access to instrument options.

### Robotic Module

This unlocks additional total station features, menus and controls that are related to robotic total stations. FieldGenius supports all popular robotic total stations.

### GNSS/GPS Module

Unlock the power of RTK GPS with this add-on module. Easy-to-use menus within the context of GPS. Switch seamlessly between instruments. The GPS toolbar displays to you the current satellite status, sky plot, PDOP values and more.



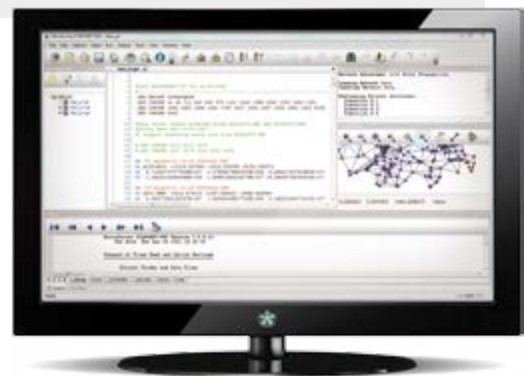
### Advanced Module

This unlocks the powerful roading tools, alignment staking, surfacing commands, and much more.



### STAR\*NET is available in four different editions:

Pro, Plus, Standard, and Lev - choose an edition that fits your exact requirements.



STAR*NET	Pro	Plus	Standard	Lev
Observations adjusted simultaneously	✓	✓	✓	✓
Includes USB Key for portability	✓	✓	✓	✓
Adjusts 1D differential leveling networks	✓	✓		✓
Graphical display of your entire survey	✓	✓	✓	
User defined instrument library	✓	✓	✓	
Supports Deg/Min/Sec or Gons	✓	✓	✓	
Transverse mercator & lambert grids	✓	✓	✓	
Reduces to NAD27, NAD83, UTM	✓	✓	✓	
Adjusts using rigorous least squares	✓	✓	✓	
Combine with GPS vectors	✓			





**You've collected your data.  
The hard work is done.  
Or so you think. Without the right  
software to process that data,  
you could end up in  
a real mess.**



## MicroSurvey CAD

Powered by IntelliCAD®, field to finish has never been this easy. Available in 5 different editions, MicroSurvey CAD is the design solution engineered especially for surveyors.

Complete survey drafting, COGO, DTM, traversing, volumes, contouring, point cloud, and data collection device interfacing. MicroSurvey CAD is compatible with field data from all major total stations and data collectors and is fully compatible with AutoCAD.

MicroSurvey CAD Standard and Premium are bundled with MicroSurvey inCAD.



## Get more with an annual maintenance subscription (AMS).

With a MicroSurvey maintenance subscription, you can be confident that your investment in MicroSurvey solutions will be efficiently managed, enabling you to focus your organisation's time and resources to improving your business. With an AMS, you receive:

- Free updates (never pay for upgrades)
- Critical service packs & notifications
- Priority phone & Helpdesk support
- Subscriber-only promotions
- Training discounts

Not to mention it has long-term cost savings benefits, and allows you to budget more precisely.



## Basic Edition

The Basic edition has the core surveying computation tools. Worldwide coordinate system support, geodetic tools, active drawing technology, and field data processing.



## Standard Edition

The Standard edition has all the features of Basic, plus all of the advanced CAD drawing commands.



## Premium Edition

The Premium edition is MicroSurvey's flagship product and the most popular edition. It has everything you expect in a Survey software package including advanced design capabilities, geospatial data support, site design features, and 3D modelling.



## Ultimate Edition

The Ultimate edition has all advanced features including point cloud tools, such as point extraction, point line extraction, lowest-point calcs – all within a dual-window system.



## Studio Edition

And finally, the Studio edition, which has everything plus animation capabilities.



**Prefer an AutoCAD solution? Check out these options:**



## MicroSurvey inCAD

This plug-in transforms AutoCAD® into a survey and design powerhouse while maintaining a fully integrated user interface within AutoCAD.



## MicroSurvey embeddedCAD

MicroSurvey embeddedCAD, powered with Autodesk technology, is 100.0% compatible with AutoCAD® DWG® files. It's a standalone program with the Autodesk engine.



## Upgrades

Leverage your existing investment in MicroSurvey software. We offer all available combinations of product versions, editions, and modules in order to upgrade you to the latest at a fraction of the cost.

MicroSurvey uses a vote-based feedback system, driven by their users, in order to determine the priority of new features and fixes.



## Crossgrades

It's important to us and MicroSurvey that you get what you need and you are satisfied with the software purchases you make. For that reason, we offer the ability to crossgrade to another product or edition.

Or, if you're coming from a different brand all-together, let us know and we'll find out if we can process it as an upgrade instead of new license.



## What is SmartNet Aus?

Australia's largest RTK CORS network for GPS/GNSS corrections. SmartNet Aus is a fully comprehensive CORS [Continuously Operating Reference Station] Network connected with Spider™ [Leica Geosystems Reference Network software] to provide centimetre level Real Time corrections for Surveying, Construction, Mining, Machine Control and Agricultural Auto-Steer Applications via nTrip. SmartNet Aus is a joint initiative of Leica Geosystems and C.R. Kennedy & Company Pty Ltd.

## Problems with conventional RTK

**Single Base RTK:** One of the problems with current Single Base RTK solutions is distance dependant errors. The further the rover gets from the base, distance dependant errors increase to the point of exceeding the accuracy required for most tasks.

**Communications:** With GNSS equipment more readily available to users, licensing of UHF frequencies is getting crowded. Most people in built up areas will only get a 5W license, greatly restricting their baseline lengths. Even 25W licenses may only give you 10km range. Topology, buildings, trees and atmospheric all affect your baseline lengths

and with the crowded frequencies, clashing of radio signals is common. Another consideration is future data bandwidth. The increasing number of satellites and GNSS Systems means more data that has to be transferred via the radio.

**Operating Costs:** Have you ever analysed how much it actually costs you to have your own base? Interest, servicing, firmware upgrades, wear & tear, battery charging & replacement and insurance all add up to your yearly operational costs. Have you worked out just how much time you have spent driving to and from the base to setup and pull down daily? Is your base in a fixed location? How secure is it? Will it still be there in the morning?

## The solution: SmartNet Aus

SmartNet Aus have a network of CORS which are connected to Spider software to create RTK corrections in various formats. Spider analyses all the data and creates network solutions removing distance dependant errors and increasing accuracy on long baselines. Communications to SmartNet Aus require the user to connect their GNSS equipment to the internet via either a Bluetooth Mobile Phone or proprietary modems, from there the user connects

to the SmartNet Aus nTrip caster to receive the corrections. Using nTrip eliminates UHF radio issues. No Bandwidth issues. No Interference. No weak signals due to distance. Significantly reduced operational costs are another benefit of SmartNet AusTurn on your GNSS equipment, connect to the SmartNet Aus servers and you are working. No setup time for the base required.

Want to perform some Static Surveys? No worries, log onto [www.smartnetaus.com](http://www.smartnetaus.com) and view all the RINEX data available with just a few mouse clicks. You can even upload your Rinex files and let Spider Web™ process the data for you. The Spider and GNSSQC Software, Leica's quality control monitoring software, continuously monitors the network for errors so you know that the integrity in the solution is there. Recently, SmartNet Aus was commissioned by the Gold Coast City Council to provide Network RTK over the entire council area. SmartNet Aus has installed new bases and utilised existing bases to provide the Cold Coast City Council with centimeter accuracy RTK. SmartNet Aus is one of many Reference Networks around the world powered by Leica- Geosystems' Spider software.

**For more information, visit [www.smartnetaus.com.au](http://www.smartnetaus.com.au) or contact your closest C.R.Kennedy office.**

 @smartnetaus



Each orange circle represents a RTK reference station. As of December 2013, the network comprised of more than 500 base stations.



**With SmartNet Aus, you can achieve millimeter GNSS accuracy from anywhere with mobile phone reception.**



P16



P30/40

**For any project, it makes sense to deploy the right tools. For as-built, topographic, detail, and engineering surveys, Leica High-Definition Surveying (HDS) systems are the way to go. Leica’s HDS hardware and software captures, visualises and processes 3D spatial data through the employment of advanced laser scanning technologies.**

Leica’s range of terrestrial 3D scanners are used throughout the world on a wide variety of applications. Together, Leica 3D scanners and Leica’s suite of Cyclone software packages are ideal for any as-built projects, including civil, plant, BIM, archaeology, architecture, forensics, forestry, etc.

### Leica P16

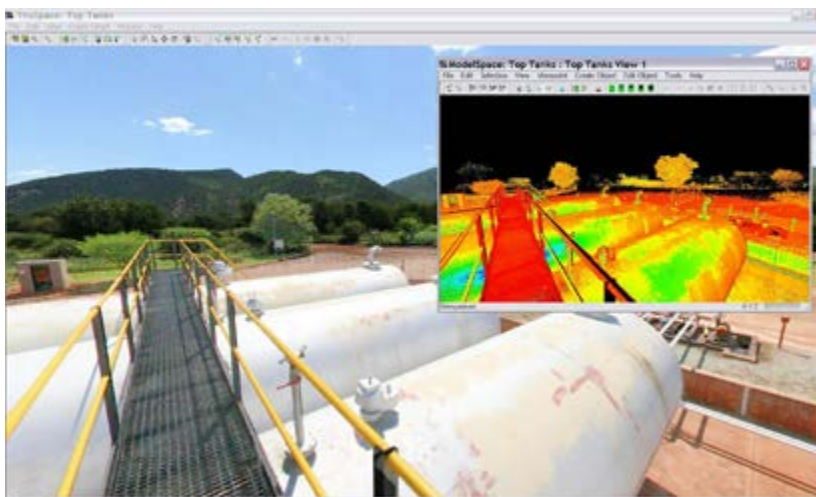
- Entry level scanner
- Range of 35m
- 25,000 points per second
- Full 360° x 270° field-of-view
- Can be upgraded to C10

### Leica P30

- Range of 300m.
- Dual-axis compensator
- 50,000 points per second.
- In-built digital camera.
- Full 360° x 270° field-of-view
- Resolution up to 1mm x 1mm at 300m.
- Can perform traverses and resections

### Leica P40

- Rang of 120m.
- Dual axis compensator
- 1,000,000 points per second!
- Can scan upside down.
- In-built digital camera.
- Full 360° x 270° field-of-view
- 1mm noise at 100m.
- Height offset adjustments.
- Local re-calibration service available.



### Leica HDS

Leica HDS scan data colourised with in-built camera and displayed in Leica Cyclone software.



Riegl Laser Systems manufacture a wide range of terrestrial, mobile and airborne scanners. Riegl terrestrial scanners have very high speed data acquisition (up to 250,000 points per second), receive multiple returns per pulse, allow waveform analysis, and come installed with in-built compass, L1 GPS, laser plummet, LAN/WLAN/USB 2.0, and inclination sensors. Riegl laser scanners are used in wide field of applications, such as mining, as-built surveying, civil engineering, architecture, archaeology, city modelling, tunnel surveying, forestry, hydrographic surveying, etc.



### VZ-400 Terrestrial Scanner

- Range of up to 600m.
- 122,000 points per second.
- 100° x 360° field of view.
- Accuracy 5mm, Precision 3mm
- External digital camera (optional)



### VZ-1000 Terrestrial Scanner

- Range of up to 1,400m.
- 122,000 points per second.
- 100° x 360° field of view.
- Accuracy 8mm, Precision 5mm
- External digital camera (optional)



### VZ-2000 Terrestrial Scanner

- XXXxxx



### VZ-4000 Terrestrial Scanner

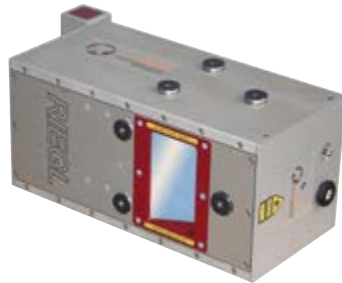
- Range of up to 4,000m.
- 222,000 points per second.
- 60° x 360° field of view.
- Accuracy 15mm, Precision 10mm
- In-built digital camera
- Ideal for open pit mining applications





## VMX-450 Mobile Scanner

- Dual V-Line laser mobile scanner
- Easily installed and removed.
- Range of 800m.
- Very high PRR of 500kHz.
- Integrated L1/L2 GPS, IMU and tachometer
- Accuracy 8mm, Precision 5mm.
- Digital camera system (optional)



## LMS-Q680i Airborne Scanner

- Long range airborne scanner, ideal for complex terrain.
- Easy to install into any fixed aircraft or helicopter.
- 60° wide field of view.
- High PRR of 400kHz.
- 266,000 measurements/second
- Accuracy 20mm, Precision 20mm.
- Laser class 3R.



## VQ-820G Airborne Scanner

- Water penetrating, hydrographic scanner, designed to survey seabeds, shorelines, lakes, rivers, as well as land.
- Easy to install into any fixed aircraft or helicopter.
- 60° wide field of view.
- Very high PRR of 550kHz.
- 200,000 measurements/second.
- Accuracy 25mm, Precision 25mm.
- Laser class 3B.



## VUX-1

## RiCopter





## Optech CMS-V500

Optech's CMS Cavity Monitoring System is the ideal scanning solution for dangerous and inaccessible cavities. With wireless control using the included Netpad handheld computer and an extendable boom system, the CMS can go deeper and farther than other scanning solutions, all while maintaining operator safety. The unit is fully programmable, allowing the user to define scan parameters including elevation step, azimuth step and scan limits.

CMS provides efficient and accurate measurements of voids and cavities in underground mines. It can be inserted through boreholes as narrow as 25 cm (10 inches).



Underground cavity scanning with the Optech CMS-V400 scanner.



## MDL Dynascan S250X

Designed as a "Plug and Play" mobile LiDAR system, the S250X is a fully integrated high speed laser scanner, high accuracy GPS positioning system, and inertial measurement unit in one. The dual head 'X' Plane S250X Dynascan is designed for higher accuracy at highway road speeds. With a net pulse rate of 72 KHz and a net line rate of up to 60 lines per second, the result is more data at faster speeds with less 'shadowing'.

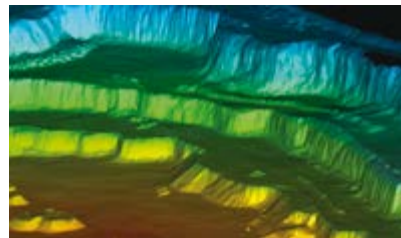
The S250X's high performance (+/- 1 cm) lasers, with a range of up to 250 meters, makes Dynascan the most effective, 'all weather', rugged mobile mapping system on the market today.

The system is light weight, highly portable and may be used on land or water vessels to acquire 3D survey quality data of topography, stock piles, bulk earthworks, urban developments, industrial plants, utility cables, bridges, dams, harbours, beaches, river banks, and much more.

Accuracy: +/- 10mm with RTK GNSS

Range: 250m

Scanning Rate: Up to 72 KHz



Open cut mining data acquired from the MDL Dynascan.



## Scanning Software

C.R.Kennedy can sell and train end users on a large range of laser scanning software, for whatever your scanner, workflow or end deliverable may be.

### Leica HDS suite

**Cyclone** - [along with Register, Server, Model, Publisher, Survey, and Import modules].

**Jetstream** - xxxx

**Cloudworx** - plugin for AutoCAD, MicroStation, Rivet and SmartPlant 3D

**3D Reshaper** - For turning point clouds into high quality 3D mesh models.

### Riegl software packages

**RiScanPro** - To optimise the workflow of acquisition, registration and processing of terrestrial laser data.

**RiMining** - To simplify and optimise the workflow for open-pit mining.

**RiProcess** - For managing, processing, analysing and visualising airborne and mobile data.

**RiAcquire** - For controlling Riegl airborne and mobile scanning systems.

**RiAnalyse** - For full waveform analyse of digitised echo signals from Riegl lasers systems.

**RiSolve** - Automatic registration and colourisation of multiple scans without targets. The fastest solution to acquire, register and colourise outdoor 3D data.

# Scan & Go

**Scan & Go gives your scanners the elevation needed to complete topographic and structural surveys. Easy to use, they come with accessories that can be used with GNSS receivers and laser scanner of any brand and model.**



**Kangur Lift**



**Level Lift**

# Dot Product



The DotProduct DPI-8 is a unique handheld 3D scanner, capable of scanning where traditional scanners can't reach, or small areas in a quick turn-around time.





## Agisoft

### TMS NAVIGATOR - Tunnel Surveying made easy.

Software package for tunnelling, every task can be called up by the construction crew at the tap of a finger.

No previous surveying knowledge is required for heading guidance and excavation control.

Runs on any ruggedised Windows tablet. Intuitive interface – only a brief training period is required.

Unique automatic total station positioning method.

Some tasks:

- Checking points and profiles
- Shotcrete thickness
- Setting out Blast Patterns, Rock Bolts, Arches and Pipe Umbrellas
- Positioning Drill Rigs, Formwork and Segment Joints



# Unmanned Aerial Vehicles (UAVs)

## Aibotix X6 #LG8243094

The Aibot X6 is an ultra-modern air robot which is easy to fly and has a high degree of robotics. The intelligent, flying airborne platform has been developed with the latest multi-rotor technology.



**We have a range of UAV solutions to cater for all types of aerial work. Our rotor and fixed wing solutions are ideal for;**

- Mapping
- Inspection
- Oblique Photography & Video
- Surveillance
- Scientific Research
- Search and rescue
- Conservation
- Maritime Patrol
- Forest fire detection
- Archaeology



### Advantages over fixed-wing UAVs

- Flight position can be maintained
- Can perform both horizontal and vertical movements
- Can produce vertical and horizontal (oblique) photographs
- Can carry different sensors up to 2.5 kg
- Vertical take off and landing
- 100% autonomous flight and data collection
- Camera mount with automatic pitch and roll compensation for flexible camera angle

### Advantages over other rotary UAVs

- Propeller protected by ultra lightweight carbon housing
- Can carry high payload up to 2.5kg
- Powered by 6 engines means it may at any time be compensated for the loss of an engine
- Fully automatic, including takeoff, flightplan execution and auto landing
- Close cooperation with Leica Geosystems provides excellent sensor systems
- Own hardware and software development have high innovation cycle over the competition
- Intuitive software for the planning of routes
- Geobox specifically developed to georeference the images
- In addition to the RC remote control via tablet PC possible

Aibot-X6 Technical Details	
Length/width	3.4 feet
Height	1.5 feet
Housing	CFK (Carbon)
Weight	2.5kg
Flight weight	4.6kg - 6.6kg depending on payload and batteries
Max. Payload	3kg (higher payloads on request)
Max. Speed	40 kmh
Climb rate	28 kmh
Flight height	Up to 3,280 feet AGL. Max. 9,842 feet ASL
Flight time	up to 30 minutes (dependent on payload)
Operating Temperature	-4 - 104 F°
Sensors	GPS, Gyroscope, ultrasonic sensors, Smart-Camera System with DSP
Controlling	Remote Control, Tablet-PC (optional) or Autonomous
Power Source	Lithium-Polymer 5,000 - 10,000 mA

# Unmanned Aerial Vehicles (UAVs)

**UAVER is an hi-tech designer and manufacturer of both military and civilian unmanned aerial vehicles (UAVs) and ground control stations (GCSs).**

Ideal for creating orthographic aerial images, 3D digital terrain models (DTMs), real time video surveillance, or aerial photo/videography.

UAVER aircraft can be flown fully autonomously or with manual control, and gently land via parachute deployment.



## UAVER Besra

#BESRAMAPPER

### Easy handling

The system consists of 3 main components, i.e. ground control station (GCS), unmanned aerial vehicle (UAV) and launch system. The whole system can be setup in 10 minutes.

### Light & Portable

The system is packed in a hard case and can be easily transported with a sedan.



## UAVER Avian RTK

#AVIAN

### Simple Structure

3 servos are the only mechanical part of the system, maintenance work is minimal.

### Parachute Landing

Using parachutes ensure a gently, controlled landing, every time.

### RTK GNSS

High accuracy RTK GNSS receiver ensures data is captured as accurately as possible whilst relying on minimal ground control.

Technical Details	Besra	Avian P
Weight		4.00 kg
Dimensions		160 x 103 x 35 cm
Wingspan		1.60 m
Wing Area		48 dm <sup>2</sup>
Speed		Cruise Speed : 64 km/hr [35 knots] Max. Speed : 81 km/hr [45 knots]
Endurance		60 - 90 min.
Wind		39 - 49 km/h or 22 - 27 knots
Take Off		Bungee Cord
Recovery		Parachute
Material		Carbon fibre
Propulsion		Electric brushless 120 W Dual Prop
Battery		Lithium-Polymer 11.1 V, 5 mAh
Communication		434 / 868 / 912 MHz [optional] 19200bps Half-duplex 8 channel
Communication Range		Up to 5 km [Omni] 10 km [Directional]



Amberg Technologies has been the leading provider of specialised tunnel and rail measurement systems for more than 30 years.

A unique combination of industry knowledge and engineering expertise has produced innovative and flexible systems, based on practical designs and user-friendly software.

With worldwide support and service, these surveying solutions have won the trust and respect of both the rail and tunnelling industry.

Amberg provides an option for every task.



## GRP1000/3000/5000

For rail Surveying, Tamping, Slab-track and Clearance.

### GRP1000

Fast and accurate rail surveying, construction and tamping

Can be geo-referenced with Leica total station or GPS/GNSS

Software modules:

- Amberg Survey Basic
- Amberg Slabtrack Plus

### GRP3000

Clearance measurements in 2D or 3D to bridges, tunnels and platforms

Software module:

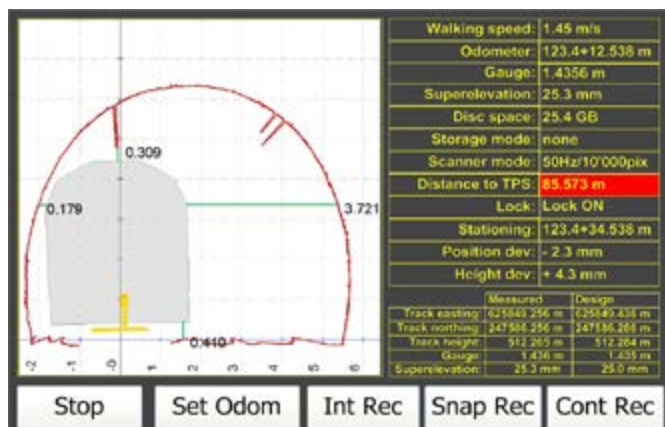
- Amberg Clearance Basic

### GRP5000

Clearance measurement and asset capture using laser scanning

Software module:

- Amberg Clearance Plus





## VMS1000/3000

Dual trolley, long-chord measurement for tamping and slab-track construction.



## AMS1000/3000

High speed measurement using Inertial Measurement Unit.

# Tunnel Surveying

## TMS NAVIGATOR - Tunnel Surveying made easy.

Software package for tunnelling, every task can be called up by the construction crew at the tap of a finger.

No previous surveying knowledge is required for heading guidance and excavation control.

Runs on any ruggedised Windows tablet. Intuitive interface – only a brief training period is required.

Unique automatic total station positioning method.

Some tasks:

- Checking points and profiles
- Shotcrete thickness
- Setting out Blast Patterns, Rock Bolts, Arches and Pipe Umbrellas
- Positioning Drill Rigs, Formwork and Segment Joints





# Underground Service Locators



**With the DIGISYSTEM operators can locate, trace and mark underground services quickly, precisely and reliably prior to excavation.**

It can be used for metallic pipes, power / data cables, and plastic piping or conduit. The DIGISYSTEM takes the guess work out of underground digging, whilst increasing productivity and safety. Buried service location has never been so easy.



## Digicat 650i

#LG795941

The Digicat 650i has a sensor depth of 3m, fits of data logging, Bluetooth Wireless Connectivity and service depth indication, when used in conjunction with the Leica Digitex.

Available in two display formats, offering depth estimation to 3m and an accuracy of 10%. With its automatic controls and combined detection mode "Auto Mode" the Digicat 550i locator has been specifically designed to reduce human error during the location process. Combined with its precise and reliable service positioning, the Digicat 550i will prevent damage to underground services during excavation projects. Active signal tracing is available when using the Digitex 8/33 signal generator.



## CST 19-202HC Magna Track 202

#530602

LCD indicator offers a digital bar graph display, plus standard audio tone, to precisely identify the target object. Metal detector. Locate ferrous objects under ground, under snow, or in water. Erase function lets you block out interference from a magnetic disturbance [such as a nearby fence].



## Digitex 100t Transmitter

Signal Generator & Digitrace

#LG795946

Designed in conjunction with the DIGICAT locator, to easily and accurately trace the route of, or locate, an underground cable or metal pipe that does not carry a naturally present signal. The DIGITEX generates a specific "active" signal, which can then be traced using the DIGICAT. The Digitrace cable comes in 30m, 50m and 80m models.

## Digitrace 30m/50m/80m

#LG731050 / LG731051 / LG731052

The Digitrace is connected into the Digitex 8/33, and fed into non-metallic pipes or conduits. The Digicat 550i and 200 are used to detect the location of the Digitrace. The Digitrace is available in 30m, 50m or 80m lengths.

## Accessories

Digicat carry bag #LG740307

DigiMouse point radiator #LG731053

Property Connection Set #LG731670

Signal Clamp (100mm diamter) #LG731056



## Leica Ultra Locators

Save time and increase confidence in your results with the Leica ULTRA, our most advanced precision utility tracing instrument.

Integrating intelligent signal processing with unique flexible operating modes, Leica ULTRA traces buried utility lines accurately for safe underground excavations and utility surveys. Outstanding performance with operational ease and flexibility.



## Leica Ultra

Ultra Advanced Locator #LG818698

Ultra Standard Locator #LG818698

Ultra Advanced Transmitter #LG818700

Ultra Standard Transmitter #LG818701

### Configuration for challenging environments

Optimise the instrument to overcome the most challenging and complex site conditions. The Leica ULTRA locator can be configured for different project environments and has more than 100 programmable operating frequencies available. Programme modes can adapt the antennas to deliver improved accuracy and repeatability.

### Best frequencies in congested environment

When working in congested environments, the Leica ULTRA incorporates Ambient Interference Measurement (AIM), which digitally analyses the surrounding area for noise and recommends the best frequencies for accurate utility tracing.

### Trace utilities through any obstruction

There will always be an occasion when the utility runs close to or underneath an obstruction. With Offset Measuring, the Leica ULTRA locates the target line if not directly accessible from above. The function uses the available data to estimate the horizontal and vertical (depth) distance.

### Transmitter to receiver link

Control the transmitter directly from the receiver with the cutting-edge communication link between the Leica ULTRA receiver and the transmitter. No more walking from the tracing line to the transmitter, simply adjust the settings automatically.

### Clear operational display

Clear graphical LCD screen, with auto-pinpointing directional arrows. Ensure confident and fast tracing in all operating conditions, day or night, with the large backlit display.

### GNSS & GIS integration

True one man, single-step data capture solution for buried utility mapping or surveying applications. Leica ULTRA integrates with GNSS or GIS data capture devices.





## Leica DS2000

#XXX

### Leica DS2000 Utility Detection Radar

Uncovering safer, faster, more

There's a lot going on underground that you need to know about before you ever start to dig. The Leica DS2000 Utility Detection Radar finds all potential threats, including non-conductive pipes and fibre optics, increasing safety by lowering the risk of accidentally hitting underground assets.

Increase safety, speed up work and lower asset management costs with the ability to prevent hazardous outages and collect more information. The DS2000 better your business by making it safer, faster and more efficient.

#### Key benefits

- Increase safety when the DS2000 identifies all potential threats
- Get to assets and recover quicker from outages when you know exactly where underground utility assets are located
- Dual-frequency antenna to detect deep and shallow targets simultaneously
- Easily collect and understand data with the DS2000's simple and intuitive software and data storage
- Simple data storage and export to continue working on the post-processing at the office
- Effortlessly maneuver around the most challenging sites with the DS2000's advanced ergonomics
- Expert knowledge of Leica Geosystems with more than 270 service centres worldwide
- PROTECT by Leica Geosystems - the strongest warranty in the market

#### Detection and underground mapping solution

Combined with the powerful and rugged Leica CT2000 field tablet, the GG03 or the GPS60 smart antenna, and the DIGICAT intelligent cable locators and DIGITEX transmitters, the DS2000 is part of the complete Leica Geosystems detection and underground mapping solution that will enhance your business by making it faster and more efficient.

## Specs etc





## Leica Zeno 20 & SmartNet Aus – It's simply more than GPS

The Leica Zeno 20 is the first high accuracy data collector tool that can run on an Android or Windows Embedded Handheld operating system. Powered by your favourite mobile GIS application, such as Leica Zeno Mobile, Geolantis.360, ESRI Collector and many more, users can now download their favourite Android or Windows applications to customise this robust data collector.



### Zeno 20

#xxxx

#### Features

- Lightweight and compact
- Dust and water resistance IP67 rating
- Android or Windows Handheld Embedded
- 4.7" FWVGA (854x480) IPS, sunlight readable
- 120 channels, L1 & L2, GPS, Glonass, BeiDou, Galileo
- 1 Hz or 5 Hz update rate
- 1 cm + 1 ppm horizontal real-time accuracy (RTK)
- 8 Megapixel camera
- WWAN 3.8G, Wireless LAN, Bluetooth



Combining the new Leica DISTO™ S910 with the Leica Zeno 20 changes how users can collect asset information in demanding areas. The Disto S910 can measure directions, and with the positions delivered from the Leica Zeno 20 you have a revolutionary GIS tool

The Zeno 20 was designed to enable non-GIS professionals to collect assets with a high degree of accuracy -- all the way down to centimetre accuracy when used with an AS10 external antenna or a wireless SmartAntenna.



## Mobile Software



### Leica Zeno Mobile

Developed by Leica, Zeno Mobile is a complete tool for data capture with the simplicity of an Android app. With an outstanding intuitive way of data collection, managing assets has never been so simple.

- Accurately survey and map above and under ground assets.
- A very simple user interface, designed for non-GIS and non-survey professionals. Stake out new engineering design
- Record associated attributes and create custom forms maintenance and condition assessment.
- Easily import and export ESRI shape files, Google KML an ASCII for use in any GIS/CAD programs.
- Option to integrate with underground locating devices and Leica's Disto S910 laser distance meter.



Geolantis.360 is a web and mobile platform that combines smart field forms and workforce management with advanced GPS, CAD & GIS functionality.

- This integrated utility mapping & workforce management platform enables the fastest, most accurate field inspections, surveys and audits of assets and infrastructure.
- Integrates directly with Utility Tracing and Detection Radar Systems for seamless data integration.
- Update drawings, raw data, location pictures, data layers and mobile forms remotely and in real time
- Operate at an enterprise level rather than having to manually update individual users one at a time.
- Project managers can track field operations in real time and make critical decisions with a broader understanding of the current situation.



### Zeno Collector Esri

ZenoCollector combines the world's leading GIS software from Esri with the hardware expertise of Leica Geosystems in surveying and geographical measurement.

- The Zeno 20 is the first dedicated, job-site tough GIS asset collector to support the Android OS. With Esri's Collector for ArcGIS app and ArcGIS Online, GIS crews can populate maps directly from the field.
- ZenoCollector handheld packages achieve sub half-meter to <5cm accuracy and include a Zeno 20, an ArcGIS Online account, and Zeno Connect, which enables the Zeno 20 to run the Collector for ArcGIS app. Upgrade to a pole package with an external antenna to achieve sub-meter to centimetre-level accuracy.

C.R. Kennedy, a proud partner of



**Geolantis.360 – cloud powered utility mapping & workforce management platform**

Geolantis modular software solutions delivering GIS & CAD & Asset Management to mobile field crews. Faster and rigorous workflows will improve productivity, efficiency and standardisation of operations in the field and office. Designed for small and large operators in surveying, utilities and local Government, project managers can track field work in real time and make critical decisions with a broader understanding of the current situation.



**Key Benefits**

- Simplification of processes and workflows
- Significantly improves data quality
- Consistent data collection methods
- Combines GIS & asset management
- Drives data accuracy of field based work
- Improves efficiency of field based work
- Workflows to maintain data integrity

**MANAGE AND SHARE**

An easy-to-use online portal allows management of all aspects of documenting utility location tasks. The user can switch between street view, satellite imagery and cartographic street maps. Field acquired survey data becomes instantly available and can be accessed by users anytime and anywhere.

Geolantis shares data to all devices and users within your organization and beyond.

- Analyse location results
- Visualize on online maps
- Filter on users, within date ranges or any attributes
- Export to standard GIS & CAD formats
- Share data to your clients
- Role-based access control.

**DATA COLLECTION & INSPECTION**

Easy, fast & accurate. The game changer in data collection

- Field data is collected based on the data model defined centrally in Geolantis.360 web management console. This ensures data integrity.
- Feature classes, attribute lists and smart forms can be defined effortlessly.
- Measure multiple features with only a single observation. This saves time and assures integrity of the topology.
- Encompasses all map viewing and navigation capabilities while hiding the complexity of GIS and CAD systems.
- Support of asset inspection functionality with smart forms and automatic assessment reporting.
- Syncs data automatically with Geolantis.360 portal and all other Geolantis.360 mobile users across the entire organisation. The mobile devices can also work in offline mode. Geolantis.360 notifications steadily monitor the system parameters, including accuracy. All quality parameters are stored as meta data.

**MANAGING YOUR MOBILE WORKFORCE**

Geolantis.360 is not only a mapping tool - it's a fully integrated solution for managing a mobile workforce

- Work force management
- Work order management
- Project time tracking
- Integrated communication tool (chat)
- Document management

**Utility detection integration**

Geolantis.360 integrates the Leica Geosystems Detection products into a simple survey workflow, empowering the user to apply locator depth measurements to GNSS observations. The result is a seamless fusion of both worlds – with all locator related data reviewable either in Geolantis.360 or any export format.

- Direct connection between the Leica Zeno 20 and the Leica Locator via Bluetooth.
- Locate map and measure the depth of the utility.
- All meta data from the locator, along with - attributes captured via smart forms is associated with the mapped feature and included in reports.



## Leica iCON

Fully understanding construction carried us beyond the ordinary. Leica iCON was designed from the ground up for the construction market, enabling you to enhance your performance, and increase your profitability through perfecting your construction workflow.



### Leica iCON Robot 50

Save time and increase your productivity by doing layout work and as-build checks yourself. With Leica iCON robot 50 you don't need an operator at the instrument. The robotic total station can be operated from the field controller at the prism pole, at the point you need positioning.

Designed specifically for ease of use within the construction industry, simply level the instrument and go! With the iCONstruct software, you can use it for a wide range of measuring and positioning tasks on site.



### Leica iCON GPS 60

This GNSS SmartAntenna was developed specifically towards construction needs. Featuring superior GNSS technology and various integrated communication options, it meets all requirements for reliable and precise positioning work on site.

Its integrated display shows you full status information of the system simplifying operation and configuration. Leica iCON GPS 60 offers exceptional network capability allowing you to work with SmartNet Aus or other RTK networks for high-accuracy GPS positioning.



### Leica iCON 80

Leica PowerBox is designed to exceed the needs of the toughest machine control applications. Vibration, dirt, dust, rain or snow can not stop the Leica PowerBox providing high accuracy uninterrupted data. Combine Leica PowerBox with Leica PowerAntenna for a unique dual GNSS control solution for use on excavators. Use the same components for all off-machine applications, such as base station, pole or site supervisor vehicle solutions. Leica PowerBox is a scalable position system, that can grow with your need. GLONASS, Networking, update rate and base station use, can all be configured to provide a tailored solution for your needs.





## Leica iCON telematics

Leica iCON telematics is a web-based suite of tools that allows contractors to increase the efficiency of their machine control operations on site and manage their machinery fleet. It is the main connectivity source of iCONnect, one of the four pillars of the Leica iCON solution family, and features substantial telematics functionalities.

The Leica iCON telematics services include fast and easy data transfer from office to site and to construction machines, remote support for the operators and basic fleet management functionality. iCON telematics seamlessly integrates with the workflow on construction projects and the Leica iCON solutions, simplifying work processes and enabling significant time and cost savings.

Leica iCON telematics currently consists of three modules - View, Sync and Track. These modules can be accessed through an intuitive web-based interface with powerful dashboard to rapidly find important information needed for taking actions. Users are also presented with a fleet overview and have overlay project data on Google map.

**View** supports multitasking, meaning users can have several machine panels active simultaneously. The office manager or support personnel can remotely view the operator's screen, carry out remote diagnostics and provide instant support if needed. This reduces site visits and saves time by remotely checking settings on the machine. Supervisors can increase machine uptime by scheduling operator training with a remote instructor.

**Sync** enables upload of the latest design data to the fleet immediately, ensuring the fleet works with up-to-date project files on the machines. Data can be transferred remotely in both directions from the field to the office, using 'drag & drop' from the desktop. Latest firmware can also be uploaded remotely what reduces machine visits, decreases downtime and simplifies support and maintenance.

**Track** functionality allows the user to track and monitor the machine fleet in real-time and provide regular activity reports by machine or by project. It enhances day-to-day operations by tracking results instantaneously and monitor the utilization of equipment on site.



## Leica iCON CC65 / CC66

versatile tablet PC's are designed to transport a user's office directly to the field

The rugged, lightweight devices have a clear and easy-to-use 7" touch screen designed to facilitate with data collection tasks on site, while at the same time communicating with the central office, real-time data transfer is made easy!

- Large 7" sunlight readable touch screen display for convenient operation
- Windows 7 Ultimate Edition multi-lingual operating system
- Various communication possibilities (Bluetooth®, WLAN, 3G modem, LAN, USB, RS232) for the use with different sensors for different applications
- Leica iCON CC65 model features 3G modem
- Leica iCON CC66 model features 3G modem and long-range Bluetooth®



iXE2

## iCON excavate iXE2, 2D excavating system

Our dual-slope system combines the depth, pitch and roll - giving you a complete picture of the excavation works. iXE2 is suitable for small road excavation jobs, drainage work or parking lot excavations.

An additional rotation sensor on the counterweight upgrades the system to a dual-slope capability. The 2D function uses a compass to fix the slope direction. This means that you can move the machine without the system losing the direction.

The dual-slope system contains two sensors that record the pitch and roll and compensate for the tilt of the machine. The machine can thus stand at an inclined position and still carry out levelling work around the entire machine.

### 2D excavating system functions



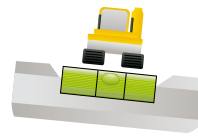
#### Depth

Commonly used for bases, foundations, etc.



#### Grading Work

Set the right depth and the desired tilt in one direction.



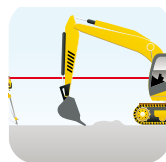
#### Roll

Sensors record and compensate for the machine tilt.



#### Slope

Set the desired slope for the embankment.



#### Laser Reference

Gives possibility to use rotating laser as a reference.



#### Pitch

Sensors record and compensate for the machine tilt.



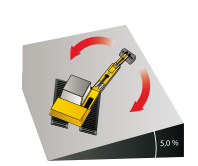
#### Pipelaying

Set the desired depth and slope of the pipe trenches.



#### Gradient

The system can handle both pitch and roll.



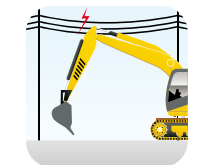
#### Compass

The system uses a compass to establish the direction of the tilt.



#### Underwater Work

The bucket motion is shown in the graphical display.



#### Height Alert

an audible signal warns the operator if the defined limit is exceeded. useful around bridges and overhead lines.



iXE3

## iCON excavate iXE3, 3D excavating system

With the 3D system from Leica Geosystems, you will work with high precision GPS and be able to monitor the excavation position by means of a digital model.

The iXE3 enables you to use the excavator for point collection and stake out activities. iXE3 is suitable for projects requiring staking out, e.g. large road and infrastructure projects and subdivisions, industrial sites or dereliction works.

Connect the machine computer via the built-in GSM modem to get quick support and transfers files. Our 3D system enables you to take the last step towards machine control. Your efficiency rate will improve by up to 30% making it easy to gain return on the investment.

### GPS/3D functions



#### 3D/GPS

Our 3D system enables you to use dual slope in 2D and reference models in 3D.



#### 2D or 3D

Switch between the 2D and 3D screens by just pushing a button!



#### ICON 3D software

Complete your system with iCON 3D, the software that allows you to create terrain models directly on the screen. A function that gives you great on-site freedom.

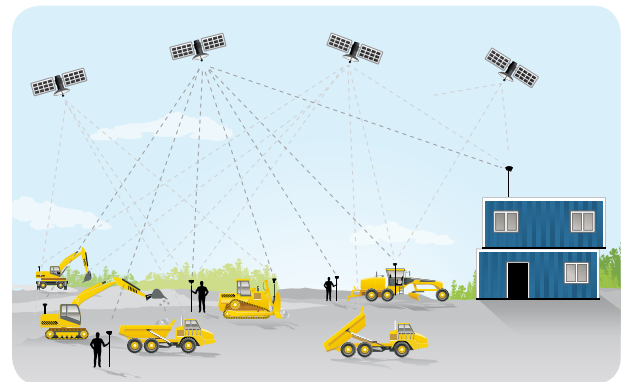


External depth indicator

### Remote site and machine access



The iCON telematics services include fast and easy data transfer from office to site and to construction machines, remote support for the operators and basic fleet management functionality.



### GPS/3D on your machine

The machine computer receives the machine position through a GPS signal and the bucket position from the excavation system. These values are then matched with the digital surface. You will see the bucket move over the design surface telling you how deep to go.





## Our machine control displays

Leica Geosystems offers both 2D and 3D solutions. With our unique PowerSnap system, one single 3D display can be used on your dozers, graders, excavators, and wheel loaders. This allows you to spread your investment across more machines and obtain a mixed fleet that you can use for many different tasks.

## Elevation



### Ultrasonic sensors

Using the Leica Geosystems patented Trisonic is very simple. The curbstone, adjacent road surface or a stringline provides the reference elevation for the moldboard. Ultrasound is often used as a reference on one side and cross-slope on the other.



### MLS700 laser receiver

The MLS700 is a laser receiver with a 360 degree range.



### Total Station/GPS

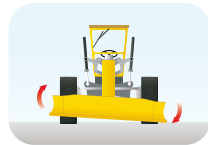
The Leica iCON measuring equipment fits seamlessly into your machine control system and the file formats used are supported worldwide. The iCON GPS and the robotic systems will help improve your productivity and precision right from the start.

## Cross Slope



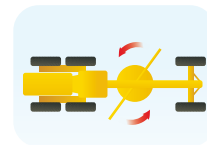
### Multi-switch

Mounted on the control levers allow you to stay in control at all times – safer, faster and more productive.



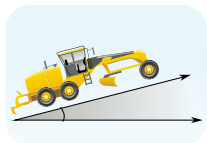
### Blade tilt sensor

The MSS1300 tilt sensor maintains the desired cross-slope precisely.



### Rotation sensor

The MRS1300 rotation sensor compensates the moldboard's rotation angle influence on cross-slope - set the blade exactly how you need it, iCON grade takes care of the rest.



### Mainfall sensor

Mainfall compensation allows for precise grade and slope control whatever the project conditions.

The result of 15 years knowledge and experience from the world's first provider of stringless concrete and asphalt paving, trimming and milling technology



With Leica Geosystems' unique PaveSmart 3D control system, the machine is controlled without stringlines. Starting from the project data, the actual 3D position is measured by robotic total stations and/or GPS receivers and transmitted to the Leica Machine Computer.

High-accuracy machinemounted slope sensors provide long and cross-slope. The results of this "design-vs-actual" comparison represent the elevation and slope corrections required to keep the machine on-grade, typically within an accuracy of 5mm (3mm for concrete), depending on jobsite conditions.

PaveSmart 3D transmits corrections to the machine controller which regulates the hydraulics, in a similar way to controlling with the conventional sensors – meaning your crew doesn't need to be retrained to work with 3D.

- Fully automatic grade, slope and heading control
- Works with the following industry-leading Slipform pavers manufacturers:
  - Gomaco
  - G&Z
  - Wirtgen
  - PowerCurbers & PowerPavers
- Supports all MOBAmatic (PWM & CAN) and Vögele NaviTronic NivelTronic levelling systems and all modern asphalt paver brands
- Puts the project plans directly on the machine
- Imports from as good as every CAD system
- Puts crews in control of their own work – all paving information available at a glance
- Uses Leica Geosystems world-leading 3D sensor technology
- One supplier, one integrated modular solution

# Sharp Grade Leveller





## A Smarter Choice

### Turn your excavator into a complete customized tool carrier

The Rototilt turns any kind of excavator into a proficient Jack-of-all-trades. The new Rototilt RS60 develops further the tried-and-tested basic concept that made this tiltrotator the most popular and most efficient in the world.

- World's leading tiltrotator
- Increase use of your machine
- Work quicker and safely
- Save fuel & wear and tear on your machine
- More flexibility
- Works with all major machine control systems
- Modular configuration
- Leica iCON ready
- Range 1.5 – 30t excavators

Quite simply, you get more done with Rototilt® year after year.





**Disto D110** #LG808088

The world's smallest laser distance meter with integrated Bluetooth® Smart technology. By using its precise measurements users can create floor plans and sketch easily by connecting it with the Leica DISTO™ sketch app on a smartphone or a tablet.



**Disto D2NEW** #LG837031

Now with Bluetooth, a fully integrated intelligent endpiece, a bright white display and an ISO certified measuring engine that drives 1.5 mm accuracy and 100 m measuring range.



**Disto X310** #LG790656

This Disto is water, dust and shock proof to IP65, and includes an in-built 360 degree angle sensor and 80m range.



**The new Leica Disto range is the most advanced range of hand held laser distance meters in the world. All Disto models are accurate to within ±1mm, and come with a 3 year international warranty upon online registration.**



**Disto D410** #LG822822

Rugged IP65 design to withstand dust, dirt and rain, and features a point finder camera, a bright LCD screen and Smart Horizontal mode.



**Disto D510** #LG792290

Large colour screen, digital view finder, Bluetooth and 360° tilt sensor in one. Power Range technology can measure up to 200 metres to a target plate.



**Disto D810** #LG792297

The most versatile laser distance meter in the world! Equipped with a large colour display, digital view finder, tilt sensor and Bluetooth, this model will perform for the most demanding users.

Model	Range	Tilt Sensor	Bluetooth	Viewfinder
Disto D110	60m	NO	YES	NO
Disto D2NEW	tba	tba	tba	tba
Disto X310	80m	YES 360°	NO	NO
Disto D410	tba	tba	tba	tba
Disto D510	200m	YES 360°	YES	YES
Disto D810	200m	YES 360°	YES	YES
Disto S910	tba	tba	tba	tba

## Disto S910 #XXXXX

**Pioneers of laser distance meter technology**  
**Leica Geosystems is excited to announce the new Leica DISTO™ S910 with “Point to Point” Technology. Whether you need to create as-built documentations, calculate roof dimensions, integrate data into BIM or CAD software – the Leica DISTO™ S910 calculates the measures of any distance between two points from one location. Measure anything from anywhere - no matter what shape, how complex or how hard to reach!**



The Leica DISTO™ S910 is the world's first laser distance meter with the revolutionary P2P Technology providing substantial application benefits to solve complex measuring tasks. Without any surveying knowledge create realistic object visualisations and high levels of fast and accurate documentation. Transfer measurement instantly to PC's, smartphones and tablets via WLAN or Bluetooth® Smart technology. Alternatively save the results and pictures on the device as DXF data and download later with the USB interface for use in CAD software. The fully digitalized workflow saves valuable time.

### Measure from point to point with P2P Technology

The integrated Smart Base enables to measure distances (e.g. widths and tie distances) between any two points, angles and inclinations at the same time from one location. Thus, you'll never have to reach for inaccessible areas again, enabling even the most complex measurement task to be quickly, accurately, and safely carried out.



### Capture measurement data in CAD format

The Leica DISTO™ S910 can save all the measured points into a DXF file, as a floor plan, wall layout or even as 3D data, which can be downloaded later in the office to a PC via the USB interface.

### Real-time transfer of point data

Transfer measurement data directly on site over the WLAN interface to a portable computer to further process it in your preferred software. Document a project or check a layout in real-time and transmit as many measurement points as you like – with or without pictures.



### 300 m range with X-Range Power Technology

With the innovative X-Range Power Technology on board, the Leica DISTO™ S910 represents the measuring technology of the future. It achieves ranges of up to 300 m and guarantees the best measuring performance, i.e. quick and reliable measurements, even to poorly reflecting objects.



Disto S910 #XXXXX







### GZM26 #LG723385

GZM26 target plate (flat A4 size)  
210 x 297mm.



### GZM27 #LG723774

GZM27 target plate (Plus section)  
73 x 98mm / 147 x 98mm.



### GZM30 #LG766560

GZM30 target plate. 274mm x 197mm.



### Leica Tripod TRI 70 #LG794963

- Aluminium tripod with easy fine adjustment
- Working height from 0.40m to 1.15m



### GLB30 #LG780117

Made by UVEX Germany, super light laser visibility glasses for better visibility of laser dot outdoors, with 3 different lenses; laser visibility, safety glasses and sun glasses.



### FTA360 adapter #LG799301

- Stable adapter with fine adjustment for convenient and accurate aiming
- Minimized measuring deviation for indirect measurement
- Fits perfectly on Leica TRI70 and TRI100 tripod

### Leica Tripod TRI 100 #LG757938

- Aluminium tripod with easy fine adjustment
- Working height from 0.70m to 1.72m

Item number	Description
LG780117	Leica Disto glasses with 3 interchangeable lenses; clear (safety), tinted (sunglasses) and red (laser).
LG723385	Disto GZM26 target plate (flat A4 size - 210 x 297mm)
LG723774	Disto GZM27 target plate (73 x 98mm / 147 x 98mm. Used for interior work.)
LG766560	Disto GZM30 target plate (274 x 197mm)
SLKF630	SLIK Tripod for Disto/ Lino
LG794963	Disto TRI 70 Tripod for fine adjustment
LG723774	Disto TRI-100 TRIPOD, Fine adjustment
LG769459	Disto LSA360 adapter for pole or tripod
LG778359	Disto TA360 adapter for 1/4" thread tripods
LG766560	Disto Plastic target plate. 274 x 197mm
LG667169	Disto soft carry case
LG788956	Leica UC20 AAA battery charger, includes 2 x AAA batteries.
LG828414	FTA360-5 adapter



## Complete 3D Measurements

Stay in control - in whatever shape of room. Capture and record distances, areas, inclinations, and angles effortlessly, even for inaccessible points. Forgotten measurements and handwriting errors are things of the past.



## Room scan

Whether in fully automatic or manual mode: you can measure complete rooms, walls, windows, structural connections or stairs – from only one station point.



## Projector

Whether ceiling grid or project layout for floors or walls – the Leica Disto 3D projects your design onto any surface – point for point.



## Tools

Quick tools inspire the user: establish plumb, create level reference points, or precisely transfer offsets or locations.



#LG784357



## Leica Disto 3D Package

#LG784357

## It can do everything

- Measure plan position, height and distance, in all three spatial axes
- Intuitive user guidance
- Measure from one station – every visible point can be measured by targeting with the visible laser dot - without the need to walk to the target
- Measure to difficult-to-reach points, such as roof edges
- As-built records of ceiling, floor and roof surfaces, volumes, inclination, falls, height differences, angles
- Plumbing of points, parallel offsetting of axis, levelling, transferring levels from wall to wall. Forget spirit level and measuring tapes!
- Realtime display of measurements as drawings on the screen
- Camera display to aid in positioning points.
- Pocket calculator
- Record and export in the form of standard tables, photos, DXF files, and text files to USB stick.



## Leica DISTO™ D810 touch carrying case

The professional package for convenient aiming and precise measurement.

The new Leica DISTO™ D810 touch carrying case is the professional package for convenient targeting and precise laser distance measurement. It includes the Leica DISTO™ D810 touch, the Leica FTA360 adapter and the Leica tripod TRI70. Everything comes together in an attractive and robust carrying case.



## Leica DISTO™ and Lino carrying case

The professional package for easy measuring and alignment.

This package was specifically designed for interior applications. It combines everything that you will need for accurate and reliable measuring and alignment. The laser distance meter Leica DISTO™ D210, the cross line laser Lino L2 and the tripod TRI 70 are stored safely and ready-to-use in the robust, attractive and functional carrying case. Keeping your tools in the convenient carrying case also ensures that nothing will be lost or forgotten. The tools are compact, handy and easy to use.







**The best in the industry! With Leica Linos everything is plumb and perfectly aligned. They project lines and points to millimeter accuracy, leaving your hands free to get on with the job. All Linos have a 3 year warranty (upon registration).**

### All Leica Linos have:

- Range of 15m, more than 30m with detector.
- Accuracy @ 5m -  $\pm 1.5$  mm
- Self levelling -  $4^\circ \pm 0.5^\circ$
- Protection - IP54, IP65 for L360.
- Locking switch for laser module.



**Lino L360** #LG790509



**Lino L2+** #LG783711



**Lino L2P5** #LG777069



**Lino P5** #LG777068

### Leica Lino Lasers

Item Number	Model	Description	Accessories
LG783711	Lino L2+	Cross line laser	Hard carry case, soft carry case, batteries, target, & magnetic bracket
LG790509	Lino L360	360° horizontal line and 180° vertical line	Hard carry case, target plate, mini tripod adapter, batteries & charger.
LG777068	Lino P5	5 point vector	Hard carry case, soft carry case, batteries, target, & magnetic bracket
LG777069	Lino L2P5	5 point and cross line laser	Hard carry case, soft carry case, batteries, target, & magnetic bracket

### Accessories

Item Number	Model
LG780117	Laser Glasses
LG784962	RVL100 Laser Receiver
LG794963	Tripod
LG758832	Mini Tripod
LG758839	Wall bracket
LG761762	CLR-290 Ceiling Pole 2.9m



**RVL100**  
#LG784962

### Receiver for Lino L2P5, L2+ and LINO L360

For finding red pulsed laser beams over longer distances or in difficult light conditions.

- Localizes the laser beam at a distance of up to 80 m
- Large reception window of 42 mm to find the laser beam quickly



**CLR-290 ceiling pole**  
#LG761762



## Fit, fast, tough – Select the perfect team player for your site

Leica Rugby lasers are the toughest rotating lasers suitable for all construction applications. Level, align and square much quicker than ever before, eliminating costly errors and downtime.

### 600 Series



#### Leica Rugby 610

One button simplicity

- Simple and reliable, one button laser where no mistakes are possible
- Superb performance with all Leica Rod Eye receivers – extend your working range using the Rod Eye 140 Classic and the Rod Eye 160 Digital



#### Leica Rugby 620

Simple & reliable - no mistakes possible

- Concrete forming, pad placement and framework levelling; setting foundations and footings has never been more efficient
- Slope matching up to 8% in single axis



#### Leica Rugby 640

Versatility inside and outside

- Fit for any interior and exterior levelling, aligning and squaring application
- Scan 90 – make layout easier by quickly moving the beam to the left or right side



#### Leica Rugby 670

XXXXxxx

- XXxxxx
- XXxxx



#### Leica Rugby 680

XXxxx

- XXxxxx
- XXXXx





## Rugby Lifetime Manufacturer's Warranty

The warranty is covered for the entire product lifetime. This includes a free of charge repair or replacement for all products that suffer defects as a result of faults in materials or manufacturing.

## 800 Series



### Leica Rugby 810

One button simplicity

- Simple and reliable, one button laser where no mistakes are possible
- Superb performance with all Leica Rod Eye receivers – extend your working range using the Rod Eye 140 Classic and the Rod Eye 160 Digital



### Leica Rugby 820

Simple & reliable - no mistakes possible

- Concrete forming, pad placement and framework levelling; setting foundations and footings has never been more efficient
- Slope matching up to 8% in single axis



### Leica Rugby 840

Versatility inside and outside

- Fit for any interior and exterior levelling, aligning and squaring application
- Scan 90 – make layout easier by quickly moving the beam to the left or right side



### Leica Rugby 870

XXXXxxx

- XXxxxx
- XXxxx



### Leica Rugby 880

XXxxx

- XXxxxx
- XXXXx

## Rotating Lasers

Technical data	Rugby 610	Rugby 620	Rugby 640	Rugby 670	Rugby 680	Rugby 810	Rugby 820	Rugby 830	Rugby 840	Rugby 870	Rugby 880
Weight	2.38 kg	2.56 kg	2.56 kg	2.56 kg	2.56 kg	3.0 kg	3.0 kg	3.0 kg	3.0 kg		
Grade range	-	± 8% SG	± 8% DG	± 8% SG	± 8% DG	± 45°	± 10% DG	± 10% DG	± 10% DG		
Grade	-	Single	Dual	Single	Dual	Single	Dual	Dual	Dual		
Dial in Grade	-	-	-	Yes	Yes	-	-	-	-		
Vertical Mode	-	-	Yes	-	-	-	-	-	Yes		
Plumb up	-	-	Yes	-	-	-	-	-	Yes		
Smart Targeting/ Smart Lock	-	-	-	-	-	-	Yes	-	Yes		
Smart Slope	-	-	-	Yes	Yes	-	-	-	-		
Accuracy	± 2.2 mm at 30 m	± 1.5 mm at 30 m				± 1.5 mm at 30 m					
Rotation – RPS	10	10	0, 2, 5, 10	10	10	10 rps	10 rps	10 rps	0, 2, 5, 10		
Scanning – degrees	-	-	10°, 45°, 90°	-	-	-	-	-	10°, 45°, 90°		
Scan 90°	-	-	Yes	-	-	-	-	-	Yes		
Self Levelling Range (diameter)	1,100 m	1,100 m	1,100 m	1,100 m	1,100 m	1,300 m	1,300 m	1,300 m	1,300 m		
Remote Control	-	-	Yes	-	-	-	-	-	Yes		
Li-Ion batt. / hours operation	40+ hours					50+ hours					
Alkaline batt. / hours operation	60+ hours					60+ hours					
Seal (both excluding and including battery pack)	IP67					IP68					
Warranty	3 year warranty on registration					5 year warranty on registration					

### All self levelling, Class 2, Visible red laser light

## Accessories

For finding red pulsed laser beams over longer distances or in difficult light conditions.

- Localizes the laser beam at a distance of up to 80 m
- Large reception window of 42 mm to find the laser beam quickly



### Leica Rod Eye Basic

#LG769811

#### One button simplicity

- **LCD Indication:** two clear displays on the front and back of the receiver
- **Audio Indication:** two settings, high for noisy outdoor jobs and low for indoor applications
- **Automatic Shutoff:** after ten minutes to conserve battery life
- **Grade Rod Bracket:** with integrated level vial ensures your grade rod is plumb and improves the reading accuracy
- **Built-in clamp:** the vial ensures good alignment & improves reading accuracy
- **Protective Overmold:** protects the receiver from possible accidents on tough jobsites



### Leica Rod Eye 140 Classic

#LG789923

- Step up with increased capture height & working distance with Leica Rod Eye 140 – with the built-in 12 cm (5") detection window you can easily detect the beam over the entire distance



### Leica Rod Eye 160 Digital

#LG789924

- Professional receiver with digital readout, half millimetre accuracy and strobe rejection
- Capture digital readout for convenient height readings



Tuf Lasers offers a range of lasers at an unbeatable price. All Tuf Lasers come with a 1 year warranty.



**HVB #RH400**

XXxxxx



**H1 #RH500**

Horizontal rotating laser with manual dual axis grade. Comes complete with receiver, remote control, glasses and carry case.



**HVG #RHVP500G**

Green laser horizontal and vertical rotating laser with plumb up and manual dual axis grade. Comes complete with receiver, remote control, glasses, wall mount bracket and carry case.



**TUF DGR #RHVPDG500**

Xxxxxx



**Tuf Red Laser #TUFXLINER**  
Self-Levelling Cross Line Laser

Tuf Red Crossline laser for quick and easy level and vertical line. Compact, easy to set up, easy to carry.



**Tuf Green Laser #TUFXLINEG**

Tuf Green Crossline laser for quick and easy level and vertical line. Compact, easy to set up, easy to carry.





**TUF 3 Plane Cross Laser** #CL360X3



**TUF 3 Plane Cross Laser RED / GREEN** #CL360X1G2R



**TUF MLINE - Red Beam**  
#MCL4V3H1P  
Multi line laser level with detector



**Tuf Cross Line** #TUFXLINE2P

Horizontal and vertical cross line laser with plumb up and plumb down. Comes complete with glasses, target, bracket and case.



**TUF 1.2XL Cross Line + 1 POINT - Red Beam**  
#CL1H2VIP

2 vertical beams with cross above,  
1 horizontal beam & 1 plumb down point

**LASER DETECTOR TO SUIT TUF RED CROSSLINE LASERS**

#D9012

2 vertical beams with cross above,  
1 horizontal beam & 1 plumb down point



**FD9 DETECTOR TO SUIT RED CROSS LINE LASERS** #xxxx



**FRD100 DETECTOR TO SUIT HVG GREEN LASER** #xxxx



**FRD300 LASER DETECTOR TO SUIT HI LASER** #xxxx



**TUFTARGETG** #xxxx



**TUFTARGETR** #xxxx



**FRA-1** #xxxx



**WM-3B WALL MOUNT BRACKET** #xxxx





## The world's smallest pipe laser.

### Leica Piper 100 #LG748704 and Piper 200 #LG748710

The Leica Piper series of pipe lasers are perfect for storm and sanitary sewer construction, gravity flow pipe line and anywhere grade and line are required with a single beam.

Built with rugged aluminium housing, Piper lasers perform exceptionally well in the toughest conditions. The Piper is the only laser pipe laser in the world that fits inside a 100mm

[4 inch] pipe, making it the perfect tool for road crossings or tight culverts.

Alignmaster is Leica patented technology in the Piper 200.

The laser searches and finds the target for quick second day setups.

Model	Piper 100	Piper 200	QL-125
Item Number	LG748704	LG748710	QBL6005213
Display	Digital	Digital	Digital
Alignmaster	No	Yes	No
Line & Grade Locks	Yes	Yes	Yes
Line Adjustment	6m @ 30m	6m @ 30m	6m @ 30m
Self-levelling	-15 % to +30 %	-15 % to +30 %	-15% to +45%
Grade range	-10 % to +25 %	-10 % to +25 %	-10% to +40%
Grade entry	Direct or by remote	Direct or by remote	Direct or by remote
Working range	200m	200m	300m
Remote control	Yes, wireless	Yes, wireless	Yes, wireless
Housing	Aluminium	Aluminium	Aluminium
Operating time	40 hours	40 hours	30 hours
Charging time	4 hours	4 hours	1 hour
Battery pack	GEB221 Li-Ion	GEB221 Li-Ion	Li-Ion
Waterproof	IPX8 – 9m	IPX8 – 9m	IPX8 – 9m
Diameter	100mm	100mm	125mm
12V cable	No	No	Yes



## QBL QL125 Pipe Laser

#QBL6005213

The QL 125 pipe laser is designed for use when space is limited. Its short length means the laser can be used in tight bends and narrow manholes with a minimum pipe diameter is 125 mm. The robust cast-aluminium housing is a common feature of QBL's pipe lasers. A compensator sensor reliably compensates for external vibrations, allowing for more accurate levelling.

Features include:

- Manual alignment with remote control
- Lithium-ion batteries
- Manual cross axis levelling
- Clear display
- Inclination angle of -10% to +40%
- Remote control
- Long 300m range

## Accessories



# Digital Spirit

## DigiPas

Digipas units are the quick and accurate way of measuring angles. All are made of a strong ABS polymer with an aluminium base and built in magnet. All have a crisp LCD to display angles in degrees and percentage slopes. Calibration can be performed by the user very quickly.

Model	DWL-80 Pro	DWL-180	DWL-280
Range	0° to 390°	0° to 390°	0° to 390°
Resolution	0.05°	0.1°	0.1°
Accuracy	30.05°	30.2°	30.2°
L x W x H (mm)	107 x 55 x 18	95 x 48 x 22	200 x 43 x 18



### DWL-80 Pro #519697

Pocket digital mini level.



### DWL-180S #519696

Turns a bubble spirit level into a digital spirit level.



### DWL-280 Torpedo Water Proof #519688

### DWL-280 Torpedo #519699

200mm long mini digital spirit level.



### Smart Tool 20cm Module

#519752



### Smart Tool 120cm #519751

The original digital spirit level

## SmartTool – The original digital spirit level

SmartTool is the industry standard digital level. Extremely durable and easy to calibrate, it will keep its accuracy for years.

Features include:

- Digital display with backlight.
- 1mm accuracy per meter.
- Display in degrees, inches/feet, or percent.
- Hold button to retain measured value.
- Audible beep at level or plumb.
- Very strong railing.
- Easy to calibrate.
- 9V battery included.



### Magnetic bracket for Smart Tool Module #519769

### Smart Tool cover 60cm #7130750

### Smart Tool cover 120cm #7130751

### Smart Tool cover module #519132



### Smart Tool 60cm #519750



### Smart Tool 60cm with laser #519754

# Survey Accessories – Batteries

The batteries available from Leica Geosystems are of the highest quality in respect of temperature tolerance, recharging capability, operating time and cycle behaviour.



**GEB111** #LG667318



**GEB121** #LG667123

**XXXX**



**GEB212** #LG772806



**GEB221** #LG733270



**GEB222** #LG793973



**GEB242** #LG793975



**GEB77** #LG439149



**GEB187** #LG667147

## Leica Batteries

Item Number	LG667318	LG667123	LG667147	LG772806	LG733270	LG793973	LG793975	LG439149
Model Number	GEB111	GEB121	GEB187	GEB212	GEB221	GEB222	GEB242	GEB77
Chemistry	NiMH	NiMH	NiMH	Li-Ion	Li-Ion	Li-Ion	Li-Ion	NiCd
Output	6V / 2.1Ah	6V / 4.2Ah	12V / 1.8Ah	7.4V / 2.6Ah	7.4V / 4.4Ah	7.4V / 6.0 Ah	14.8 V / 4.8Ah	12V / 1.2 Ah
Instrument	TPS400/800 & DNA	TPS400/700 & Builder	TPS1000 & TPS2000	Field Controllers & GNSS Receivers	System 1200, TS11/12/15, Flexline, GS10 GNSS, Piper 100/200	TS11/12/15, Flexline, GS10 GNSS, Piper 100/200	TM30 / TS30, Nova TM50 / TS60 / MS60 / P16, P30, P40	TPS1000

# Survey Accessories – Batteries



**GEB63** #LG394792



**GEV208** #LG749279



**GEV71** #LG439038



**GEV186** #LG734697



**GEB171** #LG727367

## Leica Accessories

Item Number	LG727367	LG739279	LG439038	LG394792	LG749279	LG734697
Model Number	GEB171	GEV208	GEV71	GEB63	GEV208	GEV186
Chemistry	NiMH	Mains	12V car battery		Mains	
Output	12V / 9Ah	12V / 9Ah	12V / 9Ah	12V / 9Ah	12V / 9Ah	12V / 9Ah
Description	External Battery	Power Supply	12V cable	Battery Box	Power Supply	Y-Cable RX/TCPS



Toshiba batteries are powerful, highly reliable batteries which use manganese dioxide for the cathode active material and zinc powder gel for the anode active material. The electrolyte is an alkaline solution.

## Toshiba Batteries – 2 pieces

Item Number	TSLR3SP	TSLR6SP	TSLR14SP	TSLR20SP	TS6LR61SP
Model	AAA	AA	C	D	9V



Leica Geosystems chargers ensure the fastest recharging time and the longest life span of Leica batteries.



**GKL341** #LG799187



**GKL311** #LG799185



**GKL112** #LG734753



**GKL32** #LG785703



**GDC221** #LG734369

## Chargers

Item Number	LG733271	LG734752	LG734753	LG785703
Model name	GKL221	GKL211	GKL112	GKL32
Battery	Use adapter	GEB211, GEB212, GEB221, GEB222	GEB121, GEB111	GEB77, GEB171, GEB187
Number of batteries	5	1	1	1



**GDC221** #LG734389



**GDI221** #LG733323



**GDI222** #LG733322

## Adapters for GKL221

Item Number	LG734389	LG733323	LG733322
Model name	GDC221	GDI221	GDI222
Battery		GEB211, GEB212, GEB221, GEB241	GEB121, GEB111
Type	Car adapter cable	Adapter plate	Adapter plate

# Survey Accessories – Chartwell Field Books

Chartwell field books are made to the highest specification using quality strength paper with high cotton content. They provide excellent tear resistance when wet. Strength and writing surface is retained when dried even after being subjected to extreme weather conditions. All books come with 160 pages printed with permanent waterproof ink. Covers can be wiped clean, fold flat, and are sewn in sections with nylon thread to withstand the most demanding environments.



Item number	Model	Description	Size (w x h)	Description
92291	2291	Watershed - Notebook	156x101mm	Ruled notebook, wire bound, waterproof, write underwater
08207026	2226	Field Book	192x120mm	Ruled notebook
92126	2126	Field Book	106x205mm	Ruled 2 red centre lines without feints
92006	2006	Field Book	130x205mm	Ruled 2 red centre lines without feints
92026	2026	Field Book	130x205mm	Ruled 2 red centre lines with blue feints.
92106	2106	Traverse	106x205mm	Ruled 2 red centre lines with blue feints.
92206	2206	Traverse	106x165mm	Ruled 2 red centre lines with blue feints.
92056	2056	Graph paper	130x205mm	1/10" and 1/2" grey graph and 2 red centre lines.
92416	2416	Levels: Rise & Fall	192x120mm	For surveying with a level
92426	2426	Levels: Collimation	192x120mm	For collimating levels
92557	2557	Tache Theodolite	192x120mm	For use with a theodolite
92567	2567	Tache auto redn	192x120mm	For use with an automatic level
92637	2637	Mining 5mm Graph	192x120mm	Horizontally ruled pages opposite 5mm square graph pages
92647	2647	Mining 2mm Graph	192x120mm	Horizontally ruled pages opposite 2mm square graph pages

# Survey Accessories – Compasses & Clinometers

**Silva is the leading manufacturer of compasses worldwide, starting in 1933 with the invention of the first liquid filled compass. The head office is situated north of Stockholm in Sweden.**



## Silva Survey Master #7090278

This instrument is a combination of the SightMaster compass and the ClinoMaster clinometers in one, allowing you to measure vertical angles to  $\pm 90^\circ$  and compass bearings through site or on the dials.



## Leather pouch for Silva Survey Master #7090450

Suited for the Silva Survey Master, this high quality leather pouch will protect the clinometer.



## Silva SM360 LA Compass #7090270

The SM360 LA has a site and dial to measure accurate compass bearings.

**Case available #7090450**



## Silva ADC Summit #7090263

Functional wind gauge and altimeter. Collected data can be transferred to a PC using ADC IR (accessory).

Functions include:

- Wind gauge, max and average wind speed
- Thermometer, Celsius or Fahrenheit
- Altimeter, precise to 1 metre
- Barometer, with 24 hours history
- Clock with alarm
- Stopwatch, with split times and countdown timer



## Silva Clinometer 131 #7090246

With two scales, one  $\pm 35^\circ$  and a fine tuning scale  $\pm 5^\circ$ , the 131 model is used on grading and earth moving equipment for levelling. For angles up to  $\pm 5^\circ$ , read the top precise scale, for angles over  $\pm 5^\circ$ , use the lower scale for readings up to  $\pm 35^\circ$ .

# Survey Accessories – GME 2 Way Radios

**GME is an Australian manufacture of high quality radio communications equipment. The most popular UHF radio we sell is the TX650. We can source any GME model to suit your requirements.**



## **GME TX-675 TP UHF Radio Twin Pack**

#GMETX670

The TX670 is GME's most compact UHF 40 channel radio, at just 12mm thick.

### **Features:**

- Ability to scan through all 40 channels.
- 5 different calling tones.
- Ability to monitor two channels at once.
- Power save mode when not in use.
- CTSS- select on of 38 codes per channel.
- Key pad lock.
- VOX - Talk without pressing the transmit button.
- Roger beep.
- LCD Display.
- Only 12mm thick.
- Transmits 1W or 0.5W at close range.

Comes complete with 2 rechargeable radios, cradle charger, AC adapter, 2 ear mics, and 2 neck lanyards.



## **GME LCM7000 carry case**

#7090710



## **GME TX610 Speaker microphone #7090705**



## **GME TX650 car charging kit**

#7090762



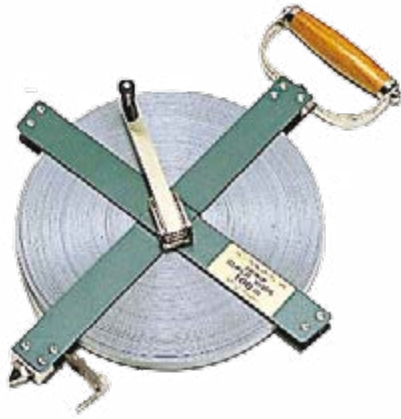
## **GME HS6000 head set**

#7090713



# Survey Accessories – Measuring tapes

## Tajima Engineer Steel



## Tajima Symron Fibreglass



## Symron Tapes

High quality fibreglass tapes with end hooks.

- 30m Myzox - #6400030M
- 30m fibreglass - #6400030
- 50m fibreglass - #6400032
- 100m fibreglass - #6400034

## Tajima G-Lock Fibreglass



## Tajima Hi-Lock



## Tajima Engineer Plastic Coated Steel 30m / 50m



## G-Lock measuring tapes

The original "armoured" tape measures with the thick elastomer cover that protects the tape casing and end hook and provides a comfortable, sure grip. Compact and smooth working tapes, with superior engineering and easy-to-read crisp, clean scales imprinted on white backgrounds. In standard, metric and standard/metric dual-scale models.

- 25mm wide, 7m long - #6100056
- 25mm wide, 8m long - #6100057
- 25mm wide, 10m long - #6100059

## Hi-Lock measuring tapes

Compact and smooth working tapes, engineered with heavy-gauge ABS casings, triple-riveted end hooks and cushioned return stops. All feature easy-to-read crisp, clean scales imprinted on white backgrounds, in standard and standard/metric dual-scale models.

- 16mm wide, 3m long - #6100054
- 19mm wide, 5m long - #6100055
- 25mm wide, 5m long - #6100058

## Engineer Tapes

High quality tapes with end hooks, all featuring crisp, clean scales. Available in fibre glass or steel.

- 30m plastic coated steel - #6300031.
- 50m plastic coated steel - #6300032
- 100m steel - #6300037

## Tape Refills

- 100m Symron
- 30m Engineer #6900001
- 50m Engineer #6900002
- 100m Engineer #6900006

# Survey Accessories – Measuring wheels



## Geo Fennel M10 #519090

1m circumference. With carry bag.  
Measures to 10,000m.



## Measuring wheel bag 416 #519139

# Survey Accessories – HPRC Cases

## HPRC – High Precision Resin Cases

HPRC cases are designed tough for any purpose, including: survey, photography, military, police, naval, and much more.

Manufactured and designed in Italy, HPRC cases are made to the highest standards, and protect your equipment from dust, water, impacts, corrosion and chemical agents.

All HPRC cases come with a life time unconditional warranty. Sizes range from small flash card cases all the way to large wheeled trunks.

For more information, visit [www.hprccases.com.au](http://www.hprccases.com.au)



Losing data after a work-filled day is frustrating and expensive. The electronic accessories from Leica Geosystems comply with a higher standard than the commercially available accessories that meet consumer or even industry standards. The storage media and other data transfer products from Leica Geosystems are qualitatively of extremely high value and reliability.



**MCF256 – 256MB**

#LG733257



**MCF1000 – 1GB**

#LG745995



**MCF8000 – 8GB**

#LG772567



**MCFAD – Compact flash adapter**

#LG733258



**MS1 – 1GB**

#LG765199



**MMSD01 – Micro SD 1GB**

#LG795993



**MSD1000 – 1GB**

#LG767856



**MSD08 – 8GB**

#LG789139

Model Name	Capacity
MCF32	32 MB
MCF256	256 MB
MCF1000	1 GB
MCF8000	8 GB
MCFAD	Compact flash adapter
MS1	1 GB
MMSD01	1 GB
MSD1000	1 GB
MMSD08	8 GB
MCR5	CF
MCR7	SD/CF
MCR8	SF/CR/RAM

NB: MCFAD is required for to use TPS1100 and DNA instruments.



**MCR7 – SD/CF**

#LG767895



**MCR8 – SF/CR/RAM**

#LG776240

# Survey Accessories – Miscellaneous

Model	Description
<b>Tajima</b>	
6600019	450G Magnetic Plumb Bob
<b>Survey Nails</b>	
7090723	25mm
7090719	43mm
7090720	55mm
7090722	80mm
<b>Nail Washer</b>	
7090736	Nail washer for 7090723 & 7090719
7090721	Nail washer for 7090720 & 7090722
<b>Field Bags</b>	
7090461	Field bag long 10 pocket
7090460	Field bag short 10 pocket
7090418	Field bag belt
<b>Markers</b>	
6600050	Tajima chalk
7290550	Maruzen marker
7290545	Maruzen replacement tips.
7290572	Ideal Marker (Black)
7290570	Ideal replacement tips.
<b>Leviathan #3 Crayons Box of 12</b>	
7090331B	Black
7090331BL	Blue
7090331R	Red
7090331W	White
7090331Y	Yellow
<b>Optical Squares</b>	
A07-5010	Double penta prism optical square.
<b>Tally Counters</b>	
7090031	Tally counter with bracket
7090030	Tally counter hand held
<b>Screen Protector</b>	
LG767907	SPF01 - Anti glare screen protector
<b>Laser Signs</b>	
7050193	Laser safety sign
7050194	Stick on laser safety sign
<b>JackJaw</b>	
7090364	JackJaw Short
7090371	JackJaw Tall



#A07-5010  
Double penta prism optical square.



#7090331 Leviathan #3 Crayons



#7290550 Maruzen marker



#LG767907  
SPF01 - Anti glare screen protector



**Survey Nails**  
25mm, 43mm, 55mm, 80mm



**Washers for nails**  
#7090736, #7090721, #7090721



**JackJaw** #7090364, 7090371  
Ideal for lifting form pins, stakes and star pickets out of the ground.

**Tajima chalk line** #6600050



# Survey Accessories – Miscellaneous



**Tajima Plumprite** #660019



**10 pocket field bag**

Short #7090460  
Long #7090461



#7090462 Field bag belt



**Tally counter** #7090030



**Tally counter with mount**  
#7090031



**Laser safety sign** #7050193  
**Stick on** #7050194



## PQR NUTS – Precision, Quality, Reliability.

Made from stainless steel, with an easy to grip design and short thread for quick on off movement, PQR Nuts are the perfect tool for bolt surveys.

With PQR Nuts, you can:

- Find the centre of bolts every time for use with mini prisms,
- increase speed and efficiency of surveys with no additional corrections needed, and
- maximise the accuracy of your survey results.

PQR Nuts are available in 2 packs.

### 5 Pack #PQR NUTS

Includes: M16, 20, 24, 30 366, 20, 24, 30 36

### 11 Pack #PQR NUTS 11PK

Includes: M16, 20, 22, 24, 30, 33, 36, 42, 48, 56 & 5/8"

Custom made and non-metric sizes can be made to order.

## Leica GVP716 Backpack

#

## Leica Total Station Eyepieces

GOF2 - Green Filter

FOK3

GVO13 - Solar Filter

GOK6

# Survey Accessories – FPM Plummets

FPM offer a range of highly accurate laser and optical Nadir and Zenith plummets made in Germany. They have the ability to adapt to almost every customer's requirement and, if necessary, can manufacture specific solutions for individual cases.



**FG-L100 – Zenith Plummets**

Measuring accuracy	
Mean square plumb line error at 100 m ±1 mm	
Telescope	
Image position	erect and true-to-side
Magnification	32 x
Shortest target distance	2.2 m
free objective diameter	40mm
Compensator	
Working range	±10'
Mean square setting error	±0,15"
Temperature	
Operating range	-25°C to +45°C
Instrument	
Magnification	32 x
Dimensions	180 x 180 x 340mm



**FG-L30 – Zenith & nadir plummet**

Measuring accuracy	
Mean square plumb line error at 30 m ±1 mm	
Telescope	
Image position	upside down, side-inverted
Magnification	9 x
Shortest target distance	0.4 m
free objective diameter	20 mm
Bubble level	reversion bubble level 20" / 2 mm
Instrument	
Dimensions	140 x 190 x 120mm
Weight	2.2 kg



**FG-LL-30/-31 Zenith  
FG-LL-32/-33 Nadir**

Both laser Zenith and Nadir come with low power (approx. 200m) or high power (approx. 500m) options. This is an ideal solution for mining or construction applications where longer range laser plumbing is required. Adjustments can be made in the field without having to open the device

**Technical specifications**

Laser class FG-LL30/-32: 2, < 1 mW  
 Laser class FG-LL31/-33: 3 R, < 5 mW  
 Laser: diode laser, visible red, 635 nm  
 Beam diameter: 13 mm at laser  
 Range FG-LL30/-32: 200 m  
 Range FG-LL31/33: 500 m  
 Self-levelling range: ± 5 %  
 Permissible deviation: ± 0.005 %  
 Operating time: 26h  
 Low battery cut-out: yes  
 Watertight: 3.5 m  
 Temperature range:- 10° C to + 50° C  
 Weight: 3.4 kg

**Accessories:**



**FG-DFXI  
Tribrach with circular**



**FG-USDFXI  
Conversion kit**

# Survey Accessories – Pentax Binoculars

**Pentax binoculars are made of the finest optics. All models comes with a case. We carry the full range of Pentax binoculars and spotting scopes. Below are our top selling items. Pentax binoculars come with a 1 year warranty and carry case.**



**8 X 21 UCFR #62209**

Magnification: x8  
Objective diameter: 21mm



**10 X 25 UCF XII #62212**

Magnification: x10  
Objective diameter: 25mm



**16 X 50 XCF #65793**

Magnification: x16  
Objective diameter: 50mm



**20 X 60 PCF WP II #65810**

Magnification: x20  
Objective diameter: 60mm  
Top of the range model.

# Survey Accessories – Pentax and Ricoh Cameras

**CR Kennedy is the sole importer of Pentax and Ricoh for Australia, and stocks the full range of compact cameras, SLRs, and lenses. For the best prices on current models, please contact a CRK sales representative.**





**GHT63** #LG767880



**GHT62** #LG767879



**GHT61** #LG767877



**GHT58** #LG748417



**GHT39** #LG733264



**GVP644** #LG767905



**GAD109** #LG767791



**Bull bar mount** #R8SPS



**GAD108** #LG767790

GPS Accessories		
Item Number	Model Number	Description
LG767880	GHT63	Clamp for attaching GHT39 to pole
LG767879	GHT62	Holder plate for GHT39
LG767877	GHT61	Handstrap for Leica Controllers
LG748417	GHT58	Tripod bracket for GFU Radio
LG733264	GHT39	Bracket for RX1200 on pole
LG767905	GVP644	Soft carry bag for CS15 controller
LG767791	GAD109	GS15 to TNC adapter
LG767790	GAD108	Arm to mount external antenna
LG784918	GHT72	Pole holder base plate for attaching CS25 tablet computer
R8SPS	R8SPS	GPS bull bar vehicle mount



# Survey Accessories – Planimeters

Tamaya digital planimeters are excellent tools to use when measuring irregular-shaped areas on plans or drawings. They eliminate the need for grids, charts, or calculations done by hand.



**Tamaya Planix 7** #08206962



**Tamaya Planix 10S** #08206964



**Tamaya Planix EX** #08207000

Planix Planimeters			
Model	Planix 7	Planix 10S	Planix EX
Item Number	08206962	08206964	08207000
Accuracy	±0.2%	±0.1%	±0.1%
Range	300cm x 30cm	300mm x 100mm	380mm x 100m
Functions	Area, line length, side length.	Traces curves, plot points, averages.	Measures straight, curved or circular lines, coordinates, radii, angles, areas.
Battery Life	30 hours	20 hours	40 hours



**Scalex Mapwheel SCMW**  
#SCALEX MAPWHEEL

This is the perfect tool, specifically designed for quickly taking scale measurements from maps. Just select the built-in scale factor to match the map and roll the MapWheel along any straight or curved line. The measurement is displayed instantly. Calculate road distances and fuel-costs easily.



**Scalex Planwheel SA2**  
#SCALEX PLANWHEEL

The PlanWheel SA2 is the perfect tool for taking scaled measurements from blueprints, maps and plans. Just select the built-in scale factor to match the plan and roll the PlanWheel. The measurement is displayed instantly.



**Scalex Protective Case**  
#SCALEX CASE

Made of high impact ABS, this rugged case provides the protection required on the job. With a hot-stamped Scalex legend and flocktex interior, the case can also hold an extra set of batteries.



**Map wheel**  
#7290462

**AC Adapter For Planix 7**  
#08206971

**Battery for Planix 10S**  
#08206967

# Survey Accessories – Myzox Poles



**CST 2.5m / 2 Section pole /  
Twist Lock #534708**



**CST 2.5m / 2 section pole /  
Quick Lock #532509**



**CST 2.5m / 2 section pole /  
Quick Lock #534417**



**CST 3.6m / 3 section pole /  
Quick Lock #534512**



**CST 4.6m / 4 section pole /  
Leica spiggot / 5/8 Thread  
#534418 / 534416**

**Myzox DMP-9 / 20DM  
#534418 / 534416**

## CST Prism Poles with Circular Bubble Level

Item number	534709	534708	532509	534417	534512	534416	534418	534216
Model	67-4708TML	67-4708TMA	67-4509TMA	67-4508TMA	67-4512TMA	67-4515TMA	67-4515TML	67-4215TMA
Height	2.5m	2.5m	2.5m	2.5m	3.6m	4.6m	4.6m	4.6m
Sections	2	2	2	2	3	4	4	4
Material	Aluminium	Aluminium	Aluminium (light)	Aluminium	Aluminium	Aluminium	Aluminium	Aluminium (heavy)
Lock	Twist	Twist	Quick	Quick	Quick	Quick	Quick	Collet
Thread	Leica Spiggot	5/8"	5/8"	5/8"	5/8"	5/8"	Leica Spiggot	5/8"

## Myzox Range Poles

Item Number		
Model		
Height		
Sections		

## Myzox range pole

2m / 2 Section

#7090773

Closed height - 1.2m

Open height - 2.0m

Weight - 640g



## GLS115

Provides prism heights of 100, 400, 700, 1000 or 1300mm.



**From left to right:  
GLS14, GLS11, GLS12, GLS13, GLS30,  
GLS31, GLS111, GLS112, GZW12**

## Leica Poles

Item number	LG403427	519616	LG642106	LG385500	LG754391	LG78226	LG752292	LG766359	LG667309	LG667310
Model	GLS14	Nedo	GLS115	GLS11	GLS12	GLS13	GLS30	GLS31	GLS111	GLS112
Min height	-	-	100mm	1.24m	1.39m	1.39	1.36m	1.36m	1.4m	1.47m
Max height	0.2m	0.8m	1.3m	2.15m	2.0m	2.0m	2.0m	2.0m	2.60m	3.65m
Bubble	Circular adjustable	-	clip-on adjustable	Circular adjustable	Circular adjustable	Circular adjustable	Circular adjustable	Circular adjustable	Circular adjustable	Circular adjustable
Thread	Spiggot	Spiggot	1/4"	Spiggot	Spiggot	5/8"	5/8"	Spiggot	Spiggot	Spiggot
Material	Aluminium	Aluminium	Aluminium	Aluminium	Aluminium	Aluminium	Carbon Fibre	Carbon Fibre	Aluminium	Carbon Fibre

## Accessories

Item number	LG403428	7316307	7316309	7316310
Model	GZW12			
Description	1m extension for spiggot	Flat shoe for GLS11	Flat shoe for GLS12	Flat shoe for GLS30

# Survey Accessories – Leica Tribrachs



**GDF321** #LG777508



**GDF111-1** #LG748888



**GDF101** #LG726839



**GDF322** #LG777509



**GDF112-1** #LG798181



**CTB102** #LG726840

Model Name	Model Number	Optical Plummet	Torsional Stiffness
GDF321	LG777508	No	<1"
GDF322	LG777509	Yes	<1"
GDF111-1	LG748888	No	<3"
GDF112-1	LG798181	Yes	<3"
GDF101	LG726839	No	<5"
GDF102	LG726840	Yes	<5"

## Tribach Accessories



**Tribach Tester** #7091111



**GHM007** #LG667718



**GHT196** #LG722045

## Accessories

Model name	Model Number	Description
GHM007	LG667718	Height meter
GHT196	LG722045	Holder for GMH007
	7091111	Tribrach Tester



# Survey Accessories – Carriers

Like all other Leica Geosystems accessories, Leica carriers distinguish themselves through outstanding quality features. The high precision carriers of the Professional 5000 Series offer you a choice between a carrier with laser plummet, or optical plummet and longitudinal bubble for high accuracy positioning. Professional 5000 carriers deliver an outstanding 0.3 mm centring accuracy, while the Professional 3000 Series offer a centring accuracy of 1.0 mm.



**SNLL121** #LG667316



**GRT144** #LG667313



**GRT146** #LG667216



**GRT247** #LG770715



**GZR3** #LG428340



**GZR103** #LG725566



**GZR2** #LG360532

Item Number	LG667316	LG667313	LG667216	LG770715	LG428340	LG725566	LG360532
Model Number	SNLL121	GRT144	GRT146	GRT247	GZR3	GZR103	GRZ2
Plummet	Laser	Optical	Optical	None	Optical	Optical	None
Accuracy	0.3mm	1.0mm	1.0mm	1.0mm	0.3mm	1.0mm	0.3mm
Bubble	No	No	No	No	Yes	Yes	Yes

## Accessories

Item Number	LG667217	LG667244	LG722045	LG667718
Model Number	GAD31	GZS4	GHT196	GHM007



**GAD31** #LG667217



**GZS4** #LG667244

## Prisms

Leica prisms are manufactured from high-quality optical glass which is worked to strict specifications. All reflective surfaces are provided with a resistant coating so that the reflectivity is not adversely affected by dirt or condensation.

Item Number	Model No.	Prism type	Holder	Centring Accuracy	Range	Comments
LG641617	GPR121	Circular	Yes	1.0mm	3,500m	
LG641618	GPR111	Circular	Yes	2.0mm	2,500m	
LG726295	GPR112	Circular	No	N/A	2,500m	Monitoring/Mining prism
LG753492	GPR113	Circular	Yes	2.0mm	2,500m	
LG362830	GPR1	Circular	No	1.0mm	3,500m	
LG639985	GRZ4	360°	No	5mm	2000m	
LG754384	GRZ122	360°	Yes	2.0mm	2000m	Can be used in SmartPole configuration
LG644327	GRZ101	360°	Yes	1.5mm	2000m	
LG641762	GMP104	Mini Prism	Yes	N/A	2000m	Monitoring Prism with L-Bar for fixed installation
LG641662	GMP101	Mini Prism	Yes	1.0mm	2000m	Includes bubble, target plate, spike and bag.
LG641615	GMP111	Mini Prism	Yes	2.0mm	2000m	Includes bubble, and GLS115 mini reflector pole
LG7643439	GMP112	Mini Prism	Yes	2.0mm	2000m	Includes 30cm height extension
LG642534	GMP111-0	Mini Prism	Yes	2.0mm	2000m	0 constant prism. Includes bubble, and GLS115 mini reflector pole
LG644187	SMP222	Mini Prism	Yes	2.0mm	2000m	Sliding prism, 0 constant.
LG555631	GPH1P	Circular	Yes	0.3mm	3,500m	Compatible with Leica TDM5005 and TDA5005

## Prism Dimension Information

Prisms	Constants [mm]	Diagram
Circular prism GPH1P	0.0	
Circular prism GPR121/111	0.0	
Miniprism GMP101	+17.5	
Miniprism GMP111* GMP111-0**	+17.5 0.0	
Reflective tape	+34.4	
Flat prism CPR 105	+34.4	
360° prism GRZ4	+23.1	
360° prism GRZ122	+23.1	
360° Mini prism GRZ101	+30.0	



**GPR121** #LG641617



**GPR111** #LG641615



**GPR112** #LG726295



**GPR113** #LG753492



**GPR1** #LG362830



**GRZ4** #LG639985



**GRZ122** #LG754384



**GRZ101** #LG644327



**GMP104** #LG641762



**GMP101** #LG641662



**GMP111** #LG641615



**GMP112** #LG742329



**SMP222** #LG644187



**GPH1P** #LG555631



**GLS115** #LG642106

## Prism Accessories

Item Number	Model Number	Description	For
LG362820	GPH1	Prism Holder	GPR1
LG400080	GPH3	3 Prisms Holder	GPR1
LG726296	GHT112	Mounting Kit	GPR112
LG362823	GZT4	Target Plate	GPH1
LG727406	GDZ112	Rain Shelter	GPR112
LG642344	GVP608	Soft bag	GMP111, GRZ101
LG742329	GMP112	Pole extension	GMP111
LG743503	GAD105	Pole adapter	GMP111 prism to Leica Spiggot adapter
LG742006	GAD103	Pole adapter	GRZ101 prism to Leica Spiggot adapter
LG642106	GLS115	Mini reflector pole	GMP111

# Survey Accessories – Prism Accessories



**GPH1** #LG362820



**GPH3** #LG400080



**GHT112** #LG727406



**GTZ4** #LG362823



**GDZ112** #LG727406



**GVP608** #LG642344



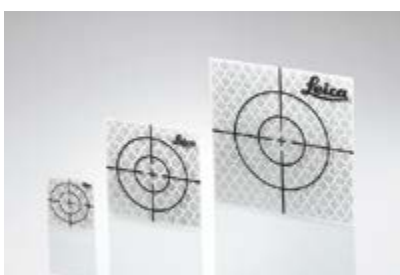
**GAD105** #LG743503



**GAD103** #LG742006

# Survey Accessories – Reflectors

Item Number	LG763532	LG763533	LG763534	LG731346	RSZ2	RSZ3	RSZ4	RSZ6
Model	GZM29	GZM30	GZM31	CPR105	RSZ2	RSZ3	RSZ4	RSZ6
Range	100m	200m	250m	250m	50m	80m	100m	120m
Mount	Tape	Tape	Tape	GLS105 pole	Tape	Tape		
Size	20x20mm	40x40mm	60x60mm	60x60mm	20x20mm	30x30mm	40x40mm	60x60mm



**GZM29, GZM30 and GZM31**



**CPR105**



# Survey Accessories – Myzox Prisms



#531507



#531100, 580654



#532010, 532012



#531010



#513512



#526053



#533011, 532011V, 541063



#531012

Item number	Model number	Prism type	Holder	Comments
513512	65-1512	Circular	Canister	Sealed in black anodized aluminium can
531100	63-2011	Circular	Canister	Hermetically sealed precision prism with 5/8" thread
580654	63-4011	Circular	Canister	Precision prism with LED in centre. M20 thread
533024	63-3024	Circular	Canister	Snap-In Leica style prism
531010	63-1010	Circular	Prism assembly	Optima target back, metal assembly, with 5/8" thread
532012	63-2012	Circular	Prism assembly	Hermetically sealed. Plastic yoke
532012M	63-2012M	Circular	Prism assembly	Hermetically sealed with polycarbonate metal yoke and assembly
526053	65-1505	Mini	Prism assembly	Plastic assembly with levelling bubble and 5/8" thread base
533011	63-3011	Circular	Canister	Copper coated monitoring prism. Ideal for humid conditions
532011V	63-2011V	Circular	Canister	Hermetically sealed, Monitoring seconds prism
541063	1100-C	Circular	Canister	Copper coated monitoring prism. Ideal for humid conditions
531012	63-1012	-	-	Optima prism holder and back target

# Survey Accessories – Adapters



#522010



#522070



#A06-4011

## Tribach Adapters

Item number	522010	522070	A06-4011
Model	61-2520	61-2525	61-2521
Comments	Fixed tribach adapter	Rotating adapter	Rotating friction adapter



**5/8" Thread to Spigot** #523513



**"Spigot to 5/8" Thread** #7050199



**Brass 5/8" to Spigot** #7050200

## Thread Adapters

Item number	Description
532513	5/8" thread to leica male spigot
7050195	BRASS 5/8" thread to leica male spigot (short)
7050200	BRASS 5/8" thread to leica male spigot long
526057	Leica spigot to mushroom
7050199	BRASS Leica spigot to 5/8" thread

# Survey Accessories – Plumb Bobs



## Plumb Bobs

Item number	A10-5012	A10-5016	A10-5024
Model	11-550	11552	11554
Description	Plum Bob 340g	Plum Bob 455g	Plum Bob 680g

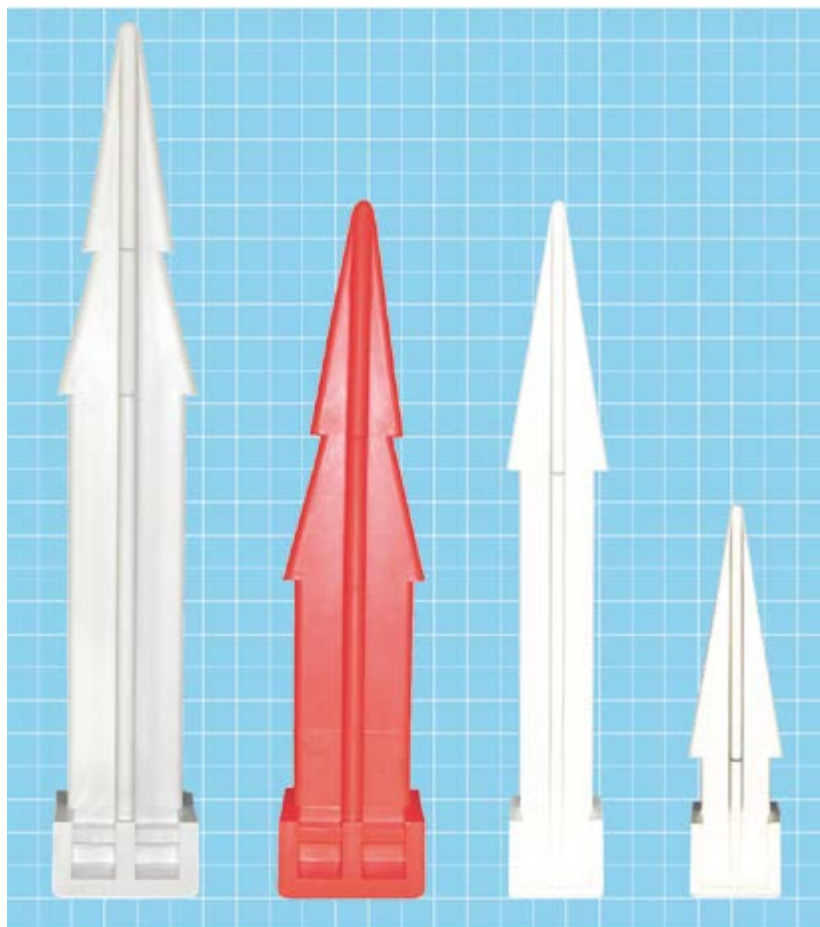
## Gammon Reel

Item number	526002	526001
Model	11729	11730
Description	3.6m	2.1m

## Plumb Bob Accessories

Item number	580035	580030	531507	7090463	882400491	882400501	882400481
Model	11555A	11555B	651507				
Description	Plum Bob cap	Plum Bob Point	Point & Plum Bob hook	Plumbob pouch	Plumbob pouch for 340	Plumbob pouch for 455	Plumbob pouch for 680

# Survey Accessories – Pegs



## Polytech Pegs

Made from polypropylene, a non toxic and chemically inert plastic, these pegs are half the weight of a traditional wooden peg.

Manufactured and designed by Survey Pegs Australia, Polytech Pegs are the survey pegs of the future.

Features include; centring point to take a nail or metal tag to, lot numbers can be stamped on individual pegs, UV resistant, heat resistant, non-flammable, impervious to white ants, designed to be easily driven into various soil types, engineered to suit state specifications, recyclable and available in a range of colours.

### FROM LEFT TO RIGHT OF THE IMAGE

#### CADASTRAL:

75x75x450mm

STATE: NSW, QLD, WA, TAS.

#### CADASTRAL:

75x75x350mm

Red: WA

White: QLD

#### CADASTRAL:

50x50x350mm

VIC, QLD, SA, WA, NT, TAS

75x50x350mm, NSW

#### ENGINEERING:

50x50x210mm

Set out peg. Green, yellow and orange.

## Wooden Pegs

White #7090521

Yellow #7090657

## Accessories

Item number	7090366	7090388	7090377
Description	Peg Stamp for Wood	8mm Peg Stamp for Polypegs	Peg Stamp Leather Case

# Survey Accessories – Spray Paint



Dy-Mark Spray & Mark is Australia's best selling marking paint. All cans have an inverted nozzle, weigh 340g and are suitable for a range of applications such as surveying, construction, landscaping, civil works, etc. Cans are available as individual items or in packs of 12.

Item Number	Description
7090332B	Survey spray black
7090332DB	Survey spray dark blue
7090332FG	Survey spray fluro green
7090332FO	Survey spray fluro orange
7090332FP	Survey spray fluro pink
7090332FR	Survey spray fluro red
7090332G	Survey spray green
7090332GR	Survey spray grey
7090332O	Survey spray orange
7090332R	Survey spray red
7090332W	Survey spray white
7090332Y	Survey spray yellow
7090338	Spray paint holster (plastic)
7090337	Spray paint arm with wheel
7090370	Spray paint long arm
7090339	Spray marking chalk yellow
7090440	Spray marking chalk white



**Spray paint long arm**  
#7090370



**Spray paint arm with wheel**  
#7090337

# Survey Accessories – General Flagging Tape

Item Number	Description
7090481DB	Dark Blue
7090481DG	Dark Green
7090481FL	Fluro Lime
7090481FO	Fluro Orange
7090481FP	Fluro Pink
7090481LG	Light Green
7090481O	Orange
7090481R	Red
7090481SB	Sky Blue
7090481W	White
7090481Y	Yellow
7090480	Red/White
7090482	Fluro Orange

These vinyl flagging tapes are ideal for surveyors, and available in a wide range of colours. All rolls are 25mm x 100m.





# Survey Accessories – Staves



**LR39 and LR34**



**SMP222**



**GTL4C**



**GMP111**



**GMP112**



**GRZ4**

## Leica

Item Number	Model	Digital level	Description
LG764452	GSS113	Sprinter	3m/1 section fiberglass, barcode & E face
LG522794	GKNL4M	DNA	4m/3 section fiberglass, barcode & E face
LG757761	GTL4M	DNA	4m/4 section fiberglass, barcode & mm graduations
LG667113	GTL4C	DNA	4m/4 section aluminium, barcode & mm graduations
LG746613	GSS112	Sprinter	4m/4 section aluminium, barcode & E face
LG741882	GSS111	Sprinter	5m/4 section aluminium, barcode & E face
LG563733	GWCL60	DNA	0.6m/1 section barcode & Invar scale face
LG563659	GPCL2	DNA	2m/1 section Invar bar & barcode face
LG560271	GPCL3	DNA	3m/1 section Invar bar & barcode face



**E Face Staff**

**Metric Staff**

## Myzox

Item Number	Model	Description
091597	SUM33EB	3m/3 section E face - 118cm with cover
011053	SUM33MB	3m/3 section Metric - 118cm with cover
091551	ALG-55EB	5m/5 section E face - 127cm with cover
011001	ALG-55MB	5m/5 section Metric - 127cm with cover
011201	ALS-74	7m/4 section Metric - 182cm with cover
011101	GFS-55	5m/5 section Metric - Fibreglass

## Astor

Item Number	Model	Description
519104WC	3M/3E	3m/3 section E face - 118cm with cover
519102WC	3M/3M	3m/3 section Metric - 118cm with cover
519121WC	5M/5E	5m/5 section E face - 127cm with cover
519118WC	5M/5M	5m/5 section Metric - 127cm with cover

## Accessories – Staff Bubble

Item Number	Description
519097	LR39 Staff Bubble Plastic
519098	LR34 Staff Bubble Metal
519092	LR7 Staff Bubble detachable for Astor
519618	Clip on Bubble for GTL4 Staves
111114	SA60 bubble for Myzox 5m & 7m staves
111115	SB60 bubble for Myzox 3m staves
211090	Staff 5/8" thread prism adapter
	NPA-1

## CST Cut and Fill Rods

Item Number	Model	Description
519012	06-TLM	Cut & fill rod, 2.4m, 2 section.

# Survey Accessories – Bi-Pods

Leica and CST bi-pods are ideal for holding prism poles in the field.



**GSR2** #LG555720

for 25mm diameter poles  
[Leica GLS11/GLS11K].



**GSR11** #LG667319

suitable for poles of all diameters.



**GST6**  
**Quickstand**

#LG560138

With 3 telescopic legs,  
for 25mm poles.

# Survey Accessories – Tripods



**RA Flat Head** #A11-1210



**RA Dome Head** #A11-1220



**Leica CTP101** #LG726831



**Leica GST05** #LG399244



**Leica GST05L** #LG563630



**Leica CTP106** #LG789913



**Leica GST20-9** #LG394752



**Leica GST120-9** #LG667301



**Trimax** #LG670238



**Elevating Tripod** #MYX217425



**Elevating Tripod** #519036

# Survey Accessories – Tripods



**HDS Tripod  
for Poles or  
Targets**  
#LG670223

Model	Item #	Manufacturer	Material	Leg clamp	top	Weight	Max height	Collapsed height	Total Station/Scanner	GPS	Laser/Levels/Targets	Poles/staves
RA FLAT	A11-1210	RA	Aluminium	Dual	flat	5kg	1.73m	1.3m	no	no	yes	no
RA DOME	A11-1220	RA	Aluminium	Dual	dome	5kg	1.73m	1.3m	no	no	yes	no
ELV-3000	MYX217425	Myzox	Aluminium	screw	flat	6.2kg	3m	1.26m	no	no	yes	no
ELV-COVER	519036	RA	Aluminium	screw	Flat	5kg	1.73m	1.03m	no	no	yes	no
CTP101	LG726831	Leica	Wood	screw	flat	5kg	1.73m	1.3m	yes	yes	yes	no
CTP103	LG332200	Leica	Aluminium	screw	flat	5kg	1.73m	1.3m	no	yes	yes	no
GST05	LG399244	Leica	Wood	screw	flat	5.6kg	1.76m	1.07m	no	yes	yes	no
GST05L	LG563630	Leica	Aluminium	screw	flat	5.6kg	1.76m	1.07m	no	no	yes	no
CTP106	LG789913	Leica	Aluminium	screw	flat	3.45kg	1.65m	1.0m	no	no	yes	no
GST20-9	LG394752	Leica	Wood	screw	flat	6.4kg	1.8m	1.07m	yes	yes	yes	no
GSTI20-9	LG667301	Leica	Wood	screw	flat	6.4kg	1.8m	1.07m	yes	yes	yes	no
GST20	LG296632	Leica	Wood	screw	flat	6.4kg	1.8m	1.07m	no	yes	yes	no
TriMax	LG670238	Leica	Wood/ fibreglass	Dual	flat	10kg	1.83m	1.07m	yes	yes	yes	no
68-3950	A08-2100	CST	Aluminium	screw	Gator for staves 1-1/4" diameter	1.5kg	1.07m	1.07m	no	no	no	yes 1-1/4"
HDS Tripod	LG670223	Leica	Aluminium	thumb release	For poles {22- 38mm}	1.3kg	1.8m	1.2m	No	No	No	Yes
Inverted	NESTLE INVTPOD	Nestle	Aluminium	screw	5/8" Thread	10kg	-3m	1.3m	yes	no	no	no



**GHT58 Tripod Bracket**  
#LG734163



**GHT43 Tripod Bracket**  
#LG748417



**GST4 Tripod Star**  
#LG332200, #519011

## Accessories

Model	Description	Item Number
GST4	Tripod Star	LG332200
A11-801	Tripod Star	519011
GHT43	Tripod Bracket	LG748417
GHT58	Tripod Bracket	LG734163
HPRC 6500W	Tripod Case	P6500EWB
Tripod Dolly	Tripod wheel base	SEC90555



**HPRC 6500W  
Tripod Case**

#P6500EWB



# Survey Accessories – Wall Stations



**Wall Station Mount with Leica Male Spigot** #602009



**MTL1-LR slim line mining laser**  
#7090127SL

Wall stations are used for underground survey control to create a survey network. They are typically used in conjunction with Leica prisms and Leica total stations or a MTL1-LR underground mining laser.

Item number	Description
7090127	MTL1-LR Mining Laser
7090127SL	MTL1-LR slim line mining laser
602008	Wall mount for MRL1-LR laser
602009	Wall Station Mount with Leica Male Spigot
602011	Wall Station Sleeves Aluminium - 1m length
602017	Wall Station Sleeves Stainless steel - 80mm
602010	Steel pillar plate
602020	Monitoring P Plate
LG362820	GPH1 Single Prism Holder
LG362830	GPR1 Prism in container
11R5-W-VA	3/8" thread with stainless steel Leica spigot (short)
11R5-W	3/8" thread with brass Leica spigot (short)
11R2-40W	Wall plug with 3/8" thread Dynabolt.



#11R2-40W



#11R5-W-VA



#7050195



#7050200

# Lenspen Cleaning Pens

Keep your optical lenses clear and clean with the Lenspen.



## Lenspen #NLP-1

A superb new tool in optical lens cleaning technology. Perfect for cleaning total station lenses, dumpy levels lenses, camera lenses, binocular lenses, small aperture spotting scopes and telescopes, eyepieces and other optical items. Comes with a handy retractable dust removal brush and a special non-liquid cleaning element, designed to never dry out. Safe and very easy to use.

No alcohol or cleaning fluids are required.



## ScreenKlean Tablet Cleaner

#XXXX



## MicroKlear Cleaning Cloth

#MK-2-G

# C.R. Kennedy National Hire Fleet

**We carry a comprehensive range of hire equipment to cover nearly all survey and measurements applications**

## These include:

- Total stations
- Theodolites
- GPS/GNSS
- Machine control
- Scanning lasers
- Optical and laser levels
- Pipe lasers
- Cable locators
- Accessories such as staves, tripods, prisms, etc.

## What does this mean to you?

- The fleet consists of the world's most advanced equipment, kept in excellent condition
- We supply basic training for rapid productivity
- Allows you to evaluate on the job without purchase commitment
- Gives you the equipment you need for the one-off job
- Allows you to take on jobs you otherwise couldn't handle



## Repairs and Service

### Service Centres

We have service centres at all of our offices. With technicians who have been factory trained, workshops that are accredited by Leica Geosystems, and use of only genuine components, CR Kennedy can offer you the best service for your instrument. We offer replacement instruments from our hire fleet during a servicing to minimise down time.

We service and repair all the equipment we sell, including:

- Total stations
- Theodolites
- GPS/GNSS equipment
- Laser levels
- Optical levels
- Tribrachs
- Tripods

And much more!



# Technical Support & Training



**Over many years, C.R.Kennedy has acquired the expertise of the leaders in the surveying field. We have built a surveyor based service business with a full range of the best products in the world, combined with the best support people in the country.**

## Technical Support

At C.R.Kennedy, we understand the importance of supporting our extensive range of surveying products. With a highly committed and responsive technical support and training team who can answer your questions, whether simple or complex, and provide the required product training.

To this extent, we have recently invested in our support structure to expand our team, so that we can continue to provide the level of service that our clients demand. This new support and training structure comprises of state based personnel that will assist with your day to day support and training needs, and backed-up by a national team of product experts.

## Training

In addition to technical support, we also understand that high quality training is critical and the key to unlocking the true potential of your survey equipment.

Our structured training programs will enable you to take full advantage of your instruments capabilities, and improve your work flow, both in the field and in the office, with the goal of increasing your productivity and giving your company a competitive advantage.

C.R.Kennedy offers a flexible selection of training packages to suit your company's needs, experience and time frame.

## CPD Accreditation

These courses are designed to advance the knowledge of our clients in the most efficient and productive use of their surveying equipment and software, and will contribute to their continued professional development.

In this regard, we have received CPD accreditations for these courses by a number of state Surveying Authorities. Please contact us for details and applicable CPD points.

**VIC / TAS:** (03) 9823 1884  
**NSW / ACT:** (02) 9552 8384  
**QLD:** (07) 3632 6784  
**WA / NT:** (08) 9489 8584  
**SA :** (08) 8410 1366

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[surveytraining@crkennedy.com.au](mailto:surveytraining@crkennedy.com.au)



# Training Courses



## Total Stations (TPS)

### 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.

### Advanced TPS (1 day)

Understand how to customise your instrument, perform advanced field coding, create / edit data export formats and the more advanced on-board applications. Import data into Leica Geo Office (LGO), edit and export to required format and generate jobs using design to field.

## GPS/GNSS

### Getting Started (1 day)

Learn the basic concepts of GPS/GNSS positioning and the functionality of your Leica equipment, workflow training in RTK including detail surveys, coding and export of data, and perform site transformation to gain an understanding of coordinate systems.

### Advanced (1 day)

Explore the advanced settings of the Leica GPS/GNSS. Learn complete equipment configuration, static data capture and basic processing, field coordinate transformation, the more advanced applications and how to create field data reports.

## Leica Geo Office

### Getting Started (1 day)

Workflow training in Leica Geo Office incorporating TPS/GPS data import, editing, simple processing, and basic analysis. This course provides a detailed explanation behind the settings and functionality enabling the user to get the most from the LGO software.

### Advanced (1 day)

Develop your understanding of static post-processing, data analysis, reporting and network adjustment. Learn new troubleshooting skills. Then further explore LGO looking at precise ephemeris, internet download and image referencing.

## Additional Courses

### Introduction to RoadRunner (1 day)

This course is designed for new users of the RoadRunner application. You will be taken through the practical procedures necessary for performing road setout within RoadRunner. The course will include an explanation of stringlines, RoadRunner elements and task development.

### Introduction to Laser Scanning (1 day)

Overview of 3D Laser Scanning technology and how this could benefit your business. Includes the basic principles of data capture, target registration and 3D point-cloud processing using specialised software. Plus reviewing case studies and projects.

### Customised Company Training

All published courses may be customised to your company's requirements, allowing you to get the most from your training investment. Choose between training on-site or at one for our state based training facilities. Or let us know what training you need and we'll do our best to accommodate.

### Product Workshops

Throughout the year we will hold a series of half day product workshops aimed at existing users. These workshops are designed to keep users up to date with new applications, software updates, new products, improved workflows and general advancements in survey technology.

# C.R.Kennedy Training Centre

Located behind our head office in Port Melbourne, Victoria, the C.R. Kennedy Training Centre has live earthmoving machinery on site in a civil construction environment so that visitors can experience and use the Leica Geosystems machine control applications on a real machine.

There is also a full simulation training room for any client who has not yet experienced the ease of using a Machine Control application. The centre provides the perfect opportunity to get a hands-on preview of what operating a system is like.

C.R. Kennedy is dedicated to providing the best instruments and systems to the surveying and construction community. The investment in this centre to support our clients reflects that commitment.

It is important to us that you know what you are investing in and how it will work. To that end the C.R. Kennedy Training Centre offers

comprehensive, practical training with experienced technical staff on hand to answer all questions.

Groups or individual training can be catered for and certificates of completion are awarded to all participants.

**For further information contact your local CRKennedy office or [surveytraining@crkennedy.com.au](mailto:surveytraining@crkennedy.com.au).**

**300 Lorimer Street,  
Port Melbourne, 3207**

**Phone: 03 9823 1533**



PowerDigger 2D Screen



PowerDigger 2D & 3D Screens



# Maintenance agreements

## Extension of warranty / Maintenance agreements

Give yourself and your instrument special attention. Service agreements reduce your instrument running costs, promote instrument longevity and ensure the best reliable performance.

Typical contracts may include:

- Extension of warranty including parts and labour for remedial services
- Priority service and repairs
- Annual service including test protocol and calibration certification
- Flexible invoice periods to suit your business
- Fixed costs per annum to allow easy budgeting

## Fully Maintained Rentals

Our Fully Maintained Rental program is designed specifically for surveyors to provide the ideal business solution. By combining a rental with a maintenance agreement, we can offer protection from obsolescence with regular upgrades to the latest technology, and ensure your survey instruments are productive at all times. By reducing your capital expenses on equipment, you can preserve your capital and better budget for new business opportunities.

Advantages of a fully maintained rental are:

- One fixed monthly cost, so you can better budget your work
- Reduced capital expenditure
- No maintenance costs or repair bills
- The latest software and hardware protecting you from obsolescence
- Loan equipment free of charge during servicing so you're always able to work

## Insurance

You wouldn't purchase a car without insurance, so why wouldn't you insure a total station?

C.R.Kennedy can recommend the right insurance options for your instruments.



## Finance Options

Don't put off work because of limitations with your current equipment. With various finance companies, C.R.Kennedy can offer a range of flexible finance options to suit individual circumstances.

You can reduce your capital expenses, easily budget with fixed monthly costs, gain access to the latest equipment, and meet the requirements of the work you have today.

Finance options can also be combined with maintenance agreements, so you'll never have any surprise repair costs.