

# Leica Geosystems Original Accessories Program 2008/2009





# Original Accessories The right Selection

Designed and built to the most stringent standards, Leica Geosystems instruments are of the highest quality, extremely reliable and designed to stand up to harsh environments. Original Accessories from Leica Geosystems meet these same standards. Our engineers design every accessory to perfectly integrate with your instrument so you always achieve the required performance and accuracy.

To easily select the most suitable accessory to perform your survey task, Leica Geosystems divides its accessories into three distinctive price/performance groups.

# **Professional**



These ultimate performance products meet the highest demands to achieve the best possible measuring accuracy. They provide a long usable life even in extreme environments. If a product becomes damaged, a complete range of spare parts is available.

# Basic



Basic products have an optimised price/performance ratio and still meeting the same stringent environmental specifications as the Professional series. They are suitable for applications where 3mm positioning accuracy is sufficient.

# Choice



The Choice range has a focus on price. They are for simple surveying applications where 10mm positioning accuracy is sufficient. Due to their low cost, spare parts or repairs are not available for these products.



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# **Tripods**

The construction and type of material that makes up a tripod has a major influence on its stability. Tripod legs consist either of wood, aluminium or fibreglass. Each of these materials differently effect the stabilty of the tripod, with wood proven to be the most stable.



# **Professional**

### GST20, Wooden Tripod

Heavy duty tripod with plumb bob, carrying strap and side clamp screws. Proven long-life, twist-proof and excellent vibration characteristics. Packaged length 110cm (3.61ft), extendible to 180cm (5.91ft), weight 6.4kg (14.1lb).

Order No: 296 632

### GST20-9, Wooden Tripod

Heavy tripod with carrying strap and side clamp screws. Proven long-life, twist-proof and excellent vibration characteristics. Packaged length 110cm (3.61ft), extendible to 180cm (5.91ft), weight 6.4kg (14.1lb).

Order No: 394 752

### GST120-9, Wooden Tripod

Heavy, self-closing tripod with carrying strap and side clamp screws. Proven long-life, twist-proof and excellent vibration characteristics. Packaged length 110cm (3.61ft), extendible to 180cm (5.91ft), weight 6.4kg (14.1lb).

Order No: 667 301

### GST40, Wooden Tripod

Heavy tripod with rigid legs, suitable for precision levelling. Proven long-life, twist-proof and excellent vibration characteristics.

Length 170cm (5.58ft), weight 6.0kg (13.2lb).

Order No: 328 422

### **GST71**, Rotating Plate Tripod

Heavy wooden tripod with adapter for 753313 GST72 rotatable laptop holder.

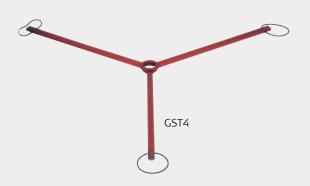
Order No: 753 312



# **Tripods**







# Basic

### GST05, Wooden Tripod

Light tripod with water-tight plastic wrap for complete protection. Suitable for GPS and target stations with long set-up periods. Packaged length 107cm (3.51ft), extendible to 176cm (5.77ft), weight 5.6kg (12.3lb).

Order No: 399 244

### **GST05L**, Aluminium Tripod

Light tripod with shoulder strap. Light-weight and long lasting making it suitable for levels and targets. Packaged length 107cm (3.51ft), extendible to 176cm (5.77ft), weight 4.6kg (10.1lb).

Order No: 563 630

# Choice

### CTP101, Wooden tripod

Heavy tripod with carrying straps and side clamp screws. A low-cost alternative for TPS set-ups. Packaged length 104cm (3.41ft), extendible to 166cm (5.45ft), weight 5.7kg (12.6lb).

Order No: 726 831

### CTP103, Aluminium Tripod

Light tripod with carrying straps and side clamp screws. A low-cost alternative for levels, lasers and targets. Packaged length 105cm (3.44ft), extendible to 167cm (5.48ft), weight 4.5kg (9.9lb).

Order No: 726 833

# **Accessories**

### GST4, Tripod Star

For the secure set-up of tripods on slippery surfaces.

Order No: 332 200

### GHT43, Tripod Bracket

Adapter for mounting the TCPS27 radio on all tripods.

Order No: 734 163

### GHT58, Tripod Bracket

Adapter to mount the Leica GFU radios on all tripods.

Order No: 748 417

### GST73, Rolling Base

Base with lockable wheels, suitable for all tripods. Allows the tripod to be moved without removing the instrument.

Order No: 753 314

# **Tribrachs**

# **Professional**

### GDF121, Tribrach w/o Plummet

High accuracy, maintenance free tribrach. Individually tested and guaranteed to effect TPS accuracy by less than 1". Therefore suitable for all high angular accuracy requirements.

Torsional stiffness <1", weight 780 grams (1.72 lb).

Order No: 667 304

### GDF122, Tribrach with Optical Plummet

High accuracy, maintenance free tribrach. The optical plummet is of robust construction, virtually eliminating the need for adjustment during the lifetime of the tribrach.

Torsional stiffness (1", weight 860 grams (1.90 lb).

Order No: 667 307

# Basic

### GDF111-1, Tribrach w/o Plummet

Suitable for TPS instruments with an angular accuracy of greater than 3". The footscrews have a large diameter which permits fine adjustment even when wearing work gloves.

Torsional stiffness <3", weight 780 grams (1.72 lb).

Order No: 748 888

### GDF112, Tribrach with Optical Plummet

The tribrach and optical plummet are of robust construction and suitable for long period exposure in all environments. This makes the GDF112 ideal for GPS and target stations.

Torsional stiffness <3", weight 670 grams (1.48 lb).

Order No: 667 308

## **Choice**

### CTB101, Tribrach w/o Plummet

A low-cost tribrach suitable for use in normal environments. Suitable for all light-weight instruments of low angular accuracy. Black colour.

Torsional stiffness <5", weight 780 grams (1.72 lb).

Order No: 726 839

# Accessories

### GHM007, Height Meter

For quick and easy instrument height measurement. The specially scaled tape, accurately displays the height to the centre of the TPS telescope or prism centre. The GHT196 holder is additionally required.

Order No: 667 718

### GHT196, Holder for Height Meter

For attachment of the GHM007 height meter to any Leica Geosystems tribrach.

Order No: 722 045



The torsional stiffness of a tribrach significantly effects the angular accuracy of the instrument. Therefore it is important to use a suitable tribrach for the required application.



# **Carriers**



Professional carriers are available with either optical or laser plummet for exact positioning. The plummet can be set precisely vertical with the rotatable longitudinal bubble.

# **Professional**

### SNLL121, Precision Carrier with Laser Plummet

The laser provides convenient setting up even in conditions of poor visibility. Can be pointed in either the zenith or nadir direction. Supplied with 4x AA-size alkaline batteries. Reflector centring accuracy 0.3mm, plummet accuracy 1.0mm at 1.5m.

Order No: 667 316

### **GZR3**, Precision Carrier with Optical Plummet

With high accuracy optical plummet for exact positioning over measurement points. Reflector centring accuracy 0.3mm, plummet accuracy 0.5mm at 1.5m.

Order No: 428 340



### GZR103, Carrier with Optical Plummet

Rotatable carrier with longitudinal bubble for use in tribrachs without plummet. Reflector centring accuracy 1.0mm, plummet accuracy 0.5mm at 1.5m.

Order No: 725 566

### GRT144, Carrier with Stub

Simple carrier for use in tribrachs with optical plummet. Suitable for reflectors with stub fitting. Centring accuracy 1.0mm.

Order No: 667 313

### GRT146, Carrier with 5/8" Thread

Simple carrier for use in tribrachs with optical plummet. For direct fitting of GPS antennas. Centring accuracy 1.0mm.

Order No: 667 216

### GRT246, Carrier with 5/8" Thread

Simple carrier for use in tribrachs with optical plummet. For direct fitting of GPS antennas. Black colour.

Order No: 762 322



### GAD31, Screw-to-Stub Adapter

For mounting of GPS antennas to poles and carriers with stub.

Order No: 667 217

### GZS4, Height Hook

Hook for positioning a tape measure directly below the tribrach. Connects to all Leica Geosystems carriers. To precisely measure the height of GPS antennas and reflectors. With integrated tape measure graduated in mm and inches.

Order No: 667 244



GAD31

# **Standard Reflectors**

# **Professional**

### GPR121, Circular Prism with Holder

Precision circular prism with anti-reflection coating, mounted in metal holder. Supplied with removable target plate. Centring accuracy 1.0mm, max. range with IR of 3500m.

Order No: 641 617

### GPR1. Circular Prism

Precision circular prism with anti-reflection coating. Suitable for mounting in GPH1 and GPH3 holders.

Max. range with IR of 3500m.

Order No: 362 830

### GPH1, Prism Holder

Holder for one GPR1 circular prism. The 362823 GZT4 target plate can be attached to this holder.

Order No: 362 820

### GPH3, Prism Holder

Holder for three GPR1 circular prisms. Provides extremely long distance measuring range, up to 5400m with IR.

Order No: 400 080

### **GPH1P**, Precision Reflector

Precisely machined reflector, for high accuracy requirements. The prism is slightly tilted to prevent any EDM reflection from the front surface, thereby increasing measurement accuracy. Centring accuracy 0.3mm, max. range with IR of 3500m.

Order No: 555 631



Leica Geosystems reflectors are produced to the highest possible accuracy. After manufacture, each prism is measured to determine its accuracy. Only those prisms meeting the required specifications are supplied to the market.



GPR121



GPH1P

# Basic

### GPR111, Circular Prism with Holder

Circular prism, sealed in red polymer holder. Large integrated target plate provides good visibility.

Centring accuracy 2.0mm, max. range with IR of 2500m.

Order No: 641 618

### **GPR112**, Monitoring Prism

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 seperately. Max. range with IR of 2500m.

Order No: 726 295

### GPR113, Circular Prism with Holder

Circular prism mounted in red polymer holder. Suitable for fitting of the 362823 GZT4 target plate.

Centring accuracy 2.0mm, max. range with IR of 2500m.

Order No: 753 492



# **Special Reflectors**

# **Professional**

### GRZ4, 360° Reflector

Suitable for all robotic TPS work performed with a survey pole. Large rubber mountings protect the prism. Overall 3D pointing accuracy of 5.0mm. When aiming on a side marked by a yellow arrow, an accuracy of better than 2.0mm can be achieved. ATR range of 600m (2000ft).

Order No: 639 985

### GRZ122, 360° Reflector

The high performance GRZ122 allows connectivity to the Leica SmartAntenna. The built-in point allows the reflector to be positioned directly on a survey mark, at a height of 78mm. Overall 3D pointing accuracy is 2.0mm. ATR range of 600m.

Order No: 754 384

# Basic

### GRZ101, 360° Mini Reflector

Suitable for short range ATR applications. Due to its small size, the GRZ101 provides the greatest pointing accuracy of 1.5mm. With the GAD103 adapter, this reflector can be mounted on all poles with stub fitting. ATR range of 350m (1150ft).

Order No: 644 327

# Choice

### CPR105, Double Sided Reflector

This unique reflector provides two back-to-back prisms, both with 0-constant. With 1/4" fitting, suitable for mounting on CPP105 reflector pole. Max. range with infrared and reflectorless EDM of 250m (800ft).

Order No: 731 346

### GZM29, Reflective Tape

A self-adhesive, reflective tape of 20x20mm. This tape is suited for measurements up to 100m (330ft) with infrared EDM. Supplied in pack of 20 pieces.

Order No: 763 532

### GZM30, Reflective Tape

A self-adhesive, reflective tape of 40x40mm. This tape is suited for measurements up to 200m (650ft) with infrared EDM. Supplied in pack of 20 pieces.

Order No: 763 533

### GZM31, Reflective Tape

A self-adhesive, reflective tape of 60x60mm. This tape is suited for measurements up to 250m (800ft) with infrared EDM. Supplied in pack of 20 pieces.

Order No: 763 534



# Mini Reflectors

# **Professional**

### GMP101, Mini Prism Set

Mini prism mounted in metal holder. Includes a circular bubble, removable target plate, spike and padded bag.

Prism constant of +17.5mm, max. IR range of 2000m (7000ft).

Order No: 641 662

### GMP104, Mini Prism with L-bar

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

Order No: 641 762



GMP101

# Basic

### GMP111, Mini Prism with Holder

Mini prism mounted in polymer holder with 1/4" thread fittings. Includes circular bubble, GLS115 four-section pole and point. Prism constant of +17.5mm, max. IR range of 2000m.

Order No: 641 615

### GMP111-0, Mini Prism with Holder

Mini prism mounted in polymer holder with 1/4" thread fittings. Includes circular bubble, GLS115 four-section pole and point. Leica 0-prism constant, max. IR range of 2000m (7000ft).

Order No: 642 534



GMP104



GMP111 8 GAD105

# Accessories

### GAD103, Mini Prism Adaptor

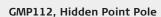
Adapter for attaching the GRZ101 to poles and carriers with stub. Provides the same height offset as for standard reflectors.

Order No: 742 006

### GAD105, Mini Prism Adapter

Adapter for attaching the GMP111 to poles and carriers with stub. Provides the same height offset as for standard reflectors.

Order No: 743 503



Hidden Point Pole extension for GMP111. Includes mini reflector and 30cm adapter pole. Provides prism separation of 40, 70 and 100cm.

Order No: 742 329



GMP111-0

### GMP112-0, Hidden Point Pole

Hidden Point Pole extension for GMP111-0. Includes mini reflector and 30cm adapter pole. Provides prism separation of 40, 70 and 100cm.

Order No: 744 495

### GVP608, Soft Bag

Bag for GMP111/GRZ101 mini prisms and the GLS115 pole set.

Order No: 642 344



**GVP608** 

# **Containers**



The robust Leica Geosystems containers protect your valuable instrument during transport or when accidentally dropped. The special seals keep the contents dry under all conditions.





### **GVP609**, Accessory Container

Container for 2 reflectors (GPR121, GPR111, GRZ4 or GPH1P), 2 carriers (GZR3, SNLL121, GZR103 or GRT144), 2 tribrachs (all types), GZT4 target plate and GHM007 height meter.

Order No: 667 451

### GVP623, GPS1200 Container

Container for System 1200 GPS receiver, AX1200 antenna, RX1200 controller, cables and accessories.

Order No: 733 267

### GVP637, Smart Rover Container

Container for System 1200 Smart Rover. Holds accessories for pole and tripod setup.

Order No: 748 994

### GVP639, GPS900 Container

Container for 2x ATX900 antennas, RX900 controller, GHT56 holder, 2x GFU14 radios, cables and accessories.

Order No: 753 895

### GVP640, System 1200 Container

Container for System 1200 SmartRover and SmartStation.

Order No: 754 598

### GVP603, Backpack

Mammut backpack for System 500/1200 GPS sensors.

Order No: 667 137

### CTC102, Soft Bag

Protective bag with shoulder strap for one prism station. Holds a tribrach, carrier and prism of all types.

Order No: 727 589

# **Back Straps**

### GDZ20, Back Strap

Back strap for TPS1000/2000 transport container. For each container two are needed.

Order No: 632 249

### GDZ66, Back Strap

Set of two back straps, for all containers with suitable mountings. The container can still be opened while the straps are attached.

Order No: 744 501

# **Survey Poles**

# **Professional**

### GLS11, Telescopic Pole

Reflector pole with quick release clamp for easy and rapid height adjustment. Graduated in cm and ft, min. length 1.24m (4.07ft), extendible to 2.15m (7.05ft), weight 940g (2.07lb).

Order No: 385 500

### GLS12, Telescopic Pole

Pole with snap locks to prevent any pole slip. Suitable for the GRZ122 reflector together with ATX antenna. Graduated in cm, min. length 1.39m, extendible to 2.0m, weight 950 grams.

Order No: 754 391

### GLS12F, Telescopic Pole

Pole with snap locks to prevent any pole slip. Suitable for the GRZ122 reflector together with ATX antenna. Graduated in ft, min. length 4.56ft, extendible to 6.56ft, weight 2.09lb.

Order No: 754 389

### GLS14, Mini Pole

Mini reflector pole for exact positioning of the reflector over a survey mark. Provides a prism height of 20cm (0.66ft).

Order No: 403 427

### GLS111, Telescopic Pole

Heavy duty reflector pole with red/white markings for high visibility. Twist lock provides easy and secure tightening. Graduated in cm and ft, min. length 1.40m (4.59ft), extendible to 2.60m (8.53ft), weight 1.48kg (3.26lb).

Order No: 667 309

### GLS112, Telescopic Pole

Heavy duty reflector pole with red/white markings for high visibility. Twist lock provides easy and secure tightening. Graduated in cm and ft, min. length 1.47m (4.82ft), extendible to 3.60m (11.81ft), weight 1.88kg (4.14lb).

Order No: 667 310

# Basic

### GLS115, Mini Pole

Set of four screw-together sections and point with 1/4" threads. Suitable for GMP111 and CPR105 reflectors.

Provides prism heights of 10, 40, 70, 100 or 130cm.

Order No: 642 106

# Choice

### CPP105, Telescopic Pole

Reflector pole with twist- and snap locks to prevent any pole slip. With 1/4" thread for mounting of GMP111 and CPR105 reflectors. Min. length 1.28m (4.20ft), extendible to 2.11m (6.92ft), weight 890g (1.96lb).

Order No: 748 967



Leica Geosystems poles provide a steady, non-slip support for your reflector or GPS antenna. Most poles have a hardened steel tip which does not wear out. This ensures that the pole height remains accurate.



# **GPS Poles**

# **Professional**

### GLS20, Bottom Section GPS Pole

Screwable pole of carbon fibre. Length 1.00m (3.28ft), weight 290g (0.64lb). 667223 GHT25 Grip with bubble is additionally required, weight 250g (0.55lb).

Order No: 667 225

### GLS21, Top Section GPS Pole

Carbon fibre pole with 5/8" thread for GPS antenna. Also available with stub, as GLS22 pole. Weight 270g (0.60lb).

Order No: 667 226

### GLS30, Telescopic GPS Pole

Carbon fibre pole with snap lock at 2.00m (6.56ft) for rapid setup. Min. length 1.36m (4.46ft), light weight at 730g (1.60lb).

Order No: 752 292

## Basic

### GLS17, Bottom Section GPS Pole

Screwable pole of aluminium with hardened steel tip. Length 1.00m (3.28ft), weight 390g (0.86lb).

Order No: 667 221

### GLS18, Top Section GPS Pole

Aluminium pole with 5/8" thread for GPS antenna. Also available with stub, as GLS19 pole. Weight 370g (0.82lb).

Order No: 667 222

### GAD32, Telescopic Rod

Telescopic rod with 5/8" screw. Fits in 667137 GVP603 backpack, for Radio and GPS antenna mounting. Can be secured on a tripod using the 667236 GHT36 adapter.

Order No: 667 228

# **Accessories for all Poles**

### **GSR2**, Dual Strut Support

With 2 telescopic legs, for rapid set-up of 0 25mm poles.

Order No: 555 720

### GST6, Quickstand

With 3 telescopic legs, provides an extremely stable support for  $\emptyset$  25mm poles.

Order No: 560 138

### GSR111, Dual Strut Support

With 2 telescopic legs, for rapid set-up. Suitable for poles of all diameters.

Order No: 667 319

### **GZW12**, Pole Extension

Extends all poles with stub fitting, by 1.00m (3.28ft).

Order No: 403 428





# Chargers

# **Professional**

### **GKL221**, Charging Station

Intelligent charging ensures long battery life. Possible to connect up to 5 batteries simultaneously. Includes country specific mains connection and cable to connect batteries with 5-pin charging socket.

Order No: 733 271

### GDI221, Charging Adapter

Adapter for charging 2 Li-Ion batteries, GEB221 or GEB211.

Order No: 733 323

### GDI222, Charging Adapter

Adapter for charging 2 NiMh batteries, GEB121 or GEB111. A charging cable is included for all batteries with 5-pin charging socket.

Order No: 733 322

### GDC221, Car Adapter Cable

For connecting the GKL221 to a 12V - 24V power source, at the cigarette lighter socket. Built-in electronics protect the charger from power surges.

Order No: 734 389



### GKL211, Battery Charger

Simple, low-cost charger for GEB221 and GEB211 Li-Ion batteries. Includes car adapter cable.

Order No: 734 752

### GKL112, Battery Charger

Simple, low-cost charger for GEB121 and GEB111 NiMh batteries. Includes car adapter cable.

Order No: 734 753

### GKL22, Battery Charger

Simple charger for batteries with 5-pin charging socket. Timed charge of 14 hours at a current of 200mA. With Euro-type plug, 230V input.

Order No: 636 983

### GKL22-1, Battery Charger

Simple charger for batteries with 5-pin charging socket. Timed charge of 14 hours at a current of 200mA. With US-type plug, 115V input.

Order No: 639 959



Leica Geosystems chargers and batteries use the latest technology to ensure a reliable supply of power. The Professional charger monitors the batteries state of charge, age and temperature for appropriate charging. This ensures the maximum possible service life of your batteries.





# **Batteries**







## **Internal Batteries**

### GEB221, Li-Ion Battery

High output battery for all System 1200 instruments and Piper 100/200, 7.4V / 4.4Ah.

Order No: 733 270

### GEB211, Li-Ion Battery

High output battery for RX1200 controller, 7.4V / 2.2Ah.

Order No: 733 269

### GEB90, Li-Ion Battery

High output battery for SR20/GS20 GPS systems, 7.4V / 2.2Ah.

Order No: 724 117

### GEB121, NiMH Battery

Low maintenance battery for TPS400/800 and Builder instruments, 6.0V / 4.2Ah.

Order No: 667 123

### GEB111, NiMH Battery

Low maintenance battery for TPS400/800 and DNA instruments, 6.0V / 2.1Ah.

Order No: 667 318

### GAD39, Battery Adapter

Adapter for 6x AA-size alkaline batteries. Suitable for TPS400/800 instruments.

Order No: 712 156

### GEB187, NiMH Battery

Battery for TPS1000 and TPS2000 series instruments,

12V / 1,8Ah.

Order No: 667 147

Additional batteries available on request.

# **External Power Supplies**

### GEB171, External NiMH Battery

High output battery for set-ups over long periods, 12V / 9.0Ah. With 5-pin charging socket. Weight 2.0kg (4.4lb).

Order No: 727 367

### **GEV208, Power Supply**

Mains adapter for uninterrupted power supply. Connects to all Leica Geosystems power cables. Country specific mains cable available seperately. AC input 100V-240V.

Order No: 749 279

### GEV71, Power Cable

4m cable for 12V battery power supply. Protects the instrument from damage due to pole reversal and voltage spikes.

Order No: 439 038

# **Memory Devices and Optics**

# Memory Cards & Card Readers

### MCF256, CompactFlash Card

Leica Geosystems memory cards are perfectly suited to the requirements of System 1200 sensors. These ruggedised industrial cards protect data even when dropped and in extreme environmental conditions. Operating temperture -40°C to +85°C. Available also as 32MB or 1GB.

Order No: 733 257

### MCFAD1, CF-Card Adapter

Adapts a CompactFlash card to PCMCIA size. Allows use of the 32MB CF-card in DNA, GPS500 and TPS1100 instruments.

Order No: 733 258

### MCR5, USB Card Reader

OmniDrive card reader for CompactFlash cards. Provides extremely high data transfer reliability. Connects by USB port with all PC operating systems.

Order No: 733 259

### MCR6, Card Reader

Universal OmniDrive card reader for all memory card types. Is supplied with data recovery software.

Order No: 743 119



Losing data after a day's work is extremely frustrating and expensive. Leica Geosystems storage media and communication products are of the highest quality in order to achieve continuous reliabilty.

# **Eyepieces & Objective Lenses**

### GVO13, Solar Filter

Attaches to the objective of all TPS instruments. Protects eyesight and EDM electronics when sighting bright objects.

Order No: 743 504

### GFZ3, Diagonal Eyepiece

For comfortable observations of steep sights, up to the zenith. Fits all TPS instruments. Includes objective counterweight.

Order No: 734 514

### GOA2, Autocollimation Eyepiece

To perform autocollimation with any TPS instrument. The 394787 GEB62 Plug-in Lamp and 394792 GEB63 Battery Box are additionally required.

Order No: 199 899

### GOK6, Diagonal Eyepiece

For comfortable observations of steep sights, up to 66°. Has a variable joint for the adjusting the sighting angle. Fits all TPS instruments. Includes objective counterweight.

Order No: 376 236

### FOK53, Magnification Eyepiece

Exchangable eyepiece for increasing telescope magnification to 42x (Requires fitting by a Leica Geosystems Service Centre).

Order No: 377 802





# **DNA Staffs**

Staffs for the DNA Levels are manufactured in Germany to the highest precision. The bar code of the Professional range is printed on an invar strip with a coefficient of expansion < 1ppm/°C.

# Ē = = GPCL2 GWCL60 GKNL4M GTL4C

## **Professional**

### GPCL2, Invar Staff with Bar Code

Precision levelling staff with 2 circular bubbles. The two attached handles provide steady positioning. Length 2.0m (5.56ft), weight 4.2kg (9.3lb).

Order No: 563 659

### GPCL3, Invar Staff with Bar Code

Precision levelling staff with 2 circular bubbles. The two attached handles provide steady positioning. Length 3.0m (9.84ft), weight 4.9kg (10.8lb).

Order No: 560 271

### GPCL3, Invar Staff with Certificates

Precision staff, individually measured for accuracy. Supplied with expansion co-efficient and length calibration certificates. Length 3.0m (9.84ft), weight 4.9kg (10.8lb).

Order No: 560 274

### GWCL92, Invar Staff with Bar Code

Light-weight staff with circular bubble. Interchangeable edge or pin base, suitable for industrial applications. Length 92cm (3.02ft), weight 1.7kg (3.7lb).

Order No: 632 313

### GWCL60, Invar Scale with Bar Code

Invar scale with screw holes allow for attachment directly to structures. Ideal for long-term height monitoring applications. Dimensions of  $600 \times 25 \times 1.5$ mm, for measuring range of 1.8 - 20m (6 - 65ft).

Order No: 563 733

# Basic

### **GKNL4M**, Sectioned Fiberglass Staff

Levelling staff in 3 connectable sections. Has dual measuring faces with bar code and cm graduations. Supplied with transport bag and 2 handles. Packaged length 1.6m, extendible to 4.0m, weight 4.4kg, coefficient of expansion 10ppm/°C.

Order No: 522 794

### GKNL4F, Sectioned Fibreglass Staff

Levelling staff in 3 connectable sections. Has dual measuring faces with bar code and ft graduations. Supplied with transport bag and 2 handles. Packaged length 5.18ft, extendible to 13.12ft, weight 9.7lb, coefficient of expansion 10ppm/°C.

Order No: 522 793

### GTL4C, Telescopic Aluminium Staff

Four-section telescopic staff. Has dual measuring faces with bar code and mm graduations. Supplied with transport bag. Packaged length 1.2m (3.94ft), extendible to 4.0m (13.12ft), weight 1.8kg (4.0lb), coefficient of expansion 24ppm/°C.

Order No: 667 113

# **Cables**

Device	Instrument	Cable Art. No. and Description
GEB171 External Battery or GEV208 Mains power supply	TPS / DNA	409678 GEV52 direct connection, 1.8m
	GX1200	560130 GEV97 direct connection, 1.8m
	GRX1200	733298 GEV172 Y-cable for two power supplies
	RX1250 / ATX1200	756365 GEV215 Y-cable for RX1250 - ATX - Battery
	ATX900	748418 GEV205 Y-cable for ATX900 - GFU - Battery
	GS20 / SR20	731352 GEV181 direct connection, 1.2m
12V Car Battery	All instruments	439038 GEV71 cable with crocodile clips plus the corresponding cable for the GEB171 listed above
PC - RS232 port	TPS / DNA	563625 GEV102 direct connection, 2m 734698 GEV187 Y-cable for TPS - PC - Battery
	GX / GRX1200	733280 GEV160 connects to Ports 1, 2 or 3
	RX1250 / ATX1200	733282 GEV162 direct connection, 2.8m
	GFU14	733297 GEV171 programming Y-cable
	GS20 / SR20	740872 GEV196 direct connection, 1.2m
PC – USB port	TPS / DNA	734700 GEV189 USB to RS232 converter cable
	GX / GRX1200	734755 GEV195 connects to Ports 1, 2 or 3, 2.0m
	RX1250 / ATX	733281 GEV161 direct connection, 2.8m
RX1210	GX / GRX1200	733283 GEV163 connecting to RX Port, 1.8m 733284 GEV164 for all-on-the-pole setup, 1.1m
RX1250	TPS1200	756367 GEV217 direct connection, 1.8m
	ATX	733299 GEV173 direct connection, 1.2m
GFU14 Satelline Radio	GX1200	639968 GEV125 for connection without GFU housing
	ATX900	748418 GEV205 Y-cable for ATX900 - GFU - Battery
System 500 GFU Radio	GX1200	733288 GEV167 for System 500 GFU housings, 0.5m
External Modem	GX / GRX1200	563809 GEV113 connects to Ports 1, 2 or 3, 2.8m 762026 GEV221 Y-cable for GX-Satel-Battery
Timed Device	GX / GRX1200	403448 GEV42 Event input cable, 2m 667744 GEV150 PPS output cable, 2m
Standard GPS Antennas or Gainflex Radio Antenna	GX / GRX1200	667200 GEV141 antenna cable, 1.2m 667201 GEV142 extension antenna cable, 1.6m 636959 GEV120 antenna cable, 2.8m 632372 GEV119 antenna cable, 10m 724969 GEV194 for all-on-the-pole setup, 1.8m
	GS20 / SR20	731353 GEV179 antenna cable, 1.2m

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### Laser plummet:

Laser class 2 in accordance with IEC 60825-1 resp. EN 60825-1 Laser class II in accordance with FDA 21CFR Ch.I § 1040



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