

# Spectra Precision®

Over 45 years experience  
in construction tools



## Construction Distributor Catalog



# Productivity Is The Right Tool For The Job... From The Deepest



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## New Products

New Products for 2012

### Universal Laser



#### UL633 Universal Laser

**The Most Versatile Construction Laser, Ever**

The UL633 is the first construction laser offering the total control of all three axes (X/Y/Z). This is accomplished via unique simultaneous radio and infrared communication and also completely new "fan beam" technology for the Z axis.

More details and more Grade Lasers starting on page 8

### DigiRod



#### DR400 DigiRod

**The Rod-less Grade Checker**

The DR400 DigiRod™ eliminates the need for grade rods when checking heights with a rotating laser. The all-in-one combination of a laser receiver with digital readout, laser distance meter and built-in tilt sensor provides the information required to take rod-less, accurate elevation readings.

More details on page 13

### Quick Measure Laser Distance Meter



#### QM75 Quick Measure

**The Rugged Laser Distance Meter**

The QM75 Quick Measure is the first distance meter designed specifically for the tough construction site environment.

More details and more Portable Tools starting on page 19

# Laser Levels

## Spectra Precision LL100

A complete leveling crew in a case



### Features & Benefits

- » Complete system in one case—includes LL100 laser, HR320 receiver, C59 receiver clamp, tripod, and choice of grade rod—allowing convenient storage for transportation
- » Retail packaging increases showroom awareness and sales
- » Easy to transport, easy to store, easy to use
- » Fully automatic self-leveling rotating laser provides simple, fast and accurate setup
- » Robust design withstands a 3 ft (1 m) tripod tip over and still remains functional, reducing costs for downtime or repair
- » 3 Year Instant Exchange limited warranty keeps productivity high and operating costs at a minimum
- » One-person elevation control up to a 1,000 ft (300 m) diameter area for increased productivity
- » Optional RC601 remote control allows easy grade matching using the remote control from rod position

### Applications

- » Checking/setting elevations, concrete forms, footings, and foundations for smaller job sites
- » Ideal for patio decks, terraces, swimming pools, septic systems, and leach fields
- » Estimating cut and fill

Part No.	Receiver	Rod	Tripod	Case
LL100	HR320	No	No	Small Hard Case
LL100-1	HR320	GR151 Tenths	Q104025	System Case
LL100-2	HR320	GR152 Inched	Q104025	System Case
LL100-3	HR320	GR153 Metric	Q104025	System Case

All product numbers include LL100 transmitter, HR320 receiver, C59 rod clamp, case, retail carton graphics, 2 D and 2 AA Alkaline batteries

See Product Specifications on Page 23

## Spectra Precision LL300

Medium-range, highly accurate leveling solution



### Features & Benefits

- » Available in system case with receiver, tripod and choice of grade rod
- » Fully automatic self-leveling provides fast and accurate setup
- » Rechargeable battery pack or alkaline batteries keeps the unit working with no downtime due to power loss
- » Optional RC601 remote control allows easy grade matching using the remote control from rod position
- » Single-axis manual slope mode with cross-axis self-leveling allowing grade matching for basic slope work, while maintaining accuracy
- » 1300 ft (400 m) operating diameter
- » Built to withstand severe drops of up to 3 ft (1 m) directly onto concrete, or up to 5 ft (1.5 m) when pushed over on a tripod means less downtime and cost due to damage caused by an accidental drop or tip-over
- » Comes with a choice of HL450, HR320 or CR600 receiver allowing you to choose the best option to suit your application
- » 5 Year Warranty

### Applications

- » Checking/setting elevations, concrete forms, footings, and foundations for small and medium sized jobs
- » Basic slope work such as driveways and ramps
- » Excavating, digging footings, and septic tanks with CR600 receiver

Part No.	Receiver	Power	Rod	Tripod	Case
LL300	HL450	4 D Alkaline	No	No	Small Hard Case
LL300-1	HL450	4 D Alkaline	GR151 Tenths	Q104025	System Case
LL300-2	HL450	4 D Alkaline	GR152 Inches	Q104025	System Case
LL300-3	HL450	4 D Alkaline	GR153 Metric	Q104025	System Case
LL300-4	HL450	Rechargeable pack*	No	No	Small Hard Case
LL300-8	HR320	4 D Alkaline	No	No	Small Hard Case
LL300-10	CR600	4 D Alkaline	No	No	Small Hard Case

All product numbers include LL300 transmitter and case. \*Rechargeable pack comes with NiMH batteries and charger.

See Product Specifications on Page 23

## Spectra Precision LL400

Longest range, highly accurate leveling solution

### Applications

General Construction Applications

- » Checking/setting elevations, concrete forms, footings, and foundations for large commercial jobs
- » Basic slope work such as driveways and ramps

Machine Control Applications

- » Excavating for forms or footers with CR600 receiver
- » Sub-base leveling with skid steer loaders and CR600 receiver
- » Long range machine control applications

See Product Specifications on Page 23

### Features & Benefits

- » 2,600 ft (800 m) working diameter which increases productivity by reducing need for multiple set-ups on a large job site
- » Fast setup, minimal training time and automatic self-leveling minimize operating costs and boost productivity
- » Highly rugged design and patented lighthouse seal protects the rotor head and glass and offers superior drop and weather protection for reduced downtime
- » IP66 dust- and water-proof to withstand harsh jobsite conditions
- » Energy-efficient design offers choice of NiMH rechargeable or alkaline batteries
- » Single-axis slope mode provides with self-leveling cross axis for improved accuracy
- » Temperature calibrated for high accuracy over wide temperature changes
- » Flexible power options and minimal power costs due to long battery life
- » Choice of HL700 or CR600 receivers



Part No.	Receiver	Power	Rod	Tripod	Retail Package
LL400	HL700	4 D Alkaline	No	No	No
LL400-1	HL700	4 D Alkaline	GR151 Tenths	2161	Yes
LL400-2	HL700	4 D Alkaline	GR152 Inches	2161	Yes
LL400-3	HL700	4 D Alkaline	GR153 Metric	2161	Yes
LL400-4	HL700	NiMH pack*	No	No	No
LL400-10	CR600	4 D Alkaline	No	No	No

All product numbers include LL400 transmitter and case. \*NiMH pack comes with charger.

## Spectra Precision LL500

Long-range, highly accurate leveling solution

### Applications

General Construction Applications

- » Checking/setting elevations, concrete forms, footings, and foundations for medium to large commercial jobs

Machine Control Applications

- » Excavating, digging footings, and septic tanks with CR600 receiver
- » Sub-base leveling with skid steer loaders and CR600 receiver
- » Longer range machine control applications

See Product Specifications on Page 23

### Features & Benefits

- » 1,600 ft (500 m) working diameter which increases productivity by reducing need for multiple set-ups on a large job site
- » Self-leveling with built-in 'out-of-level' shut off that maintains accuracy over the entire work area, and minimizes errors
- » High accuracy laser, 1/16 in per 100 ft (1.5 mm per 30 m) with temperature compensation provides highly stable, repeatable accuracy even under large temperature changes
- » Uses alkaline or rechargeable batteries—so you are less likely to run out of power and the unit keeps working with no downtime due to power loss
- » Visible 'spotting' beam for determining receiver mounting placement making it faster to find the on-grade position
- » Comes with a choice of HL700 or CR600 receivers allowing you to choose the best option to suit your application
- » 5 Year Warranty



Part No.	Receiver	Power	Rod	Tripod	Retail Package
LL500	HL700	4 D Alkaline	No	No	No
LL500-1	HL700	4 D Alkaline	GR151 Tenths	2161	Yes
LL500-2	HL700	4 D Alkaline	GR152 Inches	2161	Yes
LL500-3	HL700	4 D Alkaline	GR153 Metric	2161	Yes
LL500-4	HL700	NiMH pack*	No	No	No
LL500-10	CR600	4 D Alkaline	No	No	No

All product numbers include LL500 transmitter and case. \*NiMH pack comes with charger.

# Horizontal and Vertical Lasers

## Spectra Precision HV101

Economical solution for leveling, aligning, and plumb applications



### Features & Benefits

- » Fully automatic self-leveling in both horizontal and vertical provides fast, accurate setup
- » Robust design withstands a 3 ft (1 m) drop on concrete and still remains functional, reducing costs for downtime or repair
- » Multiple scanning angles and rotation speeds to match various conditions
- » Complete GC packages include everything you need for both interior and exterior work in a convenient system case
- » Rotor cage can be removed for exact beam spotting
- » Simple controls allow operators to carry out many functions with "one-touch" commands
- » Included RC601 Remote Control offers scanning, rotation speed, slope settings, alignment control and single axis slope control for fast setups
- » 3 Year Instant Exchange limited warranty program eliminates downtime
- » HV101GC retail packaging increases showroom sales

### Applications

- » Leveling of ceiling grids
- » Installation of interior fittings (cabinets, lighting etc.)
- » Transferring points from the floor to the ceiling
- » Short range leveling for decks and patios

Part No.	Receiver	Wall Mount	Tripod	Grade Rod	Ceiling Target	Remote	Case
HV101	No	M101	No	No	1176	RC601	Small Hard Case
HV101-4	HR150U	M101	No	No	1176	RC601	Small Hard Case
HV101GC-1	HR320	M101	Q104025	GR151 Tenths	1176	RC601	System Case
HV101GC-2	HR320	M101	Q104025	GR152 Inches	1176	RC601	System Case
HV101GC-3	HR320	M101	Q104025	GR153 Metric	1176	RC601	System Case

All product numbers include HV101 transmitter, wall mount, ceiling target, laser glasses, remote control, case and 2 D Alkaline batteries.

See Product Specifications on Page 23

## Spectra Precision HV301

General purpose construction laser for medium-range interior and exterior applications



### Features & Benefits

- » Composite material housing is rugged, lightweight and IP54 weatherproof making it easy for contractor carry and use in demanding jobsite conditions, reducing repair downtime
- » Fully automatic self-leveling in both horizontal and vertical for fast, accurate setup in horizontal and vertical applications
- » Single-axis manual slope mode with 'cross-axis' self-leveling allows grade matching for basic slope work, while maintaining accuracy in the cross-axis
- » Highly visible 3a/3R beam and superior scanning functions making it easier for interior layout and aligning over longer range job sites (visible diameter of 330 ft (100 m))
- » Long-range remote control operation allows convenient access to key functions across the job site
- » Flexible power options, including rechargeable battery pack, AC power and alkaline batteries, combined with low battery warnings, reduces downtime by having multiple power options
- » 5 Year Warranty

### Applications

- » Interior and exterior, light to medium commercial, and residential construction
- » Leveling and aligning of forms and footers
- » Leveling and aligning of interior walls
- » Installation of ceilings and raised floors
- » Interior finishing work

Part No.	Receiver	Wall Mount	Tripod	Grade Rod	Ceiling Target	Remote	Case
HV301	HL450	No	No	No	No	No	Small Hard Case
HV301-1	No	M300	No	No	1176	RC601	Small Hard Case
HV301-2	HR150U	M300	No	No	1176	RC601	Small Hard Case
HV301GC-2	HR320	M300	Q104025	GR152 Inches	1176	RC601	System Case

All product numbers include HV301 transmitter, case and NiMH battery pack.

See Product Specifications on Page 23

## Spectra Precision HV301G

Rugged Green Beam laser system for interior construction

### Applications

- » Installation of ceilings
- » Layout, leveling, and aligning of interior walls
- » Interior finishing work
- » 1 m (4 ft) marks
- » Installation of raised access floors

### Features & Benefits

- » High visibility green beam is four times more visible than standard red beam lasers allowing work at longer distances and in brighter conditions
- » Automatic self-leveling in horizontal and vertical applications increases productivity with fast setups and minimal training
- » 360 degree remote is standard and allows operation of key functions over the jobsite
- » 5 Year Warranty
- » Scanning function positions the beam in the work area
- » Includes all the features and functions of the HV301
- » Durable construction can withstand tough jobsite conditions
- » Temperature compensation for accurate use throughout the day
- » Intuitive one-touch operator controls allow anyone to get to work quickly



Part No.	Receiver	Wall Mount	Ceiling Target	Remote
HV301G	No	M300	Q104124	RC601
HV301G-2	HR150U	M300	Q104124	RC601

All product numbers include HV301G transmitter, laser glasses, target, transmitter, case and NiMH battery pack with recharger.

See Product Specifications on Page 23

## Components and Accessories

### Components and Accessories for HV301G



Q104124  
High visibility green ceiling target included



Q104252  
Enhanced visibility green glasses included



RC601 long range remote control included 250 ft (75 m)



HR150U Receiver  
Receives green and red beams



HL750U Laserometer  
Receives green and red beams

## Spectra Precision GL412

Versatile automatic single grade laser for level, grade, and vertical alignment



RC402 Remote Control



### Features & Benefits

- » GL412 is single grade plus horizontal and vertical. Simple, accurate dial in grade from -10% to +15%
- » Up to 2,000 ft (600 m) working diameter which increases productivity by reducing need for multiple set-ups on a large jobsite
- » Fast setup, minimal training time and automatic self-leveling minimize operating costs and boost productivity
- » Highly rugged design and patented lighthouse seal protects the rotor head and glass and offers superior drop and weather protection for reduced downtime
- » 2-way full function remote control allows grade changes to be made from anywhere on the jobsite
- » Temperature calibrated for high accuracy over wide temperature changes
- » IP66 dust and water-proof to withstand harsh jobsite conditions
- » Choice of HL700 or CR600 receivers
- » Mask mode eliminates interference from other crews on the jobsite
- » 5 Year Warranty

Part No.	Receiver	Clamp	Remote
GL412	HL700	Rod Clamp with Bubble Vial	RC402
GL412-14	CR600	C50 Rod Clamp and C51 Magnetic Mount	RC402

All product numbers include GL412 transmitter, remote, case and NiMH rechargeable battery pack and charger.

### Applications

- » Leveling concrete forms and footers
- » General construction vertical alignment and plumb such as anchor bolt and form alignment
- » "Over the top" sewer and storm drain pipe installations
- » Driveways and ramps
- » Grading and excavating
- » Trenching

See Product Specifications on Page 24

## Spectra Precision GL422

Versatile automatic dual grade laser for level, grade, and vertical alignment



### Features & Benefits

- » GL422 is dual grade plus horizontal and vertical. Simple, accurate dial in grade from -10% to +15%.
- » Up to 2,600 ft (800 m) working diameter which increases productivity by reducing need for multiple set-ups on a large jobsite
- » Fully automatic self-leveling in both grade axis, horizontal, and vertical which provides fast, accurate setup in all applications
- » Highly rugged design and patented lighthouse seal protects the rotor head and glass and offers superior drop and weather protection for reduced downtime
- » 2-way full function remote control allows grade changes to be made from anywhere on the jobsite
- » Temperature calibrated for high accuracy over wide temperature changes
- » IP66 dust- and water-proof to withstand harsh jobsite conditions
- » Choice of HL700 or CR600 receivers
- » Mask mode eliminates interference from other crews on the jobsite
- » 5 Year Warranty

Part No.	Receiver	Clamp	Remote
GL422	HL700	Rod Clamp with Bubble Vial	RC402
GL422-14	CR600	C50 Rod Clamp and C51 Magnetic Mount	RC402

All product numbers include GL422 transmitter, remote, case and NiMH rechargeable battery pack and charger.

### Applications

- » Leveling concrete forms and footers
- » General construction vertical alignment and plumb such as anchor bolt and form alignment
- » "Over the top" sewer and storm drain pipe installations
- » Sports fields, tennis courts and driveways
- » Grading and excavating
- » Steep slope road embankments and ditch banks
- » Ramps and drainage

See Product Specifications on Page 24



## Spectra Precision GL512

Versatile automatic single grade laser for level, grade, and vertical alignment

### Applications

General Construction Applications

- » Leveling concrete forms and footers
- » General construction vertical alignment and plumb such as anchor bolt and form alignment
- » "Over the top" sewer and storm drain pipe installations
- » Driveways and ramps
- » Grading and excavating
- » Trenching

HL750 Applications

- » Remote grade checking with cable free remote display
- » Wireless monitoring of foundations and steel erections
- » Risk free monitoring of tilt up wall position

See Product Specifications on Page 24

### Features & Benefits

- » GL512 is a single grade laser with a compensated grade range of -10% to +15%. Vertical and horizontal setups are also compensated
- » Quick setups with the 2-way radio remote control
- » Electronic Leveling Vibration Filter dampens vibrations typically experienced on tall tripods, in high winds, or on high vibration jobsites
- » Very rugged with low service costs; takes a 3 ft (1 m) drop on concrete
- » Mask mode eliminates interference with other crews on the jobsite
- » Radio communication between the laser and HL750 Laserometers allow advanced features and remote display capabilities
- » Grade Match displays the existing grade over unknown ground and eliminates time consuming and error prone calculations, time spent searching for grade plans, and over excavating
- » PlaneLok automatically locks on to an existing elevation or vertical alignment point which eliminates all drift or possibility of error due to improper calibration or weather
- » 5 Year Warranty



RC402 Remote Control

Part No.	Receiver	Clamp	Remote
GL512	HL750	Rod Clamp with Bubble Vial	RC402
GL512-14	CR600	C50 Clamp and C51 Mag Mount	RC402
GL512-1	2 x HL750	Rod Clamps with Bubble Vials	RC402

All product numbers include transmitter, remote, case and NiMH rechargeable battery pack and charger.

## Spectra Precision GL522

Versatile automatic dual grade laser for level, grade, and vertical alignment

### Applications

General Construction Applications

- » General construction vertical alignment and plumb such as anchor bolt and form alignment
- » "Over the top" sewer and storm drain pipe installations
- » Sports fields, tennis courts and driveways
- » Grading and excavating

HL750 Applications

- » Remote grade checking with cable free remote display
- » Wireless monitoring of foundations and steel erections
- » Risk free monitoring of tilt up wall position

See Product Specifications on Page 24

### Features & Benefits

- » GL522 is a dual grade laser with a compensated grade range of -10% to +15%. Vertical and horizontal setups are also compensated
- » Quick setups with the 2-way radio remote control, and single and dual grade application capability
- » Electronic Leveling Vibration Filter dampens vibrations typically experienced on tall tripods, in high winds, or on high vibration job sites
- » Very rugged with low service costs; takes a 3 ft (1 m) drop on concrete
- » Mask mode eliminates interference with other crews on the jobsite
- » Radio communication between the laser and HL750 Laserometers allow advanced features and remote display capabilities
- » Grade Match displays the existing grade over unknown ground and eliminates time consuming and error prone calculations, time spent searching for grade plans, and over excavating
- » PlaneLok automatically locks on to an existing elevation or vertical alignment point which eliminates all drift or possibility of error due to improper calibration or weather
- » 5 Year Warranty



RC402 Remote Control

Part No.	Receiver	Clamp	Remote
GL522	HL750	Rod Clamp with Bubble Vial	RC402
GL522-14	HL750	C50 Clamp and C51 Mag Mount	RC402
GL522-1	2 x HL750	Rod Clamps with Bubble Vials	RC402

All product numbers include transmitter, remote, case and NiMH rechargeable battery pack and charger.

# Grade Lasers and Laser Accessories

## Spectra Precision GL710, GL720

Precision High Accuracy, Extra Long Range Grade Lasers



### Features & Benefits

- » Temperature compensation provides accurate stable results regardless of temperature changes
- » Long battery life and flexible power options keep the unit working throughout the day
- » Large displays make the numbers easy to read, even from a short distance
- » Better than 5 arc second servo deadband accuracy for demanding high accuracy requirements

### GL710 Single Grade Laser

- » Up to a to 3,000 ft (900 m) diameter. With -0.5 to 25% grade range, the GL710 is a great choice for general construction, site preparation, trenching and pipe-laying applications

### GL720 Dual Grade Laser

- » The GL720 features +10% in the X axis grade range and -0.5 to +25% Y-axis grade range with high accuracy up to 3,000 ft (900 m) diameter. The GL720 is ideal for general construction and machine control grade applications

### Applications

- » General construction
- » Site preparation
- » Trenching
- » Pipe laying
- » Road construction
- » Machine control

Part No.	Grade	Receiver	Clamp
CTO-GL710	Single	HL700	Rod Clamp with Bubble Vial
CTO-GL710-10	Single	CR600	C50 Clamp and C51 Mag Mount
CTO-GL720	Dual	HL700	Rod Clamp with Bubble Vial
CTO-GL720-10	Dual	CR600	C50 Clamp and C51 Mag Mount

All product numbers include transmitter, case and NiMH rechargeable battery pack and charger.

## Laser Accessories

Accessories and components for rotating lasers

### Cases



All rotating lasers are housed in a jobsite-tough carrying case with customized pockets to hold all accessories

### Wall and Universal Mounts



M101 wall mount for HV101

M300 universal wall, tripod and floor mount for HV301/HV301G

M201 universal wall, tripod and floor mount for GL and UL

### Remote Control

RC601



Remote Control for HV101, HV301, HV301G, LL100, LL300, and LL400

### Laser Glasses



Q100206

Increases the visibility of the laser beam under bright light conditions

### Target



1176-6 Magnetic Visiline Target (6-pc)  
 » Optically enhanced, patented – increases beam visibility by 2.5 times.  
 » Half translucent, half reflective  
 » Magnetic mounting, magnet is permanently molded in for extra durability

### Clamp



4852-14 Batter Board Clamp  
 » Allows attachment of lasers or theodolites to batter boards for accurate vertical alignment  
 » 3 point contact for secure, sturdy grip  
 » Quick release clamp for quick instrument attachment

## Spectra Precision UL633

### The Most Versatile Construction Laser, Ever

#### Applications

- General Construction
  - » Leveling concrete forms and footers
  - » Vertical alignment such as anchor bolts and form alignment
- Machine Guidance Compatible
  - » Dual slope grading and steep slope excavating
  - » Slope work for sports fields, tennis courts, driveways, parking garages, ramps
- Pipe and Drainage Installations
  - » Automatic Alignment for pipe laying
  - » Measuring unknown slopes in existing pipes
- Interior
  - » Layout of walls
  - » Installation of drop ceilings

#### Features & Benefits

- » Automatic electronic self-leveling provides fast, easy horizontal level, grade, and vertical plumb setup
- » Large compensated grade range from -25% to +25%
- » Quick setups with the combined radio & infrared remote control including pipe laying applications
- » Electronic Leveling Vibration Filter dampens vibrations typically experienced on tall tripods, in high winds, or on high vibration jobsites
- » Automatic temperature, grade and cross axis compensation eliminate rework
- » Precise Dual Automatic Axis Alignment to two desired alignment points without positioning the receivers 90° perpendicular (+/-40° alignment range on Y- and X-axis)
- » Automatic Spot Align for short pipe laying applications, used for the first and second day set up. The SF601 guides the beam to the target point in the horizontal axis, while the Z-axis grade value will be maintained
- » Spot Search uses the Spot Finder SF601 to find the center of the plumb beam manually
- » Single and Dual Grade Match (X- and Y-axis separate or at the same time) and Spot Match (Z-axis) measures and displays the existing grade over unknown ground and eliminates time consuming and error prone calculations, time spent searching for grade plans, and over excavating
- » Single and Dual PlaneLok (X- and Y-axis separate or at the same time) and Spot Lok (Z-axis) automatically locks on to an existing elevation or vertical alignment point which eliminates all drift or possibility of error due to improper calibration or weather
- » Very rugged, survives a 3 ft (1 m) drop on concrete – reduces service and repair costs
- » Mask mode eliminates interference with other crews on the jobsite
- » Different rotation speeds plus Scanning Mode offer additional value and fulfill requirements of Interior jobsites



Part No.	Receiver	Spot Finder	Clamp	Remote
UL633	HL750	No	Rod Clamp with Bubble Vial	RC603
UL633-1	2 x HL750	No	Rod Clamps with Bubble Vials	RC603
UL633-14	HL750	SF601	Rod Clamp with Bubble Vial	RC603
UL633-24	2x HL750	SF601	Rod Clamps with Bubble Vials	RC603

All product numbers include UL633 transmitter, remote, case and NiMH rechargeable battery pack and charger.

See Product Specifications on Page 24

## Accessories

### Components and Accessories for Universal Laser



# Pipe Lasers and Accessories

## Spectra Precision DG711, DG511

Rugged pipe lasers built for lasting performance, reliability, and repeatability

### Features & Benefits

- » Rugged design is built for long lasting performance and reliability in the destructive underground environment
- » DialGrades feature the largest automatic self-leveling range in the industry providing quick, easy setups
- » The DG711 features Line Alert where the beam flashes to notify you that the setup line has been disturbed, eliminating the necessity of rework
- » 5 Year Warranty
- » Maximum legal strength red laser beam and pipe targets with optical elements to enhance beam brightness make the beam easily visible in a variety of conditions
- » Remote Controls for line and power included, DG711 remote control is full function with grade control and Line Set/Check function
- » A full range of setup accessories and power options are available and are easy and straightforward to use

### Applications

- » Installation of gravity flow sanitary pipelines
- » Storm sewer pipelines
- » Pipe jacking
- » Tunnel boring



Part No.	Accessory	Power
DG511	Standard Package	NiMH Recharge
DG511-2	1233 Sighting scope, mounting block & 1161 heavy duty tripod	NiMH Recharge
DG511-3	1230 Metal plate w/ adjustable legs (inches)	NiMH Recharge
DG511-5	1230 Metal plate & 1239 vertical pole (inches)	NiMH Recharge
DG511-6	1237 Metal plate & 1239 vertical pole (metric)	NiMH Recharge
DG511-7	Standard Package	Alkaline
DG511-9	External power cable	Alkaline
DG511-13	1233 sighting scope	NiMH Recharge
DG711	Standard Package	NiMH Recharge
DG711-2	1233 sighting scope, mounting block & 1161 heavy duty tripod	NiMH Recharge
DG711-3	1230 Metal plate w/ adjustable legs (inches)	NiMH Recharge
DG711-5	1230 Metal plate & 1239 vertical pole (inches)	NiMH Recharge
DG711-6	1237 Metal plate & 1239 vertical pole (metric)	NiMH Recharge
DG711-7	Standard Package	Alkaline

See Product Specifications on Page 24

## Pipe Laser Accessories

A full line of pipe laser accessories



1230/1237  
Metal Invert Plate



1017 Manhole  
Mount



936 Adjustable  
Large Pipe Target



P21 Power Cable



956 Optically  
Enhanced Target



1233 Sighting  
Scope



929 Blower



P20/P20B Alkaline  
Battery Pack



1239 Extended  
Height Vertical Pole



1161 Heavy-Duty  
Wood Tripod



1244 T-Bar

## Spectra Precision DR400

### DigiRod - The Rod-less Grade Checker

#### Applications

- » Excavations
- » Foundations, concrete forms and footings
- » General grading
- » Utilities installation
- » Surveying
- » Cut / Fill, Direct and Indirect measurements
- » Laser Distance Meter
- » Distance measuring by one person to 50 m (160 ft)
- » Estimating
- » As-built Verification

#### Features and Benefits

##### DigiRod

- » Extremely portable, universal system that eliminates the need to carry, transport, or maintain multiple grade rod types
- » Increases safety, reducing the need to lean over or go into excavations or trenches
- » Increases accuracy, the internal angle compensation system reduces errors and extra material costs due to tilted grade rods
- » Increases productivity by always having the correct rod on-hand, and eliminating tool marks on screeded concrete
- » Easy to learn, easy to use - the simple graphical display and bright backlight allow for fast readings in low light
- » Works with existing rotating lasers, increasing productivity with a fast payback

##### Rod Mounted Laserometer

- » Digital Readout of Elevation allows faster readings by displaying the exact numerical distance from grade, eliminating the need to move the receiver to get to "on-grade".

- » Anti-Strobe Sensor stops construction strobe lights from setting off the receiver, and eliminates phantom strikes for easier identification of true laser beam signals.
- » Large 5 inch (12.7 cm) reception height allows faster readings by acquiring the beam quickly, and makes it easier to stay in the beam.
- » Universal reversible clamp for square or oval rods
- » Simultaneous elevation LEDs and bright backlight reinforces the elevation display in low light for faster readings

##### Handheld Laser Distance Meter

- » Increases productivity by one tool having multiple applications
- » Increases safety by allowing one person to make accurate readings in difficult-to-reach areas
- » Increases accuracy, eliminating issues with sagging or mis-held tapes at different temperatures
- » 5 Year Warranty



DR400 in Laserometer Mode with traditional rod clamp

## Components for DR400



0400-1930  
Pouch for DR400

Q100206  
Laser Glasses



PN ATI400103-01V  
Includes clamp with Bubble Vial



0400-1900  
Handle for DR400

# Laser Receivers and Laserometers

## HR150U Universal Receiver

Interior receiver with highly visible LEDs and built-in magnetic mount



C61 Clamp



### Features & Benefits

- » Features a 3-channel dual-sided LED with a green on-grade display that can be easily seen indoors or outdoors over long distances
- » Built-in magnet and level bubble allows the receiver to mount to ceiling grid or drywall track without the need for additional accessories
- » Marking notches on both sides to easily mark alignments and elevations
- » Can be used with any brand rotating red, green or IR laser
- » Strong composite housing and optional lanyard offers protection against damage due to dropping
- » For interior or exterior short-range general construction applications, with a general purpose rod clamp standard
- » The perfect entry level receiver for smaller job sites
- » Includes C61 rod clamp

### Applications

- » Interior and exterior leveling and aligning
- » Soffit, curtain wall or glazing applications
- » Ceiling grid and raised floor installations

## HR220 Line Generator Receiver

Special line generator receiver for use with crossline lasers



C61 Clamp



### Features & Benefits

- » Five channel LCD on the front for general exterior leveling
- » Simultaneous LED display shows green on grade, red too high and blue too low
- » Built in magnet allows the receiver to be easily mounted to ceiling grid or drywall track without the need for additional accessories
- » Works with 5.2XL, 1.3XL and 1.5PL line generating lasers
- » Snap in rod clamp allows for quick switching from rod mounted to handheld
- » Integrated level bubbles for adjusting the receiver into a plumbed position
- » Durable in wet and dusty conditions; the housing and battery compartment are waterproof and dust-proof to IP67
- » Includes C61 rod clamp

### Applications

- » Extends versatility of laser line generators
- » Longer distance interior layout and exterior leveling
- » Ceiling grid and raised access floor installations

## HR320 Receiver

Tough receiver for exterior leveling and alignment applications



C59 Clamp



### Features & Benefits

- » Dual LCD's on front and rear are ideal for general exterior applications
- » Two on-grade sensitivities (fine and coarse) allow getting to grade fast
- » Snap-on rod clamp (included) allows quick switching from rod-mounted to handheld applications
- » Strong, IP67 waterproof housing protects the unit from dust, moisture, and accidental drops
- » Loud 100 db loud speaker can easily be heard on the noisiest job sites. 3 adjustable speaker levels (loud, low, and off)
- » Includes C59 rod clamp

### Applications

- » Measuring cut and fill for small site preparation
- » Exterior leveling, aligning and marking
- » Checking elevations

## HL450 Laserometer

Ideal for use with any rotating transmitter

### Applications

- » Checking elevations
- » Basement excavation
- » Digging septic tanks
- » Checking foundations
- » Digging footings
- » Setting forms
- » Checking sub-base materials
- » Screeding concrete

### Features & Benefits

- » Digital readout of elevation allows faster readings by displaying the exact numerical distance from grade, eliminating the need to move the receiver to get to “on-grade”
- » Anti-Strobe Sensor stops construction strobe lights from setting off the receiver, and eliminates phantom strikes for easier identification of true laser beam signals
- » Large 4-inch (10.2 cm) reception height allows faster readings by acquiring the beam quickly, and makes it easier to stay in the beam
- » Withstands direct drops up to 5 feet (1.5 m) on to concrete providing less downtime due to damage and service requirements
- » Full weather and dust proof design, including the battery compartment assures a longer product life and/or repair costs
- » Approximately 60-hour battery life with 2 x AA batteries keeps work going on the jobsite
- » Automatic power shutoff (after 30 minutes) reduces annual battery cost
- » Rod clamp included



## HL700 Laserometer

Highly versatile receiver for basic and advanced leveling and aligning applications

### Applications

- » Checking elevations
- » Basement excavation
- » Digging septic tanks
- » Checking foundations
- » Digging footings
- » Setting forms
- » Checking sub-base materials
- » Screeding concrete

### Features & Benefits

- » Digital Readout of Elevation provides a numeric display of  $\pm 2$  inches ( $\pm 5$  cm) and shows exactly how far the elevation is from on-grade
- » A large 5 inch (12.7 cm) reception height, more than double the industry standard, allows quick acquisition of the laser beam
- » Unique anti-strobe sensor stops construction strobe lights from setting off the receiver, and eliminates phantom strikes for easier identification of true laser beam signals
- » Multiple on-grade sensitivities to customize accuracy needs to application
- » Designed to survive tough construction site conditions; totally waterproof and can withstand a drop of 10 feet (3 m) onto concrete
- » Simultaneous elevation LEDs signal in low light levels and over a longer range provide easier reading in poor light
- » Two clamp positions for cut/fill or excavation. Excavation mode puts more reception height and elevation information above grade for higher utilization in digging and staking applications
- » Three-year “No Excuses” warranty
- » Rod clamp with bubble vial included



## HL750 Radio Laserometer

Highly versatile receiver for basic and advanced leveling and aligning applications

### Applications

- » Remote grade checking with cable free Remote Display
- » Wireless monitoring of foundations and steel erections
- » Risk free monitoring of tilt up wall position
- Setting and checking jobsite elevation and depth for:
- » Cut and fills and grading
- » Foundations, forms, and footings
- » Excavations

### Features & Benefits

- » Digital readout of elevation – not only will high or low arrows be displayed, but the exact distance from grade will be displayed, which eliminates the need to get “on-grade” to make measurements
- » Large 5 inch (12.7 cm) reception height acquires the beam quickly and makes it easy to stay in the beam
- » The HL750U has an internal, long range (260 ft radius / 80 m), high speed digital radio built inside that allows the it to communicate with any other HL750, HL750U, or the GL512 and GL522 laser transmitters
- » Two clamp positions for cut/fill or excavation
- » Machine operators can monitor elevation shots taken by another person or foremen can monitor elevations and cut/fill readings from anywhere on the jobsite
- » Anti-strobe sensor stops construction strobe lights from setting off the receiver, and makes it easier to identify true laser beam signals
- » Multiple deadband setting allows adaptation to meet all your jobsite requirements
- » Dust and weatherproof housing withstands a drop of up to 10 ft (3 m) onto concrete for reduced downtime
- » Three-year “No Excuses” warranty
- » Rod clamp with bubble vial included



# Laser Receivers and Laserometers

## HL750U Universal Radio Laserometer

Universal receiver for red and green laser applications



### Features & Benefits

- » The HL750U with Radio Communication is a stand-alone receiver that works with ANY general construction, site work, agriculture, machine control or highway and heavy rotating laser transmitter, including Green Beam lasers
- » The HL750U has an internal, long range (260 ft radius / 80 m), high speed digital radio built inside that allows the receiver to communicate with any other HL750, HL750U, or the GL512 and GL522 laser transmitters
- » Two HL750U's can be used together for long range wireless remote display and monitoring - even when the 2nd receiver is out of sight
- » Rod clamp with bubble vial included
- » Three-year "No Excuses" warranty



### Applications

- » Checking elevations
- » Basement excavation
- » Digging septic tanks
- » Checking foundations
- » Digging footings
- » Setting forms
- » Checking sub-base materials
- » Screeding concrete

## CR600 Combination Receiver

Advanced receiver that can be machine or rod mounted for increased productivity applications



### Features & Benefits

- » Provides high, low, or on-grade information for all your grading and excavation applications up to 1,500 ft (450 m) radius
- » In addition to handheld and rod-mounted capabilities, the CR600 system includes a C51 machine magnetic mount so it can be used as a machine-control mounted receiver in a wide range of jobsite applications
- » Magnesium housing is rugged but lightweight
- » Super-bright LED display can be easily seen by a machine operator in brightly lit conditions
- » 270° reception for easy visibility of on-grade beam
- » Five on-grade sensitivities to customize need to application
- » 3-year warranty
- » Can be used with any brand rotating red laser

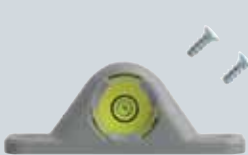


### Applications

- » Digging footings
- » Basement excavation
- » Checking sub-base materials
- » Setting and checking elevations
- » Leveling and aligning forms
- » Screeding concrete

## Accessories and Components

All receivers include rod clamps — CR600 includes rod clamp and magnetic mount



Optional Bubble Vial Kit for HR150U, HR220, HR320 and HL450 receivers clamps PN 1277-6251S



HL700 and HL750(U) includes clamp with Bubble Vial PN AT1400103-01V



HL450 Clamp PN AT1994903-01



C51 Magnetic Mount included with CR600 receiver



C50 Clamp included with CR600 receiver



## Spectra Precision Automatic Levels AL20M, AL24A/M, AL28A/M, AL32A

### Easy-to-use optical auto-levels

#### Applications

- » Two-person leveling across the job site
- » Leveling forms and footers
- » Checking elevation
- » Measuring cut and fill

#### Features & Benefits

- » Choice of magnetic or air dampened automatic compensators
- » Double-sided, continuous horizontal tangent drives
- » Stadia lines for simple distance measurement
- » Retail kit packaging for increased showroom awareness and sales
- » Convenient horizontal angle measurement
- » Built in bubble mirror and sighting guide
- » Metal housing for increased durability
- » Water resistant construction
- » Includes hardshell case



Air dampened model



Magnetic dampened model

Part No.	Power	Dampen	Tripod	Rod
<b>AL20M</b>	20X	Magnetic	No	No
AL20M-1	20X	Magnetic	5301-27-BLK-SP	GR151 Tenths
AL20M-2	20X	Magnetic	5301-27-BLK-SP	GR152 Inches
AL20M-3	20X	Magnetic	5301-27-BLK-SP	GR153 Metric
<b>AL24A</b>	24X	Air	No	No
AL24A-1	24X	Air	5301-27-BLK-SP	GR151 Tenths
AL24A-2	24X	Air	5301-27-BLK-SP	GR152 Inches
AL24A-3	24X	Air	5301-27-BLK-SP	GR153 Metric
<b>AL24M</b>	24X	Magnetic	No	No
AL24M-1	24X	Magnetic	5301-27-BLK-SP	GR151 Tenths
AL24M-2	24X	Magnetic	5301-27-BLK-SP	GR152 Inches
AL24M-3	24X	Magnetic	5301-27-BLK-SP	GR153 Metric
<b>AL28A</b>	28X	Air	No	No
AL28A-1	28X	Air	5301-27-BLK-SP	GR151 Tenths
AL28A-2	28X	Air	5301-27-BLK-SP	GR152 Inches
AL28A-3	28X	Air	5301-27-BLK-SP	GR153 Metric
<b>AL28M</b>	28X	Magnetic	No	No
AL28M-1	28X	Magnetic	5301-27-BLK-SP	GR151 Tenths
AL28M-2	28X	Magnetic	5301-27-BLK-SP	GR152 Inches
AL28M-3	28X	Magnetic	5301-27-BLK-SP	GR153 Metric
<b>AL32A</b>	32X	Air	No	No



All Spectra Precision Auto Levels include a hardshell carrying case, plumb bob, rain hood, hex wrench and adjusting pin.

### Automatic Level Specifications

	AL20M	AL24A	AL24M	AL28A	AL28M / AL28M-G	AL32A
Magnification	20x	24x	24x	28x	28x	32x
Accuracy	±2.5 mm*	±2.0 mm*	±2.0 mm*	±1.5 mm*	±1.5 mm*	±1.0 mm*
Aperture	30 mm	30 mm	30 mm	30 mm	30 mm	36 mm
Shortest Focus	0.6 m	0.6 m	0.6 m	0.6 m	0.6 m	0.6 m
Compensator Dampening	Magnetic	Air	Magnetic	Air	Magnetic	Air
Warranty	3 Year, with instant exchange	3 Year, with instant exchange	3 Year, with instant exchange	3 Year, with instant exchange	3 Year, with instant exchange	3 Year, with instant exchange

\*Note: Standard deviation according to DIN 18723 on one kilometer of double leveling

## Spectra Precision DET-2 Construction Theodolite

Full featured digital theodolite for construction



### Features & Benefits

- » 2-inch angular accuracy - accurate enough for any construction job, yet the display resolution can be tailored to any operator's preferences for fast readings
- » Vertical axis compensation - tilt sensor provides the highest level of accuracy and can be turned on or off depending on job requirements
- » Dual LCD with large characters - easy to see angle readings eliminate errors and reduces eye fatigue
- » Simple six button keypad - quick setups and simple operation with low operator learning curve
- » Large suite of programmable settings - provide multiple options for various users and job requirements including zero position of vertical angle
- » Measurement units in degrees, gon, or mils
- » 90 Degree angle audible notification - for quick turning and set out of right angles
- » Instant conversion of vertical angles to percent of grade - convenient for slope work and when used in conjunction with Dialgrade® pipe work
- » NiMH rechargeable battery pack and charger - lower operating cost with reusable batteries
- » Alkaline battery pack standard - provides backup and eliminates downtime if the charge is lost in the middle of a job
- » Each DET-2 comes equipped with a plumb bob, NiMH rechargeable battery pack and charger, alkaline battery pack, adjustment tools, rain hood, multi-language user guide, and hardshell, compact, o-ring sealed, carrying case

### Applications

- » Establishing 90 degree reference lines
- » Checking angles, alignment, and plumb
- » Anchor bolt alignment
- » Gravity flow pipe laser setup
- » Steel column placement
- » Alignment of forms, tilt-up walls, and curtain walls
- » Basic grade work
- » Short range leveling

### DET-2 Specifications

Telescope		Optical Plummet		Angle Measuring System		Vials		Button Functions		Other Specs	
Image	Erect	Image	Erect	Minimum Reading	1" or 5"	Tubular	30"/2 mm	ON / OFF	Power	Dust/Water	IP-54
Mag.	30X	Mag.	3X	Precision	2"	Circular	8'/2 mm	R	Backlight / Illumination On / Off	Operating Temperature	-20°C to +50°C
Aperture	45 mm	Angle of View	5°	Units	Deg / mil / gon / V%			HOLD	Angle Hold	Size - Instrument	164 x 154 x 340 mm
Focus Distance	1.45 m to ∞	Focusing range	0.5 m ~ ∞	Display	Dual, Large Character LCD Tilt Sensor			R/L	Clockwise / Counterclockwise Measurement	Weight - Instrument	4.5 kg
Field of View	1° 30'	Reticle type	Crosshair	Auto Compensation	User Set On / Off ±3' Range			OSET	Zero Reset of Horizontal Angle	Warranty	1 Year
Stadia Ratio / Constant	100 / 0							V%	Convert Vertical Degrees to %		

### Accessories for DET-2



**DE-50** - Diagonal 90 Degree Eyepiece  
Used to view the theodolite when tilted at very steep angles



**1161** Wooden Tripod  
Heavy-duty wood tripod for stability and accuracy  
Telescopic legs allow setup at various heights  
5/8 x 11 threaded post secures instrument

## Spectra Precision 5.2XL Point and Crossline Laser

### Two Tools in One

#### Applications

- › Level, horizontal and vertical layout, square, and plumb
- › Building, layout, and squaring of interior walls
- › Point transfer
- › Acoustical ceiling installation
- › Drywall track installation
- › Cabinet and trim installation, finish carpentry
- › General construction elevation control with HR220 receiver
- › Exterior building decks, patios, columns, and posts

#### Features and Benefits:

- › Eliminates the need for a contractor to purchase two tools - a 5-beam pointer and a crossline laser - by combining both into one simple small product
- › Automatic self-leveling assures accuracy and fast setup
- › The industry's brightest crossline laser for easy viewing in all conditions
- › Easy-to-see lines with a biased upwards beam that intersects the plumb up point
- › Soft pouch includes belt loop so it's always at hand
- › Set it up once and work plumb, level and square in the whole area
- › 3 Year Instant Exchange limited warranty minimizes downtime
- › Water, mud, and shock resistant, able to withstand a 3 ft (1 m) drop onto concrete... IP54 rated
- › HR220 receiver can be added for exterior applications for maximum jobsite versatility

Part No.	Receiver	Case
5.2XL	No	Soft Pouch
5.2XL-2	HR220	Hard Case



#### Applications

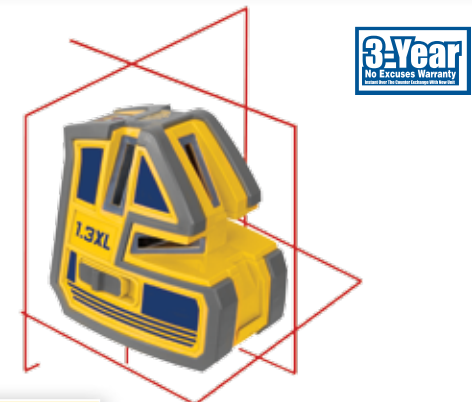
- › Level, horizontal & vertical layout, square, & plumb
- › Building, layout, & squaring of interior walls
- › Acoustical ceiling installation
- › Drywall track installation
- › Cabinet & trim installation, finish carpentry
- › General construction elevation control with HR220 receiver
- › Reference points for sprinkler systems, HVAC, lighting
- › Exterior building deck footings, patios, columns, & posts

### Simple to use — perfect for interior construction

#### Features and Benefits:

- › Capable of handling interior horizontal, vertical or plumb positioning application
- › Horizontal plane and 2 vertical planes provide a precise 90 degree layout grid with four cross line intersections
- › Automatic self-leveling assures accuracy and fast setup
- › Easy-to-see 200° horizontal / 120° vertical lines with a biased upwards beam that intersects the plumb up point
- › One tool does level, plumb and 90 degree beams... use on every job every day. HR220 receiver can be added for exterior applications for maximum jobsite versatility
- › 3 Year Instant Exchange limited warranty minimizes downtime
- › Water, mud, and shock resistant, able to withstand a 3 ft (1 m) drop onto concrete... IP54 rated

Part No.	Receiver	Case
1.3XL	No	Hard Case
1.3XL-2	HR220	Hard Case



## Spectra Precision QM75 Quick Measure Laser Distance Meter

### Digital distance measuring

#### Applications

- › Measuring distance
- › Measuring for material estimation
- › Safely measurement on places, where hard to reach

See Product Specifications on Page 24

#### Features and Benefits:

- › One-person distance measuring with 1/16-inch (1.5 mm) accuracy up to 230 ft (70 m) allows safe measuring to difficult-to-reach or hazardous locations
- › Display is illuminated automatically for easy measurements in dark lighting conditions
- › Waterproof to IP55 for use under all conditions
- › More accurate than traditional measuring tapes
- › Simple one button operation is easy to use
- › Small, compact - fits in your pocket
- › Long battery life - over 8000 measurements



## Spectra Precision LP30, LP50 Laser Pointers

3-Beam and 5-Beam self-leveling pocket lasers



### Features and Benefits:

- » The LP30 projects 3 beams - one beam up, one down and one horizontal beam
- » The LP50 projects 5 beams - one beam up, one down and three beams at 90 degrees to each other
- » Self-leveling, and universal accessories allow for setup in multiple applications
- » Patented technology... highly visual in all conditions for better productivity
- » Beam flashes if it becomes out of level for any reason
- » 3 Year Instant Exchange limited warranty minimizes downtime
- » Able to withstand a 3 ft (1 m) drop... IP54 rated
- » LP30 ships in retail box with soft pouch, target and mounting accessory
- » LP50 ships in retail carton with hard case, target, ceiling plate and mounting accessory

Part No.	Case
LP30	Soft Pouch
LP50	Hard Case



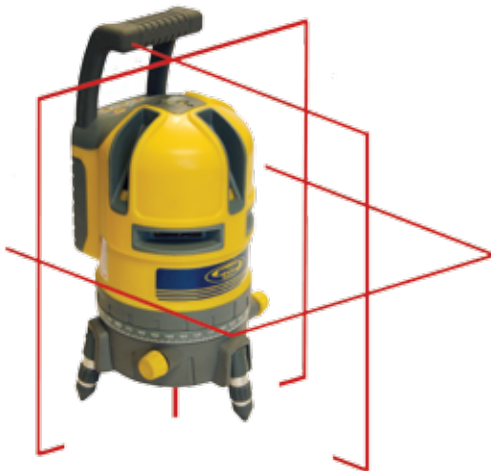
### Applications

- » Level, horizontal and vertical layout, checking plumb
- » Point transfer
- » Checking square with LP50
- » Layout of interior walls, drywall track installation
- » Acoustical ceiling installation
- » Drywall track installation
- » Cabinet & trim installation, finish carpentry
- » Short range leveling
- » Reference points for sprinkler systems, HVAC, lighting

See Product Specifications on Page 24

## Spectra Precision 1.5PL Precision Line Laser

Perfect for high accuracy interior construction use



### Features and Benefits:

- » Automatic self-leveling and plumb assures accuracy and fast setup
- » One person installation of walls, doors, ceiling track and other overhead fixtures without the need for a plumb-bob, squares or tapes
- » Fast, one person 90° layout of rooms, walls, tile, carpet squares and fixtures
- » Includes both cost-saving rechargeable battery pack and back-up alkaline battery pack
- » Rotational base with fine adjust knobs make position adjustment fast, easy and accurate
- » Built in collapsible tripod legs allow clearance of floor track and plummet
- » 1.5PL system includes a hard case with protective foam, 2 battery packs, charger, laser glasses and laser target
- » 1.5PL-2 includes HR220 and clamp

Part No.	Receiver	Case
1.5PL	No	Hard Case
1.5PL-2	HR220	Hard Case



### Applications

- » Interior plumb, level, layout and square
- » Drywall track and walls installation
- » Cabinet and trim installation, finish carpentry
- » Ceiling and door installation
- » Institution utility layout and installation
- » Exterior level, layout and square applications with the HR220 receiver
- » Decks, patios, septic system and swimming pool installation

See Product Specifications on Page 24

## Accessories for Line and Point Lasers

Use with line and point lasers for simple and accurate interior leveling



Ceiling Pole 7220-01  
Adjusts 81 - 320 cm

The laser platform adjusts vertically and locks tight at any location - perfect for interior construction applications.



Lightweight aluminum tripods are portable, easy to set up and use.

7210-01 — Adjusts from 15 to 44 inches (36 to 112 cm)

7210-02 — Adjusts from 25 to 66 inches (64 to 168 cm) and includes built-in circular vial



Rotating Adapter 7230-02 allows instruments that have a 1/4 x 20 thread to attach to tripods with 5/8 x 11 studs.

## Spectra Precision LR30 Receiver

Used on dozers, box blades, levelers

### Applications

- » Machine mounted grade checking
- » Grading and leveling

See Product Specifications Starting on Page 23.

### Features and Benefits:

- » Use on grading and excavating equipment including: dozers, graders, scrapers, skid steers and levelers
- » Five channels of grade information plus directional out-of-beam indicators
- » Three selectable accuracies meet job tolerances from rough grading to final finishing
- » Full 360-degree reception picks up the laser from all directions
- » Ultra-bright LED's with Green on-grade provides easy-to-see display to match ambient lighting conditions

Part No.	Batteries	Mount
LR30	NiMH	No
LR30-1	Alkaline	No
LR30-MM	NiMH	MM-1
LR30-DM	NiMH	DM-20



## Spectra Precision LR50 Receiver

Features built-in blade tilt and excavation plumb indicator

### Applications

- » Machine mounted grade checking
- » Grading and leveling
- » Excavation and trenching

See Product Specifications on Page 23

### Features and Benefits:

- » Built-in blade tilt indicator helps the operator keep the blade level for increased accuracy and productivity
- » Center on-grade provides an equal amount of grade information above and below on-grade. Use on dozers, graders, scrapers and box blades
- » Built-in plumb indicator for fast, accurate grade checking in excavation applications
- » Offset on-grade gives you more range above grade using the entire receiver for more productive excavation
- » Up to six channels of grade information plus directional out-of-beam indicators
- » Two-Year Warranty - Reliability you can count on

Part No.	Batteries	Mount
LR50	NiMH	No
LR50-1	Alkaline	No
LR50-MM	NiMH	MM-1
LR50-DM	NiMH	DM-20



## Spectra Precision LR60 Receiver

Features excavation plumb indicator and angle compensation indication

### Applications

- » Machine mounted grade checking
- » Grading and leveling
- » Excavation and trenching

See Product Specifications on Page 23

### Features and Benefits:

- » Patented Angle Compensation Indication automatically calculates and corrects the grade display for the angle of the dipper arm
- » Check grade with the dipper arm extended or retracted up to 30 degrees
- » Built-in plumb indicator for fast, accurate grade checking
- » Center on-grade provides an equal amount of grade information above and below on-grade. Use on dozers, graders, scrapers and box blades
- » Extended reception height stays in the beam longer providing additional grade information
- » Offset on-grade for productive excavation
- » Up to eight channels of grade information plus directional out-of-beam indicators
- » Four selectable accuracies for each on-grade location

Part No.	Batteries	Magnetic Mount
LR60	NiMH	No
LR60-1	Alkaline	No
LR60-MM	NiMH	MM-1



# Laser Display Receivers

## LR20 Receiver

Compact laser receiver used on mini-excavators and compact machines



LR20-1

### Features and Benefits:

- » 8 inch (20 cm), 360-degree laser reception provides large working area and range
- » Polycarbonate housing and elastomer over molding provides rugged durability for years of reliable use
- » Super bright grade display with Green on-grade LEDs provides superior depth/elevation indication
- » Push button setup for ease of use and application flexibility
- » Powered by NiMH batteries; optional machine power cord available
- » Center and offset on-grades are ideal for both grading and excavating applications
- » Built-in plumb indicator for fast, accurate grade checking in excavation applications
- » LR20-1 kit includes adjustable magnetic mount that fits in case with receiver for easy transport

Part No.	Batteries	Magnetic Mount
LR20	NiMH	No
LR20-1	NiMH	MMM

### Applications

- » Landscaping, building pads, sports fields, concrete flatwork, tennis courts
- » Footers, storm drains, utility, sewage
- » General construction grade and depth control

See Product Specifications on Page 23

## Display Receiver Accessories

Magnetic Mount and Remote Display for increased productivity

### RD10 Remote Display

- » Mounts in the cab, connects to the laser receiver, and displays grade information to the operator
- » Helps keep focus on the work and not on the receiver for higher productivity
- » Mounting kit includes magnets, Velcro, double-sided tape, and rubber strap for mounting options
- » Power options to fit your requirements



### DM-20 Bulldozer Bolt-On Mast

- » Trimble Ready™ adjustable mount installs with no welding. The mast mount bolts instantly to machines that come from the factory Trimble Ready.



### MM-1 Magnetic Mount

- » Works with all LR receivers and quickly attaches to the dipper arms of excavators or backhoes
- » Strong dual magnet packs will not slip on the machine
- » Magnets are adjustable, can be positioned around hoses or piping, for quick installation and set-up
- » Release lever aids in detaching from machine

Part No.	Description
MM-1	Magnetic Mount for LR Receivers
DM-20	Bulldozer Bolt-On Mount
RD10	Remote Display for LR Receivers
<b>Cables for Remote Display (1 RD10 to Receiver cable required)</b>	
010973	Cable, Coiled, RD10 to Receiver, 3-12 ft (0.9-3.7m)
010972-15	Cable, Straight, RD10 to Receiver, 15 ft (5 m)
010983	Cable, RD10 Power, Lighter/power adapter
010987	Cable, RD10 Power, Battery terminal rings
010988-10	Cable, RD10 Receiver Extension, Straight 10 ft (3 m) (for 010972-15)
010975	Cable SPLMC Receiver Extension Coil, 3-12 ft (0.9-3.7m) (for 010973)
010976-02	Mount, RD10 Swivel



### Applications

- » Remote Display is used when the receiver is behind the operator or is otherwise difficult to see, i.e. pulled drag boxes, scrapers, or trenchers
- » Magnetic Mount is used to quickly attach receivers to backhoes and excavators

Laser Levels					Horizontal and Vertical Lasers		
	LL100	LL300	LL400	LL500	HV101	HV301	HV301G
Accuracy	1/8 in @ 100 ft 3 mm @ 30 m (20 arc seconds)	3/32 in @ 100 ft 2.2 mm @ 30 m (15 arc seconds)	1/16 in at 100 ft 1.5 mm at 30 m (10 arc seconds)	1/16 in @ 100 ft 1.5 mm @ 30 m (10 arc seconds)	1/8 in @ 100 ft 3 mm @ 30 m (20 arc seconds)	3/32 in @ 100 ft 2.2 mm @ 30 m (15 arc seconds)	3/32 in @ 100 ft 2.2 mm @ 30 m (15 arc seconds)
Operating diameter	1,000 ft (300 m)	1,300 ft (400 m)	2,600 ft (800 m)	1,600 ft (500 m)	Receiver: 1000 ft (300 m) Visible: 200 ft (60 m)	Receiver: 1,600 ft (500 m) Visible: 330 ft (100 m)	Receiver: 1,600 ft (500 m) Visible: 500 ft (150 m)
Self-leveling range	±5 degrees electronic servo self-leveling	±5 degrees electronic servo self-leveling	±5 degrees electronic servo self-leveling	±11 minutes	±5 degrees electronic servo self-leveling	±5 degrees electronic servo self-leveling	±5 degrees electronic servo self-leveling
Power source	2 x D-cell Alkaline batteries	4 x D-cell Alkaline standard, NiMH optional	4 x D-cell Alkaline standard, NiMH optional	4 x D-cell Alkaline standard, NiMH optional	2 x D-cell Alkaline batteries	4 x D-cell NiMH, standard, Alkaline backup	4 x D-cell NiMH standard, Alkaline backup
Battery life	80 hr Alkaline	90 hr Alkaline, 45 hr NiMH	90 hr Alkaline, 55 hr NiMH	175 hr Alkaline, 100 hr NiMH,	50 hr Alkaline	90 hr Alkaline, 40 hr NiMH	45 hr Alkaline, 18 hr NiMH
Water res.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Size L x W x H	8.5 x 6.7 x 6.0 in (22 x 17 x 15 cm)	9.6 x 6.5 x 7.3 in (24 x 16 x 18 cm)	8.3 x 7.1 x 7.9 in (21 x 18 x 20 cm)	10.8 x 7.5 x 7.5 in (27 x 19 x 19 cm)	8.5 x 6.7 x 6.0 in (22 x 17 x 15 cm)	9.6 x 6.5 x 7.3 in (24 x 17 x 19 cm)	9.6 x 6.5 x 7.3 in (24 x 17 x 19 cm)
Weight	3.3 lb (1.5 kg)	6 lb (2.7 kg)	6.8 lb (3.1 kg)	8 lb (3.6 kg)	3.3 lb (1.5 kg)	6 lb (2.7 kg)	6 lb (2.7 kg)
Warranty	3 Year, with instant exchange	5 Years	5 Years	5 Years	3 Year, with instant exchange	5 Years	5 Years

Laser Display Receivers				
	LR20	LR30	LR50	LR60
Number of Display Channels	5-Channel Display	5-Channel Display	5-Channel Display 6-Channel Display in excavating mode	7-Channel Display 8-Channel Display in excavating mode
Accuracy: Center On-Grade mode (Grading)	Fine: 0.20 in (5 mm) Standard: 0.40 in (10 mm) Wide: 0.80 in (20 mm)	Fine: 0.20 in (5 mm) Standard: 0.45 in (12 mm) Wide: 1.25 in (32 mm)	Fine: 0.20 in (5 mm) Standard: 0.40 in (10 mm) Wide: 0.80 in (20 mm)	Setup: 0.20 in (5 mm) Fine: 0.40 in (10 mm) Standard: 0.80 in (20 mm) Wide: 1.6 in (40 mm)
Accuracy: Offset On-Grade mode (Excavating)	Fine: 0.50 in (12 mm) Standard: 1.0 in (25 mm) Wide: 2.0 in (50 mm)	NA	Fine: 0.50 in (12 mm) Standard: 1.0 in (25 mm) Wide: 2.0 in (50 mm)	Setup: 0.25 in (6 mm) Fine: 0.50 in (12 mm) Standard: 1.0 in (25 mm) Wide: 2.0 in (50 mm)
ACE—Angle Compensation Mode	NA	NA	NA	Fine: 0.50 in (12 mm) Standard: 1.0 in (25 mm)
Blade-Tilt Accuracy	NA	NA	± 0.5°, ± 1.5°, ± 2.5°	N/A
Plumb-Swing Accuracy	± 0.5°, ± 1.5°, ± 2.5°	NA	± 0.5°, ± 1.5°, ± 2.5°	Standard: 0.5 in (12 mm) Angle Compensation Mode: 1.0 in (25 mm)
Beam Reception	360 Degrees	360 Degrees	360 Degrees	360 Degrees
Vertical Reception	8 in (203.2 mm)	6.75 in (171 mm)	6.75 in (171 mm)	8.75 in (222 mm)
LED Battery Life Alkaline Bright / Dim Ni-MH Bright / Dim	35 hrs	50 hrs / 75 hrs 40 hrs / 50 hrs	45 hrs / 60 hrs 30 hrs / 45 hrs	45 hrs / 75 hrs 40 hrs / 50 hrs
Battery Recharge Time	3-4 hrs	3-4 hrs	3-4 hrs	3-4 hrs
Size	9.5 x 4.38 x 1.85 in (24.1 x 11.1 x 4.7 cm)	13.5 x 5.6 x 5.9 in (34.3 x 14.2 x 14.9 cm)	13.5 x 5.6 x 5.9 in (34.3 x 14.2 x 14.9 cm)	15.5 x 5.6 x 5.9 in (39.4 x 14.2 x 14.9 cm)
Weight	2.5 lb (1.13 kg)	5.5 lb (2.5 kg)	5.5 lb (2.5 kg)	6.0 lb (2.7 kg)
Receiver Warranty	2 Years	2 Years	2 Years	2 Years

# Specifications

## Grade & Universal Lasers

	GL412/512	GL422/522	UL633
Accuracy	1/16 in at 100 ft, 1.5 mm at 30 m (10 arc seconds)		
Operating diameter	2000 ft (600 m)	2600 ft (800 m)	2600 ft (800 m)
Self-leveling range	±5 degrees electronic servo self-leveling		±14 degrees electronic servo self-leveling
Grade range	-10 to +15% Single axis	-10 to +15% Dual axis	-25 to +25% X, Y, Z axis
Grade resolution	0.001% up to 9.999%		0.001% over entire range
Power source	4 x D-cell NiMH Standard		
Battery life	55 hr for GL512/522 28 hr for GL412/422 90 hr Alkaline		35 hr NiMH 40 hr Alkaline
Water resistant	Yes		
Size L x W x H	8.3 x 7.1 x 7.9 in (21 x 18 x 20 cm)		9.4 x 5.9 x 11 in (24 x 15 x 28 cm)
Weight	6.8 lbs (3.1 kg)		
Warranty duration	5 Years	5 Years	5 Years

## Wireless Remote Specifications

Remote Control Type	RC402 Full 2-way communication	RC603 Full 2-way communication
Battery life	130 hrs continuous 1 year normal use	
Range	330 ft (100 m)	

## Pipe Lasers

	DG711	DG511
Grade Range	-15% to +40%	
Self-Leveling Range	Complete grade range (no rough leveling required)	
Line Range	20°	
Line Center	Yes	
Grade Zero & Quick Grade	Yes	
Line Set/Check / Line Alert	Yes	No
Temperature Compensation	Yes	No
Grade Compensation	Yes	
Waterproof	Continuous Submersion at 10 ft (3 m)	
Laser classification / output	3A/3R / 4.5–5 mW (maximum allowable)	
Weight	8.0 lbs (3.6 kg)	
Length	14.75 in (37.5 cm)	
Diameter	5.5 in (14 cm)	
Housing material	Armored Die Casting	Hard Anodized Aluminum
Battery type and life	NiMH / 60 Hours with Daily Setup at 20° C	
Battery pack	Sealed (NiMH), Sealed Removable (Alkaline)	
Warranty Period	5 Years	5 Years

## Wireless Remote Specifications

Functionality	7 Button Power, Line and Grade Adjustment, Line Set	3 Button Power, Line Adjustment
Through the Pipe Range	750 ft (225 m)	
Front / Over the Top Range	500 ft (150 m)	
Rear Range	30 ft (10 m)	
Battery life	3 Years	2 Years

## Portable Tools

	LP30	LP50	5.2XL	1.3XL	1.5PL	QM75
Self-level range	±4° from level	±4° from level	±4° from level	±4° from level	±3° from level	N/A
Working range - Visible	100 ft (30 m)	100 ft (30 m)	100 ft (30 m)	100 ft (30 m)	100 ft (30 m)	230 ft (70 m)
With Detector	N/A	N/A	250 ft (75 m)	250 ft (75 m)	180 ft (55 m)	N/A
Accuracy	1/16 in @ 17 ft 1.5 mm @ 5 m	1/16 in @ 17 ft 1.5 mm @ 5 m	1/16 in @ 17 ft 1.5 mm @ 5 m	1/16 in @ 17 ft 1.5 mm @ 5 m	1/32 in @ 17 ft 1.0 mm @ 5 m	1/16 in (1.5 mm)
Battery type	2 x AA alkaline	2 x AA alkaline	3 x AA Alkaline	4 x AA alkaline	4 x AA alkaline & NiMH Rechargeable	2 x AAA Alkaline
Battery life	20 hours, alkaline	20 hours, alkaline	35/15 hours (point/line beams) 10 hours (all beams on)	4 hours, alkaline 6 hours, rechargeable (all beams on)	> 7 hours all beams on	8,000 readings
Size H x W x D	3.5 x 4.1 x 2.4 in (8.9 x 10.4 x 6.1 cm)	3.5 x 4.1 x 2.4 in (8.9 x 10.4 x 6.1 cm)	4.5 x 5.2 x 3.1 in (11.5 x 13 x 8 cm)	5.7 x 5.3 x 3.9 in (14.4 x 13.8 x 10.0 cm)	9.5 x 5.0 x 4.5 in (24.1 x 12.7 x 11.5 cm)	1.34 x 1.65 x 4.92 in 3.4 x 4.2 x 12.5 cm
Weight	0.69 lb (0.31 kg)	0.69 lb (0.31 kg)	1.1 lb (0.5 kg)	1.8 lb (0.85 kg)	3.5 lb (1.58 kg)	5.0 oz (0.14 kg)
Warranty	3 Years, with instant exchange	3 Years, with instant exchange	3 Years, with instant exchange	3 Years, with instant exchange	1 Year	3 Years, with instant exchange



## Heavy Duty Tripods

### Applications

- » Lasers
- » Instruments

### Features & Benefits

- » Stable and accurate for most applications
- » Choices of wood, aluminum and elevating base
- » Telescopic legs allow setup at various heights
- » 5/8 x 11 threaded post accommodates standard instruments and lasers
- » 2161 packaged with LL400 and LL500 kits



Part No.	Material	Extension
1161	Wood	Extends from 3 ft 2 in to 5 ft 3 in (96 cm to 160 cm)
2161	Aluminum	Extends from 3 ft 6 in to 6 ft 1 in (106 cm to 185 cm)
2162	Aluminum	Elevating Base - Extends from 4 ft 3 in to 7 ft 6 in (130 cm to 228 cm)

## Medium Duty Tripods

### Applications

- » Lasers
- » Instruments

### Features & Benefits

- » Sturdy and lightweight for many applications
- » Telescopic legs allow setup at various heights
- » 5/8 x 11 threaded post accommodates standard instruments and lasers



Part No.	Material	Packaged With
Q104025	Aluminum	LL100, LL300, HV101
5301-27-BLK-SP	Aluminum	AL Auto Level Kits

A complete line of tripods is available in our accessories catalog

## Specialty Tripods

### Applications

- » Lasers
- » Instruments
- » Machine control

### Features & Benefits

- » Tri-Max is a surveying grade tripod with certified accuracy
- » Tall tripods are ideal for use with machine mounted display receivers.
- » Adjustable legs, portability, heavy-duty construction ensure long field life.



Part No.	Material	Extension
90550	Fiberglass	Extends to 5.9 ft (1.8 m)
5321-17-ORG	Fiberglass	Extends to 12.4 ft (3.8 m)
5203-20-ORG	Fiberglass	Extends to 11 ft (3.3 m)

A complete line of tripods is available in our accessories catalog

# Accessories - Grade Rods

## Aluminum Grade Rods



### Features & Benefits

- » Aluminum leveling rods are made of a light and durable alloy
- » Telescopic sections are anodized and silk-screened with moisture-resistant ink
- » Each rod section uses sturdy polycarbonate buttons that lock each section when extended; the height gauge is on the back side
- » Each rod includes a protective bag

Part No.	Length	Sections	Scale
GR131	15 ft	5	Tenths
GR132	15 ft	5	Inches
GR133	5 m	5	Metric
984	8.5 ft	2	Tenths
984-2	8.5 ft	2	Inches

Part No.	Length	Sections	Scale
7321-30	9.8 ft	3	Inches
7301-30	9.8 ft	3	Tenths
7341-30	3 m	3	Metric
7321-40	13 ft	4	Inches
7301-40	13 ft	4	Tenths
7341-40	4 m	4	Metric

### Applications

- » Grading
- » Leveling
- » Sitework
- » Landscaping
- » Foundations

## Fiberglass Grade Rods



### Features & Benefits

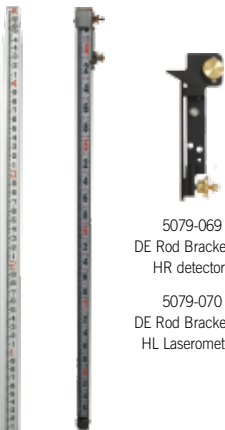
- » CR Series Leveling Rods are perfect for laser detector mounting — no special brackets are required
- » Rectangular shape with rounded back corners for better gripping
- » Made of strong fiberglass, which is waterproof and corrosion-resistant.
- » Special molded stand-off ribs protect the scales from wear
- » Fiberglass is non-conductive

Part No.	Length	Sections	Scale
92012	13 ft	3	Tenths
92022	13 ft	3	Inches
92041	16 ft	3	Tenths
92042	16 ft	3	Inches
92031	20 ft	5	Tenths
92032	20 ft	5	Inches

### Applications

- » Grading
- » Leveling
- » Sitework
- » Landscaping
- » Foundations

## Specialty Grade Rods



5079-069  
DE Rod Bracket for  
HR detectors

5079-070  
DE Rod Bracket for  
HL Laserometers

### Features & Benefits

- » 98010 SVR fiberglass rod is a surveying standard. Additional models available
- » SVR 25 features a short collapsed length (58-1/2 inches) for convenient storage
- » Constructed of strong, rigid fiberglass with reinforcing ribs for added stability
- » Direct Elevation (DE) rods are made of ash and aluminum
- » Laser DE rods feature a side rail for attaching optional bracket for laser receiver
- » Continuous tapes are stainless steel

Part No.	Length	Sections	Scale
98010	25 ft	6	Tenths
CTO-0319-4300	10 ft	2	Tenths
CTO-0319-4320	3 m	2	Metric
CTO-0319-4310	15 ft	2	Tenths
CTO-0319-4330	5 m	2	Metric

### Applications

- » Laser Grade Checking
- » Leveling
- » Sitework
- » Landscaping
- » Foundations

SPECTRA PRECISION LASER APPLICATIONS	LASER POINTERS • LP30 • LP50	LINE GENERATOR • 5.2XL • 1.3XL • 1.5PL	HANDHELD DISTANCE MEASURING DEVICE • QM75	LASER LEVELS • LL100 • LL300 • LL400 • LL500  OPTICAL LEVELS • AL20 • AL24 • AL28 • AL32	HORIZONTAL VERTICAL LASERS • HV101 • HV301 • HV301G	GRADE & UNIVERSAL LASERS • GL412 • GL422 • GL512 • GL522 • GL710 • GL720 • UL633
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### GENERAL CONSTRUCTION

Forms, footings and foundations				✓	✓	✓
Septic tank or swimming pools, decks and terraces		✓		✓	✓	✓
Estimating cut and fill				✓	✓	✓
Checking building square and area		✓	✓		✓	✓
Matching existing slopes and grades				✓	✓	✓
Checking elevations				✓	✓	✓
Checking elevations of sub-base and sub-grade				✓	✓	✓
Checking and setting elevations for sports fields, steep slopes, ramps, and drainage						✓
Vertical alignment and plumb such as anchor bolt and form alignment		✓			✓	✓

### INTERIOR

Locating finished floor levels		✓		✓	✓	
Laying out interior walls	✓	✓			✓	
Installing ceiling grids	✓	✓			✓	
Short-run vertical alignment		✓			✓	
Squaring and layout of partitions, walls and tile floors	✓	✓			✓	
Plumb reference and point transfers from below to above, such as walls, door frames, and lighting locations measured from the floor layout to ceiling	✓	✓			✓	
Level reference used for leveling cabinets, counter tops, windows, decks ceilings, and chair rails	✓	✓			✓	
Measuring distances, areas, volumes, depths, and heights			✓			

# Build a Stronger Business with Spectra Precision Products

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