About Us / Spectra 3D

Spectra 3D was founded by Frank and Johan Larsson (Father and Son) in February of 2002. The TRIMBLE/Spectra-Precision direct sales office was purchased to provide the Greater Bay-Area with sales, service, support and rentals of advanced, easy-to-use technology solutions for the construction, survey and engineering markets.

These total solution products include powerful software, global positioning systems (GPS), advanced lasers, robotic total stations, machine control systems, and more. Our unique combination of products, service, training and support give our customers an awesome advantage over their competitors. An investment in our products means greater time and cost savings, improved efficiency, and higher profits.

Spectra 3D is the only Bay Area certified warranty service center. We believe there is no substitute for reputation. Peter Muller, our service wizard, has more than 30 years of experience repairing and calibrating your field equipment. Peter has come through the ranks of Kern, Swiss and is certified by such reputable companies as Leica, Sokkia and Zeiss. He is now at our clean, well-equipped and high-tech facility in Hayward, ready to service your Geodimeter/Trimble products.

Please call us anytime for more information: 510-670-2800
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Easy to use, and all in one case – an ideal solution for the small contractor

The Spectra Precision Laser LL200 includes everything you need in a single carrying case: the laser, tripod, receiver and rod. Simple to use, the LL200 makes one-person leveling as easy as possible – putting you in control of your elevations. Fast and accurate, the LL200 will pay for itself in labor savings before you need to change the single D cell battery. Just put one in the back of your truck and change the way you work.

Features
- Transmitter, receiver, rod, and tripod in one rugged carry case
- Runs 100 hours on one D-cell battery
- Only one moving part means there is little to go wrong – and if it does, there is a next day replacement policy (US only)

Reliable lifelong accuracy and stability

The world’s best selling laser level: the Spectra Precision laser LL500 is a one-person leveling system designed for the most rugged environment. Accurate, stable and reliable, the LL500 is ideal for longer range measurements across your entire site. It comes complete with a hand held or rod-mounted receiver and is also compatible with machine control receivers.

Applications
- Checking elevations
- Setting forms (small and large jobs)
- Checking foundations
- Digging footings

Features
- Rugged, proven design
- Stable accuracy in even the most challenging environments
- Machine Control compatible

The fully-automatic self-leveling Laser for straightforward elevation control

With the push of a button the Spectra Precision Laser 1452GC automatically self-levels, making set-up even easier. Waterproof and rugged, the 1452GC is perfect for everyday construction applications.

The 1452GC package includes the laser, hand-held receiver, general-purpose clamp, operator’s manual, battery charger and carrying case.

Applications
- Forms, footings and foundations (small to medium jobs)
- Septic tank or swimming pool installations
- Estimating cut and fill
- Matching existing slopes and grades

Features
- Fully-automatic self-leveling for easy setup
- Visible beam for easy marking of finished floor levels
- Manual mode for very short run grade

The innovative Spectra Precision Laser LL600 from Trimble is rugged, reliable and accurate – especially over long distances.

The LL600 sends a continuous, self-leveled 360 degree laser reference over a large work area. This automatic, self-leveling laser is easy to set up and use, and can be used up to a diameter range of 800 meters (2500 feet).

The LL600 is ideal for a wide variety of construction leveling and machine control applications, especially on larger job sites. Using the LL600 with a laser receiver, you can perform any two-person leveling task with only one person. The LL600 is designed to deliver outstanding performance in the toughest construction job site conditions, increasing your productivity and profitability.

The LL600 can be paired with the Spectra Precision Laser HR500 receiver for general construction applications or with the Spectra Precision Laser CR600 for additional machine control applications.

Applications
- Checking elevations
- Excavating cutting depth
- Setting forms
- Digging footings
- Checking foundations
- Screeding concrete
- Machine guidance or machine control

Features
- Works over long distances
- Used for general construction and machine control
- Rugged and reliable design
Spectra Precision Laser GL700 Series

Not just another laser transmitter...

To keep you at the competitive edge, Trimble’s created a revolutionary new solution built for today’s construction industry – the innovative Spectra Precision Laser GL700 Series of grade laser transmitters.

The GL700 Series gives you the right laser for the right job, from an economical single grade transmitter to an advanced, long-range radio remote controlled steep grade transmitter. Further, the GL700 Series offers the most innovative collection of features ever available—Long Range Remote Control, Planelok, Grade Matching and Automatic Axis Alignment—to let you get to grade faster and with more accuracy.

On site, you’ll find that the advanced features quickly translate into productivity and accuracy. Complex alignments are automatic and virtually foolproof. With the powerful, long range remote control option it only takes one person to accurately set up and operate the grade laser. Even grade reverse is done in an instant. And for the first time, you can automatically control all the transmitter functions from inside the cab of a machine.

The GL700 Series includes three robust models, so you can select the right laser transmitter for the right application. Each model in the GL700 Series is designed to be simple to setup and use.

GL710 Single Grade.

An easy-to-learn, easy-to-use one-person grade laser, economical and accurate up to a 3,000 ft diameter. With -0.5 to +25% grade range, the GL700 is ideal for general construction, site preparation, trenching and pipe laying applications.

GL720 Dual Grade.

This economical choice has +/-10% in the X axis grade range and -0.5 to +25% Y axis grade range with high accuracy up to 3,000 ft diameter. Ideal for general construction, site preparation and road construction.

GL722 Dual Grade.

With the same range and base capabilities as the GL720, the GL722 includes the benefits of the full Radio Remote functions, plus Automatic Axis Alignment capability. Ideal for general construction, site preparation and road construction.

Each unit comes with a laser receiver standard, your choice of power options, and the best service and support in the industry. With the GL700 series, you can count on quicker setups and more productivity, for more profitability.

Applications

• General construction
• Site preparation
• Trenching
• Pipe laying
• Road construction
• Machine Control

Features

• Easy to use self-leveling grade laser that’s perfect for shorter range grading
• Directional bright visible beam for "above-the-top" pipe work

GL700 Series
**SPECTRA PRECISION LASER HV601/HV602**

Control you can rely on

The versatile Spectra Precision Laser HV601 and HV602 from Trimble are high-precision horizontal and vertical rotating lasers ideal for a variety of general construction and machine control applications. Their numerous high-end features like automatic self-leveling, horizontal and vertical capabilities, plumb up beam, and remote control make them adaptable to almost any application. Additionally the HV602 includes a radio remote with PlaneLok capabilities. Using the HV601 and HV602 you will save time and money by increasing productivity.

Easy to learn, set up and use, the HV601 and HV602 allow general and concrete contractors to position and measure in a variety of different ways. As part of Trimble’s portfolio of construction positioning products, the HV601 and HV602 allow you to control alignment and other positional settings in addition to elevation. The visible laser beam can be controlled for pointing or scanning, creating a highly visible reference for both exterior and interior applications.

The HV601 and HV602 can be paired with the Spectra Precision Laser HR500 receiver for general construction applications or with the Spectra Precision Laser CR600 for additional machine control applications.

**Applications**
- Layout and leveling of footers, foundations and forms
- Column layout and steel erection
- Tilt up walls
- Curtain wall installation
- Elevation control across the site
- Checking plumb
- Transferring control points up through a building
- A range of interior applications

**SPECTRA PRECISION LASER HV301**

General purpose construction laser for interior and exterior applications

The automatic, self-leveling Spectra Precision™ Laser HV301 is an economical laser with exceptional versatility and visibility. Whether your job site is indoors or outdoors, the HV301 is capable of handling a wide variety of horizontal, vertical and plumb applications. Its high-visibility beam enables 90 degree simultaneous rotating and plumb/perpendicular references.

**HV301 Features & Benefits**
- Composite material housing is rugged and lightweight, and is capable of withstanding a drop of up to 1 meter (3 foot)
- Fully automatic self-leveling in both horizontal and vertical setups
- Highly visible beam and scanning functions for improved visibility
- Long-range remote control operation provides convenient access to key functions across the job site
- Flexible power options, including rechargeable batteries, AC power and Alkaline batteries, combined with low battery warnings ensure you can always keep on working

**Applications**
- Interior and exterior commercial and residential construction
- Leveling and aligning
- Interior wall layout
- Installation of ceilings and raised floors
- Interior finishing work

**SPECTRA PRECISION LASER 1422**

The multipurpose laser for the small contractor and home renovation enthusiast

The manually leveled Spectra Precision Laser 1422 is an economical solution for horizontal, vertical and plumb applications. The 1422 includes a visible beam, 90° split beam prism, variable rotation speed and beam scan. Available in interior or general construction packages. Ideal for the home renovation enthusiast, or those on a tight budget.

**Applications**
- Checking elevations of sub-base and sub-grade
- Locating finished floor levels
- Laying out interior walls
- Installing ceiling grids

**Features**
- Easy set up
- Bright visible beam that can be directed, or rotated at various speeds
- Economical pricing

**SPECTRA PRECISION LASER 1452XL**

The multi-purpose self-leveling laser

The Spectra Precision Laser 1452 XL has a bright 3 milliWatt visible beam and water resistant design making a highly versatile laser for all construction applications. The simple, one button, fully-automatic, self-leveling makes set-up for both horizontal and vertical applications a breeze. The removable prism enables point transfer, plumb or 90 degree layout capabilities.

**Applications**
- Checking elevations
- Locating finished floor levels
- Laying out walls at 90
- Setting/checking footings and foundations
- Short-run vertical alignment

**Features**
- Easy self-leveling set up in both horizontal and vertical
- Bright visible beam that can be directed, dithered, or rotated at various speeds
- Remote control for function control where you need it.
Distance Meter/Portable Lasers

PORTABLE LASER TOOLS
One person leveling, squaring and plumb
Spectra Precision Laser LP2, LP3 and LP4 laser pointers are ideal for a range of any positioning, and alignment applications— including layout; putting in new floors, decks, walls and ceilings; and the installation of fixtures.

Applications
• Transferring point with LP2
• Install new walls/partitions with LP3
• Level and square foundations/decks with the LP4

LP2
Self-plumbing, dual-beam pocket laser for plumb up/down applications
Using the Spectra Precision Laser LP2, one person can accurately transfer a point on the floor directly to the ceiling up to (30m) 100 feet high in just seconds. Ideal for the installation of overhead fixtures and plumbing walls or metal studs, the LP2 is very easy to use. With two self-plumbing beams, the LP2 offers consistency and job site accuracy that is unmatched. Waiting for a plumb bob to settle is a thing of the past.

LP3
Self-leveling, three-beam pocket laser for plumb up/down and level applications
Designed for one-person use in plumb up, plumb down, and level applications, the Spectra Precision Laser LP3 is ideal for a broader range of applications including installation of new walls, placing footings, installation of fixtures, and truing walls. The LP3 projects three beams up to (30m) 100 feet. With three powerful self-leveling beams, the LP3 is an excellent choice for plumb up, plumb down and level applications requiring fast easy set-ups.

LP4
Self-leveling, four-beam pocket laser for plumb up/down, level and square applications
The versatile Spectra Precision Laser LP4 is a self-leveling plumb up, plumb down, level and square (90°) beam pocket laser. It offers the most versatility of the LP series and is ideal for a wide range of applications including installation of fixtures, putting in walls, and leveling foundations. The LP4 projects four powerful beams up to (30m) 100 feet. With consistent 2.5cm (one- inch) offsets, the four beams provide easy reference for plumb up, down, level and square applications. The LP4 provides a fast, easy-to-use set-up and accurate consistency on any job site.

SPECTRA PRECISION LASER HD150 HANDHELD DISTANCE METER
Reliable Distance Measurement at your Fingertips
The HD150 is ideal for use by general construction and interior contractors, builders, engineers, HVAC contractors and electrical contractors. Its accuracy and other productivity enhancing qualities make it the smart choice for a wide variety of applications. Even in hard-to-reach or hazardous locations, such as elevator shafts or open stairways, the HD150 is the reliable choice for all your distance measurement applications.

Applications
• Positioning of building components
• Building checks and inspections
• Building maintenance
• Alignment and spacing of installation points
• Installation of drywall and ceilings
• Layout from fixed reference points
• Calculation of areas and volumes
• Estimating

Features
• Area, Volume, and Continuous Measurement Functions
• Long-range measuring capabilities up to 150 m (500 ft)
• Accurate to ±2 mm-no costly rework
• Easy to use—simply aim laser beam to measure
• Labor savings—one person operation
Spectra 3D

Receivers

**SPECTRA PRECISION HR100**

Highly visible interior receiver with built in magnetic mount

The Spectra Precision™ Laser HR100 is an excellent receiver for contractors involved in extensive interior construction and remodeling work. The dual sided LED display and built in magnetic mount make it ideal for interior leveling and aligning applications. With tough composite material housing, it is capable of surviving a drop of up to 1.5 meters (5 feet) to a hard surface.

Features & Benefits

- A 3 channel dual-sided LED display that can be easily seen indoors or outdoors over long distances
- Built in magnet allows the unit to be easily mounted to ceiling grid or drywall track without the need for additional accessories
- Marking notches on both sides make it easy to mark alignments and elevations
- Strong composite housing and optional lanyard offers protection against damage due to dropping

**SPECTRA PRECISION LASER HR300**

Practical receiver for exterior and interior leveling and alignment applications

Rugged, fast and easy to use the Spectra Precision™ Laser HR300 is a receiver for basic leveling and alignment tasks. Applications include concrete footers and forms, decks, alignment of interior walls and ceilings and placing 1-meter (4') marks.

Features & Benefits

- 5 channel LCD display on the front and a LED display on the rear make it ideal for both exterior and interior applications
- Snap in rod clamp allows for quick switching from rod mounted to handheld applications
- Strong waterproof housing protects the unit from dust, moisture, and accidental drops

**SPECTRA PRECISION LASER HR400**

Rugged and durable receiver for exterior applications

The Spectra Precision™ Laser HR400 is an extremely rugged receiver for basic job site applications. The magnesium housing is both lightweight and durable.

Features & Benefits

- LCD/LED combination display for use in normal, low light, and long range situations
- Magnesium housing engineered to withstand a drop of up to 3 meters (10 feet)
- 9 channel LCD display and 3 deadband settings allows the user to optimize the receiver for accuracy and speed
Receivers

**SPECTRA PRECISION LASER HR500**

Highly versatile receiver for basic and advanced leveling and aligning applications

The Spectra Precision Laser HR500 laser receiver is designed for use by general, concrete and site prep contractors. It is an easy to use tool for accurate measurement of elevations across the site - and is ideal for use with the LL500 transmitter.

The HR500 can withstand harshest conditions on the construction site. It has a rugged, waterproof, lightweight magnesium housing capable of withstanding a drop of up to 3m (10-foot) on concrete.

The HR500 can be used as either a hand-held or rod mounted receiver for a wide range of applications, including measuring cut and fill, leveling forms and footers, setting grade and measuring elevation changes. With its 15-channel linear display, it does not require the operator to be 'on-grade' to measure, as the high and low indicators allow the offset to the on-grade position to be directly measured. Moving outside of the receiver pickup area, the lost beam direction indication allows contractors to quickly recover the on grade position.

The HR500 is visible across the job site. The bright red and green LED elevation indicators ensure high visibility in poor light, at a distance and at an angle. Wraparound receiver cells with continuous pick-up through an operating range of 270° mean less setups and improved productivity, especially for machine applications.

**SPECTRA PRECISION LASER CR600**

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

The versatile Spectra Precision Laser CR600 receiver is designed for use by general, concrete and site prep contractors. The CR600 can withstand harshest conditions on the construction site. It has a rugged, waterproof, lightweight magnesium housing capable of withstanding a drop of up to 3m (10-foot) on concrete.

The CR600 can be used as a hand-held or rod mounted receiver for a wide range of applications, including measuring cut and fill, leveling forms and footers, setting grade and measuring elevation changes. In addition, the CR600 can be used as a machine control mounted receiver for use on a backhoe, small excavator or skid steer loader. The CR600 is an ideal low-cost entry to machine control productivity.

With its 15-channel linear display, it does not require the operator to be 'on-grade' to measure, as the high and low indicators allow the offset to the on-grade position to be directly measured. Moving outside of the receiver pickup area, the lost beam direction indication allows contractors to quickly recover the on grade position.

The CR600 is visible across the job site. The super-bright red and green LED elevation indicators ensure high visibility in poor light, at a distance and at an angle. Wraparound receiver cells with continuous pick-up through an operating range of 270° mean less setups and improved productivity, especially for machine applications.

The CR600 is an easy to use tool for accurate measurement of elevations across the site - and is ideal for use with the LL500 transmitter.

**call for current prices:** 510-670-2800
Easy-to-use, one person 3D layout tool

Combining two Spectra Precision Laser LS920 LaserStation® transmitters turns the LS920 into a one-person 3D layout tool. Easy-to-use, LS920 LaserStation 3D Pro allows you to layout forms, footers, anchor bolts and even radiuses. The menu-driven receiver also allows you to see instant, “down and out” distances from a building axis (hubs).

Applications

- “Down and out” layout of foundations, forms and footers
- Anchor bolt layout
- Radius layout
- Single and dual slope grade layout up to 50%

Features

- One-person operation
- Fully-automatic self-leveling
- Reads grades, angles, and 3D positions
- Rugged, versatile receiver

Applications

- “Down and out” layout of foundations, forms and footers
- Anchor bolt layout
- Radius layout
- Single and dual slope grade layout up to 50%

Features

- One-person operation
- Fully-automatic self-leveling
- Reads grades, angles, and 3D positions
- Rugged, versatile receiver

TRIMBLE PRECISION LEVELS

For accurate engineering and geodetic measurements

Trimble’s range of optical and digital precise levels has every vertical measuring option covered—from general leveling work to precise deformation monitoring projects. Trimble levels are designed for ease of use and productivity. When you buy an AL200 optical level or a DiNi digital level you can rely on Trimble’s field-proven equipment to increase your productivity and streamline your field operations.

Trimble AL200 optical levels

The Trimble AL200 series of optical levels consists of two models: the AL228 with 28_ magnification and ±1.5 mm accuracy, and the AL232 with 32_ magnification and ±1.0 mm accuracy.

Featuring metal housings and high-quality optics, the AL200 series provides the ideal combination of durability and quality. An easy-to-read display makes these optical levels an ideal tool for everyday leveling work. The built-in horizontal circle can be used to turn basic angles and to perform short-range alignments without the need for other instrumentation.

Capable of withstanding the most challenging job site conditions these reliable optical levels will provide many years of unwavering performance.

Trimble DiNi digital levels

Through innovative technology, and a menu driven interface, our digital levels provide a tool you can quickly learn and effectively use to complete your work. With the ability to record measurements in as fast as 3 seconds you can really improve your productivity.

Nikon NE-20S/20H

Made to Measure Versatility

Building on the success of the well-received NE-20S, Nikon launched the NE-20H, which takes both 10° and 20° readings (0.002 G or 0.005 G, 0.05 mil or 0.010 mil), thus providing added versatility to the basic model.

Select the model best suited to your needs.

- NE-20H takes both 10° and 20° readings (2 mgon or 5 mgon, 0.05 mil or 0.010 mil), thus providing added versatility to the basic model NE-20S (20° or 6 mgon reading)
- Nikon’s high-quality telescope assures sharp, clear images
- Features dual-line LCD screen with battery power indicator and simplified keyboard
- Initial setting of vertical angle to zero(0) is a snap: simply rotate the telescope through the horizontal line; no need for a telescope vial
- Powered by six LR6 (L40), R6 (AA)-size penlight batteries
- Easy initial setting using the HOLD key (for the NE-20H) and inside switches under the side cover (with the NE-20S)

Nikon NE-203/202

High performance that’s waterproof and tough

The Nikon Electronic Theodolite NE-203 / 202 is the enhanced successor to model NE-103 / 10LA / 10L. This time, Nikon has added waterproof capability to stand up to the toughest field conditions. This model meets IEC529 Class 6 (IPX6) standards which state that “water projected in powerful jets against the enclosure from any direction shall have no harmful effects.”

- Digital angle display is user-switchable from 5'/10' to 1 mgon/2 mgon or 0.02 mil/0.05 mil (1°/5°, 0.5 mgon/1 mgon, 0.005 mil / 0.02 mil available as option on NE-203 only).
- Built-in vertical axis compensator automatically compensates for instrument inclination within ±3° (NE-203)
- Accuracy is 5'/1 mgon in 5'/1 mgon display mode (DIN 18723)
- Large, dot-matrix dual-line LCD screen displays both vertical and horizontal angles simultaneously.
- LCD screen and keyboard are placed on both sides of the alidade for easier operation.
- Telescope magnification of 30 x with a 45 mm objective aperture diameter.
- Employs a unique linear focusing mechanism to simplify focusing at both short and long distances. Minimum focusing distance of 0.7 m/2.3 ft.
- Repeat horizontal angle measurement possible up to ±1999° 59'59" or ±2222.2220G
- Continuous operation for up to 48 hours with fresh alkaline-manganese batteries (NE-202)
Automotive Levels

NIKON AS-2/AS-2C
Endless horizontal drive for smooth precision pointing and angular measurement

These waterproof telescopes can be attached to flat- or spherical-head tripods. A pentaprism mirror permits the viewing of the circular bubble as an erect image. They also come with an optional, high- and low-power eyepiece lenses in addition to diagonal eyepiece lenses for confined spaces. Another feature is clampless horizontal alignment.

Other features
• Accuracy of ±0.8mm in 1km double-run leveling. If used with an optical micrometer, down to ±0.4mm.
• Automatic compensator with wide working range of ±12’
• Powerful 34x telescope with a bright ø45mm-dia. objective lens.
• Improved minimum focusing distance, down to 1m/3.28ft.
• Note: AS-2C is identical to AS-2 except horizontal circle reading.

NIKON AE-7/AE-7C
waterproof telescopes reduce minimum focusing distance down to 0.3m (0.98ft)

These waterproof telescopes with reduced minimum focusing distance of 0.3m (0.98ft) feature endless horizontal drive for smooth precise pointing and angular measurement, and they can be attached to either flat- or spherical-head tripods. In addition, a pentaprism mirror enables the viewing of a circular bubble as an erect image. They come with optional, high- and low-power eyepiece lenses, and attachable diagonal eyepiece lens for use in confined spaces. Another useful feature is clampless horizontal alignment.

Other features
• Accuracy of ±1.0mm in 1km double-run leveling, or ±0.45mm when an optical micrometer is used
• Automatic compensator with wide working range of ±16’
• 24x, ø30mm-dia. telescope
• 0.75m/2.5ft. minimum focusing distance
• Note: AE-7 is identical to AE-7 except horizontal circle reading.

NIKON AP-8
Incorporates an engineer’s handy automatic level with accuracy and friction brake features for faster operation

This AP-8 features an engineer’s handy automatic level with accuracy of ±1.5mm in 1km double-run leveling and friction brake for faster operation. Moreover, an endless horizontal drive with control knobs on both sides, water-resistant construction for use under dusty conditions or in light rain, and the option to mount on a flat- or spherical-head tripod all contribute to enhanced operability. Optional diagonal eyepiece lens attachments for use in confined spaces are also available.

Other features
• 28x, ø30mm-dia. telescope
• 0.75m/2.5ft. minimum focusing distance

NIKON AC-2S
The AC-2S, an economical, compact and lightweight telescope ideal for use in construction work

The economical, compact and lightweight AC-2S features a built-in compensator with magnetic damper that automatically levels line of sight. With an endless horizontal tangent screw, it is operable with either hand and employs a friction brake for faster operation. Moreover, it can be mounted on flat- or spherical-head tripod.

Other features
• Attainable accuracy in 1km double-run leveling of ±2.0mm
• 24x, ø30mm-dia. telescope for bright, erect and sharp images
• 0.75m/2.5ft. minimum focusing distance

NIKON AX-2S
An economically and surprisingly compact, light design

The AX-2S features a built-in magnetically dampened compensator that automatically levels the line of sight. Its airtight design enables you to use even in dusty conditions or light rain. In addition, a baseplate design offers a choice of flat- or spherical-head tripod mount.

Other features
• High accuracy of ±2.5mm in 1km double-run leveling
• Bright, sharp, clear 20x image complemented by 0.75m/2.5ft. minimum focusing distance for ease of use even in tight spaces
TRIMBLE – 5800 RTK GPS SURVEYING SYSTEM

Cable free convenience

The revolutionary integrated 5800 GPS receiver combines a dual-frequency GPS receiver, antenna, UHF radio, and power source into a single compact unit that fits in the palm of your hand and weighs in at just 1.21 kilograms (2.67 pounds).

Designed to be used with the ACU™ Controller or TSCe™ Controller, the 5800 makes cables a thing of the past—you can now control your surveys using the built-in short-range Bluetooth wireless technology. This truly cable free GPS rover comprising the pole, ACU controller, holder, and batteries for a full day’s work weighs only 3.5 kilograms (7.8 pounds).

With the Trimble 5800 GPS system, versatility is redefined—it can be configured as a rover or GPS base, making it versatile to meet the changing needs of surveyor’s projects. Further, it includes 2MB of internal memory for post-processing, as well as being fully RTK capable.

The 5800 works with certain Bluetooth cell phones, which allows for a completely cable-free RTK rover. Additionally support for the use of General Packet Radio Service (GPS) available on many GSM networks world-wide, allows for significantly more cost-effective data transfer in the field, where you are charged based on the amount of data transferred, instead of the amount of time spent online.

TRIMBLE – 5700 RTK GPS SYSTEM

One receiver, many configurations

Whether you are involved in Control, Measurement, Design, Stakeout or As-built work, the 5700 RTK GPS system is a versatile powerful survey tool that will put you far ahead of your competition. The lightweight 5700 receiver can be clipped to your belt, tucked into a comfortable backpack, attached to a tripod, or configured with all components on a compact lightweight range pole. And with a rugged magnesium alloy case it is designed to meet the toughest mechanical and waterproofing specs in the business.

The 5700 is WAAS and EGNOS ready so you can conduct real-time differential GIS grade surveys and navigation without a base station when working in areas of WAAS/EGNOS coverage.

The 5700 can be used with either the ACU or TSCe controllers.

Welcome to the next generation of RTK GPS systems

Trimble R-track Technology

In 1999, a plan was announced to modernize GPS. One of the main components of this modernization is the introduction of two new navigation signals that will be available for civil use. The first new signal, known as L2C, is scheduled to be available on satellites launched from 2004 onwards.

Trimble’s unique R-track technology is designed to utilize this signal and deliver the advantages of GPS modernization to the survey professional. The L2C signal will result in an increase of signal strength on the L2 frequency. The Trimble R8 with R-track technology will deliver improved tracking performance on satellites transmitting L2C.

TRIMBLE R8 AND R7

The Trimble R8 and R7 feature Trimble’s new R-track technology, which includes the capability of tracking the new Civil Signal (L2C) scheduled to be available in 2004. The combination of R-track and all the features and functionality of the 5800 or 5700 RTK GPS receivers allow you to maximize your return on investment by purchasing a system that is ready for the future.

Special edition R8 featuring the Trimble R-track technology

Representing the special edition of Trimble’s 5800, the Trimble® R8 RTK GPS receiver marks the ten-year anniversary of RTK GPS for surveying applications, and puts you on track for the future of GPS surveying!

Special edition R7 featuring the Trimble R-track technology

Representing the special edition of Trimble’s 5700, the Trimble® R7 RTK GPS receiver marks the ten-year anniversary of RTK GPS for surveying applications, and puts you on track for the future of GPS surveying!
Economical, fully integrated single-frequency GPS survey

The Trimble® 4600 LS™ is a cost-effective GPS survey instrument for productive control, topographic, GIS, real-time and post-processed GPS surveys. The 4600 LS can be used effectively for static, L1 FastStatic and real-time surveys. The 4600 LS Surveyor is extremely portable and very simple to use. The GPS receiver, antenna and C-cell batteries are integrated into a single unit weighing only less than 1.7kg (3.7 lbs.) For post processed surveys, no external batteries or cables are required. The unit features one-button operation and three LED indicators let you easily monitor your entire survey.

For control surveys, the 4600 LS mounts on a tripod and can be start-ed with a single button press. To perform productive topographic surveys, the 4600 LS mounts on a range pole and can be controlled by the Trimble Recon™ controller running Trimble Digital Fieldbook software.

In the office, Trimble Geomatics Office™ processing software is used for processing and exporting data to a wide range of survey, CAD and design software.

- 12-channel single-frequency receiver
- c-cell alkaline battery powered
- RTCM SC-104 input and NMEA-0183 output for sub-meter survey
- Trimble Geomatics Office software.

Versatile GPS Receiver with Advanced Communications Control

Ideal for a wide range of GPS reference station applications, the NetRS™ GPS receiver is the latest in a long line of innovative reference station products from Trimble. The NetRS GPS receiver is designed for use with Trimble’s scalable infrastructure solutions and as a Continuously Operating Reference Station (CORS) for geodetic, survey, high-accuracy GIS and monitoring applications.

The NetRS GPS receiver offers ease of use, low power consumption, Ethernet connectivity, and advanced data management functions. Additionally it features the new Trimble R-track technology for L2C (GPS civilian signal) tracking capability. Its rugged construction allows receiver to be set up and unattended in remote, hostile environments.

Scalable Infrastructure Solutions

Trimble provides a portfolio of infrastructure solutions including single reference stations, a network of reference stations, or a VRS™ (Virtual Reference Station) solution. This scalability allows you to select the best solution for your requirements. NetRS can be used with the Trimble® GPSBase, GPSNet and RTKNet reference station software.
TRIMMARK 3

The TRIMMARK™ 3 radio modem is the basis for a robust, wireless data broadcast network for real-time, high-precision GPS survey and telemetry applications.

The rugged, compact unit is useable as a base station repeater station, or rover receiver.

Features

- The radio modem broadcasts or repeats data to Trimble survey-grade receivers, including the Trimble 5700 GPS Total Stations and Trimble 4700 and 4800 GPS Total Stations
- Selectable power outputs of 2, 10, or 25 Watts support: short- and long-range operations conserve battery life and minimize risk of interference with other systems.
- Operating ranges can extend from: 5 to 8 km (3 to 5 miles) for a 2W repeater (typical), to Up to 15 km (8 miles) line-of-sight under optimal conditions for a 25W base station.
- The TRIMMARK 3 radio modem is easily configurable: In the office, using the supplied WinFLASH utility on your PC. In the field from the front panel or from the Trimble Survey Controller™ software in the TSC1 Data Collector.
- You can configure each broadcast network to operate on one of up to 20 programmed channels. Channel spacing of either 12.5 or 25 kHz is programmable at the factory.

The TRIMMARK 3 radio modem is available in three frequency bands

- 410-420 MHz
- 430-450 MHz
- 450-470 MHz

SITENET 900

Rugged, multi-channel 900MHz modem for Construction and Mining

Trimble’s SiteNet™ 900 is a rugged, multi-network, 900 MHz radio modem designed specifically for the construction and mining industries. It is used to establish robust, wireless data broadcast networks for real-time, high-precision GPS applications.

This versatile Trimble radio operates in the frequency range of 902-928 MHz, broadcasting, repeating, and receiving real-time data used by Trimble GPS receivers. Under optimal conditions, the SiteNet 900 radio broadcasts data up to 10 km (6.2 miles) line-of-sight and coverage can be enhanced by using a network of multi-repeaters. Using the SiteNet 900 radio as a repeater, enables you to provide coverage in previously inaccessible or obstructed locations. The SiteNet 900 radio is so versatile, you can easily change its operating mode to suit any network configuration. This reduces costs and maximizes uptime. Additionally, SiteNet 900 is license free in the U.S.A. and Canada, which makes it extremely portable; you can move it from project to project without licensing hassles and restrictions.

The SiteNet 900 radio is designed to operate reliably in demanding RF environments where many other products and technologies cannot. Optimized for GPS with increased sensitivity and jamming immunity, the SiteNet 900 radio also has error correction, and a high-speed data rate, ensuring maximum performance.

The SiteNet 900 radio is especially suited for use with Trimble’s SiteVision™ GPS grade control system, and is ideal for all GPS machine control applications where reliability is important. The machine-rugged unit has been designed and built especially for harsh construction and mining environments. Fully sealed against dust, rain, splash, and spray, the SiteNet 900 radio remains reliable in all weather. The radio’s ruggedness and reliability minimizes downtime, lowering ownership costs.

Trimble’s SiteNet 900 radio can be used with any Trimble GPS receiver, including: MS750, MS850, MS860, and 5700 receivers.

Features

- rugged and long-lasting
- versatile - base, repeater, and rover capabilities
- reliable even in demanding RF environments
- optimized for maximum GPS performance
- upgradeable to two-way data capability
- license free in the U.S.A. and Canada
Robotic Total Station

TRIMBLE 5600 TOTAL STATION SERIES

5600 Total Station Features

Choice of DR technology
Choose the Phase Shift DR Standard option for short-range and interior applications. Alternatively select the Pulsed Laser DR200+ or DR300+ options for long-range outdoor work.

The longest range DR ever
The DR200+ leaves all other reflectorless EDM solutions far behind, with a range of up to 600 m (1,968 ft). The extra long-range DR300+ option extends the range a further 50% to everyday objects.

Eye-safe
All 5600 Total Station DR options, including the extra long-range DR300+, use eye-safe laser technology and can be used in open public areas without special precautions, warning signs or training.

Fast
The DR200+ and DR300+ have a fast measurement time which does not change with range—so you can remain productive even when measuring to far distant objects.

Revolutionary Windows® CE Total Station
Offering the best of both worlds, the 5600 and the ACU controller deliver the color and graphical capabilities of Trimble Survey Controller—all on-board!

The fastest Trimble Survey Controller ever
Use the Windows® CE-based Trimble Survey Controller software on-board speeds you’ve never dreamed of!

The integrated Total Station
With the attachable control unit and integrated robotic radio, there is no need for a data collector or radio cables—and with an on-board ACU, you always have the display facing you.

Completely Upgradable Total Station
Start with a servo instrument and upgrade to Autolock® and robotic as your business grows. Protect your investment and keep your options open.

Whatever your application, the power and versatility of the 5600 Total Station will put you far ahead of your competition.

Highly productive, advanced servo and robotic total stations
Getting the job done fast while still producing accurate, high-quality results is critical for you and your clients.

The Trimble 5600 Total Station series gives you access to the best, most-productive measuring methods available—ideal for a wide range of applications. The 5600 total station with its innovative Servo, Autolock®, and Robotic technology, plus three Direct Reflex EDM options, allows you and your survey crews to survey more productively than ever before.

For specialized high-precision applications, the 5600 IR Total Station is the ideal solution, providing you with the capability to measure distances to an accuracy of +/- 0.8 mm +1 ppm.

The Trimble 5600 is a completely upgradable total station. Start with a servo unit and upgrade to Autolock and robotic as your business grows. Protect your investment and keep your options open.

Regardless of your 5600 configuration, you remain in complete control with the Trimble ACU controller—an attachable Windows CE device equipped with a color graphical touch-screen. In addition to working with the 5600 servo, Autolock and robotic total stations the ACU is also the control unit for the 5800 RTK Rover and 3600 Total Station series. The Trimble ACU delivers one keyboard, one display, one dataset, one user interface, no cables, no hassles—true integrated Surveying.

CALL FOR CURRENT PRICES: 510-670-2800
**TRIMBLE 3300 TOTAL STATION SERIES**

Versatile, Compact, Economical 3300 Total Station Range with Direct Reflex Measurement EDM for Everyday Survey Work

The Trimble 3300 Total Stations deliver huge versatility in a compact and high performance package for data capture and field computations.

- Combines Direct Reflex capability with conventional measurement towards a prism
- Wide range of measurement applications
- Small, water resistant, lightweight and rugged
- Small internal battery
- Easy to use, even an inexperienced operator can be fully operational with the instrument within a few minutes of start up
- Can be operated with the TSCE™ Control Unit

Direct Reflex capability opens up a new world of measurement applications. Objects that were previously difficult or impossible to measure, can now be measured as easily as those measured with a prism. Property boundaries and corners can be measured without gaining land access. Overhead cables, tunnels, bridges, quarry faces, building and elevations can all be measured quickly and easily. The DR capability combined with the coaxial visible spot facilitates aiming in interior applications making the 3300 Total Stations ideal for interior survey work.

When working in arctic conditions, the 3300 Total Stations series Extreme allows you to measure in temperatures down to -35°C (-31°F). Using the DR mode, you can rapidly measure objects up to 100 meters away without a prism. In prism measurement mode, you can measure distances of 5000 m with a single keystroke. And for stakeout, the Tracking mode automatically repeats measurement, providing rapid count down to the point required.

The 3300 Total Station range is the ideal complement to Trimble RTK GPS rovers, providing a means of filling in detail that cannot be acquired using GPS. The two are seamlessly linked using the TSCE Control Unit, enabling you to easily switch between RTK and total station measurement.

The TSCE controller interfaces directly to the Terramodel® Field Data Module - a single comprehensive program that automatically interprets linework and symbology from your data to create detailed drawings and elevations.

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**TRIMBLE 3600 TOTAL STATION SERIES**

Highly productive, innovative 3D measuring system

Whether you work as a topographic, cadastral, construction or building surveyor, the innovative Trimble 3600 Total Station series is designed to optimize your workflow and field productivity.

For operation in high productivity, high density data collection, the 3600 series delivers huge productivity gains with features such as DR (Reflectorless Mode), QuickDrive, Clamp Free Endless Slow Motion and Tracklight.

Operate the 3600 Total Station with your choice of control unit including the ACU. The ACU is an on-board, color, Windows CE device equipped with a graphical touch-screen that can also be used with Trimble 5800 RTK Rovers and 5600 Total Stations. The Trimble ACU delivers one keyboard, one display, one dataset, one user interface, no cables, no hassles-truly Integrated Surveying.
Construction Total Station for Contractors

The Spectra Precision Optical TS305 and TS315 Construction Total Stations provide a complete layout solution. The TS305 or TS315 eliminates the need for using measuring tapes, plumb bobs, theodolites or separate distance measuring equipment allowing the general contractor to take control of their layout and ensure better accuracy on the job site.

Using the new Direct Reflex (DR) distance measurement, you can now position with or without a prism - making easy jobs faster and making your difficult jobs even easier.

The TS305 and TS315 are easy-to-learn and simple-to-use. The construction total stations have software developed to meet your needs on the construction site so with a little training, you will soon realize that you don't need to be a surveyor to use one. And if you want to use the more advanced features, the quick "one-touch operation" and the self-explanatory menu makes operation a snap.

For advanced functionality the TS315 comes with internal memory allowing you to import and store design data for use on the construction site.

Features

- Fast
- Flexible, both DR and prism measurement capability
- Easily accessible software functions and advanced distance measurement technology
- Internal memory option
- Rugged, water-resistant
- Compact, everything fits into one neat carry case

Applications

- General construction measurement and positioning
- Layout from the building axis by using control hubs
- Alignment along a building line
- 90 degree layout from anywhere on the job site
- As-built checks

TRIMBLE ATS (ADVANCED TRACKING SYSTEM)

Highly productive Robotic total station for dynamic remote tracking

The Trimble ATS is a dual mode robotic Total Station with enhanced features for high-performance automatic tracking. In Surveying mode, the ATS offers maximum flexibility as a fast, efficient, single-person positioning system. In Advanced Tracking mode, the ATS can be used remotely to guide vessels and marine plant performing survey & construction tasks.

The Trimble ATS is ideal for any company that carries out marine survey, land survey or construction tasks. It allows the surveyor to do all types of surveying and stakeout quickly and accurately.

Trimble ATS Data Latency and Output Rate

Designed specifically for high-speed low-latency use, the ATS in Advanced Tracking mode has a latency of less than 200 ms and selectable output rate between 1 and 6 Hz. The angle and distance data from the instrument are synchronized, providing a vessel with precise, up-to-date information, increasing the accuracy and speed of the survey operations.

This low latency and data synchronization, combined with the instrument’s turning speed, enable the ATS to track a vessel moving as close as 30 m at a speed of 46 kph (28 mph), without losing lock.

The Marine System Solution

The Trimble ATS can be used with the HYDROpro PC based software for a complete 3D marine survey and construction positioning system. The integration between software and ATS benefit the user in the following ways.

- The 6Hz deskewed ATS positions can be merged with echosounder data for accurate hydrographic charting at speed.
- The accurate vertical position from the ATS can be used for real-time correction of water level changes and for construction tasks on the vessel.
- Automatic search patterns in the ATS, initiated by the HYDROpro operator on the vessel, allow for unmanned use at the ATS.

Features and Benefits

- Marine survey and construction
- Survey applications
- Fast and accurate
- Built-in search system
- Multiple target ID.s
- Active target recognition for 100% secure lock on
- High accuracy dynamic tracking system

CALL FOR CURRENT PRICES: 510-670-2800
The next step in Total Station excellence

With the new DTM-502 Series of Total Stations, Nikon has expanded and improved on its highly successful DTM-500 Series. Celebrated for superior optics, mechanical integrity, battery life and measuring speed, the new line boasts an easy-to-read graphic LCD and ergonomic keyboard on both faces. Combine these features with the feature-packed on-board software and you’ve got a lineup of Total Stations that are unmatched for performance, ease of use and productivity.

Main features
- Measurement home base
- Easier to record data
- Easy input of feature codes
- Offset measurement
- Fast, on-site setting change capability
- Switching/configurable displays
- Downloading and uploading of data
- Compact and lightweight, with IPX4 all-weather construction
- Lumi-Guide

NIKON TOTAL STATIONS DTM-353/332

Superior overall convenience and ease of use.

In addition to the enhancement of functions inherited from their predecessors—the DTM-350 and DTM-330—the new models feature a large graphic LCD, ergonomic keyboard and improved software for superior operability. They also come with a remarkable long battery life of 16 hours, IPx6 waterproof construction and intelligent feature coding systems. A 10,000-record data memory with job manager is available as is an newly designed EDM that offers increased speed and range. Moreover, they incorporate Nikon’s superb optics as well as powerful and practical on-board survey programs. And all features are housed in a light and compact design.

Main features
- ±(3+2ppm x D)mm distance measurement accuracy
- Same distance accuracy for both Prisms and Reflector Sheet
- Just 1.6 sec. measuring time with 1mm distance resolution
- 5-second angle measurement accuracy
- Quick and convenient feature code input system
- USR user defined keys set as “ONE-TOUCH access” keys to your preferred functions
- User customizable feature code list
- First, on-site setting change capability
- Feet & Inch input and display
- A special version of the DTM-352 that allows operation at extremely low temperatures down to −30°C is available.

NIKON DTM-801

Nikon’s DTM-801 series offers all the impressive functions of its popular predecessor – the DTM-700/800 Series – including a high-performance EDM, MS-DOS® compatible operating system, data security system and PCMCIA standard cards. Moreover, it offers enhancements such as longer battery life, improved angle measurement accuracy and faster software operation.

Main features
- Faster and more accurate distance measurement
- Built-in MS-DOS® compatible operating system
- World industrial standard PCMCIA memory cards
- Data security system
- 100 % resume function
- Advanced power management system
- Nitride-finished with zero-clearance ball bearing horizontal axis for accurate and stable angle measurement

NIKON DTM-502

The next step in Total Station excellence

With the new DTM-502 Series of Total Stations, Nikon has expanded and improved on its highly successful DTM-500 Series. Celebrated for superior optics, mechanical integrity, battery life and measuring speed, the new line boasts an easy-to-read graphic LCD and ergonomic keyboard on both faces. Combine these features with the feature-packed on-board software and you’ve got a lineup of Total Stations that are unmatched for performance, ease of use and productivity.

Main features
- Measurement home base
- Easier to record data
- Easy input of feature codes
- Offset measurement
- Fast, on-site setting change capability
- Switching/configurable displays
- Downloading and uploading of data
- Compact and lightweight, with IPX4 all-weather construction
- Lumi-Guide
NIKON PULSE LASER STATION NPL-352/332

The Pulse Laser Station NPL-302 Series offers two models the Nikon NPL-352 and NPL-332. The NPL-352 and NPL-332 include excellent measurement performance and extreme long battery life. The instruments also include powerful onboard software that remains very easy-to-use and easy-to-learn. With the introduction of a graphical LCD display the menu selections and data entry has become even simpler, resulting in increased productivity in the field. The Nikon Pulse Laser Stations are equipped with the unique coaxial focusing system reflectorless EDM. Otherwise inaccessible points can now be surveyed reliable and accurate due to Nikon's unique reflectorless EDM technology. This system focuses the laser on the object that is to be measured. The focusing of the laser beam on the object assures greater accuracy, especially when the measurement beam is oblique to the target surface.

The focusing system also automatically reduces the risk of erroneous measurements caused by passing object such as e.g. cars, persons or the leaves of trees or bushes that interrupt the line of sight. Through this unique technology the NPL-302 Series pulse laser station offers superb reliability in reflectorless measurements. The size of the laser beam can be examined as the diameter of the laser beam is etched into the reticle.

Main Features
• Measurement performance
• Superb Nikon optics
• Large internal memory
• Powerful and practical new on-board programs
• Extreme long battery life
• Waterproof construction
Spectra 3D

Data Collection Hardware

ACU CONTROLLER

Windows® CE operating system, built-in Bluetooth® technology, color touch screen with graphics, detachable, specifically built for use with Trimble® GPS systems and optical total stations, runs your choice of Trimble field software.

TSCE CONTROLLER

Windows CE operating system, Bluetooth technology, hand held, color touch screen with graphics, and broad environmental specifications, full alphanumeric keypad, 512 MB memory, supports major third-party total stations, runs your choice of Trimble field software.

TRIMBLE RECON CONTROLLER

Windows CE operating system, extremely rugged, hand held, 400 MHz Intel® Xscale processor, supports Bluetooth technology, powerful battery, extendable memory, runs your choice of Trimble field software.
Data Collection Hardware

**TRIMBLE LM80**

A pocket-sized personal computer featuring the first data collection software created specifically for construction layout

The Trimble® LM80 is a revolutionary tool in the field of construction layout, designed to make the layout process more productive, accurate and reliable. The LM80 features the first construction software created specifically to meet the unique requirements of in-the-field construction layout. It’s truly in a class of its own.

With the LM80 you can:

- Input blueprint dimensions
- Build a digital replica of the layout plan
- Guide the layout of major points, add string dimensions on the print, calculate diagonals and angles
- Make complex layouts, such as curves and arcs-as straightforward
- Can also be used for standard field calculations, materials calculations and job site management.

Based on Microsoft® Windows CE operating system, the LM80 can support the wide range of application software that is available on the market today for Windows CE devices. Its built-in functions include e-mail and Microsoft Office File Viewers, among many others.

**GEODIMETER CONTROL UNIT**

Powerful control of your Trimble Optical surveying instruments

The Geodimeter™ Control Unit provides powerful control of your Trimble Optical surveying instruments:

- Trimble 3600 Total Station series
- Trimble 5600 Total Station series in all modes of operation from manual to direct reflex (DR), SERVO, AUTOLOCK™, and ROBOTIC.

Features

- User defined sequences (UDS)
- SERVO and ROBOTIC instrument capabilities
- Software available in many languages
- Is a compact, powerful field computer
- Fits easily on your total station or range pole or in your pocket for easy transport
- Provides upgradeable memory capacity for 1,000, 5,000, or 8,000 points
- Is built especially for tough surveying environments—even the Arctic.
- An important component in the Trimble Toolbox of Integrated Surveying™ solutions.

Trimble Total Stations are supplied as standard with the Terramodel Field Data Module. Through this Windows™ based application, data can be imported from your design system and uploaded to the control unit. Survey data can be downloaded, reduced, computed and drafted before exporting to the CAD/Survey system of choice.
The Trimble Survey Pro software is a complete data collection and field computation solution based on the popular TDS Survey Pro software.

Trimble Survey Pro offers all the powerful features of TDS Survey Pro Plus selected Trimble advantages:

- The familiar easy-to-use TDS Survey Pro interface.
- TDS Survey Pro functions, including extensive COGO and conventional data collection.
- Support for optical total stations from Trimble and other major brands.
- Support for Trimble GPS systems, site calibration techniques, and ground coordinates.
- Trimble integrated surveying: use one Job file for GPS systems and optical total stations, and for Trimble office software such as Trimble Geomatics Office, Trimble Total Control, and Terramodel.
- Runs on the Trimble® ACU, TSCe™ and Trimble Recon™ controllers.

Site Measurement designed especially for construction contractors

The Trimble® SCS900 system is a breakthrough site measurement and surveying solution designed specifically for construction contractors.

The Site Controller software, which operates on Trimble’s ACU and TSCe™ controllers, uses GPS positioning technology to enable you to measure material volumes, monitor grades and laid material thicknesses, and perform site measurement tasks such as point, line, and surface stakeout. With this easy-to-use, task-oriented system, you no longer need to rely on a contract surveyor for all your surveying and grade-staking requirements.

SCS900 is designed to simplify your operations, increase your efficiency in the field, and minimize downtime. You can use the system at every stage of construction: site calibration, original ground level checking, stockpile measurement, progress volumes, design stakeout and checking both finished grade and laid material thickness with real-time verification of construction tolerances.

SCS900 Applications:
- Residential Development
- Commercial Development
- Golf Course Development
- Airports
- Mass Earthwork
- Road Construction

How the SCS900 system works

SCS900 uses a Trimble GPS receiver and antenna to compute a precise position of the rover. The controller attached to the system uses the position information of the antenna with antenna height to calculate the exact position of the range pole tip. The system compares the computed position with a 3D surface design model or stakeout point location, that is loaded into the controller’s memory, and computes cut and fill in relation to design grade or navigate to point information. Cut and fill information is displayed in real time on the controller as text and as a plan view coverage map.

Collect, view, and manage your data efficiently in the field

The Trimble® Digital Fieldbook™ field software is a data-collection solution for L1 post-processed kinematic and static surveys using the 4600 LS™ GPS receiver. It runs on the super-rugged Trimble Recon™ controller, providing a tough, cost-effective GPS surveying solution.

Collect, view, and manage your data in the field, and then transfer it in a single Job file to Trimble Geomatics Office™ software for processing.

Trimble Digital Fieldbook offers the following:
- Map view: View a survey in the Plan view to ensure all required points are measured.
- Background maps: View files (e.g., DXF files) and points for project visualization. Also, tap and hold to review items, or navigate to them directly from the map.
- Coordinate system support: Transfer grid coordinates in a local coordinate system to the software and use them to occupy points and to navigate on the map.
- Feature Code libraries: Improve quality control in the field and only collect valid codes.
- Survey data stored in job files: Review project details in the field. The related raw GPS (*.dat) files are automatically downloaded when the job file is transferred to Trimble Geomatics Office.
- Receiver configuration: View satellites using a sky plot view and manage GPS files stored in your 4600 LS GPS receiver.
- Available in many languages: English, French, German, Spanish, Portuguese, Swedish, Italian, Chinese, Korean, and Japanese.
Data Collection Software

TRIMBLE SURVEY CONTROLLER

Proven data collection solution for the field.

The Trimble Survey Controller operates on the Trimble® ACU and TSCe™ controllers and offers powerful features for streamlining all your surveying operations, making you more productive and profitable.

Trimble Survey Controller gives you full control over data collection and stakeout, with color maps displaying your results in real time as you measure. It also offers completely integrated surveying for greater productivity in the field.

Features

• Work with one software, one controller, and one file for more efficient surveying. Survey data is organized in a single Job file, so you can switch seamlessly between Trimble GPS systems and optical total stations, including major third-party total stations.
• Transfer data to any office software in the Trimble suite for processing, including Trimble Geomatics Office™, Trimble Total Control™ and Terramodel® software.
• Transfer data to and from third-party survey, design, and GIS software packages (via the office software).
• Available in many languages: English, French, German, Spanish, Portuguese, Swedish, Italian, Chinese, Korean, or Japanese.
**GPS BASE**

**Designed for single site GPS reference station setup**

Ideal for surveyors, engineers, mappers, and geomatics professionals, Trimble® GPSBase reference station software provides the basic functionality for your fixed reference station solution. Designed for the setup of a single-site GPS reference station, this fully automated system operates continuously to provide either RTK or post-processed data to GPS users within a local area. GPSBase is an affordable, flexible, and easy-to-use solution that makes the setup of your fixed reference station quick and easy.

**Scalable Fixed Reference Station**

GPSBase meets the needs of companies and organizations that desire the benefits of a single fixed reference station to serve their local area and be positioned to grow. Trimble provides a portfolio of infrastructure solutions to accommodate single reference stations, networks of reference stations, or VRS™ (Virtual Reference Station) solutions.

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**GPS NET**

**Designed to manage multiple GPS receivers in a network**

The Trimble® GPSNet reference station software package is ideal for a range of precision GPS applications including surveying, engineering, construction and GIS data collection. It is an affordable and easy-to-use solution for the operation of a GPS network using multiple receivers.

GPSNet expands the geographic territory covered by the Trimble GPSBase software and enables a single administrator to operate an unlimited number of receivers in a network. Using GPSNet, you can establish and control a network of fixed reference stations to provide RTK corrections or post-processed data for your area of operation—whether it is a city, county, state or country.

**Scalable Fixed Reference Stations**

GPSNet is available as a starting point for new networks of reference stations or as an upgrade to GPSBase. Trimble provides a portfolio of infrastructure solutions to accommodate single reference stations, networks of reference stations or fully modeled RTK solutions. This scalability allows you to select the best solution for your requirements and expand both geographical coverage area and functionality as required. GPSNet provides the ability to setup a network of reference stations, and it can be upgraded to RTKNet for the setup of a VRS™ (Virtual Reference Station) solution.

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**RTKNET**

**Designed to establish a VRS (Virtual Reference Station) system**

Designed to provide true Network RTK performance, the Trimble® RTKNet software enables high-precision positioning in real time across a geographic region. The RTKNet software package uses real-time data streams from the GPSNet system and generates correction models for high-precision RTK GPS corrections throughout that network. It is ideal for any application requiring reliable, fast, high precision wide area positioning.

RTKNet provides the highest level of RTK performance achievable from a network of base stations. RTKNet provides all of the same features as GPSNet for reference station configuration, data logging, individual base RTK streams, and 24/7 availability. In addition, by creating a systematic error model across the network, RTKNet provides VRS™ (Virtual Reference Station) or SAPOS/FKP broadcast RTK corrections, enabling rover users to achieve fast, high-precision performance over much larger areas than standard RTK. It maximizes the achievable RTK performance from a network of reference stations and eliminates the need to set up a temporary field base station for each individual project—saving you time and money.

**Scalable Network Solutions**

Available stand-alone, or as an upgrade to the Trimble GPSNet software, RTKNet provides all the functionality of GPSNet, plus true Network RTK capability. Trimble provides a range of infrastructure solutions designed to accommodate single reference stations (GPSBase), networks of reference stations (GPSNet), or fully modeled Network RTK solutions (RTKNet). This scalability allows you to select the best solution for your requirements. RTKNet is designed to meet the needs of organizations and companies requiring high-reliability, high accuracy RTK performance in one or more networks spanning large geographic regions. For users who work in smaller areas and require only standard RTK corrections, GPSBase software provides key functionality for setting up and managing a single fixed reference station, and GPSNet supports the management of multiple reference stations in a network.
Designed to create a virtual model for high precision short base line work across wide areas

Trimble’s VRS™ (Virtual Reference Station) system uses the RTK solutions from the Trimble® RTKNet software and provides high-accuracy, real-time kinematic (RTK) GPS positioning for wider areas. The fixed VRS network is available at any time without setting up a base station and provides common control wherever you are in the network.

The VRS system is made up of the latest in GPS hardware, modeling and networking software, plus communications interfacing. Once set up, RTK roving receivers in the field have access to real-time network modeled corrections. In the field, you also have the reassurance of the built-in integrity monitoring system that warns if there are any problems with the data.

The system components:
- Trimble NetRS™ or 5700 CORS GPS receivers
- Zephyr Geodetic™ Antennas
- Trimble GPSNet Software
- Trimble RTKNet Software

Differential GPS Reference Station File Management

Trimble Reference Station (TRS™) base station software records raw GPS data, including pseudo-range, carrier phase, and ephemeris information, as well as providing real-time differential and RTK corrections over a communications link. With the TRS software, one or more users can have simultaneous access to that data for post-processing. At the center of the application is a set of efficient tools for automating the management of both the base station data as well as user access to that data. Users can access TRS files remotely via a network, standard Web browsers, FTP sites, or a bulletin board service (BBS). Real-time differential corrections can be transmitted directly to users’ data radios - an ideal feature for resource and utility mapping, RTK surveying stake-out, hydrographic survey, and pesticide or fertilizer application, among other uses. The software generates reports that show time, date and amount of data collected by users to facilitate billing.

The Trimble Reference Station (TRS™) software brings a new generation of reference and base station technology to GPS reference data providers and users. Innovative features, coupled with intelligent software design, puts a new level of flexibility, data availability and data control at your fingertips.

The Global Reference Station List is available to a worldwide community of GPS users, including surveyors, engineers, GIS professionals, mappers, scientists and educators. The list ensures that users obtain highly accurate GPS reference data. If you want to add your Trimble Reference Station (TRS), Universal Reference Station (URS™) or GPS Pathfinder® Community Base Station (PFCBS™) to this list, complete the Global Reference Station Form to add, edit, or delete a station.

Features
- Support for Trimble land survey and mapping & GIS receivers
- Automated posting of data to networks, web, FTP and BBS
- DAT, SSF and RINEX file format support
- File purging based on age or storage use
- Data collection scheduling using weekly calendar
- Windows 95/98, Windows 2000, ME, NT 4.0 (or later) support
Spectra 3D Office Software

TRIMBLE TOTAL CONTROL

Advanced survey processing package

Trimble Total Control™ software is a powerful, easy-to-use processing package for GPS and conventional survey measurement data. The software provides advanced geodetic control as well as GPS processing and analysis tools, making it ideal for surveyors who do a lot of control or photogrammetry work, as well as the research, education, and scientific communities.

The software’s advanced tools for satellite data analysis provide full access to the raw data in various graphical and numerical ways. The incredibly fast processing engine allows you to easily and effectively work with large networks. And the software allows seamless transfer of data from Trimble devices, including the 3300, 3600 & 5600 total stations, the TSCe™ with either Trimble Survey Controller software or Trimble Survey Pro software and the Trimble DiNi. Additionally the software supports popular third-party raw GPS data formats, allowing for post-processing of data from a variety of different GPS sources.

Features
- GPS baseline processing
- Support of the Russian GLONASS satellite system
- Data processing for static, kinematic and stop-&-go surveys
- Support of all major GPS manufacturers’ raw data
- Automatic download of data from the internet
- Support of conventional total station and digital level data
- Geodetic network adjustment in 1, 2, and 3 dimensions
- Geodetic transformations including residual error distribution
- Geodetic datum and projection support
- Advanced GPS and GLONASS data analysis
- Post processed VRS™ (Virtual Reference Station)
- Manual and automatic quality analysis
- Flexible project reporting
- Optional Motion Tracker module for continuous deformation monitoring - provides instantaneous graphical deformation analysis for dam and landslide monitoring, earthquake prediction, and subsidence analysis.

TERRAMODEL

Terramodel Complete 3D Civil/Survey Office Software

The Trimble Terramodel™ software is a powerful software package for the Surveyor, Civil Engineer and Contractor, who requires a CAD and Design package with integrated support for raw survey data.

Using Terramodel software you can import data collected using the Trimble conventional instrument product line, as well as from the Trimble TSCe™ Controller running the Trimble Survey Controller™ software. The software allows you to do all the necessary COGO calculations, quickly and easily produce roadway designs, generate contours, and calculate volumes. With the integrated 3D Visualizer, you can view your project as an interactive 3D model, which makes the design and quality control process extremely efficient. And with the powerful CAD functions available, you are able to perform survey engineering and CAD tasks all in one package! With the convenience of a number of modules, Terramodel software can be configured to provide the features needed.

Additionally road data can be exported from Terramodel software to the RoadLink module of the Trimble Geomatics Office software using the TRMBROAD macro. Terramodel macros (TML) for these features are included on the Trimble Geomatics Office v1.6 CD. DTM data can be shared using a 3D faces file.

The Terramodel software is ideal for surveyors who require an integrated Survey, CAD, drafting and surface modeling tool.

TRIMBLE GEOMATICS OFFICE

Data processing and management application

Trimble Geomatics Office™ software is the ideal software for integrating real-time kinematic (RTK), post-processed GPS and conventional survey data. Designed for ease of use, high productivity and quality control, the software imports, checks, and processes field data. The data is stored in Microsoft Access database format for easy customized access, reporting, and editing.

Trimble Geomatics Office software provides a seamless link between field collected data and third party design, CAD, and GIS packages. Data can be exported to a wide variety of standard data formats. Road and construction site designs created using other software can be easily imported and transferred to the Trimble Survey Controller™ or Trimble Survey Pro field software for stakeout.

Features
- Fully integrated GPS and conventional data processing
- WAVE baseline processing
- Network adjustment
- Full editing, layer annotation, and plotter support
- Tools for creating GIS feature and attribute lists
- Roadlink and DTMLink
- QA / QC
- HTML Reports
- DXF and ASCII input; DXF; ASCII, DWG, Arcview, MapInfo, Softdesk Fieldbook, and custom format output
- Land XML support
- Comprehensive, editable worldwide coordinate system definitions included
Office Software

SITEVISION OFFICE

Easy to use data management tool for the SiteVision GPS Machine Control System

The easy to use SiteVision Office software is the data management tool for the SiteVision GPS Machine Control system. The software is designed for use by either the site data manager who receives the data from the engineer and then assigns it to the data cards, or the site engineer who wants to view the data and see what is being used. The intuitive software makes the transfer and checking of design data simple and efficient.

Using the SiteVision Office software, earthwork contractors and civil engineers can import designs from other CAD packages, translate them into the SiteVision format, and run validation checks. You can view any profile through the data and check spot heights for inconsistencies, giving you increased confidence in the data. Once the data has been verified, the SiteVision Office software provides the ability for the design to be broken into smaller subsets of information that can be copied to a data card for use on machines installed with SiteVision GPS.

The 3D simulation of the design makes it easy for you to give the data a visual check before you leave the office. As you drive a virtual machine over the design, the SiteVision screens are displayed as they would be in the machine on the job site.

The transfer of data from CAD and design software packages to the SiteVision Office software is easy. A wide range of data formats can be imported into SiteVision Office. Additionally, the SiteVision format can be exported directly from a range of leading design packages.

SiteVision Office is the ideal software for managing your data and ensuring that your operators have the correct information to achieve maximum productivity. SiteVision Office manages the designs, sub-designs and data card content, logs all data transactions, and provides a complete record of what design was used where and when.

* imports data from most major design packages, including Terramodel, Paydirt Sitework, AutoCAD, GEOPAK, and Insite.

PAYDIRT SOFTWARE

Powerful estimating tool for construction earthwork and material quantity calculations

The Trimble Paydirt® Software is a fast, accurate and easy-to-use estimating software for earthwork and material takeoff. Paydirt module SiteWork.

For takeoffs of long, linear projects such as roads, dams, or levees, use the optional Paydirt module RoadWork.

Paydirt benefits contractors in the ways that count:

• Take off earthwork construction projects more quickly and accurately than ever before
• Increase production, protect your profits, and better your bottom line
• Bid for every job that comes your way, but contract only those that will profit you the most.

With Paydirt you can calculate cut and fill, plan your construction project, verify sites, settle quantity disputes, and improve communications between the office and field. Using Paydirt will give your contracting company the competitive edge in today's tough, fast-paced construction market, winning you more bids and making you more money.

Fast

With Paydirt you can complete takeoffs 2-10 times faster than you do now - most takeoffs take less than an hour.

Quickly and easily digitize your plans in Paydirt and let the software calculate the takeoff quantities for you rather than laboriously calculating cut and fill volumes yourself. Now you can spend our valuable time checking work, bidding for jobs, and making more money.

Easy-to-use

Paydirt is designed especially for people like you: construction estimator, not computer experts. If you can read earthwork construction plans, then using Paydirt will be easy. You'll be up and running with Paydirt takeoffs in less than a day.

Accurate

Paydirt not only speeds up the estimating process; it also improves estimation accuracy. The software's unlimited grid spacing lets you check earthwork and material quantities more precisely than ever before. And because Paydirt calculates everything for you.
The Trimble SiteVision® system is a revolutionary earthmoving grade control system that puts design surfaces, grades, and alignments inside the cab. Precise to 30 mm (0.1 ft), the SiteVision system enables operators to perform bulk Earthwork in a stakeless environment. The SiteVision system is a simple, easy-to-use, rugged machine attachment for your whole fleet. It gives you more value and greater return from your machine and operator. Using SiteVision, you can reduce material overages and dramatically improve your project profitability. You and your machine operators will wonder how on earth you moved dirt before SiteVision. Using SiteVision you can win more contracts and make more money!

The system can be used on a range of earthmoving machines, including:

- Dozers
- Motorgraders
- Scrapers
- Excavators
- Supervisor’s System

Using SiteVision, moving dirt is faster, more efficient, and more predictable. SiteVision from Trimble offers the following benefits:

- Daylight readable, color display of site maps and cross-section views
- Interface to hydraulic valves for automatic control of elevation and cross-slope for dozers and motorgraders
- Single and dual GPS antenna options
- Easy-view, “on-grade” and “on-line” lightbars display blade position relative to the site design
- Support for many design packages such as Trimble TerraModel® and Paydirt®, AGTEK SiteWork 98, Quest Earthwork, GEOPAK Civil Engineering Suite and GEOPAK Site, Autodesk Land Development Desktop, Infrasoft MX software, Bentley InRoads, and many others
- Local and fast equipment service and support

Using BladePro 3D contractors complete jobs faster, reduce machine operation costs and reduce material overages, all significantly improving the cost of getting the job done, allowing the contractor to be more competitive.

- Precise fine grade automatic 3D machine control system
- Available for dozers, graders, motor scrapers and carry-all scrapers
- Highly visible readable daylight graphical color display of site maps, profile and cross-section views
- Interface to hydraulic valves for automatic control of elevation and cross-slope of the blade
- Eliminates setting up stakes or stringlines for roads, railways and airport construction
- Easy-view, “on-grade” and “on-line” color displays show blade position relative to the site design
- Local and fast equipment service and support

BladePro 3D is excellent for contractors who want the flexibility to do both site development and precise finished grade work. For bulk Earthwork see Trimble’s SiteVision™ GPS system.
Conventional Machine Control

Operating a dozer is demanding enough in itself, let alone having to manually control the grade and slope.

BLADEPRO

Versatile Motor Grader Control System

With unmatched versatility the BladePro® dual grade control system for use on motor graders or dozers is ideal for a range of grading applications. Using the BladePro system, contractors can increase their machine productivity and accuracy.

The BladePro grade control system can be set up with different positioning sensors, including Slope Sensors, Sonic Tracers, Laser Tracers and Laser receivers.

Maintaining control of slope can be difficult during rough and fine grading operations, and inaccuracies caused during the rough grade phase can cause delays later in the project. By using the Slope only mode the BladePro system allows operators to quickly and easily spread or cut material at the correct cross slope.

When used with a Sonic or Laser Tracer®, in addition to the Slope Control, the BladePro system provides automatic control of both slope and elevation. The Tracer follows a string line, curb, or previous pass to give the operator precise elevation control of the blade.

For improved productivity on building pads the optional R2S laser receiver and EM2 electric mast provide automated elevation control for fine grading. And for applications with very tight tolerances, such as large commercial pads and airport runways, a second laser receiver and mast can be added. With a laser receiver on each end of the blade, motor grader operators can work even faster and maintain very accurate grade.

Using either one or two laser receivers and a rotating 1145 laser transmitter, stringlines are eliminated and grade-checking costs are drastically reduced.

Features

- Adjustable elevation and slope offsets
- Large backlit display
- Dual LED grade indicators - visually show where the cutting edge is in relationship to final grade
- Audible grade alert warns operator if they are off grade for more than 3 seconds
- Push-button Tracer benching - quick, easy approach to re-benching over a new reference
- Local and fast equipment service and support
- Upgradable to BladePro 3D

GCS400

Premium-Featured Dual Automatic Control System

The Trimble® GCS400 system is the first dual grade control dozer system truly designed with the operator’s needs in mind. The GCS400 is a laser-based system that delivers dual control from a single operator interface-simultaneous, automatic control of a dozer’s lift and tilt functions—and more!

The GCS400 can indicate the blade’s relative position to finish grade or automatically control both lift and tilt functions to place the cutting edge at the precise elevation. Menus can be customized to each user’s operating styles and needs. Trimble’s unique Linked Mode minimizes setup error. Using Linked Mode allows an operator to maintain consistent slope across the blade regardless of elevation changes. With only one control point needing to be set up during the benching process, the system then sets the two masts at the same elevation. The end result is dramatically easier operation and more consistent accuracy.

Features

- Innovative Linked Mode is a truly unique element of the system, providing one-button control of setup and elevation changes.
- Ease of Operation The GCS400 is easy to set up and operate. The millimeter resolution of the linear receivers provides unmatched accuracy, ensuring decreased material overruns.
- Increased Efficiency Providing increased accuracy allows operators better material control, ensuring job site cost savings.
- Laser Control systems are proven to reduce rework, operating costs, and material usage to improve bottom line profitability. Rugged
- Durability Meeting the toughest standards in the industry, the GCS400 is designed to operate in the harshest job site conditions, delivering exceptional reliability and up-time.

CALL FOR CURRENT PRICES: 510-670-2800
Flexible, modular laser-based machine control system

The flexible Trimble GCS21 Grade Control System is an advanced laser-based "plug-and-play" machine control solution for the earthmoving industry.

The GCS21 modular design and Controller Area Network (CAN) capability is the foundation of Trimble’s next generation of machine control solutions. The CAN based system allows for easy configuration and expandability to meet changing grade control requirements both today and in the future. The system offers a wide range of configurations from a self-contained, battery operated grade display system to full automatic grade control system.

The GCS21 system consists of the LR21 and can be used as a stand alone machine guidance display, or as a component of the full automatic grade control system. The LR21 is easily and quickly installed on a manual or electric mast on the machine.

As a full automatic system the laser receiver is connected to the machine’s hydraulics using the SCB21 Single Control Box and the SRB21 Single Remote Box. The signals from the laser receiver are used to control a proportional hydraulic valve for blade correction, allowing operators to grade faster and more accurately.

The GCS21 grade control system is ideal for contractors and machine operators who require the flexibility to customize the system to fit the specific needs of each job application.

- Flexible configurable machine control system designed to meet all your grade-control requirements now and in the future
- Controller Area Network (CAN) allows Plug & Play expandability
- Digital linear laser receiver and proportional valve control ensures maximum productivity and accuracy
- No grade checkers required, cutting cost, eliminating communication errors, rework and idle machine time
- Immediate return on investment as your operators get to grade faster with greater accuracy
- Auto Benching of blade elevation reduces downtime and maintains precise material control without leaving the cab of the machine
- 30 - 55% productivity improvement and 25 - 70% accuracy improvement
- Local and fast equipment service and support

Simple/Economical display or grade control system

The laser based system is an easy to use display or grade control system for rough and fine grade work on construction sites, enabling machine operators to get to grade quicker than before. The versatile PA System allows for the system to be configured as an indicate or automatic grade control system and can be easily installed on a wide variety of machines and for different applications.

As an indicate system the three light display-high, on-grade and low-provides the operator with grade information as they manually move the blade up or down to maintain grade. The in cab display allows operators to check grade from within the cab, eliminating the need for grade checkers. As an automatic control system the blade is automatically controlled up and down to maintain grade.

The system is ideal for the general or sub-contractor requiring an economical product flexible enough to be used on many machines on the same site from an elevating scraper to a finishing dozer. And as the system is easily installed, it can be quickly moved between machines on the job site for different applications.

The system increases job site profitability by getting to grade in fewer passes. This reduces on the job time, and allows for labor and equipment to be used more efficiently. And with improved accuracy, material costs are reduced. All this adds up to improved profitability on each job.

- Simple to use
- Accurate
- In-cab grade display
- Manual display systems can be upgraded to automatic control for improved accuracy
- Local and fast equipment service and support

GCS21 Masts

GCS21 Receiver
"Plug and Pave" non-contact controls for Asphalt Pavers and Milling Machines

ScreedPro is a non-contact control system for laying asphalt that plugs directly into the automatic control system on Asphalt Pavers and Milling Machines. The configurable paving system can be set up with one or more of Trimble’s positioning sensors—Tracer Plus, the Slope Module and a Laser Receiver—to meet your needs.

Using ScreedPro with the Tracer Plus ultra Sonic grade controller, the distance to a reference surface is measured using high frequency sound waves. Simply set up the Tracer Plus over a reference surface; curb lip, previous pass or string lines, to control the precise mat thickness. And if the distance changes, the Tracer Plus sends a correction signal to the machine’s control valve.

ScreedPro with Tracer Plus is very easy to install and setup, the non-contact Tracer Plus sensor is a direct replacement of a mechanical grade sensor that simply plugs into the paver as a low cost, expandable replacement for mechanical wands and grade matching ski. When used with the Universal Remote Control, screed operators can use the Tracer Plus control the mat thickness to increments as fine as 1mm, or 0.01 foot, from anywhere on the screed, keeping personnel out of traffic and danger. Combining the Tracer Plus with the Slope Module, provides automatic slope control as well as mat thickness.

For resurfacing airport runways or applications with long continuous grades, the addition of the R2S-2 Laser Receiver, EM2 electric mast and the 1145 dual slope laser transmitter provides the greatest accuracy for day or night time operations.

From subdivisions to runways, ScreedPro is an extremely flexible paving control system, offering the option to use the right sensor for the application—the Tracer Plus sonic grade controller, the Slope Module or the Laser Receiver. Asphalt Pavers and Milling Machines can be set up with one or more sensor for precise control of the mat thickness, improved productivity and reduced material overages.

- reference bale compensates for rapid temperature changes to ensure consistent material depth.
- hand held universal remote interface provides the flexibility to move the control where you need them while making material thickness changes or just setup.
- indicate Mode shows the deviation to grade while in automatic for fine tuning the system
- local and fast equipment service and support
- easily transferable from machine to machine

The modular Trimble ScreedPro® System is the ideal choice for improved productivity and accuracy when laying road and runway asphalt.
Economical, Stand-alone Laser based Machine Control System

The Trimble Grade Control Receiver (GCR) is a cost-effective laser-based machine control system that can significantly improve the productivity and accuracy of grading equipment by as much as 50% over conventional methods. Used primarily for finishing grade on sites and for foundations, the GCR family of laser receivers is easy to learn. With minimal training, even inexperienced operators are able to get up to speed in no time at all.

GCR is ideal for a variety of machines, including dozers, drag boxes, scrapers, trenchers, skid steer attachments and small motor graders. The system consists of the GCR laser receiver mounted on a rigid mast that is mounted on the machine’s blade and a laser transmitter set up on the job site. And with the addition of a hydraulic control valve to the machine, the GCR valve control capability enables it to provide complete proportional blade control relative to the laser reference.

The built-in grade display is clear and bright, making the GCR laser receiver easy to see in all lighting conditions. And with a stand-alone design the receiver can be used as both a visible display system as well as a control system. This dual capability allows for rough grade and finished grade work. The system consists of the GCR laser receiver mounted on a rigid mast that is mounted on the machine’s blade and a laser transmitter set up on the job site. And with the addition of a hydraulic control valve to the machine, the GCR valve control capability enables it to provide complete proportional blade control relative to the laser reference.

The built-in grade display is clear and bright, making the GCR laser receiver easy to see in all lighting conditions. And with a stand-alone design the receiver can be used as both a visible display system as well as a control system. This dual capability allows for rough grade and finished grade work. The unique cab SPEED control knob allows for the hydraulic system to be adjusted to match the ground speed and material type without leaving the cab or slowing down.

The GCR is a self-contained design, with no separate control box, making the system extremely portable. The system can be moved between machines, allowing for the effective use of all machines in each phase of the job.

The GCR is the simplest way to put all the advantages of automated machine control to work on earthmoving jobs. The system is easily installed and eliminates grade-checkers, communication errors, re-work and idle machine time. Using the GCR contractors can lower labor and material costs, and that generates higher profits-realizing a return on their investment right away.

- Remote Blade speed control
- Super bright LED grade display
- Built in valve drivers
- Built in valve calibration
- Simple operation
- Ocal and fast equipment service and support

Multipurpose Machine Mounted Laser Receiver

The LR21 laser receiver is ideal for use as both a fully self-contained battery operated display system as well as a component in the GCS21 automatic grade control system. The versatile LR21 can be mounted on a rigid manual or electrical mast on motor graders, excavators, dozers, or elevating and drag scrapers and is suitable for excavation, rough grading, fine grading, milling and paving on airport, highway, landfill, residential and industrial development job sites.

Featuring adjustable On-Grade Position and ±1 mm (0.003 foot) linear accuracy the LR21 allows for the best performance regardless of the application. The machine operator has the option to select between three On-Grade deadbands and three selectable Grade Display modes. The selectable on-grade deadband allows operators to match their accuracy levels to the job tolerances. Additionally using the LR21, operators can position the on-grade location in the center of the receiver or offset the location for more information when cutting down to grade in excavating mode.

For accurate detection and display of the laser reference relative to the machine’s cutting edge, the LR21 laser receiver has a "Super Bright" LED, dual-color display-green for on-grade, and red for cuts and fills. And to ensure ideal visibility at all times, the LED automatically adjusts to day or night ambient lighting. The display allows for a wide viewing angle range allows operator to see grade without having to look directly to the display. To minimize down time, the lost beam indication correction arrow displays the direction to move the receiver to find the beam. The versatile LR21 is the ideal option for contractors and machine operators who need a flexible laser receiver for a range of display and grade control work. Using the LR21, contractors can improve their productivity and accuracy as well as reduce labor and material costs all adding up to increased profits.

- Use as a superior display receiver or as a component of the GCS21 automatic grade control system
- Operates using the machine voltage or its own 1-hour quick charge NiCad battery pack
- 360° digital linear laser receiver that uses patented pin diode technology to precisely measure the position of a rotating laser
- Adjustable On-Grade deadband
- Selectable On-Grade Location
- Lost Beam Indication
- Super bright, dual color "Green On-Grade", Red for cuts and fills automatically adjusts to day or night ambient lighting conditions
- Local and fast equipment service and support
SPECTRA 3D
Credit Application

Please complete, sign and fax to Spectra 3D at 510-670-2858

Business Name ___________________________ Phone ___________________________
Address ___________________________ Fax ___________________________
City ___________________________
State ___________________________
Zip ___________________________

Sales Tax Exempt (attach form)

Check One: Corporation Partnership Individual (If Branch, list Name and address of parent company)

Name(s) of Officer(s) Address Phone Fax

Rent or Own: Landlord's Address Phone

Federal Employee # Bank

Bank Address Phone

Type of Business # of years at current address

Trade references where charge accounts are maintained (loan or leasing companies, banks, credit cards or department store charge accounts are not acceptable credit references)

Company Name Address Phone Fax
1. ___________________________
2. ___________________________
3. ___________________________

Names of authorized buyers:

Is a purchase order required?

I, (We) request an open account in the amount of $ _________ per month with your terms of Net 15. It is understood that title to all property remains with the seller until fully paid. I (We) understand a collection agency’s and/or attorney’s fee will be payable to Spectra 3D if past due invoices are processed for collection. A 1-1/2% interest charge per month will be payable to Spectra 3D on the amount of the past due balances. Spectra 3D’s Net 15 terms are based on shipment or pick up.

Authorized Signature ___________________________ Title ___________________________ Date ___________________________
**SPECTRA 3D**

**Order Form**

*Purchase Order #: ________________________________*

**Sold to:**
Company __________________________________________ Phone ________________________________
Address __________________________________________ Fax ________________________________
City __________________________________________ State __________________________________________ Zip ________________

**Ship to:**
Company __________________________________________ Phone ________________________________
Shipping Address __________________________________________
City __________________________________________ State __________________________________________ Zip ________________

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We hereby agree to purchase/rent the items indicated herein in accordance with the terms stated about. The calibration of this unit is guaranteed to be within product specifications when the unit leaves the authorized service center. Neither Spectra 3D nor its authorized service center will assume liability incurred during the use of this unit should it lose calibration.

*Equipment Total*

*Rental Fee (Billable in Advance)*

Circle one: Day Week Month

*Freight*

*Tax*

(Order Total)

Authorized Signature ___________________________ Title ___________________________ Date ___________________________

Printed Name ___________________________
DIRECTIONS
Spectra 3D located off Highway 92, just east of the San Mateo Bridge.

East Bay
- Merge onto CA-92 W toward SAN MATEO BR.
- Take the Clawiter Rd exit toward EDEN LANDING RD.
- Turn LEFT onto CLAWITER.
- Stay straight to go onto EDEN LANDING RD.
- Turn LEFT onto INVESTMENT BLVD.

San Francisco / Peninsula
- Merge onto CA-92 E toward HAYWARD.
- Take the CLAWITER RD / EDEN LANDING RD exit.
- Turn RIGHT onto EDEN LANDING RD.
- Turn LEFT onto INVESTMENT BLVD.

SPECTRA 3D
510-670-2858
3566 Investment Blvd
Hayward, CA 94545