

Precision Grade Laser Transmitter with Long-range Remote Control



## GL700 GRADE LASERS SERIES

# SPECTRA PRECISION LASER GL700 SERIES

## NEW CHALLENGES DEMAND NEW SOLUTIONS.

The fiercely competitive, 21st century construction environment has created a whole new set of business challenges. With increasing accuracy requirements and faster completion times, your bids need to be razor-sharp just to compete.

As the leader in construction positioning technology, Trimble continually provides innovative solutions to help you gain the edge and succeed in this environment. Among these are new solutions to help you precisely control difficult tasks like long-range, high-accuracy elevation control and fine grading for major construction projects.



Road Construction



Trenching



Airport Construction



Concrete Construction



**NOT JUST ANOTHER LASER TRANSMITTER...**

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

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. When used with Trimble GCS300, GCS600, or GCS900 Grade Control Systems, the operator can control which allows an operator to control lift and tilt automatically and simultaneously for improved speed and controlled accuracy.

With the GL700's 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 machine cab.

And 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.



**LONG-RANGE RADIO REMOTE –**

With 2-way communication between the transmitter and the remote, you can now change grade on the fly... even from the cab... without approaching the transmitter!

No more long walks up grade. By remotely changing and reading grade information, you can speed setup and reduce costly communication errors.



*3D Grade Control with Laser Augmentation*



*Site Preparation*



*Landfill*



*General Construction*

# THE MOST ADVANCED GRADE LASERS. EVER.

Trimble's innovative technology ensures higher accuracy than ever before over a variety of machine control and general construction applications. Plus, unique features help reduce beam drift errors and speed up setup and grade changing to optimize worker and machine productivity.

The Spectra Precision Laser GL700 Series from Trimble has four 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 set up and use.



## THE GL700 SERIES CAN BE USED WITH TRIMBLE AND SPECTRA PRECISION LASER RECEIVERS.

For example, the Spectra Precision Laser HL700 and CR600 receivers, and the Trimble LR410 Machine receiver are part of the Trimble Grade Control System family.



### GL710 SINGLE GRADE

An easy-to-learn, easy-to-use one-person grade laser, economical and accurate up to a 900 m (3,000 ft) diameter. 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 900 m (3,000 ft) diameter. Ideal for general construction and machine control grade applications.



### GL722 DUAL GRADE

With Long-range Radio Remote and 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.

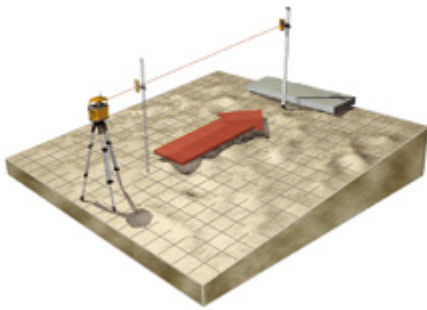


### GL742 STEEP GRADE LASER (TO 110%)

The GL742 includes all the features of the GL722 – including full Radio Remote – with the increased capability of achieving a steep grade range of 110%. Ideal for all general construction and machine control applications, as well as steep slope applications such as highway embankments, seawalls and landfills.

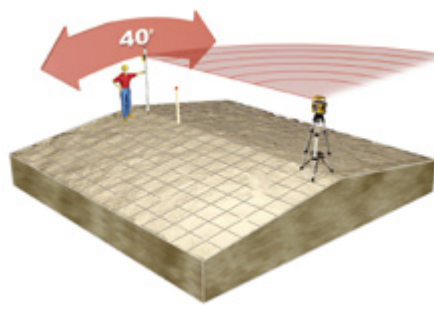


MODEL	GL710	GL720	GL 722	GL742
Range (Diameter)	900 m (3,000 ft)	900 m (3,000 ft)	900 m (3,000 ft)	900 m (3,000 ft)
Radio Remote	No	No	Yes	Yes
Auto Axis Alignment	No	No	Yes	Yes
Grade Match Mode	No	No	Yes	Yes
PlaneLok	No	No	Yes	Yes
Axis Grade Range X	NA	-10 to +10%	-10 to +10%	-5 to +5%
Axis Grade Y	-0.5 to +25%	-0.5 to +25%	-0.5 to +25%	-0.5 to 110%
Precision Compensation	No	No	No	No



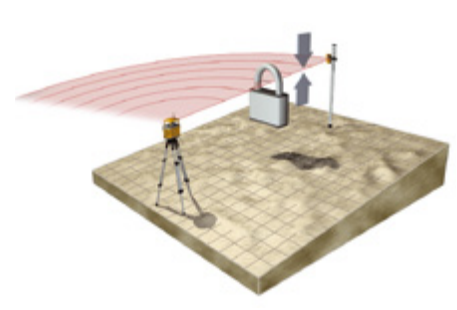
### GRADE MATCH MODE

Grade Match Mode allows you to match the laser to an existing slope. Simply set your receiver at the same height as the transmitter then after going to your remote point, press a button on the wireless remote to enable the transmitter to automatically match and display the grade...without returning to the laser transmitter.



### AUTOMATIC AXIS ALIGNMENT

Up to 150 meters (500 feet) from the Transmitter. Allows simple alignment of either side of any grade axis to the desired remote point. This simple, one-person operation lets you roughly align the transmitter to within 40 degrees of the remote point. You can then go to your remote point and, with a simple button press on the wireless remote, the axis is automatically aligned. The remote provides immediate confirmation of the alignment. Automatic Axis Alignment simplifies setup and ensures repeatable accuracy.



### PLANELOK

For applications that require maximum stability and accuracy, PlaneLok virtually eliminates beam drift by locking the laser beam to a fixed elevation. Simply set your handheld receiver at the desired elevation, select PlaneLok mode on the remote control and the laser beam will remain exactly at that elevation all day long, regardless of wind or temperature changes. This increased stability and accuracy means less rework, better material control... and a better bottom line.

# BUILT FOR THE JOBSITE



## ACTIVE TEMPERATURE COMPENSATION

Accurate, stable results regardless of temperature changes

## LONG-RANGE WIRELESS LINK

Unaffected by direction or sunlight

## STEEPEST SLOPE RANGE

Up to 110% with the GL742

## PROTECTIVE LENS HOOD

Ensures laser performance in inclement weather

## MANUAL ALIGNMENT SIGHTS

Allows fast, easy setup

## HIGH-POWERED VISIBLE BEAM

For fast setup and excellent performance in high dust conditions.

## SELECTABLE ROTATION SPEEDS

300, 600, and 900 rpm.

## INTUITIVE, SIMPLE CONTROLS

Makes the GL700 series easy to use and learn

## MANUAL VERTICAL CAPABILITY

With the use of the Long-range Remote, vertical applications such as vineyards become simple to setup

## FIELD CALIBRATION

Makes it simple to check and adjust the calibration in the field either at the transmitter or via the remote

## LONG BATTERY LIFE

Flexible power options, battery life indicator, and a wireless operated sleep mode that saves battery during breaks

## FULLY SEALED, RUGGED ALUMINUM HOUSING

With weather-resistant control panel, allows you to work in all weather and work conditions. Built-in non-slip carrying handle

## GRADE BUMP

Allows you to simply raise or lower the grade remotely

## GRADE REVERSE

Mirrors the grade setting with the push of a button

## AUTOMATIC SELF-LEVELING

...over the entire grade range, simplifies setup and ensures repeatable accuracy (not applicable to GL742 steep grade model)

## SPECTRA PRECISION LASERS

Proven performance and quality... supported by the industry's leading service centers

## AUTOMATIC OFF GRADE SENSOR

Prevents incorrect grading ... and wasted man and machine hours

## LARGE ALPHA/NUMERIC DISPLAYS

Transmitter display is visible from ground even on 3 m (10 ft) tripods... no ladder needed



SUPPORTED BY THE INDUSTRY'S LEADING SERVICE. READY TO GO. ANYWHERE.



### STANDARD WITH ALL MODELS

Each GL700 series grade laser comes complete with Laser, Receiver, Charger, NiMH Rechargeable Batteries, Power Cord, Receiver Manual, Laser Card, Laser Manual, and Rugged Waterproof Carrying Case.

### AVAILABLE OPTIONS

Available with HL700 or CR600 Receivers  
 Rod Mount for Remote Control  
 M100 Mount converts all models to a 3 1/2" x 8 Mounting Thread or Quick Disconnect

### GL742

Standard Package plus 2-way Remote, Rod Mount and Steep Slope Mount

### GL722

Standard Package plus 2-way Remote and Rod Mount



### FLEXIBLE POWER OPTIONS

NiMH rechargeable for extended work periods (6 D Cells)

Alkaline backup, just in case you forget to recharge (6 D Cells)

External 12VDC operation for long-term applications like mining or land leveling

External power cable standard

Battery status is indicated on GL700 Series Lasers so you know exactly how much longer you can work

## GL700 SERIES SPECIFICATIONS

### GRADE RANGE ACCURACY

Axis Grade Range X  
 -10 to +10% (GL710, GL720, GL722)  
 -5 to +5% (GL742)  
 Axis Grade Range Y  
 -0.500 to +110% (GL742)  
 -0.500 to +25% (GL720, GL722)  
 Self-Leveling  
 GL710 self levels to 10%  
 GL720, GL722, GL742 self level to 25%  
 Grade Resolution 0.001%  
 Servo Deadband Accuracy  
 4.6 arc seconds (GL710, GL720, GL722, GL742)

### LASER CLASSIFICATION

CDRH II (IECI)

### RANGE/RADIUS

Laser – 450 m (1500 ft) with Spectra Precision Lasers machine-mounted receivers

### MOUNTING THREADS

5/8" x 11" on all models  
 3 1/2" X 8" Mounting Adapter optional

### WATERPROOF & HOUSING

Waterproof Aluminum Housing

### DIMENSIONS

Weight	8.5 kg (18.8 lbs)	
Size	Height	29.8 cm (11.75 in)
	Width	25.4 cm (10.0 in)
	Depth	19.7 cm (7.75 in)

## REMOTE CONTROL SPECIFICATIONS

### RANGE/RADIUS

225 m (750 ft) General Operation  
 150 m (500 ft) Automatic Alignment

### DIMENSIONS

Weight	0.4 kg (0.86 lbs)	
Size	Height	19 cm (7.5 in)
	Width	10.8 cm (4.25 in)
	Depth	4.4 cm (1.75 in)

### GENERAL

Radio Type  
 2.4 GHz spread spectrum, encrypted to each laser transmitter to allow multiple systems on each job.  
 Battery Life: 2.5 weeks  
 Optical Axis Fine Adjust  
 Automatic Alignment Range ±40° Max



## Plan

software that optimizes transportation routes to minimize project time and costs.

## Design

data preparation and management for the construction jobsite life cycle.

## Grade

control that is faster, more accurate and minimizes rework.

## Check

measurement, stakeout, quality control and progress monitoring on the job site.

## Construct

with precise positioning for faster completion with less re-work.

## Pave

new roads or re-profile existing roads for greater smoothness using less material.

Only one company can optimize your productivity with the broadest, deepest and most advanced set of tools for integrating measurement, data management, machine operations and asset management throughout the construction life cycle. Productivity is... Trimble.

Trimble: The Construction Technology Standard



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