Precision Grade Laser Transmitter with Long-range Remote Control

GL700 GRADE LASERS 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.
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.
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.
**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.

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<table>
<thead>
<tr>
<th>MODEL</th>
<th>GL710</th>
<th>GL720</th>
<th>GL 722</th>
<th>GL742</th>
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<tbody>
<tr>
<td>Range (Diameter)</td>
<td>900 m (3,000 ft)</td>
<td>900 m (3,000 ft)</td>
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<td>Grade Match Mode</td>
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<tr>
<td>PlaneLok</td>
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<tr>
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<td>Axis Grade Y</td>
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<td>-0.5 to +25%</td>
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<td>Precision Compensation</td>
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</table>
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

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 +10% (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 (IEC)

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 (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