Laser Display System Benefits

- Allows operator to check grade from the cab; increases productivity and safety and reduces labor
- Reduces rework because material is moved only one time
- Increases overall operator and machine efficiency, saving fuel and time
- Can easily and quickly be moved from one machine to another
- Wireless remote capability
- Works with your existing rotating laser - no longer need a second person with a rod mounted laser receiver

Getting to Grade Faster Increases Operator and Machine Productivity

Spectra Precision® LR Display Systems let you spend less time walking the job site ... and more time in the cab being productive. The laser display receiver guides the operator to the desired elevation or depth without a grade checker. Your accuracy will improve and your profits will increase. The operator optimizes machine time, effectiveness, efficiency and increases safety.

You can use these rugged, highly flexible display systems on a wide range of machines. The receivers are self-contained, portable and easily moved from machine to machine for greater operator and machine efficiency.

A wireless remote display and quick mounting accessories add to the versatility of the receivers.

Used on

- Backhoes
- Excavators
- Skid Steer Attachments
- Box Blades
- Dozers
- Trenchers
Versatile, 360-Degree Reception
Works with all types of rotating lasers and on all types of machinery for fast, no-hassle setup.

Multiple Accuracy Choices
Offers maximum flexibility to meet jobsite requirements, from rough grading to final finishing.

Wireless Remote Capability
Provides in-cab display of elevation and audible signals.

Adjustable, Ultra-bright LED with Green On-Grade Display
Provides user selectable, easy-to-see display to match ambient lighting conditions.

Out-of-Laser Beam Indication
Selectable on/off indicator directs which way to move and get back in the beam.

Two-Year Warranty
Reliability you can count on.

Power Options
Choose alkaline batteries, nickel metal hydride rechargeable batteries, or a power cord that connects directly to the machine power.

Rugged & Waterproof
Durable polycarbonate and aluminum die cast housings withstand all weather and construction site conditions. Internal isolating shock mounts protect the electronics.

RD20 Wireless Remote Display
Wireless remote mounts in the cab and displays grade information to the operator. Helps keep focus on the work and not on the receiver for higher productivity. Works with LR30W, LR50W & LR60W.
LR50 for Excavating and Grading

Features built-in blade tilt and excavator boom plumb indicator

- Built-in blade tilt indicator helps the operator keep the blade level for increased accuracy and productivity.
- Center On-grade provides an equal amount of grade information above and below on-grade. Use on dozers, graders, scrapers and box blades.
- Built-in plumb indicator for fast, accurate grade checking in excavation applications.
- Offsets on-grade gives you more range above grade using the entire receiver for more productive excavation.
- LR50W links wirelessly to the RD20 in-cab display.

MM-1 Magnetic Mount

The MM-1 quickly attaches to the dipper arms of excavators or backhoes. Strong dual magnet packs will not slip on the machine and are adjustable for quick installation and setup.

DM-20 Dozer Mast

The DM-20 is an easy-to-install rigid mast for grading machines. No welding is required and no drilling/tapping is required for Trimble Ready™ machines.

LR60 for High Speed Excavating

Features Angle Compensation for Excavating (ACE) for accurate elevation readings without being plumb

- Patented Angle Compensation for Excavators automatically calculates and corrects the grade display for the angle of the dipper arm.
- Check grade with the dipper arm extended or retracted up to 30 degrees.
- Built-in plumb indicator for fast, accurate grade checking.
- Large vertical reception height for use with bigger excavators.
- Center On-grade provides an equal amount of grade information above and below on-grade. Use on dozers, graders, scrapers and box blades.
- LR60W links wirelessly to RD20 in-cab display.

Specifications

<table>
<thead>
<tr>
<th></th>
<th>LR50 / LR50W</th>
<th>LR60 / LR60W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Display Channels</td>
<td>5-Channel Display in excavating mode</td>
<td>9-Channel Display</td>
</tr>
<tr>
<td>Accuracy: Center on grade mode (grading)</td>
<td>Fine: 5 mm (0.20 in) Standard: 10 mm (0.40 in) Wide: 20 mm (0.80 in)</td>
<td>Setup: 5 mm (0.20 in) Standard: 10 mm (0.40 in) Wide: 40 mm (1.60 in)</td>
</tr>
<tr>
<td>Accuracy: offset on grade mode (excavating)</td>
<td>Fine: 12 mm (0.50 in) Standard: 25 mm (1.0 in) Wide: 50 mm (2.0 in)</td>
<td>NA</td>
</tr>
<tr>
<td>ACE—Angle Compensation Mode</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Blade-Tilt Accuracy</td>
<td>± 0.5°, ± 1.5°, ± 2.5°</td>
<td>NA</td>
</tr>
<tr>
<td>Plumb-Swing Accuracy</td>
<td>± 0.5°, ± 1.5°, ± 2.5°</td>
<td>NA</td>
</tr>
<tr>
<td>Vertical Reception</td>
<td>203 mm (8 in)</td>
<td>171 mm (6.75 in)</td>
</tr>
<tr>
<td>LED Battery Life</td>
<td>36 hrs</td>
<td>50 / 75 hrs 30 / 45 hrs 40 / 50 hrs 20 / 30 hrs</td>
</tr>
<tr>
<td>Wireless with remote on Ni-MH Bright/Dim</td>
<td>36 hrs</td>
<td>50 / 75 hrs 30 / 45 hrs 40 / 50 hrs 20 / 30 hrs</td>
</tr>
<tr>
<td>Receiver Warranty</td>
<td>2 Years</td>
<td>2 Years</td>
</tr>
</tbody>
</table>
# Rugged Laser Transmitters Built for the Jobsite

## LL500 Laser Level
- Long range accuracy and field proven reliability
- The workhorse of the industry for decades

### Applications
- Level work
- General elevation control
- General construction
- Cut and fill

## LL400 Laser Level
- Fast setup, automatic electronic self leveling and long range
- Rugged design - Warranted to withstand 1 m (3 ft) drop

### Applications
- Level and manual slope work
- General elevation control
- General construction
- Cut and fill

## GL412/GL422 Grade Lasers
- Powerful, easy-to-use single or dual slope grade lasers with radio remote
- Three lasers in one - Level, grade, and vertical alignment

### Applications
- Level and automatic slope (grade) work
- Site preparation
- General construction

## GL612/GL622 Grade Lasers
- Accurate horizontal, vertical, single or dual slope grade lasers with radio remote
- Automatic Grade Match and Planelok functions, for precision concrete laser screed applications

### Applications
- Leveling concrete forms
- Grade/elevation control
- Remote elevation monitoring (HL750 receivers)

## UL633 Universal Laser
- Versatile grade laser with total control in X, Y and Z axes
- Automatic Planelok functions for precision concrete laser screed applications

### Applications
- Leveling concrete forms
- Grade/elevation control
- Machine control
- Pipe laying and layout

## Specifications

<table>
<thead>
<tr>
<th>Specifications</th>
<th>LL500</th>
<th>LL400</th>
<th>GL412/GL422</th>
<th>GL612/GL622</th>
<th>UL633</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level Accuracy</td>
<td>1.5 mm @ 30 m (1/16&quot; @ 100 ft)</td>
<td>1.5 mm @ 30 m (1/16&quot; @ 100 ft)</td>
<td>1.5 mm @ 30 m (1/16&quot; @ 100 ft)</td>
<td>1.5 mm @ 30 m (1/16&quot; @ 100 ft)</td>
<td>1.5 mm @ 30 m (1/16&quot; @ 100 ft)</td>
</tr>
<tr>
<td>Grade Range</td>
<td>N/A</td>
<td>N/A</td>
<td>-10 to +15% Dual Axis</td>
<td>-25 to +25% Dual Axes</td>
<td>-25 to +25% Dual Axes</td>
</tr>
<tr>
<td>Operating Diameter</td>
<td>500 m (1600 ft)</td>
<td>800 m (2600 ft)</td>
<td>600 m (2000 ft) (GL412)</td>
<td>800 m (2600 ft) (GL422)</td>
<td>800 m (2600 ft)</td>
</tr>
<tr>
<td>Temperature Compensation</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Laser Type / Classification</td>
<td>3 mW 670 nm, Class 2</td>
<td>3 mW 650 nm, Class 2</td>
<td>3 mW 660 nm, Class 2 (GL412) &lt;5 mW 650 nm, Class 3A/3R (GL422)</td>
<td>3 mW 650 nm, Class 2</td>
<td>&lt;5 mW 650 nm, Class 3A/3R</td>
</tr>
<tr>
<td>Rotation Speed</td>
<td>600 rpm</td>
<td>600 rpm</td>
<td>300, 600 rpm</td>
<td>300, 600 rpm</td>
<td>0 - 900 rpm</td>
</tr>
<tr>
<td>Drop Height on Concrete</td>
<td>N/A</td>
<td>1 m (3 ft)</td>
<td>1 m (3 ft)</td>
<td>1 m (3 ft)</td>
<td>1 m (3 ft)</td>
</tr>
<tr>
<td>Laser Warranty</td>
<td>5 Years</td>
<td>5 Years</td>
<td>5 Years</td>
<td>5 Years</td>
<td>5 Years</td>
</tr>
<tr>
<td>Standard Receiver</td>
<td>Choice of HL700 Lasermeter or CR600 receiver</td>
<td>Choice of HL700 Lasermeter or CR600 receiver</td>
<td>Choice of HL700 Lasermeter or CR600 receiver</td>
<td>Choice of HL700 Lasermeter or CR600 receiver</td>
<td>HL750 Lasermeter</td>
</tr>
<tr>
<td>Standard Receiver Warranty</td>
<td>3 Year “No Excuses”</td>
<td>3 Year “No Excuses”</td>
<td>3 Year “No Excuses”</td>
<td>3 Year “No Excuses”</td>
<td>3 Year “No Excuses”</td>
</tr>
<tr>
<td>Wireless Remote Receiver Elevation Monitoring (HL750 receiver)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-20° to +50°C (-4° to +122°F)</td>
<td>-20° to +50°C (-4° to +122°F)</td>
<td>-20° to +50°C (-4° to +122°F)</td>
<td>-20° to +50°C (-4° to +122°F)</td>
<td>-20° to +50°C (-4° to +122°F)</td>
</tr>
<tr>
<td>Remote Control</td>
<td>N/A</td>
<td>Optional RC601</td>
<td>RC402  Full 2-way communication</td>
<td>RC402  Full 2-way communication</td>
<td>RC603  Full 2-way communication</td>
</tr>
<tr>
<td>Remote Operating Range</td>
<td>N/A</td>
<td>200 m (650 ft) x side, 50 m (160 ft) other sides</td>
<td>100 m (330 ft) radius</td>
<td>100 m (330 ft) radius</td>
<td>100 m (330 ft) radius</td>
</tr>
</tbody>
</table>

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