

Automatic Machine Control System Benefits

- Increase machine productivity and accuracy
- Simplify your grading and increase operator efficiencies
- Reduce labor and wasted downtime waiting for grade checks
- Save material with improved accuracy

Automated Machine Control Systems



Laser Referenced Systems for Automatic Blade Control

Spectra Precision® Laser Automatic Machine Control Systems take grade control to the next level. These systems are designed with the cost-conscious owner / operator and contractor in mind, delivering high-priced performance in affordable packaging. Automatically controlling the blade improves grading operations with increased accuracy and higher profits. The operator can optimize machine time, effectiveness, and efficiency.

Extremely rugged and highly flexible, machine control systems can be used on a wide range of machines. For even greater productivity, dozers may be upgraded from lift to lift and tilt control.

Used on:

- Skid Steer Blade Attachments
- Levelers
- Kilvers
- Box Blades
- Dozers





Spectra Precision Laser Control Boxes for Affordable Automatic Blade Control

CB30 Dual Control Box

Features and Benefits

- Simultaneous, automatic control of lift and tilt of blade or attachment for less passes required to grade saving time, material, and fuel
- Highly featured to fit multiple machine and application types and priced for quick return on investment
- Super-bright LEDs provide easy-to-see elevation indication in any light for setup and operation

Used on compact machines, including

- Skid-steer loaders with attachments such as 6-way dozer blade, grader blade, box blade, loader bucket for automatic control requiring lift or lift and tilt control
- Small dozer with lift or lift and tilt automatic control
- Small graders for lift and tilt control

Applications

- Building pads
- Sports fields
- House pads



Tough, Affordable Spectra Precision Laser Grade Display Receivers



LR20 for Compact Machines

Can be easily moved from machine to machine with features and setup options for multiple applications



MC50 for Construction Grade Control

Built-in LED display provides blade location relative to grade, as well as high, low, and lost beam indications



LR30 for General Excavating

Use on dozers, backhoes, excavators and trenchers. Used with the CB20 Single Control Box



LR50 for Excavating and Grading

Features built-in blade tilt and excavator boom plumb indicator. Used with the CB25 and CB30 Control Boxes



LR60 for Excavating

Features built-in excavator boom plumb and angle compensation indicator. Used with CB25 and CB30



CB25 Single Control Box



Features and Benefits

- Automatic lift control lets you get to grade faster with less rework and more material savings
- Proportional valve control provides smooth blade response through quick corrections making more consistent and accurate finish grade
- Super-bright grade LEDs and easy-to-see display provide highly visible elevation indication and system status in any light for setup and operation
- On/off automatic/manual switches are easy to set up and use

Used on small and large dozers, and compact machines

- Skid-steer loaders with attachments such as dozer blade, grade blade, box blade, loader bucket for automatic control requiring lift control
- Small dozer with lift and automatic lift control using PT proportional current, proportional voltage

CB20 Single Control Box



Features and Benefits

- Automatic lift control lets you get to grade faster with less rework and more material savings
- Proportional Time (PT) valve control offers economical automatic control
- Super-bright grade LEDs and easy-to-see display provide highly visible elevation indication and system status in any light for setup and operation
- On/off automatic/manual switches are easy to set up and use

Used on compact machines

- Skid-steer loaders with attachments such as dozer blade, grade blade, box blade, loader bucket for automatic control requiring lift control
- Small dozer for lift and automatic lift control using PT output

Spectra Precision Laser Receiver Mast

Manually adjusted telescopic mast mounts to the blade for receiver setup and adjustment.



| Specifications | CB30 | CB25 | CB20 |
|---------------------|--|--|------------------------|
| Single Auto Control | Yes | Yes | Yes |
| Dual Auto Control | Yes | No | No |
| Slope Control | Yes | No | No |
| Elevation Coupling | Yes | No | No |
| On-grade LEDs | Green | Green | Green |
| High/Low LEDs | Red | Red | Red |
| Valve Compatibility | Proportional Time (On/Off), Proportional Current, and Proportional Voltage | Proportional Time (On/Off), Proportional Current, and Proportional Voltage | Proportional Time only |



Spectra Precision Laser Rugged Grade Laser Transmitters Built for the Job Site



GL412 / GL422 Single and Dual Grade Lasers

for smaller commercial and residential site prep and general construction

Applications

- Site preparation
- General construction
- Pipe-laying



GL512 / GL522 Single and Dual Grade Lasers

are rugged, cost-effective, automatic self-leveling lasers for grade, and vertical alignment

Applications

- Cut and fill
- Excavation
- Elevation and slope control
- Grade/elevation control



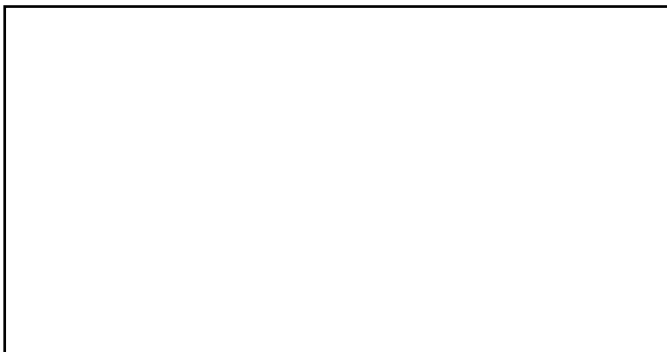
GL710 / GL720 Single and Dual Grade Lasers

with longer range and powerful features for general construction and larger commercial sites

Applications

- Excavating
- Trenching
- Pipe laying
- General construction

| Specifications | GL412 | GL422 | GL512 | GL522 | GL710 | GL720 |
|--|---|---------------------------|--|--------------------------|--|---|
| Level Accuracy | 10 arc seconds 1.5 mm @ 30 m (1/16" @ 100 ft) | | 10 arc seconds 1.5 mm @ 30 m (1/16" @ 100ft) | | 8 arc seconds 1.2 mm @ 30 m (<1/16" @ 100 ft) | |
| Grade Range | -10 to +15% Single Axis | -10 to +15% Dual Axes | -10 to + 15% Single Axis | -10 to + 15% Dual Axes | -10 to +10% Single Axis | -10 to +10% (X Axis) -0.500 to +25% (Y Axis) |
| Grade Resolution | 0.001% up to 9.999% | 0.01% at higher grades | 0.001% up to 9.999% | 0.01% at higher grades | 0.001% up to 9.999% | 0.01% at higher grades |
| Operating Diameter | 600 m / 1950 ft | 800 m / 2600 ft | 600 m / 2000 ft | 800 m / 2600 ft | 900 m / 3000 ft | |
| Laser Type / Classification | 3 mW 650 nm, Class 2 | <5 mW 635 nm, Class 3A/3R | 3mW 650 nm, Class 2 | <5mW 635 nm, Class 3A/3R | CDRH II (IECI) | |
| Rotation Speed | 300, 600 rpm | | 0 (GL522), 300, 600 RPM selectable | | 300, 600, 900 rpm | |
| Battery Life | 55 hrs | | 55 hrs | | 30 hrs NiMH | |
| Mounting Thread | 5/8 x 11 | | 5/8" x 11 Horizontal and Vertical | | 5/8 x 11 | |
| Operating Temperature | -20° to +50°C (-4° to +122°F) | | -20° to +50°C (-4° to 122°F) | | -20° to +50°C (-4° to +122°F) | |
| Dimensions | 21L x 18W x 20H cm (8.3L x 7.1W x 7.9H in) | | 21L x 18W x 20H cm (8.3L x 7.1W x 7.9H in) | | 19.7L x 25.4W x 29.8H cm (7.75L x 10.0W x 11.75H in) | |
| Weight | 3.1 kg (6.8 lb) | | 3.1 kg (6.8 lb) | | 8.5 kg (18.8 lb) | |
| Remote Control | Full 2-way communication, operation and transmitter security lock | | Full 2-way communication, operation and security lock with transmitter | | N/A | N/A |
| Remote Operating Range | 100 m (330 ft) radius | | 100 m (330 ft) radius | | N/A | N/A |
| Remote Battery Life (2 x AA Alkaline) | 130 hrs continuous, 1 year under normal use | | 130 hrs continuous, 1 year under normal use | | N/A | N/A |



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