



Product Specs

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Spectra Precision Laser Dealer Confidential

Spectra Precision Laser CB30 Dual Control Box

General Description

The Spectra Precision® Laser CB30 Dual Control Box is a rugged, cab-mounted operator interface for dual laser or single laser with slope based machine control applications. The CB30 is used for lift and tilt configurations such as dozers and skid-steers with six-way blades and dual lift and lift configurations for motor graders and dirt trains. This simple-to-set up-and-use control box allows the user to automatically control the elevation of the blade, for balancing and rough grading material, using dual LED indicators, or with automatic controls for the blade for fine grading. The CB30 is designed to be mounted in the cab while in operation, and can be quickly removed for storage when not in use.



Standard Features

- **Easy to use**, simple operation with toggle, push-button rotary switches gets you to grade fast and accurately. LED grade displays relay the blade position to grade in day or night lighting condition to maximize productivity. Operators can be trained quickly to become more productive in a shorter period of time.
- **Proportional valve control** for proportional time, proportional current or proportional voltage automatic hydraulic valves. The CB30 is configurable for smooth blade response through quick corrections making more consistent and accurate finish grade.
- **Super bright LCD User Display** gives the operator information about the operating configuration of the system, from reference elevation information to auto/manual control to system diagnostics.
- **Super bright dual LED grade display** provides easy-to-see elevation feedback when balancing or finish grading.
- **Configurable Audio Output** gives the operator audible information for elevation and system commands.
- **A great addition to a laser receiver**, the CB30 works with Spectra Precision Laser LR30, LR50 or LR60 Laser Receivers for automatic blade control.
- Easily installed near the operator for hands-on use, and may be moved from machine to machine.

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Options and Accessories

- Bolt-on mounting bracket
- Remote switch (single or dual auto/manual)

Compatible Components

The CB30 is used with the following Spectra Precision Laser receivers:

- Spectra Precision Laser LR30 Receiver
- Spectra Precision Laser LR50 Receiver
- Spectra Precision Laser LR60 Receiver

Specifications

Switch Type	Description
On/Off	Momentary, toggle switch type, sealed switch. Toggles the system between on and off, and enables the system to be changed into different operating modes and system configuration setup menus.
Dual Multi-Functional Switches	Left and right multi-functional switches enable the user to set independently or simultaneously either side of the control system into Auto or Manual grade control, raise or lower the hydraulic implement, vary and reset the elevation.

Cable Configurations

Receiver Cable

Powers the receiver and communicates grade information between the receiver and the control box.

Control Box 7 Socket	Function	Receiver 7 Socket	Wire Color
A	Receiver Power – Left	A	Red
B	Communication (+)	B	Green
C	Communication (-)	C	White
D	Ground (Signal)	D	Black
E	N/C	E	N/C
F	N/C	F	N/C
G	Receiver Power – Right	G	N/C

Power Cable

Supplies power to the system. The control box supports both 12- and 24-Volt machine systems.

Function	Control Box 4 Pin	Wire Color
Machine Ground	A	Black
Machine Ground	B	Black
Machine Power	C	Red
Machine Power	D	Red

Multi-Functional Remote-Switch Cable

Optional single and dual remote switch cable assemblies extend the CB30 control multi-function switches to the user's hands. Blade raise/lower, auto/manual, elevation/slope offset, and elevation/slope matching functions are all configurable via the single or dual remote switch cable assemblies.

Single Remote Switch Function	Control Box 7 Socket	Wire Color
LH Analog In	A	Orange
RH Analog In	B	N/C
LH Phase A	C	Black
LH Phase B	D	White
RH Phase A	E	N/C
Remote Switch Power	F	Red
RH Phase B	G	N/C

Dual Remote Switch Function	Control Box 7 Socket	LH Wire Color	RH Wire Color
LH Analog In	A	Orange	N/C
RH Analog In	B	N/C	Orange
LH Phase A	C	Black	N/C
LH Phase B	D	White	N/C
RH Phase A	E	N/C	Blue
Remote Switch Power	F	Red	Red
RH Phase B	G	N/C	Green

Valve Cable

Communicates grade information between the control box and the hydraulic valve. The type of valve determines the valve-cable wiring.

Proportional Time Valve Function	Proportional Current Valve Function	Proportional Voltage Valve Function	Control Box 10 Socket	Wire Color
LH Valve Lower	LH Valve Lower	LH Fault	A	Blue
LH Valve Raise	LH Valve Raise	RH Fault	B	Green
Switched Power	Switched Power	LH Switched Power	C	Red
Load Sense	Load Sense	RH Switched Power	D	Orange
N/U	N/U	LH Raise/Lower	E	White
RH Valve Raise	RH Valve Raise	N/U	F	Brown
RH Valve Lower	RH Valve Lower	N/U	G	Yellow
N/U	N/U	RH Raise/Lower	H	Violet
Ground	Ground	Ground	I	Black
Ground	Ground	Ground	J	Gray

General Specifications

Physical characteristics	Specifications
Grade Display	On-Grade LEDs Green; High/Low LEDs Red
Operating Display	LCD
Operating Voltage	10 Volts to 30 Volts DC Reverse Polarity Protected
Maximum Current	5 Amps per driver
Electrical Connection	Standard Military Type
Valve Compatibility	PT, Proportional Time (On/Off) PC, Proportional Current PV, Proportional Voltage
Receiver Deadband	LR50 and LR60: 0.0 m to 0.050 m (2.0 in; 0.170 ft) LR30: 0.0 to 0.025 m (1.0 in; 0.085 ft) Resolution: 1 mm (0.05 in; 0.003 ft) increments
Slope Set-Point	$\pm 23^\circ$ ($\pm 44\%$)
Remote Toggle Switch	Multi-function Raise/Lower Auto/Manual Elevation Offset Single switch for lift and tilt; Dual switch for dual lift
Weight	2.25 kg (5 lb)
Dimensions	196 mm x 140 mm x 140 mm (7.7 in x 5.5 in x 5.5 in)
Operating Temperature	-20 °C to +60 °C (-4 °F to +140 °F)