



Product Specs

December 2005

Spectra Precision Laser Dealer Confidential

Spectra Precision Laser LR50 Receiver

Rugged 360-degree laser receiver with blade tilt and boom plumb indication

General Description

The Spectra Precision® Laser LR50 Laser Receiver is designed to be used as a stand-alone display receiver for skid-steer loaders, backhoes, excavators, dozers and trenchers. Designed for use in harsh environments, the LR50 is 100% weatherproof and features 360-degree laser detection.

Standard Features

- **Built-in blade tilt indication**—helps the operator keep the blade level for increased production and accuracy. Can be programmed to match an existing or known grade for slope matching operations.
- **Built-in plumb indication**—for quick and accurate grade checking on excavators and backhoes.
- **Offset On-grade**—provides more information above grade using the entire receiver for productive excavation.
- **Selectable accuracy**—lets you match your application requirements. Using the right accuracy for the job means clearer feedback to the operator and less display “jitter.” Work to the tolerances demanded by the job by selecting the correct on-grade accuracy.
- **Selectable on-grade accuracy**—allows configuration of the LR50 to match the job site tolerances.
- **Precise laser strike positions**—for more accurate grade control. Unlike other laser receivers that provide only 5 to 7 fixed relative grade regions, the LR50 laser receiver provides a continuous, absolute laser strike position to precisely measure the actual height deviation from “On Grade.” This feature gives you the highest accuracy and grade performance.



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- **Designed for construction**—Shock mounted electronics for stable performance and tough aluminum/poly carbonate housing for superior knock and drop protection. Sealed housing and battery chamber is designed and built to the most demanding construction industry standards.
- **Receiving Windows**—include four sets of photocell that are equally spaced to allow for 360 degree reception.
- **Super-Bright LEDs**—are highly visible and graphically display blade or bucket position.
- **Power Button**—turns the receiver on and off.
- **LED Status Indicators**—show on-grade location, deadband selection, and low-battery warning. They also function as the blade-tilt indicator.
- **Touch-Panel Buttons**—function primarily to select blade-tilt indication, on-grade location, deadband (accuracy), plumb indication, and display brightness. Their secondary functions are to select blade-tilt accuracy, plumb-accuracy indication, laser-beam averaging, and laser out-of-level warning.
- **Mounting Knobs**—are attached to stainless steel clamps. The large front-facing knobs allow for quick and easy installation to the mast or magnetic mount.
- **CB25 Control Box Option**—Use the LR50 as a stand-alone display receiver or combine with the CB25 control box to create affordable automatic blade control for dozers.

Specifications

FEATURE	SPECIFICATION
Beam Reception Range	360 degrees
Operating Range	Over 460 m (1500 ft) radius, laser dependent
Laser RPM	Minimum: 105; Maximum: 1200
Vertical Reception	171 mm (6.75 in.)
Accuracy—Center On-Grade (Grading)	Fine: 5 mm (0.20 in.) Standard: 10 mm (0.40 in.) Wide: 20 mm (0.80 in.)
Accuracy—Offset On-Grade (Excavation)	Fine: 12 mm (0.50 in.) Standard: 25 mm (1.0 in.) Wide: 50 mm (2.0 in.)
Blade-Tilt Accuracy	$\pm 0.5^\circ$, $\pm 1.5^\circ$, $\pm 2.5^\circ$
Plumb-Swing Accuracy	$\pm 0.5^\circ$, $\pm 1.5^\circ$, $\pm 2.5^\circ$
Display Output	Bright or Dim
Power Options	Alkaline—4 x "C" Cell—Standard Nickel Metal Hydride—4 x "C" Cell Power Cable—10 -30 V dc
Battery Life—Alkaline (Continuous in beam)	60 hours, Display Dim 45 Hours, Display Bright
Battery Life—Ni-MH (Continuous in beam)	45 hours, Display Dim 30 hours, Display Bright
Battery Recharge Time	3–4 hours
Automatic Shutoff	75 minutes with no laser beam
Out-of-Beam Indication	High and Low, Selectable On or Off
Remote Display Option	Yes
Automatic Control Option	Yes
Dimensions (LxWxD)	343 mm x 142 mm x 149 mm (13.50 in. x 5.58 in. x 5.88 in.)
Mounting Pipe Round Tube (Outside Diameter) Square Tube	42 mm to 50 mm (1.66 in. to 2.00 in.) 38 mm (1 ½ in.)
Operating Temperature	-20 °C to +60 °C (-4 °F to 140 °F)

**Specifications subject to change without notice*