



Precision Agriculture

Technology

- Save Water
- Increase Productivity
-and much more



Precision solutions for all seasons, all crops, all terrain, all vehicles—a growing investment





SPECTRA PRECISION AGRICULTURE THE LINE EVERYONE FOLLOWS

Agriculture plays a significant role in overall socio-economic development of India. In the past various techniques and implements were used for developing agriculture in India. Current Agricultural practices are neither economically nor environmentally sustainable.

The key challenge today is two-fold - Conservation of natural resources and improved productivity. To meet these Challenges it is important to adopt new agricultural practices and use of technologically advanced implements & equipments.

The soil-water management forms the very basis of "conservation of natural resources" and the precision levelling is first step towards this direction.

The precision levelling of the farming fields is achieved by using technologically advanced laser guided land leveler that was first brought in and made commercially available in India by Spectra Precision Lasers (P) Ltd in the year 2002 in collaboration with Trimble Navigations Ltd., USA. The product has gained acceptance level among farming community and is popular as LEVEL MASTER.

The LEVEL MASTER Laser Guided Land Leveler is currently being used by most of the Agricultural Universities, ICAR Institutions, State Government Organisations in India and farmers in U.P., Punjab, Haryana, Rajasthan and Bihar.

As of now there are about 1500 LEVEL MASTER Laser Guided Land Levellers working in India.

The advantages and benefits of LEVEL MASTER are:

- * Conserves Water by upto 45%.
- * Protects Top-Soil erosion by rainfall and water runoff.
- * Reduces the surface water contamination
- * Enhances water retention and storage.
- * Increases productivity by upto 35%.
- * Increases cultivable area.
- * Reduces fertilizer run-off.

Save Water

Increase Productivity

Use

LEVEL MASTER

LASER TRANSMITTER HV 401-3 WITH SINGLE GRADE

HV 401-3 The highly visible, multi purpose spectra precision® Laser HV 401-3 is advanced Laser with exceptional accuracy and durability. The HV 401-3 Laser gives you easy setup and one person operation in a wide variety of applications, especially Land-Leveling using the HV 401-3 Laser you can maximize your return on investment, and boost your productivity.

- Highly visible beam.
- Automatic Self-Leveling.
- Intuitive one-touch operator controls
- One-person operation reduces labor costs.
- Automatic compensation for level and plumb.
- Temperature Calibrated, high accuracy for consistent performance across larger job sites.
- Multiple power option, NIMH rechargeable Batteries, direct power or alkaline batteries for reduces downtime
- Fast setup, minimal training time, and automatic Self-Leveling minimizes operating costs and boosts productivity.
- Rugged, durable, Light weight Eye Receiver HR 350 makes fill simpler.



LASER TRANSMITTER GL 422 WITH DUAL GRADE

GL 422- Rugged new grade Laser with two-way Radio Remote offers superior Grade, Level and vertical capabilities. The Laser GL 422 (Dual Grade) Transmitter is cost effective automatic self leveling Laser. The GL 422 Feature a 2-way, full function remote control with a built-in back-lit grade display.



- Fast, easy horizontal level, grade and vertical plumb setup with no manual leveling
- Quick payback due to easy setup with the 2-way radio remote control, and single Dual Grade application capability.
- Built-in back-lit grade display.
- No rework due to automatic temperature and grade compensation
- Very long operating range-800m (2,600 ft) diameter for increased machine control capability and fewer setup over the job sites.
- Very rugged with low service costs, takes a drop of up to 1m (3ft) onto concrete



SPECTRA LASER CONTROL SYSTEMS

Trimble Laser GL-700 series Dual Grade Laser Transmitter is the right Laser for the right job from an Economical grade Transmitter to an advanced long range radio remote controlled dual grade Transmitter. Further the GL-700 series Laser Transmitter offers the most innovative collection of features ever available.

SPECTRA PRECISION LASER GL700 SERIES

PlaneLok: the laser beam locks to a fixed elevation and stays there regardless of wind or temperature changes

Grade Matching: set your receiver at the same height as the transmitter, go to the remote point with the remote control, and the transmitter will automatically match the two points and display the grade without returning to the laser transmitter

Automatic Axis Alignment: gives you simple alignment of either side of any grade axis to the desired remote point

Long Range Remote Control: All transmitter functions are automatically controlled from inside the vehicle allowing for one-person set-up and operation



LASER RECEIVER LR 410

Cost-effective automated machine control systems that improve productivity and accuracy of agricultural drainage and leveling equipment by up to 50%.

LR410 LASER RECEIVER

Works with both the GCS300 and GCS400

Optional three foot and four foot electric mast capability

LED set up lights

Rugged design; 100% weatherproof

Auto detection and connection to PA control systems



CONTROL BOX CB2ETD

CB2ETD CONTROL BOX



CB 2ETD is rugged, operator interface for single Laser-Based control systems. This simple to setup and use.

This device is design to be mounted in the cab while in operation, and be quickly removed for storage when not in use.

Control Box allows the use to manually control the elevation of blade, for balancing or rough grading using the LCD indicator or to automatically control the blade for fine grading.

The CB2ETD features proportional valve control for a smooth and quick corrections making more consistent and accurate finish garde. It can be easily moved from the machine to machine. CB2ETD also features control for electric mast .

Available in single and dual configurations

Dual capability for either tandem inputs or dual-sided machine applications

Direct connect to almost all machines, eliminating the need for additional control valves

Control / Survey / Indicate modes to handle any job

CB415 UNIVERSAL CONTROL BOX

LEVEL MASTER LASER LAND LEVELER



TECHNICAL SPECIFICATIONS

LASER TRANSMITTER - SINGLE GRADE (HV-401-3)

Laser source : 4.99 mw maximum
 Laser accuracy : ± 10 arc sec. (± 1.5 mm at 30 m)
 Self-leveling range : ± 5 degrees
 Receiver operating dia. : 800 m (2,600 ft)
 Rotation speed : Four preset speeds from 10 to 600rpm
 Operating temperature : -20°C to 50°C (-4°F to 122°F)
 Storage temperature : -20°C to 70°C (-4°F to 158°F)
 Size : 21L x 18W x 20H cm
 Weight : 3.1 kg (6.8 lbs)

Eye Receiver (HR 350) :

Number of Disp. Channels : 5
 Displays : LCDs Front & Rear, 3 LEDs Front
 Low Battery Warning : Yes
 Battery Life (AA-2) : 70 hours
 Auto Shut-Off : 30 minutes
 Water Resistance : Ip67

LASER TRANSMITTER - DUAL GRADE (GL-422)

Laser Source : $< 5\text{mw}$ 635nm,
 Drop height on concrete : 1 m (3 ft)
 Operating diameter : (Above) 800 m
 Compensation method : H/V Electronic Self Leveling
 Grade range : -10 to $+15\%$ Dual Axes
 Grade accuracy : 0.015% 3 mm@30 m
 Remote control type : Full 2-way communication,
 Remote control range : 100 m (330 ft) radius
 Rotation speed : 300, 600 RPM selectable
 Transmitter battery life : 55 hours

Eye Receiver (HR 550) :

Operating temperature : -20°C to $+50^{\circ}\text{C}$ (-4°F to $+122^{\circ}\text{F}$)
 Battery life (2-AA) : 100 hours at normal opera.
 Auto shut-off : 30 minutes
 Anti-strobe sensor : Yes
 Dust & waterproof : Yes
 Operating temperature : -20° to $+50^{\circ}\text{C}$ (-4° to 122°F)

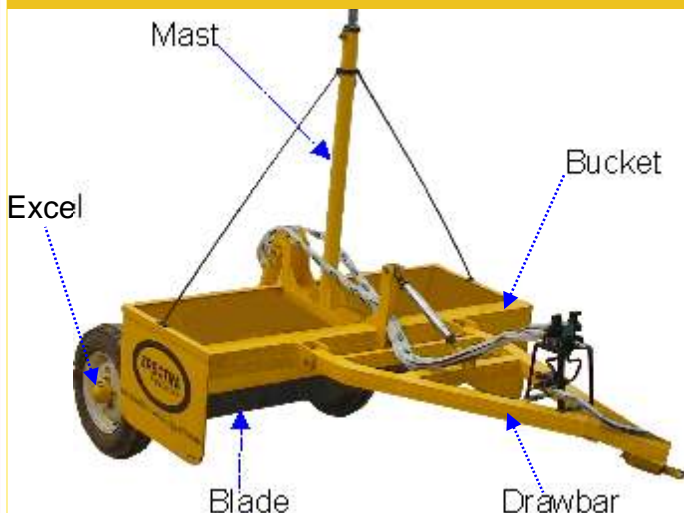
LASER PLANE RECEIVER (LR 410)

Laser Transmitter Speed : 270 to 1320 RPM
 Laser Beam Accep.Angle : 360°
 Detection Window : 231mm (9.1")
 Operating Temperature : -40°C to 71°C (-40°F to $+160^{\circ}\text{F}$)
 Storage Temperature : -55°C to 85°C (-67°F to $+185^{\circ}\text{F}$)

CONTROL BOX (CB2ETD)

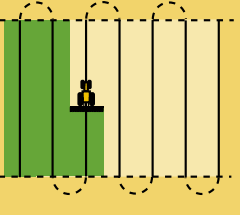
Operating temperature : -28°C to $+71^{\circ}\text{C}$ (-20°F to 160°F)
 Weight : 2.5kg (5.6 lbs)
 Display : LCD (Optional)
 Control : For Electric Mast
 Electrical Input : 12 v or 24 vdc (10 amp max.)
 Electrical Output : 12 v or 24 vdc (4.5 amp/Valve)

BUCKET SCRAPPER



Bucket
 Thickness: 10mm/8mm (iron sheet)
 Weight: 55kg, Height: 2.5ft, Width: 78 inch, Depth: 2ft
 Drawbar
 Length: 80 inches
 Top-Link-Pin inch for adjustment of bucket.
 Mast
 Automatic Motor driven Electric Mast.
 Rigid Mast with Manual height adjustment.
 Blade
 Length: 77 inches, Height: 4.92 inches, Thickness: 16mm
 Excel Length: 66 inches
 Tyres No. of wheels: Two, Tyres size: 6-16 inches
 Recommended Tyre Pressure: 28p



	Ag GPS EZ-GUIDE 250 LIGHTBAR		Ag GPS EZ-GUIDE 500 LIGHTBAR		Ag GPS FIELDMANAGER DISPLAY	
CHOOSE DISPLAY						
	<ul style="list-style-type: none"> • Entry-level lightbar guidance system • Easy-to-use and most affordable • Built-in high performance DGPS receiver with Trimble® OnPath® filter technology • Ultra rugged aluminum housing • Compatible with EZ-Steer® 500 assisted steering system 		<ul style="list-style-type: none"> • Built-in dual-frequency GPS receiver offering multiple accuracy options • Integrated lightbar with 31 bright LEDs • Simple control buttons operate easy-to-use software • USB flash drive to transfer files for printing maps and reports 		<ul style="list-style-type: none"> • A 10.4" color touch screen with plan and 3D views • Intuitive graphical layout • Works with any Trimble AgGPS receiver • Removable data card to transfer files between displays or to the office 	
CHOOSE 8 DIFFERENT PATTERNS	HEADLAND		PIVOT		A-B PATTERN	
						
	A+PATTERN		MULTI HEADLANDS		FREEFORM	
						
		IDENTICAL CURVE		ADAPTIVE CURVE		
						



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