

About Us

Celec Enterprises offer hi-tech & most efficient power saving solutions and worked with fortunes 100 & 500 companies, government agencies globally to enhance power saving and green energy solutions.

First company in asia awarded with prestigious UL listing with in house laboratory facilities for live testing upto 500 Kvar capacitor panels, fully furnished floor plan of 25,000 sq.feet with all the ultra modern manufacturing facilities backed with trained



ISO 9001 : 2008 JUNE - 2008 ISO 9001 : 2015 AUG - 2017

CE (Certificate for Europe) FEB - 2012 NRFMTTI (Govt. of India) JAN - 2018

UL Listing (USA & Canada) FEB - 2013 NOM (Mexico) FEB - 2018



CELEC
LASER LAND LEVELER

CELEC WORLDWIDE | GROUP OF COMPANIES | CELEC USA | CELEC INDIA



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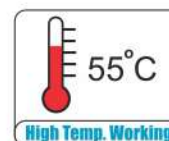
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Authorized Dealer/Distributor

www.celec.com

USER MANUAL

CELEC
LASER LAND LEVELER



An ISO 9001-2008 CERTIFIED COMPANY

www.celec.com

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TECHNICAL DATA

OPERATION RANGE:	PRO Series: 1.5 Km ,1500 mtr.
SELF LEVELLING RANGE	$\pm 5^{\circ}$
EXPERT ALERT:	Laser shut-off
WINDY MODE:	Reduces Sensitivity
ROTATION SPEED:	600 rpm
BEAM TYPE/OUTPUT:	Red diode; 670nm; 5mW; class 2
POWER SOURCES:	12V 7.5Ah LEAD-ACID BATTERY (NOT INCLUDED IN KIT)
OVER VOLTAGE PROTECTION:	Laser shut off
MOUNTING BASE:	5/8" x 11 flat or domed
ENVIRONMENTAL:	IP55 for water and dust resistance
OPERATING TEMPERATURE:	-20° C to 55° C
STORAGE TEMPERATURE:	-20° C to 60° C
DIMENSIONS:	
WEIGHT:	2.5 Kg.

WARRANTY

CELEC warrants the PRO Series to be free of defects in material and workmanship for a period of three years. Celec or its authorized service center will repair or replace, at its option, any defective part, or the entire product, for which notice has been given during the warranty period. If required, travel and per diem expenses to and from the place where repairs are made will be charged to the customer at the prevailing rates. Customers should send the product to Trimble Navigation Ltd. or the nearest authorized service center for warranty repairs or exchange, freight prepaid. Any evidence of negligent, abnormal use, accident, or any attempt to repair the product by other than factory-authorized personnel using Trimble certified or recommended parts, automatically voids the warranty. Special precautions have been taken to ensure the calibration of the laser; however, calibration is not covered by this warranty. Maintenance of the calibration is the responsibility of the user.

The foregoing states the entire liability of Trimble regarding the purchase and use of its equipment. Trimble will not be held responsible for any consequential loss or damage of any kind. This warranty is in lieu of all other warranties, except as set forth above, including any implied warranty merchantability of fitness for a particular purpose, are hereby disclaimed. This warranty is in lieu of all other warranties, expressed or implied.

INTRODUCTION

- Thank you for choosing one of the CELEC high precision lasers. The CELEC PRO-Series lasers easy-to-use for Agriculture land leveling.
- **FOR YOUR SAFETY:**
 - Never look into the laser beam or direct it to the eyes of other people.
 - Use of this product by people other than those trained on this product may result in exposure to hazardous laser light.
 - Always Check level calibration before use.
 - Always operate the unit in a way that prevents the beam from getting into people's eyes.
 - If initial service is required, which results in the removal of the outer protective cover, removal must only be performed by factory-trained personnel.

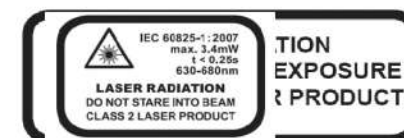
Calibration:

Use of other than the described user and calibration tools or other procedures may result in exposure to hazardous laser light.

Caution:

Using different than described at the LL300S user guide, may result in unsafe operation.

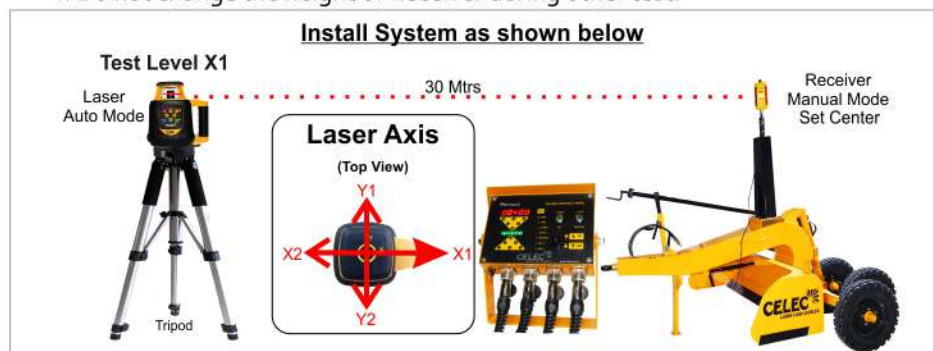
- For hazardless and safe operation, read all the user guide instructions.



HOW TO CHECK LEVEL CALIBRATION

Test - Level X1

1. Take Receiver 100 feet away from Laser in the direction of X1.
2. Use Laser in Auto Mode & Control Box in Manual Mode.
3. Adjust the Receiver height to center.
4. Do not change the height of Receiver during other test.



Test - Level Y1

1. Rotate Laser Clockwise 90° to check Y1 as shown below in Pic - Y1
2. Do not use the Laser if Y1 does not show center.



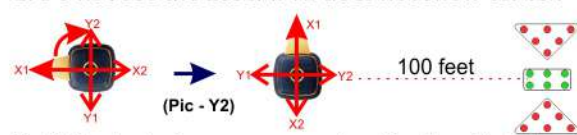
Test - Level X2

1. Rotate the Laser again Clockwise 90° to X2 & check the center as shown below in Pic - X2
2. Do not use the Laser if X2 does not show center.



Test - Level Y2

1. Rotate the Laser again Clockwise 90° to Y2 & check the center as shown below in Pic - Y2
2. Do not use the Laser if Y2 does not show center.



If all the test show same center, the level is OK.

अगर लेजर लेवल टेस्ट किया है तभी भूमि स्तर की गारंटी है
ने लेजर लेवल टेस्ट किया है तभी भूमि स्तर की गारंटी है।

Level guarantee valid if laser is tested before work.

PROTECTING THE UNIT

Do not expose the unit to extreme temperatures or temperature changes (do not leave inside the car). The unit is very robust and can resist damage if dropped even from tripod height. Before continuing your work, always check the levelling accuracy. The laser is water proof and can be used indoors and outdoors.

CLEANING AND MAINTENANCE

Dirt and water on the glass parts of laser or prism will influence beam quality and operating range considerably. Clean with cotton swabs. Remove dirt on the housing with a lint-free, warm, wet and smooth cloth. Do not use harsh cleansers or solvents. Allow the unit to air dry after cleaning it.

PROTECTING THE ENVIRONMENT




The unit, accessories and packaging ought to be recycled. This manual is made of non-chlorine recycling paper. All plastic parts are marked for recycling according to material type.



Do not throw used batteries into the garbage, water or fire. Remove them in compliance with environmental

INTERNAL SOFTWARE

LASER INTERNAL SOFTWARE

1. Place the laser at horizontal flat and disturbance free surface.
2. Power ON  the Laser and wait for laser to run.
3. Press and Hold the Expert  and WINDY  for 3 seconds.
4. POWER LED, EXPERT LED and WINDY LED will glow together.
5. Remove hands or any kind of disturbance from laser unit during calibration.
6. Laser may take 1-3 minutes to calibrate.
7. After Calibration laser will start running.

*NOTE :

Do not disturb or move the laser when it is calibrating itself.
(while POWER, H.I. and WINDY LEDs are ON.)

RESTORE FACTORY SETTING

1. Press & hold POWER , WINDY  & Expert  switch together and connect the laser power.
2. Laser will restore its factory calibrated value and start running.

HOW TO SET TRIPOD LEVEL

- Fix the LASER ON tripod Stand using Bottom Nut.
- Add just Tripod leg T1, T2 & T3. As per Indication below.

Tripod Level Fault If Led 1,2,3 Blink Together.



1,2 and 3

→ Tripod Level Fault



➡ Tripod Level Indication Blink :-

(1)



Double Blink

→ If Led T1, Double Blink
Press T1 Leg in Ground.

(2)



Double Blink

→ If Led T2, Double Blink
Press T2 Leg in Ground.

(3)



Double Blink

→ If Led T3, Double Blink
Press T3 Leg in Ground.

(4)



Double Blink

→ If Led T1 and T3, Double Blink
Press T1 & T3 Leg in Ground.

LASER COMPONENTS

LASER TRANSMITTER



LASER REMOTE



Up



Power



Down



Auto / Manual



Left



Fine finish



Right



Vibration Proof

CONTROL BOX

GENERAL DESCRIPTION

Mounting of control box usually on side mud-guard of Tractor, where operator can easily access the switches and view indication. Celec provided hand held remote for which help easy movement. Control box receive laser position from receiver and feed the hydraulic valves to move bucket up/down.



STANDARD FEATURES

- 3 control method
 1. Touch
 2. Toggle
 3. Remote
- Link indicator to show connection with receiver.
- Laser indicator to show laser on the receiver.
- Charger point to change battery in field.
- Timer reset function and total working hours.
- Short circuit protection on all outputs.
- Avionics grade connector and RR Kabel.
- Programmable delay for hydraulic valves.
- Accurate control near center.
- Accuracy ± 3 mm

LASER OPERATION MODES

Y-CALIBRATION MODE

Y –calibration can be changed by pressing up arrow (Y1) or down arrow (Y2) once for one step on the laser or remote control. Laser will also automatically try to level itself to calibration value simultaneously even when Y- calibration is changed. When laser will position itself near calibration level, POWER LED will glow.

To save the new calibration value press either left arrow (X2) or right arrow (X1) button. After saving new value laser will automatically switch back to automatic self correction mode. If laser remains in Y-calibration mode for more than 3 minutes without any activity (key press), it will automatically switch back to automatic self levelling mode discarding any changes in the calibration. To restore the factory default Y-calibration value, put laser in Y-Calibration mode and press and hold the MANUAL button from laser for more than 3 seconds. Laser will switch to automatic self levelling mode and restore the factory Y-calibration value.

LASER OPERATION MODES

X-CALIBRATION MODE

X-CALIBRATION mode is used to recalibrate X–Level of laser for running. This calibration is changed under expert supervision otherwise wrong calibration may lead to wrong correction level and undesired slope in the field. To put the laser in to X - calibration mode press up arrow (Y1) and down arrow(Y2) buttons together on laser for more than 3 seconds or press up arrow (Y1) and down arrow(Y2) buttons together once in remote control. This mode is indicated by continuously glowing WINDY LED and switching off POWER LED.



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RECEIVER

GENERAL DESCRIPTION

The laser receiver detect the laser beam level and send signals to control box.

It can work 360° where sensors and mounted on all sides.

Leds indicator show movement of bucket to all level.

Keep Led Indications towards Operator.

STANDARD FEATURES

1. Double mounting.
2. Out of range indication.
3. RFI & Electric filter inside.
4. Indication to show laser level.
5. Can detect laser from 800 meters.
6. Working under high tension line and high temperature.



USE OF LASER SYSTEM

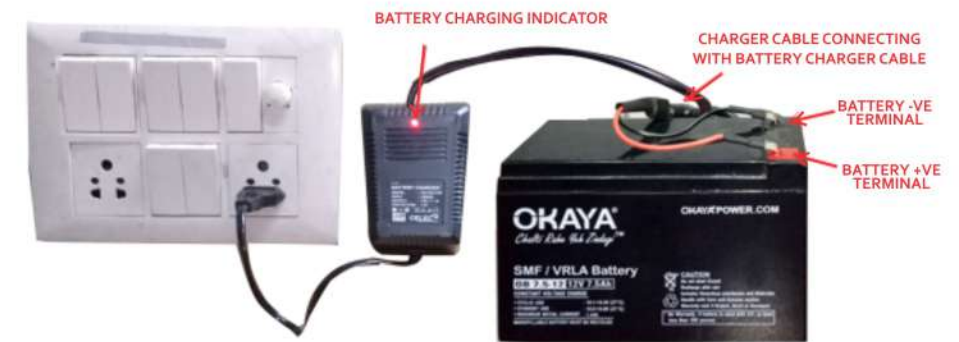
POWER ON THE LASER SYSTEM

To power up the laser system following connection has to be done with battery.

1. Connect the laser with 12V battery connecting cable with correct polarities.
2. If Power LED Blink, and the buttons not working, it indicates battery need to be Charged.



HOW TO CHARGE THE BATTERY



*NOTE

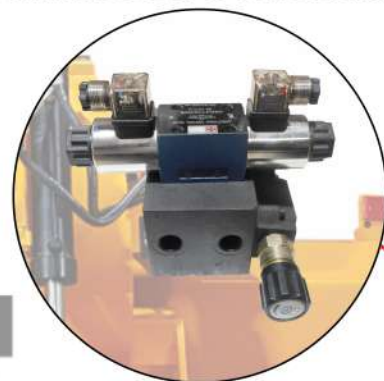
- Always Connect Battery before Switch ON
- RED LED - Charging
- GREEN LED - Fully Charged

* Battery Extra (Not Included)

LASER CONNECTION DIAGRAM

DCV HYDRAULIC

Connect DCV (HYDRAULIC)
(3 Pin Lead) to **Control Box**
and other to both **Up** and **Down**
terminals of DCV to lift the Bucket.

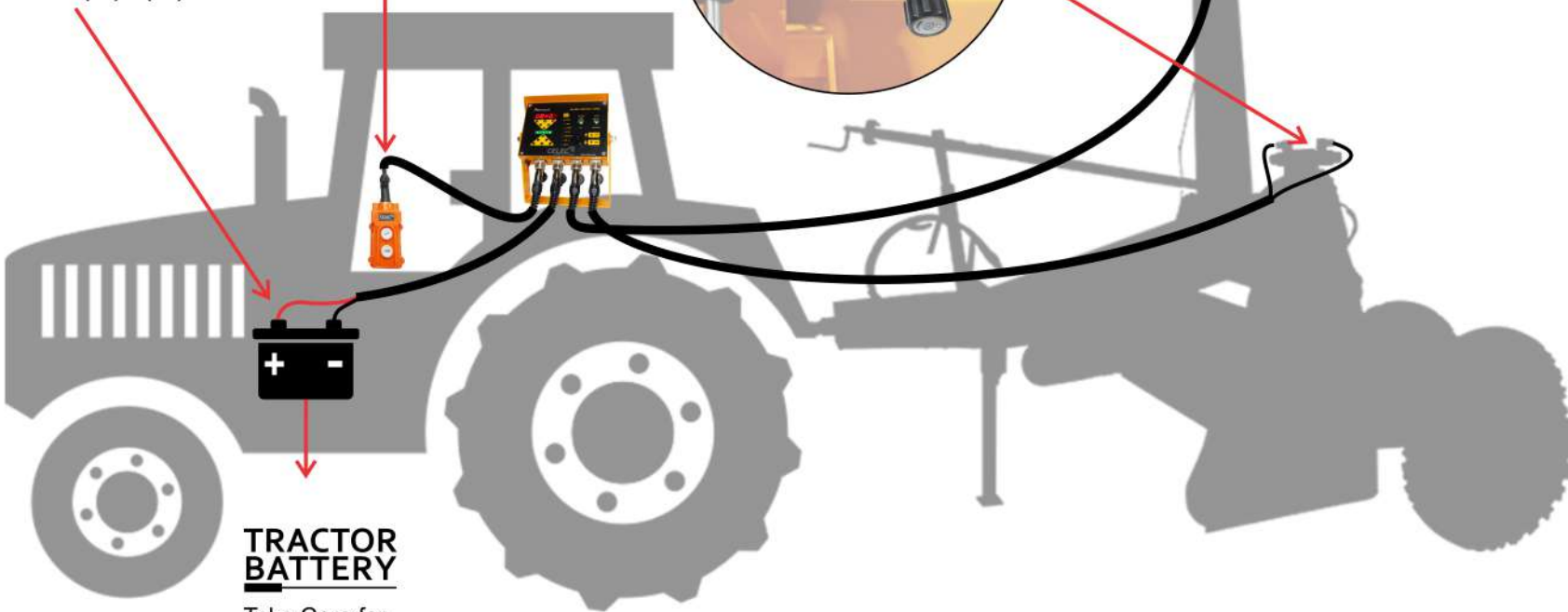


REMOTE

Connect Remote Cable
(3 Pin Lead) to Control Box.

INPUT 12V

Connect Power Cable
(2 PIN 12V Lead) to both the
terminals + (ve) - (Ve).



TRACTOR BATTERY

Take Care for
Polarity

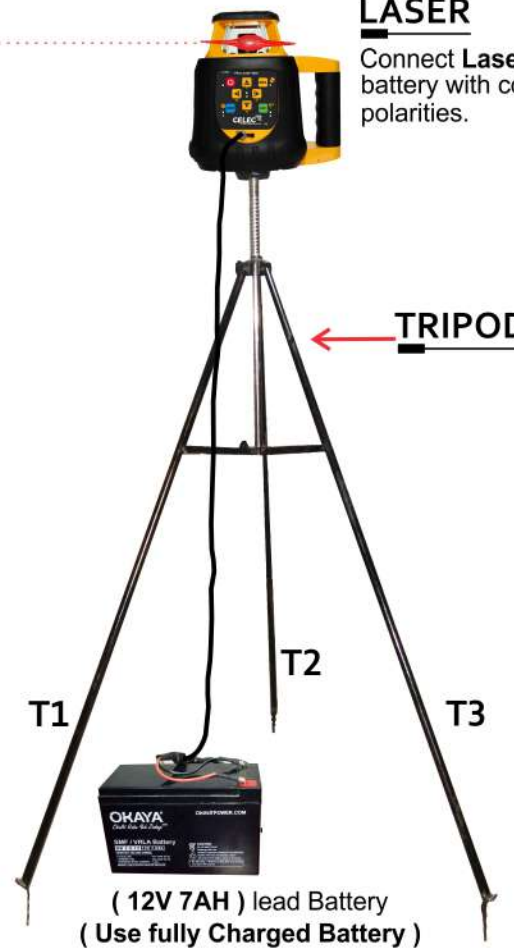
RECEIVER

Connect Receiver Cable
to Control Box using (3 Pin Lead)

LASER

Connect **Laser** with 12V
battery with correct
polarities.

TRIPOD



LASER OPERATION MODES

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