MEASUREMENT FOUNDATION

Operating manual

Line Laser

Model: 3D LINER 2V,3V,4V

Manufacturer: ADA INSTRUMENTS

Address: WWW. ADAINSTRUMENTS.COM

ENG

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Kit

ADA 3D LINER 2V,3V,4V, aluminum carrying case, laser glasses, alkaline batteries, target, operating manual.

Applications
With ADA 3D LINER you can take horizontal and vertical marking. You can use the instrument inside and outside.

Spesifications

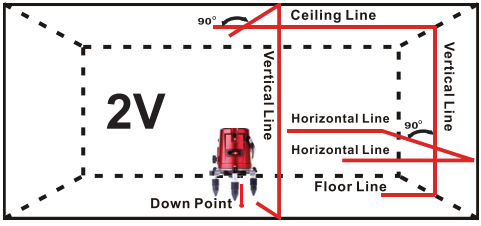
Laser beam	2V/3V/4V1H1D
Light sources	635nm/floor point 650nm
Laser safety class	2
Accuracy	±0.2mm/1m
Self-leveling range	±3°
Working range (with detector)*	radius 70m; without detector 40m
Rotation/Fine adjustment	360°
Power supply	3 X AA batteries
Service time	approx 8h with all lines ON
Mounting thread	5/8"
Operating temperature	-10°C ~ +40°C
Weight	0.9kg

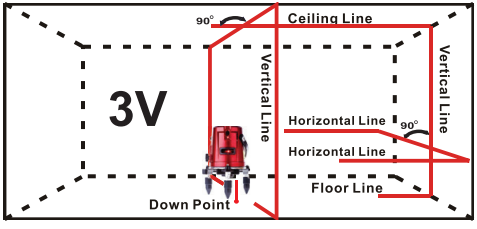
*depends on illumination

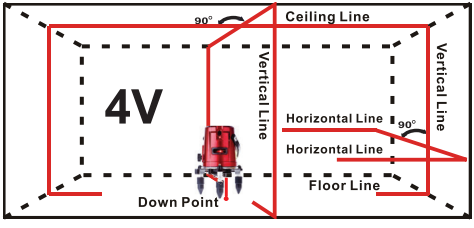
Functional description

1. 2, 3 or 4 vertical lines (the quantity of lines depend on the model of the instrument), 1 horizontal line, plumb down.
2. Can be used both for operation indoor and outdoor. Use the receiver for outdoor operation up to 40 m.
3. Electronic compensator ensures quicker self-leveling.
4. When the instrument inclines more than ±2 the laser lines automatically gleam.
5. 360° rotating fine adjustment mechanism makes it easier to find objects correctly.
6. When turning off the power, built-in locking system can automatically lock the compensator to avoid vibration during the transportation.

Laser lines


2V
90°
Ceiling Line
Vertical Line
Vertical Line
Horizontal Line
90°
Horizontal Line
Floor Line
Down Point


3V
90°
Ceiling Line
Vertical Line
Vertical Line
Horizontal Line
90°
Horizontal Line
Floor Line
Down Point


4V
90°
Ceiling Line
Vertical Line
Vertical Line
Horizontal Line
90°
Horizontal Line
Floor Line
Down Point

Features

1. Carry belt
2. Power switch
3. Vertical laser window
4. Horizontal laser window
5. Adjusting legs
6. Circular level
7. Fine adjustment

Keypad

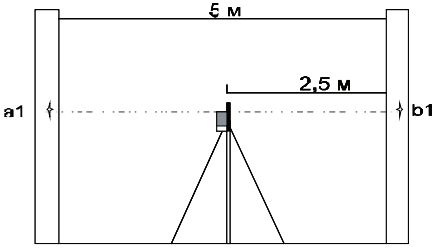
1. Indoor/outdoor key (D)
2. V laser lines switch
3. Detector LED
4. Power LED

Operation

1. Take out the battery lid. According the sign " + ,-", insert four alkaline batteries or rechargeable batteries to the battery socket, then cover the battery lid.
2. Set up the instrument on the floor or the tripod. When using tripod, put the bottom part of the instrument on the tripod. Twist in the screw of the tripod into the centering nut of the instrument.
3. If you hear the sound alarm while turning on the instrument, it means that the inclination of the laser level is more than ±2°. Adjust the instrument with the help of the instrument legs or tripod.
4. Aim the down point on the selected point on the floor. Move the upper part of the instrument to adjust vertical lines. Use fine adjustment mechanism for accurate adjustment of the instrument.
5. ADA 3D Liner has several operating modes. Horizontal line is On when turning on the instrument. Press button V to select the desired operating mode: H/V/2HV/3VH. There is no plumb down in the H mode.

TO CHECK THE ACCURACY OF LINE LASER LEVEL

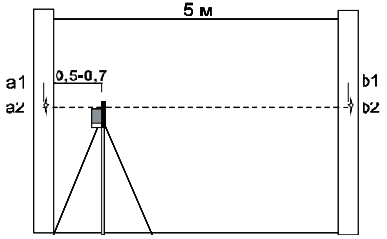
Set up the instrument between two walls, the distance is 5 m.Turn on the Line Laser and mark the point of cross laser line on the wall.



Set up the instrument 0,5-0,7m away from the wall and make, as described above, the same masrks. If the difference {a1-b2} and {b1-b2} is less then the value of “accuracy” (see spesifications), there is no need in calibration.

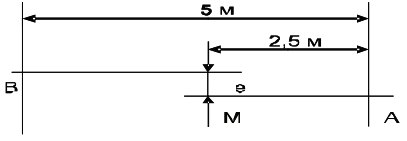
Example: when you check the accuracy of Line Laser the difference is {a1-a2}=5 mm and {b1-b2}=7 mm. The instrument’s error: {b1-b2}-{a1-a2}=7-5=2 mm. Now you can compare this error with standard error.

If the accuracy of Line Laser isn’t corresponding with claimed accuracy, contact the authorized service center.



TO CHECK LEVEL

Choose a wall and set laser 5M away from the wall. Turn on the laser and cross laser line is marked A on the wall.Find another point M on the horizontal line, the distance is around 2.5m. Swivel the laser, and another cross point of cross laser line is marked B. Please note the distance of B to A should be 5m.
Measure the distance between M to cross laser lune, if the difference is over 3mm, the laser is out of calibration, please contact with seller to calibrate the laser.



TO CHECK PLUMB

Choose a wall and set laser 5m away from the wall. Mark point A on the wall, please note the distance from point A to ground should be 3m. Hang a plumb line from A point to ground and find a plumb point B on ground. turn on the laser and make the vertical laser line meet the point B, along the vertical laser line on the wall and measure the distance 3m from point B to another point C. Point C must be on the vertical laser line, it means the height of C point is 3m. Measure the distance from point A to point C, if the distance is over 2 mm, please, contact with seller to calibrate the laser.

CARE AND CLEANING

Please handle measuring instrument with care. Clean with soft cloth only after any use. If necessary damp cloth with some water. If instrument is wet clean and dry it carefully. Pack it up only if it is perfectly dry. Transport in original container/case only.

Note: During transport On/Off compensator lock (3) must be set to position “OFF”. Disregard may lead to damage of compensator.

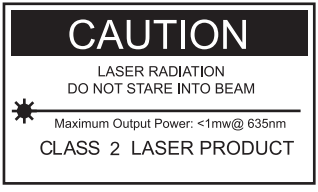
SPECIFIC REASONS FOR ERRONEOUS MEASURING RESULTS

- Measurements through glass or plastic windows;
- Dirty laser emitting window;
- After instrument has been dropped or hit. Please check the accuracy.
- Large fluctuation of temperature: if instrument will be used in cold areas after it has been stored in warm areas (or the other way round) please wait some minutes before carrying out measurements.

ELECTROMAGNETIC ACCEPTABILITY (EMC)

- It cannot be completely excluded that this instrument will disturb other instruments (e.g. navigation systems);
- will be disturbed by other instruments (e.g. intensive electromagnetic radiation nearby industrial facilities or radio transmitters).

Laser class 2 warning labels on the laser instrument.



LASER CLASSIFICATION

The instrument is a laser class 2 laser product accortding to DIN IEC 60825-1:2007. It is allowed to use unit without further safety precautions.

SAFETY INSTRUCTIONS

Please follow up instructions given in operators' manual.
Do not stare into beam. Laser beam can lead to eye injury (even from greater distances).
Do not aim laser beam at persons or animals.
The laser plane should be set up above eye level of persons.
Use the instrument for measuring jobs only.
Do not open instrument housing. Repairs should be carried out by authorized workshops only. Please contact your local dealer.
Do not remove warning labels or safety instructions.
Keep instrument away from children.
Do not use instrument in explosive environment.

WARRANTY

This product is warranted by the manufacturer to the original purchaser to be free from defects in material and workmanship under normal use for a period of two (2) years from the date of purchase.
During the warranty period, and upon proof of purchase, the product will be repaired or replaced (with the same or similar model at manufactures option), without charge for either parts of labour.
In case of a defect please contact the dealer where you originally purchased this product. The warranty will not apply

to this product if it has been misused, abused or altered. Withiut limiting the foregoing, leakage of the battery, bending or dropping the unit are presumed to be defects resulting from misuse or abuse.

EXCEPTIONS FROM RESPONSIBILITY

The user of this product is expected to follow the instructions given in operators' manual.
Although all instruments left our warehouse in perfect condition and adjustment the user is expected to carry out periodic checks of the product's accuracy and general performance.
The manufacturer, or its representatives, assumes no responsibility of results of a faulty or intentional usage or misuse including any direct, indirect, consequential damage, and loss of profits.
The manufacturer, or its representatives, assumes no responsibility for consequential damage, and loss of profits by any disaster (earthquake, storm, flood ...), fire, accident, or an act of a third party and/or a usage in other than usual conditions.
The manufacturer, or its representatives, assumes no responsibility for any damage, and loss of profits due to a change of data, loss of data and interruption of business etc., caused by using the product or an unusable product.
The manufacturer, or its representatives, assumes no responsibility for any damage, and loss of profits caused by usage other thsn explained in the users' manual.
The manufacturer, or its representatives, assumes no responsibility for damage caused by wrong movement or action due to connecting with other products.

WARRANTY DOESN'T EXTEND TO FOLLOWING CASES:

1. If the standard or serial product number will be changed, erased, removed or wil be unreadable.

2. Periodic maintenance, repair or changing parts as a result of their normal runout.

3. All adaptations and modifications with the purpose of improvement and expansion of normal sphere of product application, mentioned in the service instruction, without tentative written agreement of the expert provider.

4. Service by anyone other than an authorized service center.

5. Damage to products or parts caused by misuse, including, without limitation, misapplication or nrgligence of the terms of service instruction.

6. Power supply units, chargers, accessories, wearing parts.

7. Products, damaged from mishandling, faulty adjustment, maintenance with low-quality and non-standard materials, presence of any liquids and foreign objects inside the product.

8. Acts of God and/or actions of third persons.

9. In case of unwarranted repair till the end of warranty period because of damages during the operation of the product, it's transportation and storing, warranty doesn't resume.

WARRANTY CARD

Name and model of the product _____

Serial number _____date of sale_____

Name of commercial organization _____stamp of commercial organization

Warranty period for the instrument explotation is 24 months after the date of original retail purchase.

During this warranty period the owner of the product has the right for free repair of his instrument in case of manufacturing defects.

Warranty is valid only with original warranty card, fully and clear filled (stamp or mark of thr seller is obligatory).

Technical examination of instruments for fault identification which is under the warranty, is made only in the authorized service center.

In no event shall manufacturer be liable before the client for direct or consewuential damages, loss of profit or any other damage which occur in the result of the instrument outage.

The product is received in the state of operability, without any visible damages, in full completeness. It is tested in my presence. I have no complaints to the product quality. I am familiar with the conditions of qarranty service and i agree.

purchaser signature _____

Before operating you should read service instruction!

If you have any questions about the warranty service and technical support contact seller of this product

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