

#### **OPERATING MANUAL**

CONSIGNES DE FONCTIONNEMENT INSTRUCCIONES DE FUNCIONAMIENTO



model | modelo KS2L/KS2LG

CROSS-LINE LAYOUT LASER



**IMPORTANT:**Read Before Using

**IMPORTANT:** Lire avant usage

**IMPORTANTE:**Leer antes de usar

# KEEP IT SIMPLE WITH THE KS-SERIES

# KS2L/KS2LG

CROSS LINE LASER

by SitePro

Congratulations! You've purchased a SitePro laser that is simple to use with onebutton operation for precise and accuracy layout and leveling.

The purpose of this user's guide is to acquaint you with the laser tool, its components, safety, proper care and handling.

All instruments are adjusted when they are shipped from the factory. It is the customer's responsibility to check and to ensure instruments are adjusted prior to using.

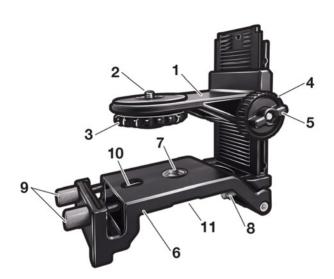
SitePro is not responsible for errors caused by instruments that are out of adjustment. Contact your distributor, dealer or SitePro for information on the nearest facility to check if your instrument is properly adjusted.

All specifications are subject to change without notice.

**SAFETY INSTRUCTION**Page 17









## INTENDED USE

This laser tool projects a vertical and horizontal laser line. Projects two lines independently or together for a wide range of level and/or plumb applications. Intended for determining and checking horizontal and vertical lines- level, horizontal and vertical layout, layout and alignment of walls, partitions installing cabinets, trim and finish carpentry.

The KS 2L is suitable for indoor and may be used outdoors with optional receiver.

## FEATURES AT A GLANCE

The numbering of the product features shown refers to the illustration of the tool on page 3.

- 1. Control Keypad
- 1a. Power ON/OFF Button
- **1b.** Operating Mode Button
- 1c. Battery/Operating Mode Indicator
- Exit opening for laser beamproduces vertical laser line
- **3.** Exit opening for laser beamproduces horizontal laser line

- Safety Lock / Automatic Leveling Switch
- 5. Battery Compartment Door
- 6. Latch Release
- 7. Serial Number
- 8. 1/4-20 Mounting Thread
- 9. Safety Label and Nameplate

## **PREPARATIONS**

This laser tool is shipped with four (4) 1.5v AA alkaline batteries.

The Battery/Power Indicator **1c** blinks and turns off when batteries need replaced.

### INSERTING/REPLACING BATTERIES

Alkaline batteries are recommended for use to power this laser tool.

**WARNING** 

Always replace all alkaline batteries at

the same time. Only use batteries from one brand and with the identical capacity.

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Remove the batteries from the tool when not using it for extended periods. When storing for extended periods, the batteries can corrode and discharge themselves.

Open the battery compartment door **5** by pressing the latch release **6**.

When inserting batteries, pay attention to the correct polarity (+ and -) according to the representation on the

inside of the battery compartment.

Close the battery compartment door 5. Push down until the door latch 6 clicks into the secure position.

IMPORTANT k

Remove the batteries from the sing it for extended

tool when not using it for extended periods. When storing for extended periods, the batteries can corrode and discharge themselves.

## **OPERATIONS**



Do not subject the laser tool to extreme

temperatures or variations in temperature. As an example, do not leave it in vehicles for long time. In case of large variations in temperature, allow the instrument to adjust to the ambient temperature before putting it into operation. In case of extreme temperatures or variations in temperature, the accuracy of the instrument can be impaired.

Avoid heavy impact to or falling down of the instrument. After severe exterior effects to the instrument, it is recommended to carry out an accuracy check each time before continuing to work.

This laser tool is a precision instrument and should be treated with care.

**IMPORTANT** 

When not in use, the Safety Lock/

Automatic Leveling Switch 4 should always be in the A lock position.



This locks the pendulum and allows the laser to better withstand vibration and trauma incurred during transportation or if the unit is dropped.

# SETTING UP THE INSTRUMENT

Position the instrument on a firm surface, mount it to a tripod or to the wall mount with alignment unit. Due to the leveling accuracy, the laser tool reacts sensitively to ground vibrations. Therefore, pay attention that the position of the instrument is stable in order to avoid operational interruptions due to re-leveling.

#### **POWER ON AND OFF**

To Power ON the tool, slide the Safety Lock / Automatic Leveling Switch 4 to the position.



Press the ON/OFF Power button (2) 1a once to project a horizontal laser line in self-leveling mode.

The Operating Mode Indicator **1c** will illuminate green.

If the base of the laser tool is placed improperly and exceeds the range of 3°, the laser beam will turn off.

Reposition the laser tool that it is more horizontal or level.

#### **OPERATING MODES**

The laser tool has four (4) operating modes that can be switched through in sequence:

MODE	Operating Mode	Mode Indicator Light	Laser Beam
Press	Horizontal Layout Self-Leveling Mode	Green	_
Press 2	Vertical Layout Self-Leveling Mode	Red	
Press 3	Cross Line Self-Leveling Mode	Orange	+
Press 4	Cross Line <b>Manual</b> Mode	Blue	+

#### **Cross Line Manual Mode**

When in Cross Line Manual Mode, slide the Safety Lock/ Automatic Leveling Switch 4 in the lock position. Cross Line Manual Mode disengages self-leveling. This allows the laser tool to be placed in any position, at any angle or slope.

## **DETECTOR (PULSE) MODE**

The Detector (Pulse) Mode allows the laser tool to be used with the optional line laser detector. To activate this mode:

Place laser in desired Operating Mode

Press and hold the ON/OFF Power button (3) 1a for three (3) seconds. The Operating Mode Indicator 1c will begin to blink.

## CHECK ACCURACY

The ambient temperature has the greatest influence on the accuracy.

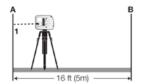
The tool should be mounted on a tripod when using for distances exceeding 65-ft (20m).

If possible, set up the tool in the center of the work area.

# Checking the Accuracy of the Horizontal Line

Use an area with a distance of approximately 16 feet (5 m) between two walls **A** and **B** is required.

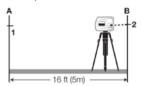
- Mount the laser tool onto a tripod or place it on a firm level surface close to wall A. Switch ON cross laser.
- Position the laser beam on wall A.
   Mark the center point where the laser lines cross on the wall (point 1).



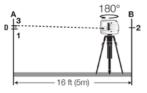
 Rotate the laser tool by 180° to position the laser beam on wall B.
 Mark the center point of the laser lines (point 2).



- Move the laser tool to position it close to wall B.
- Align the height of the laser tool so that the cross point of the laser lines is projected onto the previously marked point 2 on wall B.



- Rotate the laser tool by 180° to position the laser beam on wall A (be careful not to change the height of laser tool) so that the vertical laser line is aligned with point 1.
- Mark the the center point of the laser cross lines on the wall A (point 3).
- Measure the height between points
   1 and 3. This height indicates the deviation D of the tool.



The maximum deviation is calculated as follows:

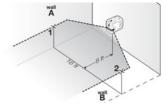
 $2 \times (Distance between wall$ **A**and**B** $) <math>\times 0.0036$ .

In this example with a 16-ft distance between walls, the maximum deviation is 0.1152-in. If the measurement **D** of the height between points **1** and **2** is more than 0.1152-in, your laser tool must be repaired by a SitePro service agent.

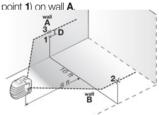
# Checking the Leveling Accuracy of the Horizontal Line

Use an area with walls approximately 16 x 16-ft (5 x 5 m).

- Mount the laser tool onto a tripod or place it on a firm level surface between walls A and B. Switch ON cross laser.
- Measure 8-ft (2.5 m) from the laser tool and mark the center of the laser line (point 1 on wall A and point 2 on wall B) on both walls.



- Position the laser tool 16-ft (5 m) to other end of area and rotate 180°.
- Align the height of the laser tool so that the center of the laser line is projected exactly on the previously marked point 2 on wall B.
- Mark the center of the laser line as point 3 (vertically above or below



Measure the height between points
 1 and 3. This height indicates the deviation D of the level plane of the laser tool.

The maximum deviation is calculated as follows:

2 x (Distance between wall **A** and **B**) x 0.0036.

In this example with a 16-ft distance between walls, the maximum deviation is 0.1152-in. If the measurement **D** of the height between points **1** and **2** is more than 0.1152-in, your laser tool must be repaired by a SitePro service agent.

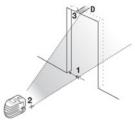
# Checking the Leveling Accuracy of the Vertical Line

Use a door opening with at least 8-ft of space on each side of the door.

- Position the tool on a firm, level surface 8-ft (2.5 m) away from the door opening. Place laser tool in the Cross Line Mode and position the laser beams at the door opening.
- Mark the center of the vertical laser line on the floor at the door opening (point 1).
- Measure a distance of 16-ft (5m) beyond the other side of the door opening and mark the center of the vertical laser line on the floor (point 2). Mark the upper edge of the door opening (point 3).



 Position the tool on the other side of the door opening directly behind point 2. Align the vertical laser line to center exactly through points 1 and 2.



- Measure the distance between point 3 and center of laser line projected on the upper edge of the door opening. This height indicates the deviation D of the vertical plane of the laser tool.
- Measure the height of the door opening.

The maximum deviation is calculated as follows:

 $2 \times \text{(Height of the door opening)} \times 0.0036.$ 

In this example with a 7-ft door opening, the maximum deviation is 0.05-in. If the measurement D between point **3** and center of laser line projected on the upper edge of the door opening is more than 0.05-in, your laser tool must be repaired by a SitePro service agent.

## UM2S VERSATILE POSITIONING DEVICE

The UM2S versatile positioning device is used to mount the your KS2L cross line laser virtually anywhere.

## UM2S FEATURES AT A GLANCE

The numbering of the product features shown refers to the illustration of the tool on page 4 and 5.

- 1. Adjustable Platform for Laser Tool
- 2. 1/4-20 Mounting Thread
- 3. Twisting Attachment Knob
- 4. Height Adjustment Knob
- 5. Alignment Position Lock
- 6. Trivet/Mounting Base

- 7. 5/8-11 Tripod Mount Thread
- 8. Application Set Thumb Screw
- 9. Grid Mount Thumb Screws
- 10. Keyhole Mounting Slot
- 11. Strap Mounting Groove

## HOW TO USE THE UM2S

The versatile positioning device provides the easy ability to properly position the laser line or lines. It attaches virtually to any job site surface. The positioning device can be setup in two positions. Unscrew the setup thumb screw 8 to swivel the trivet/mounting base 6 in the desired position for your application. Relocate the setup thumb screw 8 to secure in new position.

#### **Standard Setup Position**



In this position, the laser tool can be:

- Setup on level floor surface or horizontal platform
- Attached to steel surface using builtin magnets on back of positioning device

Mounted to a tripod with 5/8-11 thread mount 7

#### Vertical/Wall Mount Position



In this position, the laser tool can be:

Mounted to ceiling grid rails using the grid mount thumb screws 9



- Attached to drywall or wood walls

using the keyhole mounting slot 10 with No. 8 screw or nail



To attach the laser tool, screw the 1/4-20 mount 2 into the tool and tighten.

Turn the knob 3 and tool together as necessary to properly position the laser line or lines.

To adjust the height of the laser lines, adjust the height using the height adjustment knob 4 on the adjustable platform 1 attachment. Secure position using the alignment position lock 5.

## MAINTENANCE AND SERVICE

Store and transport the tool only in the supplied protective case.

Keep the tool clean at all times.

Do not immerse the tool into water or other fluids.

Wipe off debris using a moist and soft cloth. Do not use any cleaning agents or solvents.

Regularly clean the surfaces at the exit opening of the laser in particular, and pay attention to any fluff of fibers.

If the tool should fail despite the care taken in manufacturing and testing procedures, repair should be carried out by an authorized after-sales service center for Dave White's SitePro instruments. In all correspondence and spare parts orders, please always include the

model number and serial number of the instruments.

All precision instruments should be cleaned, lubricated, checked and adjusted ONLY at a qualified instrument repair station or by the manufacturer, at least once a year.

In case of repairs, send in the instrument packed in its protective case.

# ENVIRONMENT PROTECTION

Recycle raw materials & batteries instead of disposing of waste.



The unit, accessories, packaging & used batteries should be sorted for environmentally friendly recycling in accordance with the latest regulations.

## LIMITED WARRANTY

Dave White's SitePro ("Seller") warrants to the original purchaser only, that KS-series laser tools will be free from defects in material or workmanship for a period of one (1) year from date of purchase.

SELLER'S SOLE OBLIGATION AND YOUR EXCLUSIVE REMEDY under this Limited Warranty and, to the extent permitted by law, any warranty or condition implied by law, shall be the repair or replacement of parts, without charge, which are defective in material or workmanship and which have not been misused, carelessly handled, or mis-repaired by persons other than Seller or an Authorized Service Center. To make a claim under this Limited Warranty, you must return the complete product, transportation prepaid, to any SitePro Authorized Service Center. Please include a dated proof of purchase with your tool. For locations of nearby service centers, email us at info@sitepro.us.com or call 1-855-354-9881.

THIS LIMITED WARRANTY DOES NOT APPLY TO ACCESSORY ITEMS SUCH AS TRIPODS, RODS, HAND LEVELS, FIELD SUPPLIES, TAPES, MOUNTING DEVICES AND OTHER RELATED ITEMS. THESE ITEMS RECEIVE A 90 DAY LIMITED WARRANTY

All rotary lasers and optical instruments will be free from defects in material or workmanship for a period of two (2) years from date of purchase.

ANY IMPLIED WARRANTIES SHALL BE LIMITED IN DURATION TO ONE YEAR FROM DATE OF PURCHASE. SOME STATES IN THE U.S., AND SOME CANADIAN PROVINCES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

IN NO EVENT SHALL SELLER BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING BUT NOT LIMITED TO LIABILITY FOR LOSS OF PROFITS) ARISING FROM THE SALE OR USE OF THIS PRODUCT. SOME STATES IN THE U.S., AND SOME CANADIAN PROVINCES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

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THIS LIMITED WARRANTY APPLIES ONLY TO PRODUCTS SOLD WITHIN THE UNITED STATES OF AMERICA, CANADA AND THE COMMONWEALTH OF PUERTO RICO. FOR WARRANTY COVERAGE WITHIN OTHER COUNTRIES, CONTACT YOUR LOCAL SITEPRO DEALER OR IMPORTER.

## TECHNICAL DATA

	KS 2L	KS 2LG
Accuracy	± 1/8-in at 100 ft (±3 mm at 30 m)	± 1/8-in at 100 ft (±3 mm at 30 m)
Leveling		
Leveling Type	Self-Leveling	Self-Leveling
Compensation	Magnetic Dampening with Lock Switch	Magnetic Dampening with Lock Switch
Leveling Range	± 3°	± 3°
Beam	Red	Green
Laser Emission Angle	180 degrees	180 degrees
Laser Diode	635 nm <1mW	520 nm <1mW
Laser Hazard Class	Hazard Class 2	Hazard Class 2
Operating Range		
without Detector	100 ft (30 m) dependent on illumination of work area	100 ft (30 m) dependent on illumination of work area
with Detector (Optional)	325 ft (100 m)	325 ft (100 m)
Environment	+14° F to 113° F (-10° C to 45° C)	+14° F to 113° F (-10° C to 45° C)
Power Source	Four (4) AA Alkaline Batteries	Four (4) AA Alkaline Batteries
Run Time (typical)	18+ hrs of continuous use	4+ hrs of continuous use
Dimension	4.5 x 1.75 x 3.0-in (110 x 45 x 76 mm)	4.5 x 1.75 x 3.0-in (110 x 45 x 76 mm)
Weight (no batteries)	0.6 lb (275 g)	0.6 lb (275 g)

## IMPORTANT SAFETY INSTRUCTIONS



Read all instructions. Failure to follow all

instructions listed below may result in hazardous radiation exposure, electric shock, fire and/or serious injury.

All labels on your laser are for your safety and must not be removed. Removing labels increases the risk of exposure to laser radiation. Do not throw this manual away.

If glass light house breaks when dropped, contact customer service immediately. Broken glass can cause laceration hazard and unit to lose its IP rating.



DO NOT direct the laser beam at persons or animals and do not stare into the laser beam

yourself. This tool produces laser class 2 laser radiation and complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007. This can lead to persons being blinded.

DO NOT remove or deface any warning or caution labels. Removing labels increases the risk of exposure to laser radiation.

Use of controls or adjustments or performance of procedures other than

those specified in this manual, may result in hazardous radiation exposure.

ALWAYS make sure that any bystanders in the vicinity of use are made aware of the dangers of looking directly into the laser tool.

DO NOT place the laser tool in a position that may cause anyone to stare into the laser beam intentionally or unintentionally. Serious eye injury could result.

**ALWAYS** position the laser tool securely. Damage to the laser tool and/or serious injury to the user could result if the laser tool falls

ALWAYS use only the accessories that are recommended by the manufacturer of laser tool. Use of accessories that have been designed for use with other laser tools could result in serious injury or unsatisfactory performance.

DO NOT use this laser tool for any purpose other than those outlined in this manual. This could result in serious injury or unsatisfactory performance.

DO NOT leave the laser tool "ON" unattended in any operating mode.

**DO NOT disassemble the laser tool.**There are no user serviceable parts inside. Do not modify the product in

any way. Modifying the laser tool may result in hazardous laser radiation exposure.

#### **WORK AREA SAFETY**

Keep work area clean and well lit. Cluttered or dark areas invite accidents.

DO NOT operate the laser tool around children or allow children to operate the laser tool. Serious eye injury could result.

DO NOT use instruments, attachments and accessories outdoors when lightening conditions are present.

#### **ELECTRICAL SAFETY**

Batteries can explode or leak, cause injury or fire. To reduce this risk, always follow all instructions and warnings on the battery label and package.

Remove the batteries from the tool when not using it for extended periods. When storing for extended periods, the batteries can corrode and discharge themselves.

DO NOT short any battery terminals.

DO NOT charge alkaline batteries.

DO NOT mix old and new batteries.

Replace all old batteries at the same time with new batteries of the same brand and type.

DO NOT mix battery chemistries.

Dispose of or recycle batteries per local code.

DO NOT dispose of batteries in fire. Keep batteries out of reach of children.

#### PERSONAL SAFETY

Stay alert, watch what you are doing and use common sense when operating a tool. Do not use a tool while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating a tool may result in serious personal injury or incorrect measurement results.

Use safety equipment. Always wear eye protection. Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.

**DO NOT use the laser viewing glasses** as safety goggles. The laser viewing glasses are used for improved visualization of the laser beam, but they do not protect against laser radiation.

DO NOT use the laser viewing glasses as sun glasses or in traffic. The laser viewing glasses do not afford complete UV protection and reduce color perception.

DO NOT use any optical tools such as, but not limited to, telescopes or transits to view the laser beam. Serious eye injury could result.

DO NOT stare directly at the laser beam or project the laser beam directly into the eyes of others. Serious eye injury could result.

Use caution when using instruments in the vicinity of electrical hazards.

#### **MAGNETS**



Keep the tool, universal mount, and laser target away from cardiac pacemakers. The magnets of the tool and

laser target plate generate a field that can impair the function of cardiac pacemakers.

Keep the tool and laser target away from magnetic data medium and magnetically-sensitive equipment.

The effect of the magnets of the tool and laser target plate can lead to irreversible data loss.

#### **USE AND CARE**

Use the correct tool for your application. The correct tool will do the iob better and safer.

Do not use the tool if the switch does not turn it on and off. Any tool that cannot be controlled with the switch is dangerous and must be repaired. Store idle tool out of the reach of children and do not allow persons unfamiliar with the tool or these instructions to operate the tool.

Tools are dangerous in the hands of untrained users.

Maintain tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the operation. If damaged, repair tool before use. Many accidents are caused by poorly maintained tools.

Use the tool, accessories, etc., in accordance with these instructions and in the manner intended for the particular type of tool, taking into account the working conditions and the work to be performed. Use of the tool for operations different from those intended could result in a hazardous situation.

#### SAVE THESE INSTRUCTIONS.



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