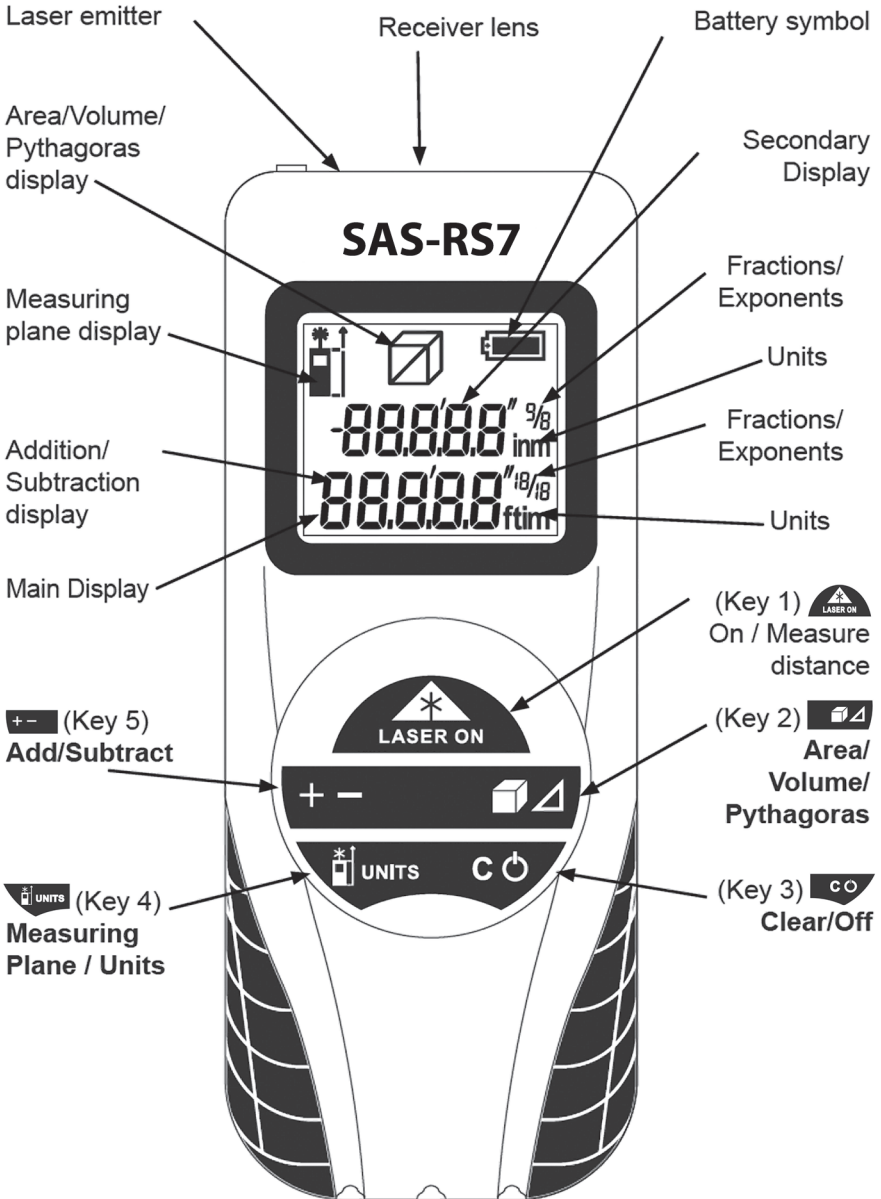


INSTRUCTION MANUAL

MODEL SAS RS-7 LASER DISTANCE METER



KEYS, DISPLAYS AND FUNCTIONS



GENERAL SAFETY RULES

⚠ DANGER!

Do not aim light at persons or animals. Do not stare into the laser light source. Laser light can damage your eyes.

Read the instructions carefully before using the device.

Safe Practices for Using the Moder SAS RS-7

- Do not use as a pointing device.
- Make sure that the safety settings are not disabled.
- Make sure that warning labels and caution labels are not removed.
- Do not open the device with tools (screwdriver, etc.).
- Make sure that the device is not modified.
- Avoid using accessories that are not recommended by the manufacturer.
- Do not aim the laser beam at shiny, reflective surfaces.
- Avoid aiming directly at the sun.

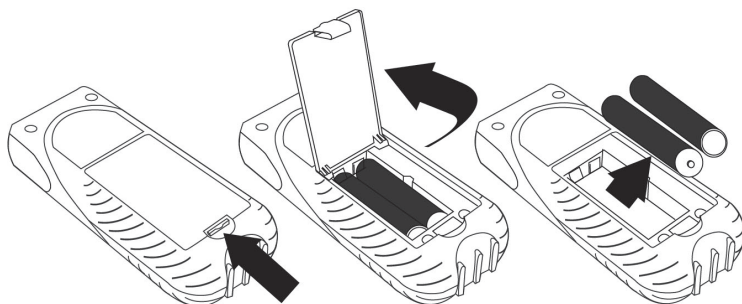
Correct usage

The SAS RS-7 is designed for measuring distances, lengths, and heights and for calculating areas and volumes.

INITIAL OPERATION

Insert the batteries

- To ensure reliability, use alkaline batteries only.
- Remove battery compartment cover.
- Insert two (2) AAA alkaline batteries, observing the polarity.
- Close the battery compartment cover.



Changing the batteries

- Change the batteries when the battery symbol blinkings continuously.

HOW TO USE

Measuring conditions

The quality of the measurement depends on the surfaces to which you are measuring. Strongly reflecting targets deflect the laser beam and cause measuring errors. Non-reflecting, dark surfaces increase the measuring time.

Always begin by making a control measurement.

Measurement errors



Measuring errors are possible in case of:

- Colorless fluids (e.g., water)
- Clean, translucent glass
- Styrofoam or similar semi-translucent surfaces
- Strongly reflecting targets that deflect the laser beam
- Measurements aimed at moving objects

For consistently accurate measurements

- Perform control measurements periodically.
- Perform control measurements before and after important measurements.

Switching on/off (Key 1) / (Key 3)



- Switch on the device by pressing Clear/Off  (Key 1). The device shows the Battery and Measuring Plane symbols until another key is pressed.
- Switch off the device by pressing Clear/Off  (Key 3) for 2 seconds. If no key is pressed for 3 minutes, the device switches off automatically.

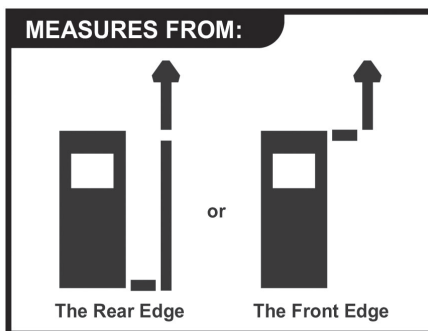
Clear key (Key 3)

- Undo the most recent action by pressing Clear/Off  (Key 3) briefly.

Adjusting the measuring plane

Rear measuring plane is the standard setting.

- For measurement from front edge, press Measuring Plane/Units  (Key 4) briefly.
- For measurement from rear edge, press Measuring Plane/Units  (Key 4) briefly again



Adjusting measuring units



Metric system is the standard setting.

- To change the unit, hold **Measuring Plane/Units**  (key 4) for several seconds.

Possible units:



- meters
- feet-inch-fractions
 - main display up to 1/16 inch
 - secondary display up to 1/8 inch
- inch-fractions
 - main display up to 1/16 inch
 - secondary display up to 1/8 inch

Measuring (Key 1)

- Press and release **On/Measure**  (Key 1) to light the laser.
- Aim active laser at target area.
- Press and release **On/Measure**  (Key 1) again to measure.
The device measures the distance and immediately displays the result in the Main Display.

Continuous measuring



This function enables specific, desired distances to be determined.

- Hold **On/Measure**  (Key 1) for several seconds. Continuous measuring starts, and display shows “trc”
- Press **On/Measure**  (Key 1) briefly. Continuous measuring stops.
The value last measured appears in the Main Display



FUNCTIONS

Add/Subtract (Key 5)




Add:

- Measure the first distance by pressing **On/Measure**  (Key 1).
- Press **Add/Subtract**  (key 5) once.
- Measure the second distance.
The device adds the second measurement to the first measurement. Result shows in the Main Display and the previous value in the Secondary Display.

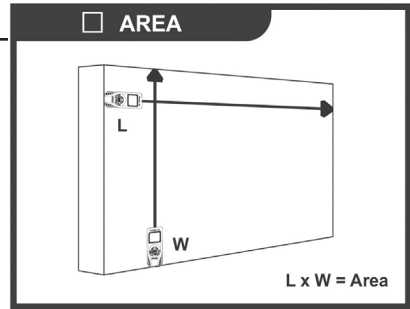
Subtract:

- Measure the first distance by pressing **On/Measure**  (Key 1).
- Press **Add/Subtract**  (key 5) twice.
- Measure the second distance.
The device subtracts the second measurement from the first measurement. Repeat if required. The device displays the result in the Main Display and the previous value in the Secondary Display.





Area

- Press **Area/Volume/Pythagoras**  (key 2) once. The **Area** symbol appears on the display.
- Press **On/Measure**  (Key 1) and measure the first distance (e.g., length).
- Press **On/Measure**  (Key 1) and measure the second distance (e.g., width).

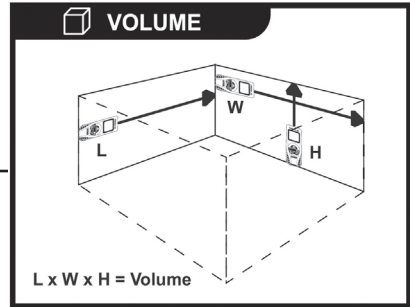
The Area measured is shown in the **Main Display** and the last distance measured is in the **Secondary Display**.






Area or Volume

- Press **Area/Volume/Pythagoras**  (key 2) twice. The **Volume** symbol appears on the display.
- Press **On/Measure**  (Key 1) and measure the first distance (e.g., length).
- Press **On/Measure**  (Key 1) and measure the second distance (e.g., width).
- Press **On/Measure**  (Key 1) and measure the third distance (e.g., height).

The result is shown in the **Main Display** and the last distance measured is shown in the **Secondary Display**.

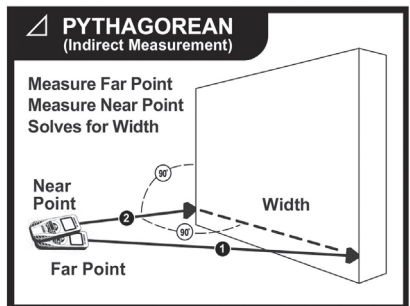
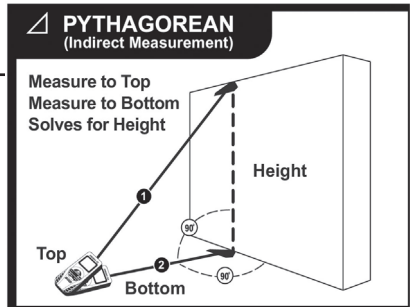


Pythagoras (Indirect)


- Press **Area/Volume/Pythagoras**  (key 2) three times. The **Pythagoras** symbol appears on the display.
- Press **On/Measure**  (Key 1) and measure the first distance (diagonal measurement).
- Press **On/Measure**  (Key 1) and measure the second distance (horizontal measurement).

The result is shown in the **Main Display** and the last distance measured is shown in the **Secondary Display**.

Note: Second measurement must be perpendicular (90° angle) to measured surface.



TROUBLESHOOTING

- If the laser remains lit, or the value in the **Main Display** keeps changing, flashing, or showing "trc" you are in Continuous Measure mode. Press **On/Measure**  (Key 1) once to exit this mode.
- If the message **InFo** appears with a number, follow the instructions in the following table.

No.	Cause	Remedy
204	Calculation error	Measure again.
252	Temperature too high	Let the device cool down.
253	Temperature too low	Warm the device up.
255	Reception signal too weak, measuring time too long	Change target surface (e.g., white paper).
256	Input signal too high	Change target surface (e.g., white paper)
257	Measuring error, too much background light	Shadow the target area.
258	Measurement outside of the measuring range	Target is beyond range. Move closer to target.
260	Laser beam interrupted If RS-7 does not turn on	Repeat the measurement. Check and replace batteries

SPECIFICATIONS

Measuring Range	4" (10 cm) to 100' (30.5 m)
Accuracy	+/- 1/8" (3 mm) or better over entire range
Smallest unit displayed	1/16 (1 mm)
Laser class	2
Laser type	635 nm, < 1 mW
Automatic shut-off	After 3 minutes
Continuous measuring	Yes
Addition/Subtraction	Yes
Area	Yes
Volume	Yes
Pythagoras (Indirect)	Yes
Metric and Imperial Units	Yes
Dimensions	4.75 x 2 x 1" (118 x 50 x 26 mm)
Battery life	Up to 3,000 measurements
Weight	3.22 ounces (100g)
Temperature range:	
- Storage	-13°F to +158°F (-25°C to +70°C)
- Operation	32°F to +104°F (0°C to +40°C)

HELPFUL USER HINTS

- a. To clean your Model SAS RS-7 use a soft, damp cloth. Do not immerse in, or spray with water. Avoid all liquid or abrasive cleaners.
- b. The electronic module in your SAS RS-7 was sealed after factory calibration; therefore, no user serviceable parts or adjustments are required.
- c. Your SAS RS-7 is temperature compensated. However, small variations in accuracy may occur with changes in altitude and humidity. These variations typically can be ignored for estimating purposes.
- d. If moved from one temperature environment to another, allow the SAS RS-7 time to adjust to the surrounding air temperature before operating.

ELECTROMAGNETIC COMPATIBILITY (EMC)

Warning

Possible disturbance of other devices (e.g. safety equipment, medical equipment) due to electromagnetic radiation.

Observe the safety instructions of the respective devices. Despite the compliance with all requirements of the corresponding directives and norms, a disturbance of other devices is possible.

FCC

This equipment has been certified to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC rules.

FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

WARRANTY

Warranty Repair Service – U.S.A.

SAS R&D Services, Inc. warrants this product against defects in materials and workmanship for a period of one (1) year from the date of original consumer purchase in the U.S. If a defect exists during the warranty period, we will either repair (using new or remanufactured parts) or replace (with a new or remanufactured calculator) the product at no charge.

THE WARRANTY WILL NOT APPLY TO THE PRODUCT IF IT HAS BEEN DAMAGED BY MISUSE, ALTERATION, ACCIDENT, IMPROPER HANDLING OR OPERATION, OR IF UNAUTHORIZED REPAIRS ARE ATTEMPTED OR MADE. SOME EXAMPLES OF DAMAGES NOT COVERED BY WARRANTY INCLUDE, BUT ARE NOT LIMITED TO, BATTERY LEAKAGE, BENDING, A BLACK "INK SPOT" OR VISIBLE CRACKING OF THE LCD, WHICH ARE PRESUMED TO BE DAMAGES RESULTING FROM MISUSE OR ABUSE.

To obtain warranty service in the U.S., contact info@sasrad.com

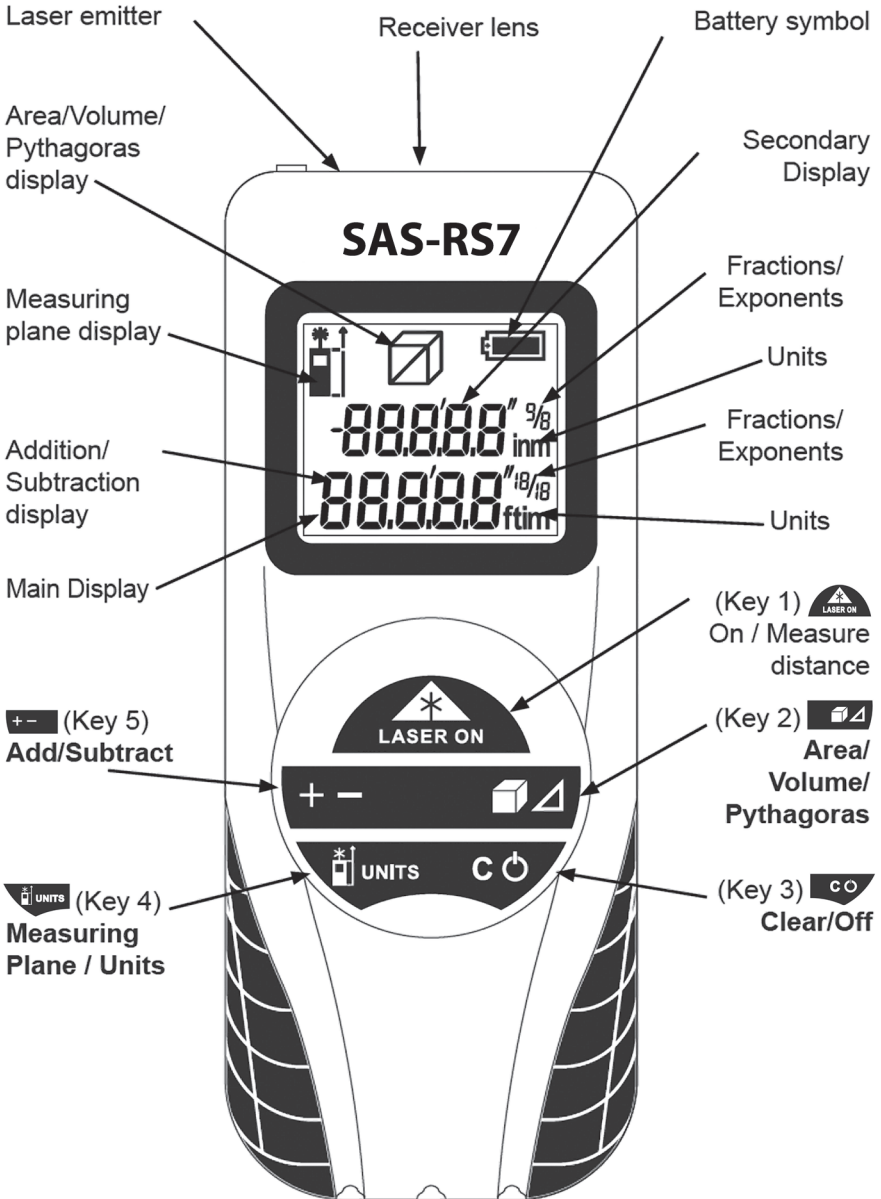
Disclaimer

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IN NO EVENT WILL WE BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY DEFECT IN THE PRODUCT OR ITS DOCUMENTATION.

The warranty, disclaimer, and remedies set forth above are exclusive and replace all others, oral or written, expressed or implied. No dealer, agent, or employee is authorized to make any modification, extension, or addition to this warranty.

KEYS, DISPLAYS AND FUNCTIONS





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