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› SG SURGOAL Laser Measure LS 120m/393.7ft User Manual

SG SURGOAL LS

SG SURGOAL Laser Measure LS 120m/393.7ft User Manual

1. INTRODUCTION

This manual provides detailed instructions for the safe and effective use of your SG SURGOAL Laser Measure LS. This digital laser measurement tool offers high accuracy for various measurement tasks, including distance, area, volume, and angle calculations. Please read this manual thoroughly before operating the device.

2. SAFETY INFORMATION

The SG SURGOAL Laser Measure LS is a Class II laser product. Adhere to the following safety guidelines:

- Do not stare directly into the laser beam during operation.
- Avoid looking directly into the beam with optical aids, as this can cause serious laser radiation exposure.
- Keep the device out of reach of children.
- Always read and understand the user manual completely before initial use.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- Handheld Laser Distance Meter (x1)
- User Manual (with maintenance card) (x1)
- Certificate (x1)
- Laser Measure Strap (x1)
- Type-C Data Line (x1)
- Packing Box (x1)

PRODUCT LIST



Image: Package contents of the SG SURGOAL Laser Measure LS.

4. PRODUCT OVERVIEW AND CONTROLS

Familiarize yourself with the device's display and button functions.

DATE STORAGE

Review the work easily



Image: Front view of the laser measure with key functions and display elements labeled.

- **Power On / Measurement Key:** Activates the device and initiates measurements.
- **Function Key:** Cycles through measurement modes (e.g., distance, area, volume, Pythagoras).
- **Addition Key (+):** Adds measurements.
- **Reference Key / Sound Key:** Changes the measurement reference point (front/back) and toggles sound.
- **Save Key:** Stores current measurement data.
- **Subtraction Key (-):** Subtracts measurements.
- **Unit Key:** Changes measurement units (m/in/ft).
- **Clear Key / Off Key (C):** Clears the current measurement or turns off the device.
- **USB Type-C Port:** For charging the device.

5. SETUP

5.1 Charging the Device

The SG SURGOAL Laser Measure LS is equipped with a built-in Li-ion rechargeable battery. Use the provided Type-C data line to charge the device. Connect the Type-C cable to the device's charging port and the other end to a 5V power supply (e.g., a USB wall adapter or computer USB port). A full charge

allows for over 20,000 measurements.

5.2 Powering On/Off

Press the **Power On / Measurement Key** to turn on the device. To turn off, press and hold the **Clear Key / Off Key (C)**, or the device will automatically shut down after 120 seconds of inactivity.

6. OPERATING MODES

The device offers multiple measurement modes to suit various applications. Press the **Function Key** to cycle through the available modes.

6.1 Reference Point Selection

The measurement reference point can be set to either the front or the back of the device. Press the **Reference Key** to toggle between these options. The selected reference point will be indicated on the display.

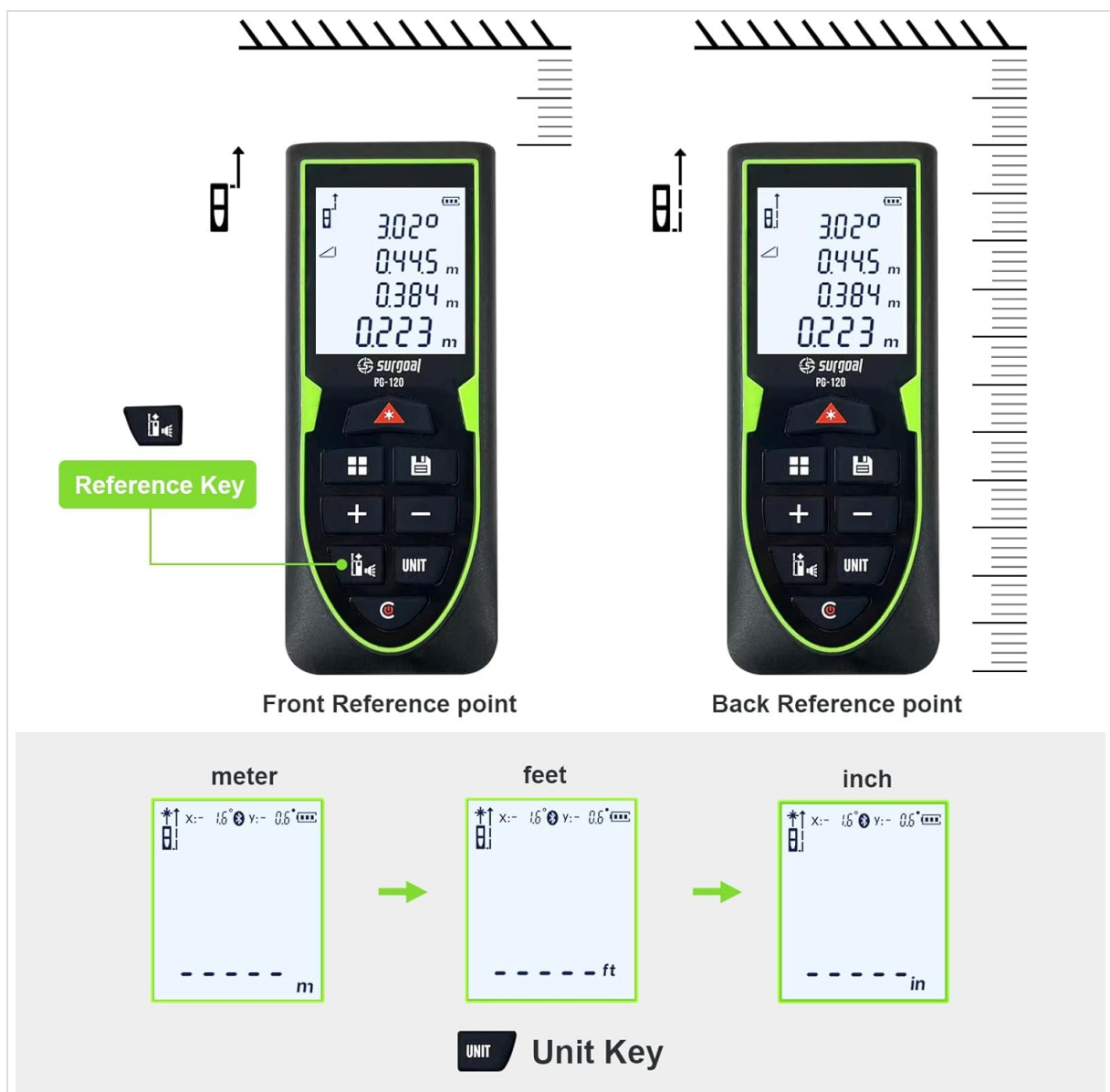


Image: Illustration of front and back reference points and unit conversion.

6.2 Basic Measurement Modes

- **Single Distance Measurement:** Press the **Power On / Measurement Key** once to activate the laser, then press it again to take a single measurement.

- **Continuous Measurement (Tracking):** Hold the **Power On / Measurement Key** to enter continuous measurement mode. The display will update in real-time as the device is moved. This mode also shows maximum and minimum distances.
- **Area Measurement:** Select the area mode using the **Function Key**. Take two consecutive distance measurements (length and width). The device will automatically calculate and display the area.
- **Volume Measurement:** Select the volume mode. Take three consecutive distance measurements (length, width, and height). The device will calculate and display the volume.
- **Pythagorean Theorem Measurement:** Select the Pythagorean mode. Follow the on-screen prompts to take the required measurements (e.g., two sides of a right triangle) to calculate an unknown side.

MULTIPLE MEASUREMENT MODES

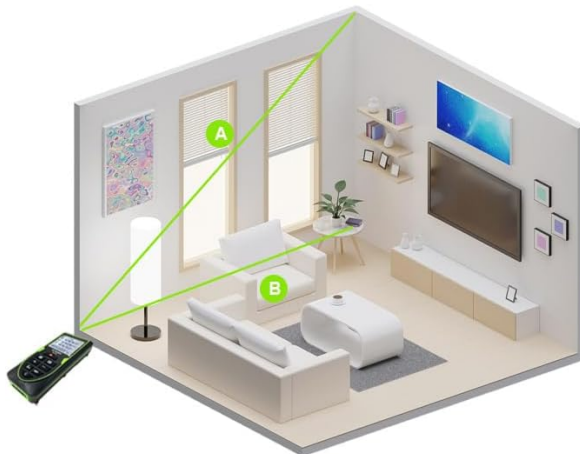
DISTANCE



AREA



PYTHAGOREAN



VOLUME



Image: Visual representation of multiple measurement modes.

6.3 Angle Sensor

The integrated electronic angle sensor allows for accurate angle measurements, useful for various applications such as determining slopes or leveling. The angle will be displayed on the screen.

ELECTRONIC ANGLE SENSOR



Image: Laser measure displaying an angle using its electronic angle sensor.

6.4 Addition and Subtraction

After taking a measurement, you can use the **Addition Key (+)** or **Subtraction Key (-)** to add or subtract subsequent measurements from the current total.

7. UNIT CONVERSION

The device supports multiple measurement units. Press the **Unit Key** to cycle through available units: meters (m), inches (in), and feet (ft). Area and volume units (m², in², ft², m³, in³, ft³) will automatically adjust based on the selected linear unit.

8. DATA STORAGE

The SG SURGOAL Laser Measure LS can store up to 30 groups of historical measurement data. Use the **Save Key** to store a measurement. You can review stored data by navigating through the memory function.

9. MAINTENANCE

- Keep the device clean and dry. Wipe the lens and housing with a soft, damp cloth. Do not use

abrasive cleaners or solvents.

- Store the device in a cool, dry place when not in use.
- Avoid exposing the device to extreme temperatures or direct sunlight for prolonged periods.
- Ensure the Type-C charging port is free from dust and debris.

10. TROUBLESHOOTING

If you encounter issues with your laser measure, consider the following:

- **Device not powering on:** Ensure the battery is sufficiently charged. Connect the device to a 5V power source using the Type-C cable.
- **Inaccurate measurements:** Check that the reference point is correctly set (front or back). Ensure the laser beam is not obstructed and the target surface is suitable for reflection. Clean the laser lens if necessary.
- **Display issues:** Recharge the battery. If the problem persists, contact customer support.

11. SPECIFICATIONS



1 inch

1.9 inch

4.7 inch

±0.07in

High Accuracy

-10°~+40° Working Temperature

120S OFF

Auto power-off

120M 393ft

Distance

Rechargeable Li-ion

GREEN LASER
More bright and visible, good idea for outdoor use

 accuracy ± 0.07 in

 Automatic shutdown 120s

Image: Key specifications and dimensions of the laser measure.

Feature	Specification
Measuring Range	120m / 393.7ft
Measuring Accuracy	± 2.0mm (± 0.07in)
Single Measurement Time	0.5s
Laser Type	500~690nm, Class II, <1MW (Green Laser)
Working Temperature	-10°C to +40°C
Auto Laser Off	30 seconds of no operation
Auto Shutdown	120 seconds of no operation
Battery Type	Rechargeable Lithium-Ion
Charging Port	Type-C (5V)
Measurements per Charge	>20000 times
Material	Plastic
International Protection Rating	IP68
Item Weight	12 Ounces (approx. 340g)
Dimensions (approx.)	11.9cm x 4.8cm x 2.5cm (4.7in x 1.9in x 1in)

12. WARRANTY AND SUPPORT

The SG SURGOAL Laser Measure LS comes with a 1-year warranty. For any questions, technical support, or warranty claims, please contact our customer service team via email. We are committed to providing professional assistance to ensure your satisfaction.