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Walfront EM90

Walfront EM90 Handheld Land Area Meter User Manual

Model: EM90

1. INTRODUCTION

The Walfront EM90 is a handheld GPS-based land area and length measurement instrument designed for various outdoor applications. This manual provides detailed instructions on how to set up, operate, and maintain your device to ensure accurate and reliable performance.

2. PRODUCT OVERVIEW

2.1 Included Components

- EM90 Handheld Land Area Meter
- USB Cable
- Power Adapter
- Portable Rope (Lanyard)
- Instruction Manual



Figure 2.1: EM90 device and included accessories.

2.2 Device Layout and Key Functions

The EM90 features a clear LCD display and a user-friendly button interface for easy operation.

Walfront



Figure 2.2: Front view of the EM90 with key labels.



Figure 2.3: Description of EM90 function keys.

The back of the device clearly displays the model number.



Figure 2.4: Back view of the EM90.

3. SETUP

3.1 Charging the Device

Before first use, fully charge the EM90. Connect the provided USB cable to the device and the power adapter, then plug the adapter into a standard 100-240V AC outlet. The charging indicator on the device will show its status. A full charge ensures optimal operation time.

3.2 Initial Power On

To power on the device, **long press** the Power Key (). The device will boot up and attempt to acquire a GPS signal. Ensure you are in an open area with a clear view of the sky for best signal reception.

4. OPERATING INSTRUCTIONS

4.1 Power On/Off and Backlight

- **Power On/Off:** Long press the Power Key ().
- **Backlight:** Short press the Power Key () to toggle the backlight on or off, or adjust its intensity in settings.

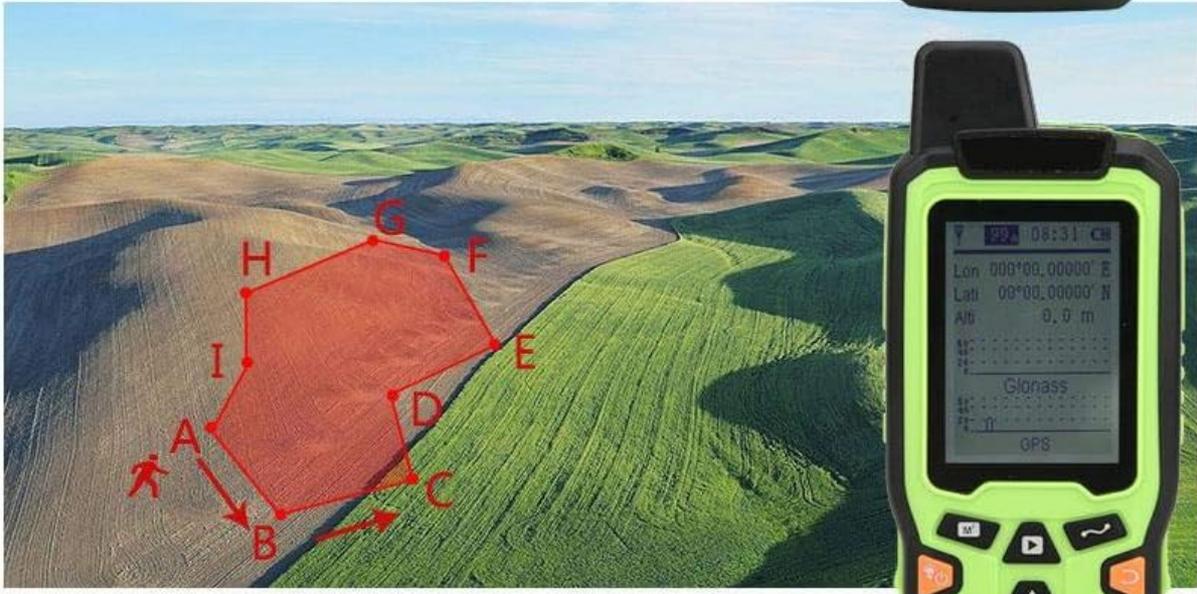
4.2 Area Measurement

Press the Area Measurement Key (M²) to enter the area measurement mode. There are three primary methods:

1. **Auto Track Measurement:** Walk the perimeter of the area you wish to measure. The device will automatically record your path and calculate the enclosed area.
2. **Collected Points Measurement:** Manually mark specific points (vertices) of the area. The device will connect these points to form a polygon and calculate its area.
3. **Quadrilateral Measurement:** For rectangular or square areas, you may define specific corners.



Length and width measurement



Manual fixed-point measurement

Figure 4.1: Example of length and width measurement.

Distance measurement



Figure 4.2: Example of manual fixed-point measurement.

There are totally 12 function keys, they are

【 M^2 】 : Area measurement, there are three kinds of measurement methods : auto track measurement, collected points measurement, Quadrilateral measurement.

【  】 : Length measurement, there are two kinds of measurement methods: auto track measurement, collected points measurement

【  】 : Long press the power on/off, short press switched the backlight.

【  】 : Return to previous menu.

【  】 : Move the cursor up or implement plus function.

【  】 : Move the cursor down or implement reduce function.

【 OK 】 :The end of measurement or complete setting.

【  】 : setting for price

【  】 : setting for mountain slope.

【  】 : Setting

【  】 : view the results.

Figure 4.3: Various measurement applications including automatic area and slope.

4.3 Length Measurement

Press the Length Measurement Key (↔) to enter the length measurement mode. Similar to area measurement, you can use:

- **Auto Track Measurement:** Walk along the path or line you want to measure.
- **Collected Points Measurement:** Mark start and end points, or multiple points along a path, to calculate the total length.

4.4 Distance Measurement

The device can also measure the distance between two or more points. This is useful for straight-line distances or cumulative distances along a path.



Figure 4.4: Examples of distance measurement.

4.5 Settings

Press the Settings Key (⚙) to access device settings. Here you can adjust:

- **Area Unit:** Change between square meters, acres, etc.
- **Length Unit:** Change between meters, kilometers, feet, miles, etc.
- **LCD Backlight:** Adjust brightness or set auto-off time.
- **Time UTC:** Set time zone offset.

Use the Up (▲) and Down (▼) keys to navigate and the OK key to confirm selections.

4.6 Record Viewing

Press the Record Key () to view previously saved measurement data. You can scroll through records and review details of past measurements.

5. MAINTENANCE

- **Cleaning:** Wipe the device with a soft, dry cloth. Avoid using harsh chemicals or abrasive cleaners.
- **Storage:** Store the device in a cool, dry place away from direct sunlight and extreme temperatures when not in use.
- **Battery Care:** For optimal battery life, avoid fully discharging the device frequently. Charge it regularly, even if not in constant use.

6. TROUBLESHOOTING

If you encounter issues with your EM90, please refer to the following common problems and solutions:

- **Device does not power on:**
 - Ensure the device is fully charged. Connect it to the power adapter and allow it to charge for at least 2 hours.
 - Confirm the power adapter and USB cable are functioning correctly.
- **Inaccurate measurements or poor GPS signal:**
 - Ensure you are in an open outdoor area with a clear, unobstructed view of the sky. Buildings, dense foliage, and adverse weather conditions can interfere with GPS signal reception.
 - Allow sufficient time for the device to acquire a stable GPS signal before starting measurements.
 - Movement during signal acquisition can affect accuracy. Remain stationary until a strong signal is indicated.
- **Display is dim or unresponsive:**
 - Check the backlight settings in the device menu.
 - Ensure the battery is adequately charged.

If problems persist, please contact Walfront customer support for further assistance.

7. SPECIFICATIONS

Model	EM90
Item Weight	11.4 ounces
Power Input	100-240V (via adapter)
Included Components	Land Area Meter, Portable Rope, USB Cable, Adapter, Instruction Manual

8. WARRANTY AND SUPPORT

This product comes with a standard manufacturer's warranty. For specific warranty details, please refer to the

documentation included with your purchase or contact Walfront customer support. For technical assistance or service inquiries, please visit the official Walfront website or contact their customer service department.