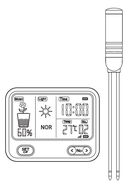
Wireless Soil Monitor

USER MANUAL

(HG01)

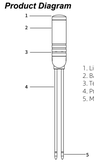


Please read this manual carefully before using this product.

Introduction

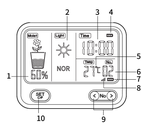
Thank you for choosing this 4-in-1 Soil Monitor. This product is designed using wireless RF technology to remote monitoring the soil moisture, ambient light and temperature of your plants, and displaying time on the screen. Features such as the large LCD display, stainless steel probe, waterproof housing and multi-device compatibility all contribute to the ease of use and the reliability you would expect from it.

Product Diagram



1. Light sensor
2. Battery compartment/cover
3. Temperature sensor
4. Probe
5. Moisture sensing head

Soil Sensor (Transmitter)



Soil Monitor (Receiver)

1. Soil moisture readout
2. Light intensity readout
3. Time display
4. Battery level display (monitor)
5. Temperature readout
6. Serial number of the sensor displayed on the screen
7. Battery level display (soil sensor)
8. Wireless transmission signal icon:
   - The icon displays, normally indicating it is within the transmission range.
   - The icon blinks indicating it is out of range.
9. Number switch button: Press < or > to switch between different sensors displayed on the screen.
10. SET button, °C/°F switch button

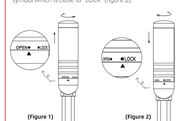
Battery Installation

A. Monitor

1. Remove the battery cover.
2. Insert 2 alkaline 1.5V AA batteries, make sure batteries are oriented properly.
3. Put the battery cover back into place.

B. Sensor

1. Rotate the battery cover counterclockwise to the right until the ▲ symbol aligns with the "●" symbol which is close to "OPEN" (figure 1).
2. Remove the battery cover.
3. Insert 1 alkaline 1.5V AA battery, make sure battery is oriented properly.
4. Put the battery cover back into place, rotate the battery cover clockwise to the left until the ▲ symbol aligns with the "●" symbol which is close to "LOCK" (figure 2).



(Figure 1) (Figure 2)

Pairing

Before the first use, it's necessary to pair the product. The monitor and sensor will automatically pair when all batteries are installed.

Note: Please ensure distance between the monitor and the sensor is within 5 meters when installing batteries.

If you have purchased multiple sensors, follow the steps below to automatically pair the product.

1. Install batteries in the monitor first.
2. Install battery in the first sensor, then attach the number label "1" onto the housing of sensor.
3. Install battery in the second sensor, then attach the number label "2" onto the housing of sensor.
4. Follow above steps to install batteries and attach labels for all sensors one by one, make sure the monitor displays the same serial number as the sensor.
5. The monitor and sensor will automatically pair when all batteries are installed.

Note:

1. If the pairing order is incorrect, press and hold the No(>) button on the monitor for 10 seconds to restore factory default settings, and then re-pair.
2. In order to ensure the accuracy of data display and the reliability of the product, it is recommended not to add more than 6 sensors.

Moisture Measurement

1. Make sure the probes are clean before use.
2. Soften the soil to be measured, break up pieces if it is hardened. Remove grass, leaves, pebbles and other debris.
3. Gently insert the probe vertically into the softened soil. Press the soil tightly around the probes so that the probes are in close contact with the soil.
4. Read the % moisture value in the display.

Note:

1. It is recommended that probe head should be inserted into the soil at least 10cm when make the measurement.
2. When the soil moisture environment is stable, in order to save the battery power consumption of the sensor, the sensor will not continuously transmit data to the monitor. If there is no change in soil moisture readings after watering, please wait up to 30 minutes and then read the data.
3. The soil moisture is measured according to the national standard (mass moisture content) to obtain data. For example, 20% moisture refers to 200g of water in 1000g of soil. Please note that different measurement methods may yield different data.

200g water
200g water + 800g dry soil
x100% =

Low Moisture Alarm

When the soil moisture level drops below 10%, the percentage symbol and the flower pot icon on the screen will flash. This function helps to remind you to water the plants and maintain their health.

Light Intensity Measurement

Appropriate light does well in plant's growth (some plants need more light than others). This function helps you understand the level of light and determine if adequate illumination for photosynthesis is being provided to the plants.

The sensor can measure the intensity of light automatically and send the data to the monitor and display on the screen. Here is the list:

Low Light		Normal Light		High Light	
LOW	LOW+	NOR	NOR	NOR+	HIGH	HIGH+

Temperature Measurement

The sensor can measure the environment temperature of the plant automatically and send the data to the monitor and display on the screen.
Press SET button to set the unit of temperature as ℃ or ℉.

Time Setting

Press and hold the SET button for 3 seconds to enter the time setting mode, follow the steps below to set the time:
1. Use the number switch buttons < or > to choose either 24-hour or 12-hour format, press SET button to confirm and switch to the hour setting.
2. Use the number switch buttons < or > to adjust the hours, press SET button to confirm and switch to the minute setting.
3. Use the number buttons < or > to adjust the minutes, press SET button to confirm and save the time.

Disconnection Reminder

If the sensor (transmitter) and monitor (receiver) are placed beyond the specified working range, the wireless signal on the display screen will blink continuously, indicating that the sensor and monitor have disconnected. After 48 hours, the sensor that is out of range will no longer be displayed on the screen. Please ensure that the sensor and monitor are within the working range to maintain a reliable connection.

Important Notes:

1. Do not cover the light sensor.
2. Do not put the probes into water or other liquids.
3. Do not force the probes into hard soil or at hard objects, as this can easily damage the probes.
4. Please use good quality alkaline batteries.
5. Water may not penetrate the soil evenly, try measuring at different locations and depths to get an accurate reading.
6. Please keep the unit away from metal objects, refrigerators, iron doors, metal surface, etc.
7. Please keep the sensor at least 1 meter above the ground level, as close proximity to the ground can affect the wireless working range.
8. It is recommended to take out the probes from the soil and wipe them every 1-2 weeks to ensure the accuracy of data.
9. Please note that the actual operating distance of wireless products may vary due to different environmental conditions.

Manufacturer's Declaration

1. This product is designed specifically for planting assistance, aiming to help users better understand soil conditions and improve the planting efficiency. It provides users with quick and convenient soil testing capabilities.

2. We have made every effort to ensure the accuracy and reliability of the product. However, we cannot guarantee its suitability for scientific research or laboratory analysis in professional fields.

3. The results provided by the soil testing device are based on the analysis of its internal sensors and algorithms. While every effort has been made to ensure accuracy, there may still be some margin of error. Therefore, when making any decisions or adjusting planting practices, please consider other relevant factors and seek professional advice.

FCC Statement

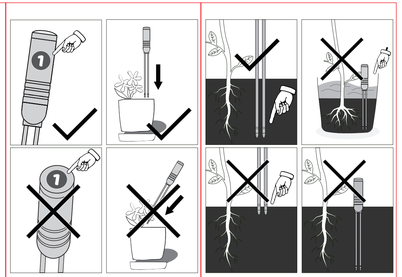
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

Made in China

Specifications:

Soil Sensor	
Frequency	433.92MHz
Working Range	60-100 meters in open space
Soil Moisture Range	0% to 100%
Moisture Accuracy	±3% (0-64%); ±5% (65-100%)
Resolution	1%
Temperature Measurement Range	-20℃ to 80℃
Temperature Accuracy	±1℃
Light Intensity	0-15000LUX
Housing Material	ABS
Probe Material	Stainless Steel
Probe Length	160mm
Power Supply	1*AA battery (not included)
Standby Time	12-18 months
IP Rating	IPX5
Soil Monitor	
Frequency	433.92MHz
Display	LCD screen (83 x 46.5mm)
Time Display	12H/24H
Housing Material	ABS
Power Supply	2*AA batteries (not included)
Standby Time	10-12 months
Dimensions	98 x 77 x 22 mm



Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: 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.

This device complies with FCC radiation exposure requirement set forth for an uncontrolled environment.