



GrowCube- Smart Automatic Watering Kit USER GUIDE

© ELECROW All Rights Reserved.

www.elecrow.com

<u>I</u> IMPORTANT SAFETY WARNING!

Please read through this manual before using the device and then keep it safe for future reference.
 Please follow the instructions in this manual carefully and ensure that you follow all the warnings

and instructions marked.

 If you still have any questions about how to use the device after reading this manual, please contact techsupport@elecrow.com

- Cleaning and maintenance should not be carried out unsupervised by children.

-WARNING: Use the detachable power supply provided for the device only.

Contents

Chapter 1. Product Introduction	
 1.1 Product Overview 1.2 Key Features 1.3 Product Appearance And Description 1.3.1 Host Appearance 1.3.2 Accessories 	
Chapter 2. Get Started	04
 2.1 Installation 2.1.1 Steps To Use GrowCube 2.1.2 Install APP 2.2 Network Configuration 2.2.1 Networking Mode 2.2.2 Direct Connection Mode 2.3 Watering Parameter Settings 	
Chapter 3. Functions Introduction	24
 3.1 Plant Monitoring 3.2 Plant Details 3.3 Manual Watering 3.4 Modify Plant's Watering Settings 3.4.1 Smart Watering Mode 3.4.2 Auto Watering Mode 3.5 Diary 3.6 Delete Plant 3.7 Garden 3.8 Device Management 3.8.2 Switch Device 3.8.3 Rename Device 3.8.4 Delete Device 3.8.5 Reset Device Network 3.8.6 Update Device Firmware 	
Chapter 4. Abnormal Reminder	38
 4.1 Water Shortage Reminder 4.2 Sensor Not Connected Reminder 4.3 Sensor Abnormal Reminder 4.4 Water Pipe Blockage Reminder 4.5 Device Locked Reminder 	
Chapter 5. Product Parameters	43
Chapter 6. Troubleshooting	44
FAQ	45
Customer Service	46

Chapter 1 Product Introduction

1.1 Product Overview

GrowCube is a smart watering product designed by Elecrow. It offers you a variety of plant watering methods, with four independent soil moisture sensors and water outlets design, GrowCube can water four plants intelligently and independently. In addition, by monitoring soil moisture in real-time, GrowCube can water plants autonomously and take good care of your plants.

1.2 Key Features

Intelligent Automatic Watering

① Obtaining soil moisture data for plant growth in real-time by reliable soil moisture sensors

② GrowCube APP contains over 3000 kinds of plants growth humidity guidance data,

keeping a comfortable growth humidity environment for the plant

③ Alternative option to avoid watering during the sun exposure period

APP Exclusive Plant Housekeeper

① Illustrating the plant soil moisture curves and recording the watering operations

- 2 Dedicated plant diary for recording the growth process
- ③ Real-time display of environmental temperature & humidity and soil humidity
- ④ Massive knowledge-base database for plant maintenance to better cultivate your lovely plants

Comfortable Use in Multiple Scenarios

① Three watering modes, it also supports watering manually and timing quantitatively

- 2 Equipped with 1.5L large water tank, provides enough water for 2 weeks by one refill
- ③ Availability on external water supply is sufficient for large outdoor watering demand

④ The original nozzle is suitable for various sizes of plant pots

⑤ Simple and stylish appearance matches the watering scenarios in office, home and many other places

⑥ GrowCube APP supports multi devices working simultaneously, switching freely between different usage scenarios

O Offline operation - the device can operate normally when there is no active network

Easy to Operate and Easy to Use

- ① Easy and quick installation with the aid of sensor magnetic plug-and-play interface design
- ② One-click settings to start the GrowCube APP
- ③ Adding water is easy and convenient
- ④ Built in smart protection systems for water shortage alarm, block prevention and sensor detection.

1.3 Product Appearance And Description

1.3.1 Host Appearance

Front And Side



Reset Button Hole

Press and hold the reset button with something like a needle for 3 seconds then restore GrowCube to factory settings.

Temperature And Humidity Sensor

Measure the ambient temperature and humidity of GrowCube.

Unlock Button



GrowCube will be locked when the blockage occurs or the water tank is empty or the sensor is abnormal for more than 3 times. After troubleshooting or adding water, press the unlock button to restore normal operation of the device. If you hold down the button for 3 seconds, the network will be reconfigured.

Back

External Water Tank Hole

When an external large water tank is required, using a water pipe to connect the external water tank from this hole.

Power Supply

12V/2A power adapter interface.



Soil Moisture Sensor Interface A/B/C/D

Interfaces for independent 4-way soil moisture sensor

Water Outlet Interface a/b/c/d

Independent four water outlets. Using water outlet and soil moisture sensor in pair. **A-a, B-b, C-c, D-d.**

• 1.3.2 Accessories



Chapter 2 Get Started

2.1 Installation

• 2.1.1 Steps To Use GrowCube

• 1. Install the filter, install the filter at the water inlet of the water tank, and insert it vertically as shown in the figure right.



• 2. Connect the soil moisture sensor to the GrowCube and insert the other end into the soil. There are four sensor interfaces(Marked A to D) on the GrowCube, and you can connect a sensor to any one of them. For example, when using port a to water plants, connect the sensor to port A of the GrowCube (Pay attention to the buckle position of the sensor connector and device interface). Then insert the soil moisture sensor vertically into the soil, the insertion depth should be more than 2/3 of the sensor, and the sensor insertion position should be as close as possible to the rhizome of the plant.



The following is an example of the wrong way to insert the sensor:

- A: The insertion position is too far from the root of the plant
- B: The sensor is inserted too shallow



C: The sensor is inserted too deep





• 3. Cut water pipes based on the distance from GrowCube to plants.



4. Connect the cut water pipe to GrowCube. Note that when you use sensor "A" for the plant, you should use a water outlet "a" at the same time.



• 5. Connect the water pipe to the nozzle.



• 6. Bend the nozzle to fit the size of the plant disk so that the nozzle can reach the root area of the flower as much as possible.







Single root plant

Multi-rooted plant

Big root plant



Small size pot



Big size pot









• 7. Fix the nozzle through the bracket if necessary.



• 8. Fill the GrowCube tank with water, being careful not to exceed the maximum level.



According to different usage scenarios, an external water source can also be used to supply water. First, unplug the rubber plug on the back of GrowCube. Then, insert the water tube into the water cube through the external hole. Next, unplug the filter at the water inlet inside the GrowCube box, and insert the water pipe into the water inlet. In order to prevent the GrowCube from alarming due to lack of water in the water pipe, please keep the inlet and outlet pipes full of water (via manual watering), and then set the auto watering mode or smart watering mode.













 9. Turn on the power supply of GrowCube, wait for the red and blue lights to flash alternately, which means the state of waiting for network configuration.



2.1.2 Install APP

Android users go to Google Play to search for "GrowCube ", download and install it. iOS users go to the Apple Store to search for "GrowCube", download and install it.



2.2 Network Configuration

The GrowCube has two working modes, **Direct Connection Mode** and **Networking Mode**. We recommend users to use the networking mode, which is connected to the router wifi at home or the wifi in the office environment, the device and the mobile phone can establish a local area network connection. Multiple devices can be added this way. Of course, if you are in an environment without WiFi, you can also use direct connection mode. The device itself will open access point, allowing the phone to connect directly. In direct connection mode, only one device can be controlled at the same time and only locally stored plants can be added instead of using the cloud database.

• 2.2.1 Networking Mode

Before configuring the network for the GrowCube, let's take a look at how GrowCube **Networking Mode** works:



The GrowCube is connected through the home / office WiFi network, it is the intermediary between mobile phone and GrowCube information transmission. Here are the steps for GrowCube to configure the network:

 1. Open the app and enter the Mode Selection page, select "Networking Mode" and enter the Set GrowCube Network page, enter the home/office WiFi name and home/office WiFi password to be used, click "Continue", and there will be a pop-up "XXXX (your WiFi name) has been Saved"; (Note: There is a drop-down selection menu at the WiFi name, users can choose WiFi by themselves, the recently used WiFi will be displayed first, do not use 5G network as it is currently not supported).



• 2. Go to **Connect The Device** page, make sure that the red and blue indicators on the front of the GrowCube are flashing alternately before you initiate the connection, if not, the device is not ready to be connected. Please press the side button for 3s until you hear the "beep" sound. At this time, you can search for the WiFi named GrowCube xxxx launched by the device itself, where xxxx is a random combination of numbers and letters. Use your phone to connect the WiFi as prompted, check **"The above operations have been confirmed"**, and then click **"Next"**. If the phone is already connected to the WiFi, the **Networking** page can be normally entered, and the App will send the WiFi name and password just saved to GrowCube, then GrowCube will connect by itself.



 3. After enter the Networking page, turn on the phone WiFi and disconnect the WiFi connection between the phone and GrowCube. And then connect the previously saved home/office WiFi to ensure that the phone and the device are connected to the same wireless network. In this page, the App will continuously check:

① Whether the device has been connected to the home/office WiFi,

- (2) Whether the phone has also been connected to the corresponding home/office WiFi,
- 3 Whether the device and the phone have established connections through the home/office WiFi .



If the first step fails, the interface will pop up as follows, and you can choose to re-enter or reconnect. Re-entering will return to the **WiFi Configuration** page and re-enter the WiFi name and password. If you choose to reconnect, it will try to connect again using the current saved WiFi name and password.



If the second step fails, the interface will pop up as follows, you need to disconnect the WiFi connection between the mobile phone and GrowCube and then connect to the current home/office WiFi.



If the third step fails, the interface will pop up as follows, you can choose to reset or reconnect. Resetting will re-enter the **Mode Selection** page. Reconnecting is to return to the page and perform three rounds of connection attempts and detection again. If the above three steps are completed, the configuration is successful.



 4. After the network configuration successfully saved, enter the Configured Successfully page and generate the device name. The name can be renamed according to your preferences. At this time, the blue indicator on the front of GrowCube is solid.



• 5. Click "Click here into the homepage" to enter the Home page of the GrowCube APP and start your smart maintenance journey.



• 2.2.2 Direct Connection Mode

 1. Select "Direct connection mode" on the Mode Selection page and enter the page of the Directly Connected Device. Connect the WiFi named GrowCube xxxx as prompted and click "Next".



• 2. After the device is successfully connected to the mobile phone, enter the **Configured**

Successfully page, generate the device name, click "Click here into the homepage" to enter the GrowCube APP home page.



2.3 Watering Parameter Settings

• 1. Add Plants

On the **Plants** page, click 🕂 F

+ Plant to add plants. Do not add exceed four plants.



• 2. Choose Water Outlet

According to the soil moisture sensor interface and water outlet used by the added plant, select the corresponding watering outlet in the APP. Note that the soil moisture sensor interface should be paired with the water outlet. In this example, the soil moisture sensor of A is used, so it is necessary to choose a as the plant watering outlet accordingly.



3. Choose Plant

Enter "plant name" in the search box, and when you find the plant, click to select it.



• 4. Choose Watering Mode For Plant

Choose the watering mode according to your need.



• 5. Save Settings And Start Smart Watering

Give the plant a nice nickname, such as "my beauty" and click Save to start planting. If you choose the smart watering mode, you can also choose whether to avoid watering during the sun exposure period. Turn on the switch and the device will not water from 9AM-6PM every day.



Back to the **Plants** page, you can see all the plants being planted. Click on the blank space except for the plant name and plant picture to enter the detailed page of the plant's watering status. Click on the plant name or plant picture to enter the detailed introduction page of the plant.





*6. Add New Category

Brief Introduction:

If the plant is not found in the plant database, please go to the **Garden** first, and then click to add a new plant category. Enter the plant nickname, scientifific name and take a photo of the plant. After customizing the suitable humidity range, click "**Save**". Go back to the **Plants** page and click Plant to enter **Add Plant** page. You can find the plant in the Self-made list. After selecting it, click "**Save**" to add the plant successfully.



Chapter 3 Functions Introduction

3.1 Plant Monitoring

On the **Plants** page, you can view all the added plants monitoring data. For plants set to smart watering mode, the app will display the plant's current soil moisture and suitable soil moisture range in real time. For plants set to automatic watering mode, the app will display the plant's watering interval and duration, the last watering time and the next watering time in real time. The upper right corner of the page can also display the temperature and humidity data of the plant growth environment in real time.



3.2 Plant Details

Click on the plant name or plant picture to enter the detailed introduction page of the plant. For plants set to "Smart Watering Mode", you can view the plant's suitable soil moisture range, current soil moisture information, soil moisture curve records and plant watering records on the plant details page. The soil moisture curve can also be divided into hourly, daily and monthly curves according to the time dimension, which are represented by different colors. Click the corresponding curve to view the humidity change curve, and slide the curve left and right to view more historical data.

9:41	ا ن.		
< Succulent T	housand Buddhas		
	table Soil Current Soil Moisture (m: 30%) (m: 50%) 40%		
Soil Moisture Curve - Hours - Days - Months $\begin{pmatrix} 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 $			
Watering Record			
• 2021-06-07 09:08 Smart Wateri	ng		
17:25 Manual Water	ring		



9:41	. 11 🗢 🖿	
< Succulent Thousand Buddhas		
Harry Butterfiel	Suitable Soli Moisture Min: 30% Max: 50% AUXING AUXING AUX	
Soil Moisture Curve - Hours - Days - Months (%) 100 100 100 100 100 100 100 10		
Watering Re • 2021-06-07 09:08 Smart 17:25 Manu	, Watering	

For plants set to "Auto Watering Mode", you can view the plant's watering interval and duration information, last watering time, next watering time and watering operation records on the plant details page.



AS Stop

3.3 Manual Watering

On the Plants page, click on the plant's Annual stop watering the plant by press the

button, manually water the plant, and button again.



3.4 Modify Plant's Watering Settings

On the Plants page, click the button 🐡 in the upper right corner to modify the plant settings. For example, the nickname of the plant, the picture of the plant, the watering mode of the plant and the corresponding parameters can be modified.



• 3.4.1 Smart Watering Mode

Click to select "Smart Watering Mode", select the minimum humidity and maximum humidity for the plant, and select whether to turn on the "Avoid watering during the sun exposure period" switch, then click Save to update the plant settings.



• 3.4.2 Auto Watering Mode

Click to select "Auto Watering Mode", select the watering interval and single watering duration for the plant, and then click Save to update the plant settings.



3.5 Diary

On the Plants page, click // to write a plant exclusive diary. Take a picture of the plant and record the growth of your plants. Click "POST" to publish your diary.

≔ GrowCube Ø	Temperature: 86"F Humidity: 40%	< Exclusive Diary	< Sweet Lily Exclusive Diary
My Plants	🕀 Plant		2020/07/01
A Succulent Suitable Soil Moisture Mir: 30% Mar: 50%	Current Soil Moisture 40%	Plant Picture	145
		Say something	In some withdrawn, unpublic mead Let me sigh upon a
B Lithops spp	10		reed, Or in the woods, with leafy din, Whisper the still
Suitable Soil	Current Soil		evening in: Some still work give me to do,- Only-be it
Moisture Min: 20%	Moisture 40%		near to you!
Lithops spp	4 thread	2020/07/02	8(140 2020/07/01
78.977			
26 Aug. 120	ast Watering Time	POST	

On the Diary page, left-slip plant's exclusive diary, click 👘 to delete the plant's exclusive diary.



On the Diary page, click the plant exclusive diary to enter the plant exclusive diary details page, view all the diaries of the plant.



3.6 Delete Plant

On the Plants page, the left-slip plant enters (Note: Delete operation cannot be undone, and the diaries of deleted plants will continue to be preserved.)





3.7 Garden

On the Garden page, data on more than 3,000 plants are provided for users to view and reference. After searching in the search box, click on the plant to view the details of the suitable environment for plant growth. If there are plants that cannot be searched, users can also manually add new categories, and the new category that have been added will be preferentially displayed in the added plants.



3.8 Device Management

• 3.8.1 View And Add Device

Multiple GrowCube devices can be added and controlled through a single APP. Click i on the Plants page. Go to the Device Management page. You can view the "Device Added" list and Add a new device by clicking +.



3.8.2 Switch Device

After adding the multiple GrowCube devices to an APP, you can switch to any one of them. On the Device Management page, click the device's name to switch.



3.8.3 Rename Device

On the dDevice Management page, left-slip device name, click 🖉 to modify the device name.

(The device name should not exceed 12 characters in English)



• 3.8.4 Delete Device

On the Device Management page, left-slip device name, click




• 3.8.5 Reset Device Network

On the Device Management page, click "Reset GrowCube Network" to reset the device network. Confirm the reset on pop-up window, click "Sure" to enter the reset network page, if the device and the app are connected, wait for the red and blue indicator lights of the device to flash alternately, and then click "Next"; if the device is not connected, you need to long press unlock button for 3S, wait for the red and blue lights to flash alternately, and then click "Next".



• 3.8.6 Update Device Firmware

On the Device Management page, when the network connection is normal, click "Update Firmware", and there will be a "Update GrowCube Firmware" pop-up window. After clicking OK, start to upgrade the software of the GrowCube. If the power is turned off during the upgrade process, you can use the reset needle to restore the factory settings of the device to prevent the device from crashing.









3.9 More

On the More page, you can view "About Us", "User Manual", "User Policy and Privacy" and Select Language and Update APP.



Chapter 4 Abnormal Reminder

4.1 Water Shortage Reminder

When the device is short of water, the app will pop up if it is connected to the device. If the app is not connected to the device when water is short, it will also pop up after the app is connected to the device.



4.2 Sensor Not Connected Reminder

When selecting the smart watering mode, if no sensor is inserted into the corresponding sensor port, a reminder will pop up:



4.3 Sensor Abnormal Reminder

When the sensor is inserted abnormally, the corresponding sensor port cannot detect humidity data normally, then the system will pop up a reminder.



4.4 Water Pipe Blockage Reminderer

When the device is blocked, a pop-up reminder will occur if the App is connected to the device. If there is no connection, the pop-up will remind you after the App connects to the device.



4.5 Device Locked Reminder

The device lock reminder is divided into three situations:

A: Lock the machine due to lack of water



B: Lock the machine due to blockage of waterpump



C: The water outlet is locked due to abnormality in the sensor operation



Chapter 5 Product Parameters

Product Name: GrowCube Product Dimensions: 180*170*100mm Power Supply: 12V/2A Working Temperature: 41°F- 113°F Water Tank Capacity: 1.5L Designer: Elecrow





Chapter 6 Troubleshooting

Phenomenon	Problem	Solution
Quick flashing Red	The device detects motor blockage more than 3 times, which results in device locked	The water outlet of the device is blocked or the water pipe is blocked 1. Unplug the water pipe and check whether the water can flow through, if not, clean the water outlet with a fine needle 2. Check whether the water pipe is squeezed by heavy objects and whether the water outlet of the water pipe is blocked by sludge. After the troubleshooting, press the unlock button on the side of GrowCube to resume normal use
Slow flashing Red	The device detects the motor idling more than 3 times, which results in device locked	The water outlet of the water tank (the water inlet of the motor) is blocked or the water tank is empty 1. Check whether the water tank is empty 2. If there is no shortage of water, unplug the filter head of the water inlet to check whether it is blocked. If it is blocked, clean it with a fine needle. After the troubleshooting, press the unlock button on the side of GrowCube to resume normal use
Solid Red	The device detects an abnormality of a certain sensor more than 3 times, which results in water outlet locked	Connect the app, you can determine which sensor is abnormal through the pop-up window. After the troubleshooting, press the unlock button on the side of GrowCube to restore the locked water outlet to normal use
The device beeps	The device detected an abnormal situation	Troubleshoot the following exceptions: 1. There is a sensor not connected in the planting plant 2. There are abnormal sensor data of plant being measured 3. The equipment is short of water or the water inlet is blocked 4. The water outlet of the equipment is blocked or the water pipe is blocked"

Q1: Does the device fail to run in direct connection mode?

A: In the direct connection mode, the mobile phone is connected to the WiFi sent by the device itself. If the connection fails, please re-plug and unplug the device.

Q2: Failed to establish connection between mobile phone and WiFi in network mode?

A: Firstly, check whether the home/office WiFi is stable and whether it is a 5G network (the device does not support 5G network at present). Then check whether the input home/office WiFi and password is correct. Finally, check whether there are incorrect connections caused by multiple GrowCube devices in the same environment.

Q3: Can't use the plant database?

A: Check whether the device is in direct connection mode, because in direct connection mode, the mobile phone is connected to the WiFi of the device, which does not have the function of networking.

Q4: What is the purpose of the Micro USB port on the back of the device?

A: The Micro USB port is used to flash the firmware before the device leaves the factory. Do not use it to power the device.

Q5: Once the power supply is plugged in, the blue and red lights of the device doesn't turn on?

A: Please check whether 12V/2A power supply is used.

Q6: The sensor value is abnormal, such as high value or no change.

A: Check whether the insertion position of the sensor is normal (whether it is in the vicinity of the spray nozzle); Check whether there are foreign bodies such as dust or dirt in the magnetic suction interface of the sensor; Check whether the magnetic suction cable is broken or damaged; Check whether the surface of the sensor is broken or damaged; Check whether the pot is inserted wrong; Check whether the water supply from the pipe is normal or low.

Q7: Silicone nozzle does not give water?

A: Check whether the connector is blocked; Check whether the water outlet and water pipe are blocked; Check whether the spray hole is blocked by silt.

Customer Service

If you have any questions, cutomer support is always stand by.





@elecrow.openhardware



@Elecrow



Informationon the disposal for Waste Electrical & Electronic Equipment(WEEE) This symbol on the products and accompanying documents meansthatused electrical and electronic products should not be mixed with generalhouseholdwaste. For proper disposal for treatment, recovery and recycling, pleasetake these products to designated collection points where they will beacceptedon a free of charge basis. In some countries you may be able toreturnyour products to your local retailer upon the purchase of a newproduct. Disposing of this product correctly will help you save valuableresources and prevent any possible effects on human health and theenvironment, which could otherwise arise from inappropriate wastehandling. Please contact your local authority for further details of yournearestcollection point for WEEE.





F© (€ 🗹 🚨 🗵