WFC01 User Manual

Content

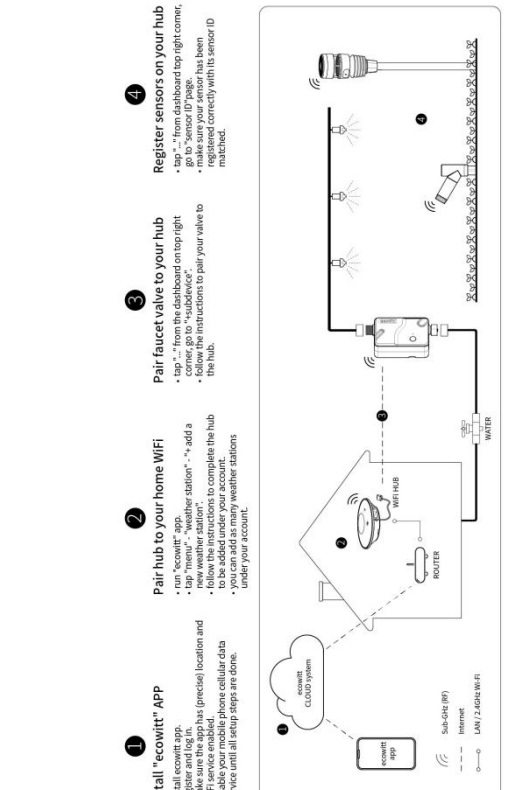
Help

Our product is continuously changing and improving, particularly online services and associated applications. To download the latest manual and additional help, please contact our technical support team:

support@ecowitt.com

Brief Instruction

Quick Guide on how Ecowitt system works



* step4 is used when you have any other ecowitt sensors or for future use.

1 Specific Operation instructions

1.1 Install Ecowitt app

App Download
https://api.ecowitt.net/api/app/download

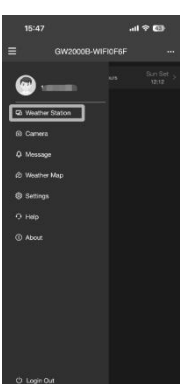
a. Install ecowitt app
b. Register and log in
c. Make sure the app has (precise) location and WiFi service enabled
d. Disable your mobile phone cellular data service until all setup steps are done

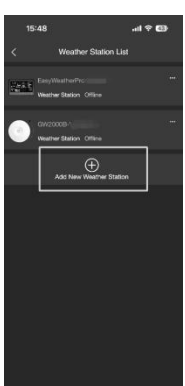
1.2 Pair the GW2000 hub

If you've already got a GW2000 configured, go to 3.

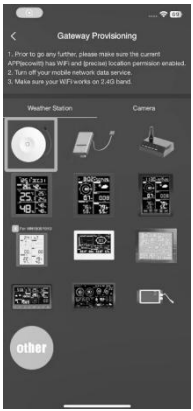
1.2.1 Power on the GW2000

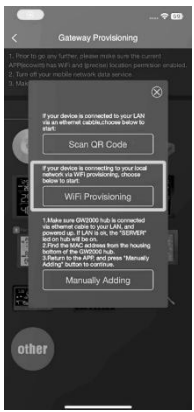
1. Power on
   Power on the GW2000.
2. Enter the network configuration mode
   Hold the button of GW2000 for 5s, led will flash rapidly.
3. Open ecowitt app, click add New Weather Station
   Tap "menu" - "weather station" - "+ add a new weather station".

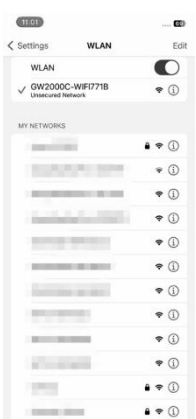




4. Connect to the Hotspot GW2000 emits

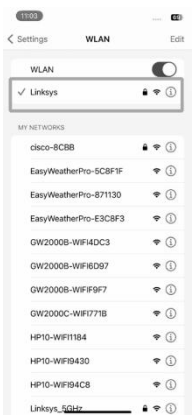


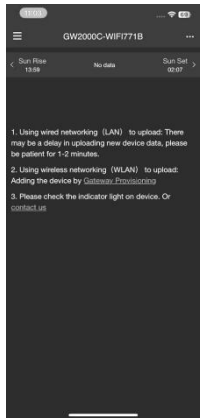




5. Fill the WiFi SSID and Password

6. Switch the WiFi of your phone to the GW2000 is connected to





* If any problem occurs, video with the QR code instruction will help.

1.3 Pair the WFC01 with the hub

1.3.1 Power on

Unscrew the 4 screws on the battery door on the back, and put in 2 AA batteries. The blue light on the front indicates that the device is powered on normally, and screw on the screws. Please do not use rechargeable batteries as they are lower in voltage, which is not good for reliable valve control.

1.3.2 Test

Short press the button to test whether the function of the water timer button is normal.

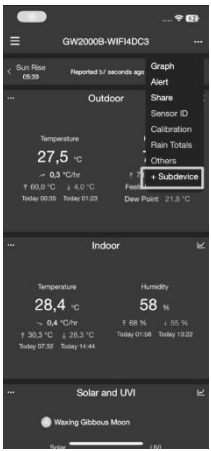
1.3.3 Enter the network configuration mode

Hold the button for more than 5s, the LED will flash quickly and enter the network configuration mode.

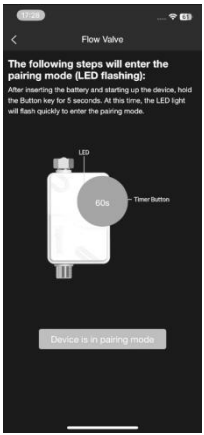
1.3.4 Pair with hub

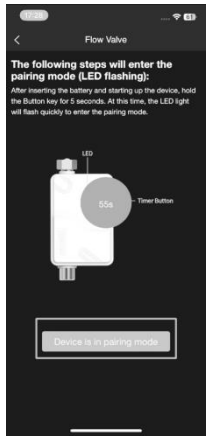
Click as the following pictures indicate to enter the network configuration mode.

1. Add a Subdevice



2. Click ‘Device is in pairing mode’
   Make sure WFC01 is in network configuration mode.





3. Wait for about 20 seconds and the pair will be success

4. Click Confirm and following is the operation interface of WFC01

1.4 Activate other sensors into GW2000 hub system

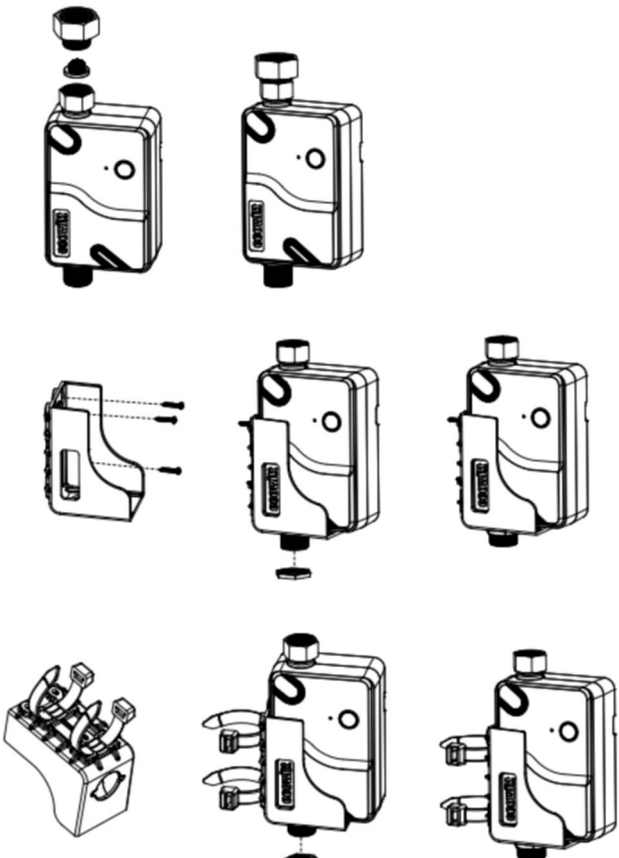
1. Step4 is used when you have any other ecowitt sensors or for future use.
2. Make sure your phone is connected to the same WiFi GW2000 is connected to.
3. Make sure your sensor has been registered correctly

with its sensor ID matched.

4. Tap "..." from dashboard top right corner, go to "sensor ID" page.

2 Mount of WFC01

Connect the water inlet and outlet pipes according to the direction of the arrow on the back of the product and fix them.



3 Product Overview

1. Welcome to use WFC01, a product that enables intelligent irrigation. WFC01 communicates with GW2000 hub on SUB_G ISM radio band. The GW2000 hub can work w/ or without internet (smart mode is only available when the GW2000 hub is connected to our cloud server).
2. The Smart Water Timer is equipped with a flow meter as well as a built-in temperature sensor, which not only functions as a water timer but also allows real-time monitoring of water flow and temperature, providing you with a better understanding of water usage in your home. WFC01 supports cloud-based control, and all water usage log is stored in the cloud. Users can check their water usage anytime and manage and optimize it for more convenient control and achieve more scientific and rational water usage.
3. This product can be set up in the Ecowitt APP and can be linked with Ecowitt Soil Moisture Sensors to enable automatic irrigation. It is also possible skipping off the current watering plan when

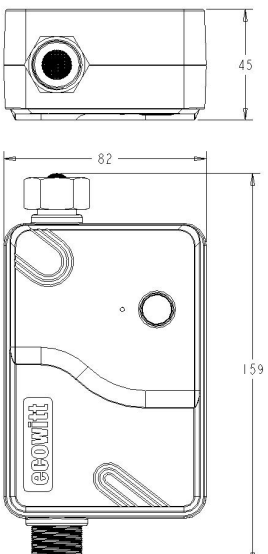
predefined skip conditions are met: Like raining detected with Ecowitt Rain Sensors, water temperature is too low/high. The SMART mode or plan skip feature is only accessible when hub is talking to our cloud server normally. Scheduled plans are saved on hub locally and it is not affected in case of network issues, the pre-set plans can still operate normally.

4. The Smart Water Timer utilizes Sub G radio frequency transmission technology, ensuring stable and reliable communication between the timer and the gateway within a range of 100 meters in an open area. Remote control is possible through the Ecowitt APP, allowing you to control your water timer anytime and anywhere. The radio status can be further monitored by the app with both device's RSSI level.
5. With a design featuring all-copper pipelines and connectors, the Smart Water Timer can withstand water pressure of up to 0.9 MPa. It is IP66 waterproof and dustproof, durable, corrosion-resistant, with a long service life.

4 Product Specifications

4.1 Size

L159 * W82 * H45mm



4.2 Weight

Weight: 520g

4.3 Material and Protection Level

Shell Material: ABS+PC

Inlet Interface Material: Brass (CU)

Outlet Interface Material: Brass with Chrome Plating

Waterproof / Dustproof Level: IP66

4.4 Power Supply and Power

Power Supply: 1.5V AA x 2

Power: 1.5mW (Average power of opening and closing once a day)

Battery Runtime: Over 6 months (Average runtime of opening and closing once a day)

4.5 Inlet and Outlet Interface

The inlet/outlet interface is G1/2inch thread.

4.6 Flow and Pressure

Maximum flow rate: 30L/min

Working pressure: 0.03 ~ 0.9MPa

Flow rate error: ±10%

4.7 Working Temperature and Humidity

Working Temperature: 1~ 60℃ (33.8~140℉) (The equipment can still transfer data during -40 ~ 0℃ (-40~32℉), but water freezing may cause damage to the product).

Working Humidity: 1% ~ 99%.

4.8 Accessory List

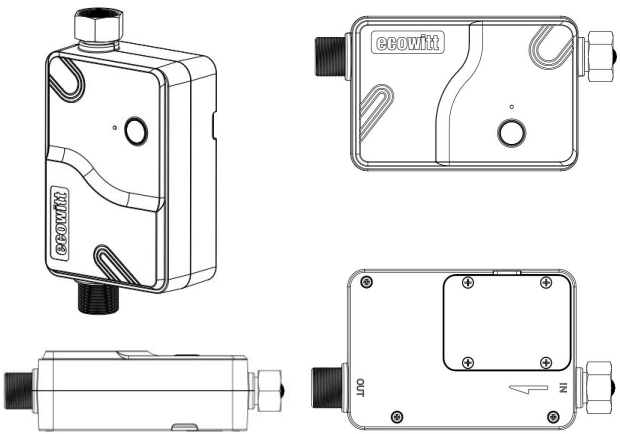
1 x Hexagon nut
1 x 3/4" to 1/2"Adapter
1 x Retaining bracket
2 x Nylon cable ties
3 x Screws

4.9 Specifications

Product Name	: Smart Water Timer
Product Model	: WFC01
Product Size	: 159×82×45(mm) | L×W×H
Weight	: 520g
Shell Material	: ABS+PC

Inlet Material	: Brass
Outlet Material	: Brass + Chrome Plating
Waterproof Level	: IP66
Power Supply	: 1.5V AA Battery × 2
Power	: 1.5mW (Average power of opening and closing once a day)
Battery Runtime	: Over 6 months (Average runtime of opening and closing once a day)
Interface Type	: G1/2inch thread
Maximum Flow Rate	: 30L/min
Working Pressure	: 0.03 ~ 0.9MPa
Flow Rate Error	: ±10%
Working Temperature	: 1 ~ 60℃ (33.8~140°F) (The equipment can still transfer data during -40 ~ 0℃ (-40~32°F), but water freezing may cause **DAMAGE** to the product)
Working Humidity	: 1 ~ 99%
RF Communication Distance	: 100 meters

5 Product Structure



6 Software Functions

6.1 Watering Methods

1. By duration

   Set a duration. Open the timer and it will automatically be closed after running for the set opening duration.

2. By quantity
   Set the amount of water. Open the timer and it will automatically be closed when the set quantity is reached.
3. Always on
   Keep the timer always on until another manually off operation(press button on faucet or APP) is carried out.
4. Off
   Keep the timer off.

6.2 Operation Modes

The operation modes include Timer Button mode, Manual Watering mode, Plan mode and Smart mode.

Each mode trigger will interrupt the others, and the operation mode generated by the most recent trigger will take effect.

For example, if the watering is currently in progress based on a scheduled plan and a certain condition is met to close the timer, the timer will be immediately closed. When the next scheduled time arrives, the watering will resume and the timer will be opened again.

6.2.1 Timer Button Mode

1. Short Press
   Execute Manual Watering or terminate the current program.
2. Long Press for 5s
   Enter the network configuration mode.
3. Long Press for 10s
   Restore factory settings.

6.2.2 Manual Watering Mode

1. Timer open state
   Click the RUN button to turn off.
2. Timer closed state
   Will execute immediately after setting the watering method on the APP.
   Click the RUN button. Choose one of the three modes: [Duration]/[volume]/[Always on].

   [Cycle Mode]:
   When cycle mode is turned on, a duty cycle is introduced against the current working mode. The

duty cycle can be used to regulate more precisely for lower water rate application.
On/off time: 5 ~ 3600 seconds.

A. By duration

Duration Range:
10 ~ 43200 seconds or
1 ~ 720 minutes.

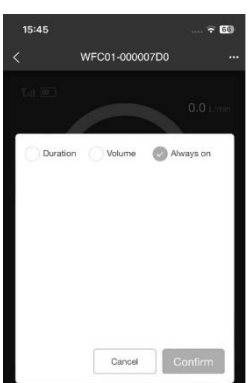
Click Confirm to execute current setting.

B. By quantity

Volume Range:
1 ~ 6500 L.

Click Confirm to execute current setting.

C. Always On

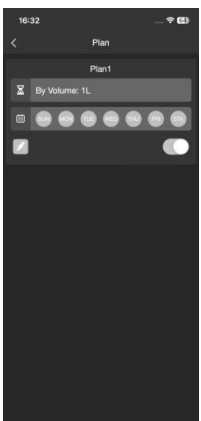


Click Confirm to execute Always On setting.

6.2.3 Plan mode

You can set a plan to start, and the plan can be set up to 24 start times.

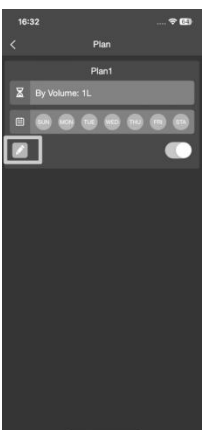
1. Click plan to enter the Plan mode.

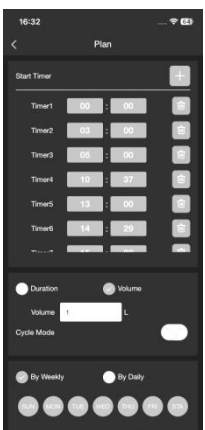


2. Click the right button to activate or deactivate a plan.

Skip function is under development, and user defined skip condition can be edited here. (Currently this feature is not implemented, but it will be available in the next upgrade).

3. Click the left icon to enter the plan editing interface.

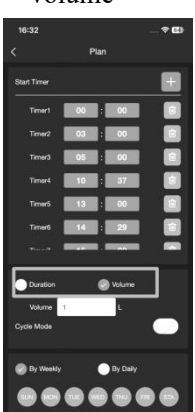




4. Adjust the details of the plan on the editing interface.

A. Add or delete a beginning time

B. Set the method of watering. By Duration or by volume



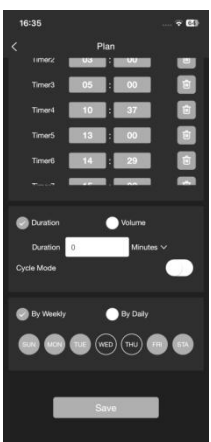
C. Select the Cycle Mode

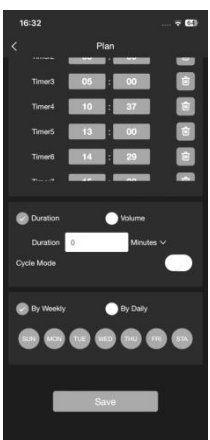
Cycle Mode;

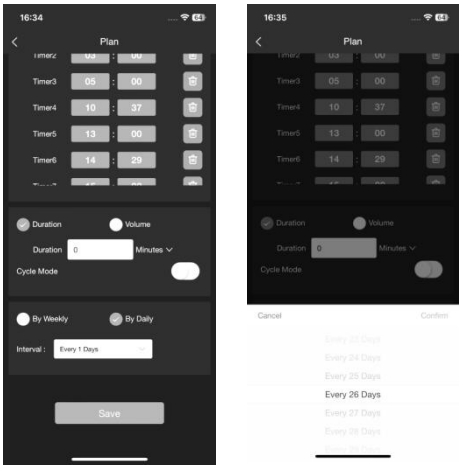
Can be set as on/off;

On/off time range: 5 ~ 3600 seconds.

D. Set the repeat mode of watering. By weekly or by daily







7 Alerts

There are 5 kinds of alerts. The details of the alerts can be inquired below.

7.1 No Water!

No water detected a while after the Water Timer has been open. Please check if the water source is sufficient.

7.2  Water Leakage!

Water Flow still detected after the Water Timer has been closed. Please ceheck the equipment immediately for leaks.

7.3  Ice Alert!

Current temperature below 5℃ (41℉). Ice formation may be caused.

7.4  Overheating!

Current temperature above 60℃ (140℉). Safety threat may be caused.

7.5  Communication Unstable!

Communication is unstable. Plan skip function will be disabled. Please adjust the position of the Water Timer or WiFi hub.

8 Note

8.1 Installation

The smart water timer should be installed in a dry and well-ventilated location, avoiding prolonged exposure to humid, high or low temperature, or harmful gas environments. The installation position should be as close as possible to the water source or the water pipe that needs to be controlled, and avoid excessive bending or twisting of the water pipe.

8.2 Usage environment

The smart water timer is suitable for both residential and commercial use. Do not install the smart water timer in areas prone to moisture or high temperatures. Additionally, it is prohibited to use chemical or corrosive substances to clean the smart water timer.

8.3 Maintenance

To ensure the normal operation of the smart water timer, regular maintenance is required. During daily use, please

pay attention to cleaning the water timer and its surrounding area to prevent the accumulation of dust and dirt. Also, remember to replace the batteries promptly.

8.4 Precautions during use

When using the smart water timer, do not use it for substances other than liquids. Avoid hitting, impacting, or forcefully pulling the smart water timer during use to prevent damage to its mechanical components. Additionally, keep children and pets away from the smart water timer to prevent accidents.

Please read this user manual carefully and install and use the smart water timer correctly according to the instructions. If you have any questions, please contact our customer service team, we will be happy to assist you.

9 Warranty Information

We disclaim any responsibility for any technical error or printing error, or the consequences thereof.

All trademarks and patents are recognized.

We provide a 1-year limited warranty on this product against manufacturing defects, or defects in materials and workmanship.

This limited warranty begins on the original date of purchase, is valid only on products purchased, and only to the original purchaser of this product. To receive warranty service, the purchaser must contact us for problem determination and service procedures.

This limited warranty covers only actual defects within the product itself and does not cover the cost of installation or removal from a fixed installation, normal set-up or adjustments, or claims based on misrepresentation by the seller, or performance variations resulting from installation-related circumstances.