# F rachio

# Let's get started!

www.rachio.com/support

#### Need help? We're here for you.

Visit us online at www.rachio.com/support Email us at support@rachio.com Call us at 844-4-RACHIO

#### 2 Year Limited Warranty

Rachio's products include a 2 year limited warranty and a 30 day return policy. www.rachio.com/warranty

#### **Outdoor Installation**

This Rachio controller is designed to be installed indoors. If you need to install yours outside, a weatherproof enclosure is required. You can purchase an enclosure at www.rachio.com/store

For outdoor install instructions visit www.rachio.com/outdoors

# What's in the box?



# What you'll need...



# Wi-Fi Access

The Rachio controller uses wireless communications and must be installed within range of a strong signal source for optimal performance. If the Wi-Fi signal strength is low, you may need to move your wireless router or install a Wi-Fi extender. You'll need your Network (SSID) & Password to connect to your network.

#### This controller cannot connect to 5 GHz networks.



Mobile Device iOS 9 (or greater) Android 4 (or greater)



#### phillips screwdriver

wire strippers







#### hammer (for drywall installs)

# Easy Install

4 Steps





## Check your sprinkler system.

Test your sprinkler system by turning on each zone with your old controller. Find and repair any issues with your sprinkler system prior to installing your Rachio controller.



## Take a few pictures.

Use your phone to take a few photos of your old controller's wiring from a few angles. This will come in handy when it's time to wire your Rachio controller.



## Unplug your old controller.

Disconnect the wires from your old controller and then remove it from the wall. Now you're ready to install your Rachio controller.





#### Attach it to the wall.

Remove the controller's cover from the base. Locate the 4 mounting locations on the base. Attach the base to the wall using the included screws. Wall anchors are included for drywall.



#### Wire it up.

Insert sprinkler wire through the opening on the base. Connect the wires to the corresponding terminal locations. Press down on each terminal tab with a screwdriver to easily insert or remove each wire.



#### Connect the power cord.

Insert the power connector into the controller's power port in the lower right hand corner of the wiring bay. Finally, plug the transformer into a wall outlet.



#### **Required Wiring**

Connect common wires to any of the four terminal locations labeled with a "C". Zone wires connect to the numbered terminals "1-16". Only install a single valve wire per terminal. Power and ground wires are not needed.

#### **Advanced Wiring**

If you have a master valve, pump start relay, hydraulic indexing valve, or sensor see Advanced Wiring on page 28.





shown at the right will signal the status of your controller.





### Light One (Booting Up)

A blinking light means the device is booting up. Once the light turns solid you can add the controller to your account. You'll be prompted to confirm the network you want to connect to.

### Light Two (Connecting to Wi-Fi)

This light will begin blinking as the controller tries to connect to your Wi-Fi network. Once connected to Wi-Fi, the light will turn solid.



#### Light Three (Connecting to Rachio Cloud)

This light will begin blinking as the controller attempts to connect to Rachio's servers. Once connected, it will turn solid.



#### Light Four (Online)

This light will begin blinking until you enter the controller's serial number. The light will turn solid once your controller is online.

## **Tips for Connecting**

While the controller is compatible with numerous platforms, it must be setup via the Rachio mobile app for initial activation, including zone and scheduling configuration.

If the controller fails to connect, a Wi-Fi reset will be required to clear the controller's network settings.

To perform a Wi-Fi reset, see page 19.



# The app will now guide you through the setup process in order to create your first schedule.

The Rachio controller uses your local weather data combined with the specifics of your landscape to create accurate and efficient schedules.

You can change the national weather station you use, or even choose a personal weather station. Try to find the station that provides the most consistently accurate results.

## Your Zones

Every yard is different. Customize each zone's vegetation, soil, shade, nozzle and slope types. Your controller will use this information to better predict when and where you'll need water.

You can adjust each zone over time and your schedules will automatically adjust, watering more effectively.



## **Your Schedules**

#### **Fixed Schedules**

Water on a static schedule; Rachio adjusts watering durations using statistical data and skipping schedules based on local weather forecasts.

#### Flex<sup>™</sup> Schedules

Water only when needed; Rachio dynamically adjusts watering days based on soil moisture needs. Promotes root growth and reduces watering frequency, resulting in a healthier landscape.



## **Advanced Program Features**

#### **Smart Cycle**

Eliminates runoff and promotes deeper roots by breaking watering schedules into shorter durations dependent on soil, nozzle, and slope settings.

#### Weather Intelligence

Operates as a virtual rain sensor, watering like it knows the future. Watering schedules are skipped when it has rained and/or will rain.

#### Water Hammer

Eliminates banging pipes by turning on the next zone before the prior zone turns off, reducing water pressure from building up.

#### **Rain Delay**

Manually pause watering for a specific duration of time. This can be disabled or adjusted within the app.

#### **Integration Partners**

Rachio integrates with numerous platforms and products. Learn more at www.rachio.com/integration-setup

# Congratulations!

Your Rachio Sprinkler Controller is now up and running.

# Manual Controls

#### **Manually Start and Stop Zones**

Press the Arrow Buttons up or down to select the zone you want to run. Press the Select Button to start and stop the selected zone. When you start a zone, it will begin watering immediately and then stop after a short duration.





#### Wi-Fi Reset

Perform a Wi-Fi Reset when you need to reconnect your controller to your Wi-Fi network. It will clear the controller's network settings, but not the yard or schedule settings.

Press and hold the *Down Arrow* and *Select Button* simultaneously until the LED light ring is fully illuminated.



**Factory Reset** (Cannot be undone) Performing a Factory Reset cannot be undone and will clear the controller's network, yard and schedule settings.

Press and hold the *Up Arrow* and *Select Button* simultaneously until the LED light ring is fully illuminated.

Troubleshooting

# My controller is offline.

#### Check your valves.

Attempt to run a zone from the app. Does the corresponding zone light activate on your controller? If so, the device is online and valve troubleshooting may be needed. Please proceed to Valves Section on page 23.

#### Check your Wi-Fi network.

Check your local network. Are other connected devices working properly? Reset your router. Make sure your router has the most recent firmware update.

#### Restart the controller.

Power cycle the controller. Simply unplug the device and plug it back in. Keep an eye on the Rachio light; what light (1-4) does it light up to? If stuck at light 2, perform a Wi-Fi reset on the controller.

# My app isn't responding.

#### Does the app respond to changes?

Make a simple edit, such as setting a manual rain delay or disabling a zone to see if the change applies. If the change does not apply, force quit the Rachio app.

**Force Quit for iOS:** Quickly press the Home button two times. You'll see your currently running apps. Swipe up on the Rachio app to close it. Relaunch the app to see if the issue is resolved.

**Force Quit for Android:** Locate your settings icon, which looks like a gear icon. Scroll down and tap on the Applications option, select "Applications Manager." Swipe your finger across the screen to the left until you are on the "Running" tab. Scroll down until you find the Rachio app and tap on it. Tap on either the "stop" button or "force stop" button to shutdown the app. Relaunch the app to see if the issue is resolved.

# My zones aren't running.

#### **Check Your Valves**

Is the Master Valve toggle enabled? If your system has a master valve or pump start relay, ensure the master valve toggle is enabled within the Rachio App's device settings.

#### **Common Wire**

Is the issue isolated to one or all zones? If all zones, move common wire to a different common terminal to see if the issue continues.

#### **Hot Wire**

Double check wiring matches the photos of your wiring. Swap zone wire with another nearby zone to see if the issue continues.

#### **Defective Solenoid**

Turn off water to the system. Unscrew the solenoid from the problematic zone and replace it with one from a working zone to test.

#### **Not Stopping/Slow Leak**

Is there debris in valve? Turn off water to the system. Remove top of valve via twist or screws. Remove diaphragm assembly and clean the interior of the valve. Inspect the diaphragm for tears. Replace the diaphragm assembly if torn. Make sure all components are installed properly when reassembled.



# My schedule won't run.

#### Is the Rain Sensor active?

You can either wait until the Rain Sensor dries out, or disable it within the Rachio App's device settings.

#### Is Standby or Rain Delay active?

Make sure the controller status is not set to Standby Mode. Disable any active Rain Delay status.

#### Is water actually running?

Ensure the main water line supply lines are open and operating. you can do this manually by turning on a valve via the bleed screw.

#### Are your wires properly connected?

Check wiring for loose connections. For a master valve/pump start relay, ensure it's enabled in advanced settings in the Rachio App.

#### Wires loose? Corroded connections?

Check your system's wiring for damaged wires. Check all connections and replace with watertight splice connectors as needed.

# Schedule or weather are inaccurate.

#### Have you picked an accurate weather station?

Verify the reported weather matches what you observed. If the weather reported is incorrect, report the station.

Try to find the most accurate weather station in your area, and keep in mind Personal Weather Stations (PWS) can be inaccurate.

# Rain sensor isn't triggering my schedule to skip.

#### Make sure your Rain Sensor is working.

Verify operation of the rain sensor and proper wiring.

- Ensure the rain sensor toggle is enabled in the Rachio App's device settings. Re-enable the rain sensor toggle if it is disabled.
- 2. Hold down the test spindle on your rain sensor.
- 3. The app should show that the rain sensor is activated.
- 4. Release the test spindle on the rain sensor.
- 5. A new activity should be logged in the app showing that the rain sensor deactivated.

# Advanced Wiring

## Master Valve Wiring

Install in the "M" terminal slot, and enable the Master Valve from the device settings under Advanced within the Rachio App. Complete this wiring only if you have a master valve installed in your irrigation system.

A master valve is a "normally closed" valve installed at the supply point of the main line that opens whenever a zone is operating.



# Do I have a Pump Start Relay?



## Pump Start Relay Wiring

A pump start relay serves as a switch that activates 110-220VAC power to the pump when the Rachio controller's master valve is enabled. Since the Rachio controller outputs 24VAC, a pump start relay is required when using a pump with the Rachio controller.

Install in the "M" terminal slot, and enable the Master Valve from the device settings under Advanced within the Rachio App.

Make sure that the total draw of the Pump Start Relay plus the draw of the valve does not exceed 1.3 amps at 24 VAC, 60 Hz. The controller does not provide main power for a pump.

# Do I have a Hydraulic Indexing Valve?



## Hydraulic Indexing Valve Wiring

Indexing valves offer a central hub to automate multiple zoned irrigation systems. Usually consisting of 1 inlet and 3+ outlets, indexing valves can operate on city water or pumps.

An indexing valve will water on a zone by zone basis, diverting the water supply from one outlet to another in a rotational direction. The order of the zones cannot be changed on an indexing valve are are predetermined by the order in which they were installed. For more information, please visit rachio.com/indexing.

Install in the "M" terminal slot, and enable the Master Valve from the device settings under Advanced within the Rachio App.

If your system's water supply comes from city water, install following the Master Valve wiring instructions, page 29.

Since the Rachio controller outputs 24VAC, a pump start relay is required when using a pump with an Indexing valve (See page 30).

## **Rain Sensors**

Rain Sensors will temporarily suspend watering by the irrigation controller when moisture is detected. Rain sensors normally have 3 wires; common, normally open, and normally closed. Rachio controllers use normally closed wiring (sometimes labeled NC). For more information, visit www.rachio.com/rain-sensor

#### Wired Sensors

- Insert the normally closed wire into the S1 or S2 terminal slot.
- Insert the common wire into the SC terminal slot.
- Enable & set up the sensor terminal under the advanced settings in the Rachio App



#### **Wireless Sensors**

- Insert the normally closed wire into the S1 or S2 terminal slot
- Insert one (1) of the 24VAC leads and common wire into the SC terminal slot.
- Insert the other 24 VAC lead into the SP terminal slot.
- Enable & set up the sensor terminal under the advanced settings in the Rachio App.



## **Flow Sensors**

Flow Sensor are used to measure the amount of water flowing through an irrigation system in Gallons Per Minute (GPM). Flow sensors are being used to monitor water usage and detect abnormal use. For more information, visit www.rachio.com/flow-sensor

- Insert one (1) of the leads into the SC terminal slot.
- Insert the other lead into the S1 or S2 terminal slot.
- Enable & set up the sensor terminal under the advanced settings in the Rachio App.



## Hard Wiring

An enclosure is required for hard wiring installations and/or outdoor installation; For details, reference www.rachio.com/outdoors

## **Multiple Controllers**

If you're using more than one controller, do not share ANY wires between them. A relay is required. For further details reference www.rachio.com/relay

## Got thick wires?

The controller is designed for 18 gauge sprinkler, solid copper wire. Up to 14 gauge wire can be inserted into the terminals without causing damage. If you have thicker gauge wires, we recommend retrofitting with 18 gauge wires using a terminal strip. We recommend the exposed wire to be between 3/8 to 1/2" inch long and straight.

#### **Limited Warranty**

Rachio warrants that the Product will be free from material defect in materials and workmanship for a period of two (2) years (one (1) year for factory refurbished Products) from the date of purchase from Rachio or an authorized dealer (the "Limited Warranty Period"). Detailed warranty info at www.rachio.com/warranty

#### Limited Warranty is subject to the following conditions:

You must either (i) return the Defective Product to Rachio within the Limited Warranty Period, or (ii) notify Rachio in writing of the Defective Product during the Limited Warranty Period by visiting www.rachio.com/returns and return the Defective Product to Rachio on or within thirty (30) days following the date you notified Rachio in writing of the Defective Product.

You must provide Rachio with proof of the original purchase of the Defective Product from Rachio or an authorized dealer. You must obtain a return materials authorization ("RMA") number from Rachio.

#### Privacy

We're committed to being open and honest about how we use data. We will always ask for permission before sharing personally identifiable information like your email address, and we keep your data safe with the same security tools banks use. Learn more about our Privacy Policy at www.rachio.com/privacy

#### Recycle

Recycle your old controller. www.rachio.com/recycle

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