

# **RAIN BIRD ARC Series Smart Irrigation Controller User Manual**

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# **RAIN BIRD ARC Series Smart Irrigation Controller User Manual**





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# **READ AND SAVE THESE INSTRUCTIONS**

Feature	Description
Station count	6
Automatic programs	3
Start times per program	4
Custom run days	Yes
Master valve control	Yes
Rain delay	Yes
Rain/freeze sensor control	Yes
Seasonal adjust	Yes
Manual station run	Yes
Manual program run	Yes
Manual test all stations	Yes
Station advance	Yes
Built-in WiFi	Yes
AP Hotspot	Yes

#### Installation

# If You Are Replacing an Existing Controller

- 1. Take a photo of the wiring details, which will be useful to reference when installing the new controller.
- 2. Unplug the power cord from the AC power outlet and disconnect wires from the controller.

# **Mount New Controller**

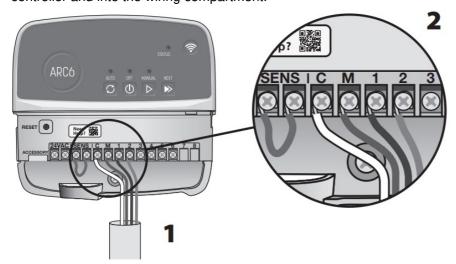


- Install the controller with the power supply cord exit side pointing downwards and through the leftmost opening at the bottom of the controller to avoid ingress of water.
- DO NOT apply power until you have completed and checked all wiring connections.
- DO NOT attempt to link two or more controllers together using a single transformer.
- 1. Unless installing with custom wiring, choose a mounting location on a wall within 1.8 m of an AC power outlet and at least 4.5 m away from major appliances or air conditioners.
- 2. Drive a mounting screw into the wall, leaving a 3.2 mm gap between the screw head and the wall surface (use supplied wall anchors if necessary).
- 3. Locate the keyhole slot on back of the controller and hang it securely on the mounting screw.
- 4. Remove the wire bay cover on the lower part of the controller and drive a second screw through the open hole and into the wall (use supplied wall anchors if necessary).

# **Connect Valve Wiring**

#### **NOTICE**

- DO NOT route valve wires through the same opening as power wires.
- DO NOT connect more than one valve to the same station terminal (1-6).
- 1. With the wire bay cover removed, route all field wires through the rightmost opening at the bottom of the controller and into the wiring compartment.



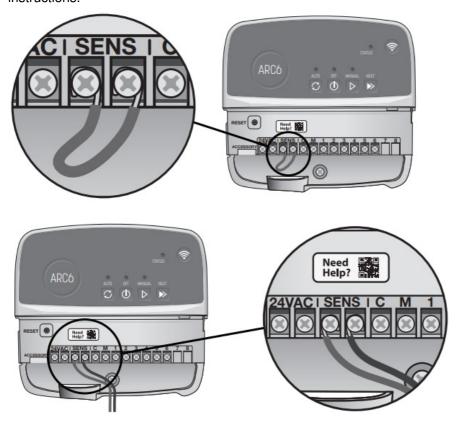
- 2. Connect one wire from each valve to one of the numbered station terminals (1–6) on the controller.
- 3. Connect a field common wire to the common terminal (C) on the controller.

# Connect Rain/Freeze Sensor (optional)

#### **NOTICE**

DO NOT remove the jumper wire unless connecting a rain or rain/freeze sensor.
 The controller will not function if the jumper wire is removed and a rain or rain/ freeze sensor is not connected.

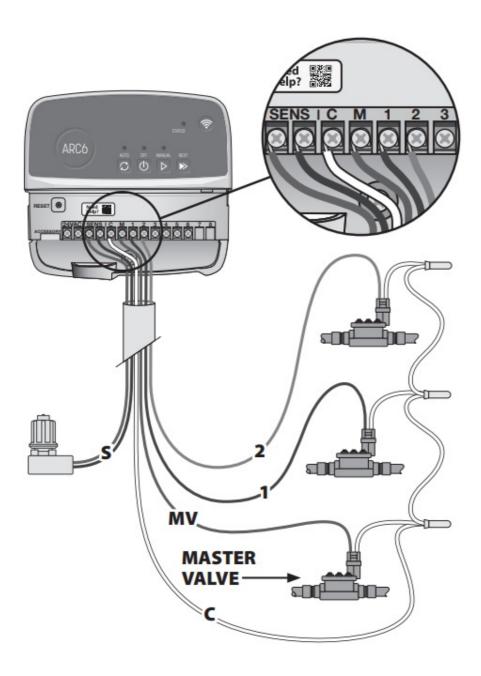
- Rain Bird controllers are only compatible with normally closed rain or rain/ freeze sensors.
- Check local and/or state regulations to determine if a rain or rain/freeze sensor is required.
- 1. Remove the yellow jumper wire from the SENS terminals on the controller.
- 2. Connect both rain or rain/freeze sensor wires to the SENS terminals.
- 3. For detailed installation and operation of a rain or rain/ freeze sensor, refer to sensor manufacturer's installation instructions.



# **Connect Master Valve (optional)**

# **NOTICE**

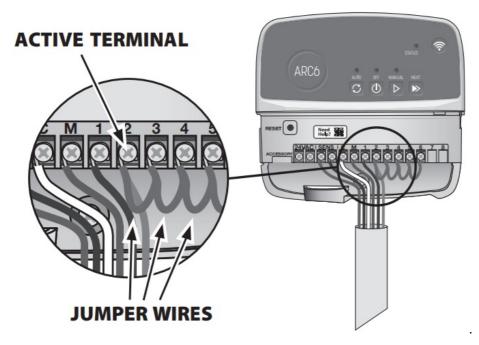
- DO NOT route the master valve wires through the same opening as the power wires.
- DO NOT connect more than one valve to the master valve terminal (M).
- 1. Using a direct burial cable, connect one of the wires from the master valve to the master valve terminal (M).
- 2. Connect the remaining wire from the master valve to the common terminal (C).



# **Connect Pump Start Relay (optional)**

# **NOTICE**

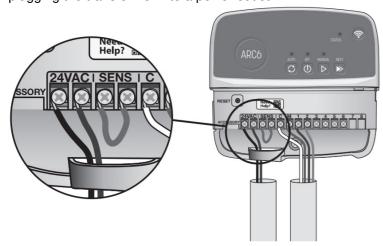
- DO NOT route the pump start relay valve wires through the same opening as the power wires.
- A pump start relay connects to the controller in the same way as a master valve, but connects differently at the
  water source.
- This controller DOES NOT provide power for a pump. A relay must be wired according to pump manufacturer's installation instructions.
- 1. Using a direct burial cable, connect one of the wires from the pump start relay to the master valve terminal (M).
- 2. Connect the remaining wire from the pump start relay to the common terminal (C).
- 3. To avoid possible pump damage in the event run times are assigned to unused stations, connect a short jumper wire from all unused station terminals to the nearest station terminal in use



4. For detailed installation and operation of pump start relay, refer to pump manufacturer's installation instructions.

# **Connect Power**

**Indoor controller:** With the wire bay cover removed, connect the power wires to the 24VAC terminals prior to plugging the transformer into a power outlet.



# **Outdoor controller:**

- 1. Must be plugged into a weatherproof outlet when installing outdoors.
- 2. If desired, the provided power cord can be removed and replaced with custom wiring.
- 3. Remove the wire bay cover on the lower part of the controller.
- 4. Locate the transformer box in the left-hand corner of the wire bay and unscrew the wiring compartment cover.
- 5. Unscrew the terminal block connecting the AC power cord and the transformer wires. Remove the power cord wires from the transformer box.
- 6. Remove the factory installed power cord by loosening the liquid tight cord connector.
- 7. Route the three wires from an external power source into the wiring compartment.
- 8. Connect the external power supply wires using the terminal block and resecure the liquid tight cord connector or a means of strain-relief of connections.
  - Brown supply wire (live) to the brown transformer wire.

- Blue supply wire (neutral) to the blue transformer wire.
- Green/yellow supply wire (ground) to green/yellow transformer wire.
- 9. Re secure the wiring compartment cover.

# **Programming**

# Add a New Controller to the Rain Bird App

- 1. Before mounting new controller, check the WiFi signal at controller.
  - Verify minimum signal strength of two bars in your phone at controller.
  - Mount controller closer to router or add signal booster if needed.
- 2. Download and launch the Rain Bird App



3. Select "Add Controller" to begin the set-up wizard.

#### **Set Date and Time**

- When the controller is connected to WiFi, it will automatically set the date and time according to the local WiFi network settings. In the event of a power outage, the date and time will default to the local WiFi network settings.
- If a local WiFi network is not available at setup and the controller is connected to the Rain Bird App in AP
   Hotspot mode, the controller will default to the date and time in the mobile device settings. In the event of a
   power outage, the date and time will need to be manually reset by reconnecting the controller to your mobile
   device through AP Hotspot mode.

# **Create a Watering Schedule**

1. **ADD PROGRAM(S):** This controller is scheduled using up to three programs

(A, B and C). Basic programs include instructions on watering days, start times and durations.

In the Rain Bird App, add a new program by selecting + PGM and an available program.

#### **NOTICE**

- The first time you connect to the controller, the Rain Bird App will refl ect the default program assigned to the controller. You can choose to retain, change, or set up a new program.
- Programming is stored in non-volatile memory and will remain in the controller in the event of a power outage.
- 2. **SET PROGRAM START TIME(S):** This controller is scheduled using up to four independent start times per program. The start time(s) is the time of day at which the program will begin. Each start time will run every station for its scheduled duration within that program.
  - In the Rain Bird App, add a program start time by selecting the icon.
  - Set the station(s) and watering duration(s) associated with the start time by selecting the icon.

## **NOTICE**

Start times apply to the entire program, not individual stations. Depending on landscaping needs, multiple start times may be assigned for that program. Once the start time is set, the controller begins the watering cycle with the first station; the other stations in the program follow in sequence.

3. **SET PROGRAM RUN DAY(S):** Run days are the specific days of the week in which watering occurs.

In the Rain Bird App, set the watering frequency by selecting Odd (calendar days), Even (calendar days), Custom (days of week) or Cyclic (specifi c intervals).

## **NOTICE**

Watering days apply to the entire program, not the individual stations.

4. **SEASONAL ADJUST** changes the watering duration (as a percent) for all stations associated with run times in an individual program. This may be manually adjusted in the Rain Bird App using the slider in the program settings.

# **NOTICE**

- The controller must be connected to WiFi to make automatic adjustments.
- An adjustment value of 100% is representative of irrigation during the average hottest time of year, so
  even if you're experiencing warm weather on a summer day, you may not see an adjustment above
  100%.
- 5. **RAIN DELAY:** In the Rain Bird App, manually turn off automatic watering for a fi xed number of days when it rains even without a rain sensor.
  - Suspend watering for up to 14 days by selecting the ook icon in the controller settings.
  - Slide the bar to the desired number of days to delay automatic watering.
  - · Select "Save" to store the setting.

# **NOTICE**

The maximum numbers of days to delay watering is 14. After the days expire, automatic irrigation will begin again according to the programmed schedule.

# **Manual Watering**

#### ON THE CONTROLLER

- To start manual watering, press the button.
- As a default, each station will run for 10 minutes; you can choose to retain or change the watering duration in the Rain Bird App.
- The blinking LED will give indication for which station is active.
- To advance to the next station, press the button.
- To stop manual watering on the controller, press the button.

#### IN RAIN BIRD APP

- To start manual watering, select the Oicon and select manual watering preferences.
- To advance to the next station, select the icon.
- To stop manual watering in the Rain Bird App, select the icon.

# **Automatic Watering**

#### ON THE CONTROLLER

# NOTICE

When operating in automatic mode, each program will run according to the start times, run days, and run times for each station in sequence until all scheduled watering has been run.

- Press C to start automatic watering according to scheduled program(s).
- The blinking LED will give indication for which station is active.
- To advance to the next station, press the button.
- To stop automatic watering on the controller, press the button.

#### IN RAIN BIRD APP

The Rain Bird App off ers a toggle to switch between automatic watering and off status.

# **Resetting the Controller**

# **Reset WIFI Settings to Quick Pair Broadcast Mode**

# NOTICE

This action will reset WiFi back to factory default settings and cannot be reversed; watering schedules will be retained.

Hold PAIRING MODES button on the controller interface for approximately fi ve seconds.

- 1. STATUS will turn solid amber.
- 2. Once rebooted, STATUS will blink blue.

If you have previously connected to the controller from your mobile device, you will need to fi rst delete the old controller card. The controller can then be reconnected to your mobile device by launching the Rain Bird App, tapping the "Add Controller" icon and following the on-screen instructions.

# **Reset Programmed Watering Schedules to Factory Default Settings**

#### **NOTICE**

This action will reset all programmed watering schedules back to factory default settings and cannot be reversed; WiFi settings will be retained.

Simultaneously hold AUTO, OFF and NEXT buttons on the controller interface for approximately fi ve seconds.

- 1. AUTO will blink green.
- 2. OFF will blink red.
- 3. MANUAL will blink green.
- 4. Once rebooted, AUTO will turn solid green.
- 5. STATUS will remain unchanged from the current state.

The default program will water each zone for 10 minutes every day until overwritten with a custom program. Additional programs can also be added (if desired) by selecting +PGM. Each program in use should have the desired watering start time(s), run day(s) and duration(s).

# **Restore the Controller to Factory Default Settings**

#### NOTICE

This action will reset both WiFi and all programmed watering schedules back to factory default settings and cannot be reversed.

Simultaneously hold AUTO, OFF, NEXT and PAIRING MODES buttons on the controller interface for approximately fi ve seconds.

- 1. STATUS will blink amber.
- 2. AUTO will blink green.
- 3. OFF will blink red.
- 4. MANUAL will blink green.
- 5. Once rebooted, AUTO will turn solid green.
- 6. Once rebooted, STATUS will blink blue.

If you have previously connected to the controller from your mobile device, you will need to fi rst delete the old controller card. The controller can then be reconnected to your mobile device by launching the Rain Bird App, tapping the "Add Controller" icon and following the on-screen instructions. When paired, watering program(s) will need to be set-up in the Rain Bird App. The default program will water each zone for 10 minutes every day until overwritten with a custom program. Additional programs can also be added (if desired) by selecting +PGM. Each program in use should have the desired watering start time(s), run day(s) and duration(s).

# **Lawn Sprinkler Control**



- 1. AUTOMATIC WATERING: Watering occurs automatically according to programmed schedules
- 2. **OFF:** Cancel all active watering immediately and disable automatic irrigation
- 3. MANUAL WATERING: Start watering immediately for all stations in sequence
- 4. ADVANCE TO NEXT STATION: Advance to the next station in sequence
- 5. PAIRING MODES: Toggles between AP Hotspot and WiFi pairing modes
- 6. **WIRING BAY WITH REMOVABLE COVER:** Contains terminal block to connect valve stations and optional accessories
- 7. POWER CORD: 1.8 m power cord

**CONTROLLER CASE** (outdoor model): Controller case with removable door for protection against inclement weather.

# **LED Status on Controller**

LED	ACTION
STATUS flashing blue	Quick Pair broadcast mode
STATUS alternating red and green	AP Hotspot broadcast mode
STATUS solid green	WiFi broadcast mode
STATUS flashing red	Not connected
AUTO solid green	Automatic watering active
OFF solid red	Controller off
MANUAL flashing green	Manual watering active

# **Technical Support**

For more information, including troubleshooting, scan the **QR code**.



# **Safety Instructions**



This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental c apacity, or lack of experience and knowledge unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

Outdoor controller: If the supply cord is damaged, it must be replaced by the manufacturer, its service agent, or similarly qualified persons in order to avoid a hazard. It must be replaced with flexible supply cord of H05VV-F ty pe, 0.75mm<sup>2</sup> (18 AWG) wire size minimum. For fixed installation, use 0.75mm<sup>2</sup> (18 AWG) wire size minimum.

Indoor controller: If the power supply unit is damaged, it must be replaced by the power supply unit available fro m the manufacturer or its service agent.

Special precautions must be taken when valve wires are located adjacent to, or share a conduit with other wires, such as those used for landscape lighting or other electrical systems.

Separate and insulate all conductors carefully, taking care not to damage wire insulation during installation. An e lectrical "short" (contact) between the valve wires and another power source can damage the controller and crea te a fire hazard.

DO NOT apply power until you have completed and checked all wiring connections.

DO NOT attempt to link two or more controllers together using a single transformer.



# **A** CAUTION

This device must be installed to provide a separation distance of at least 20 cm from all persons and must not b e co-located or operating in conjunction with any other antenna or transmitter.

Indoor controller: Install the controller indoors with normal household air circulation, and not exposed to smoke or excessive condensation (pollution degree 2).

Outdoor controller: Install the controller so that it is not exposed to smoke (pollution degree 2).

Indoor controller: Only use the provided power supply unit. It provides the voltage required by the controller.

All electrical connections and wiring runs must comply withlocal building codes. Some local codes require that o nly a licensed or certified electrician can install power. Only professional personnel should install the controller. Check your local building codes for guidance.

# **NOTICE**

Changes or modifications not expressly approved by Rain Bird could void the user's authority to operate the equipment.

Use only Rain Bird approved accessory devices. Unapproved devices may damage the controller and void warr anty.

#### **DISPOSAL OF ELECTRONIC WASTE**

This symbol on the product and/or accompanying documents means that used electrical and electronic equipment (WEEE) should not be mixed with general household waste. For proper treatment, recovery, and rec ycling, pleasetake this product to designated collection points. Disposing of this product correctly will help save r esources and prevent any potential negative effects on human health and the environment, which could otherwise arise from inappropriate waste handling.

#### **EU DECLARATION OF CONFORMITY**

Hereby, Rain Bird Corporation declares that the radio equipment type ARC6I-230V is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address: <a href="https://www.rainbird.co">www.rainbird.co</a> <a href="https://www.rainbird.co">m/RegulatoryCompliance</a>

## **RF SPECIFICATIONS**

Maximum radio-frequency power: 19.22 dBm
 Operating frequency band: 2 402 – 2 480 MHz

#### **SPECIFICATIONS**

- Electronic disconnection on operation
- Rated impulse voltage (ARC6I-230V): 500V√
- Rated impulse voltage (ARC6O-AUS): 2500V√



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## **Documents / Resources**



RAIN BIRD ARC Series Smart Irrigation Controller [pdf] User Manual

ARC Series, ARC Series Smart Irrigation Controller, Smart Irrigation Controller, Irrigation Controller, Controller

#### References

- ▶ Product Regulatory Compliance | Rain Bird
- ♣ Rain Bird | A Global Irrigation Company
- ▶ Product Regulatory Compliance | Rain Bird
- User Manual

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