

SPLASH WIZARD BASIC

Installation and User Manual




Sapphire[®]

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SPLASH WIZARD BASIC WARNING

The Splash Wizard Basic is designed for use in connection with residential and commercial water features. Proper installation, use, and maintenance are essential for optimal performance and to reduce the risk of accident or injury. Follow the installation instructions carefully.

IMPORTANT

Before beginning installation, read all of the warnings and instructions below and identify components using the figures and diagrams listed in this document. It is critical that all parts be carefully inspected by the installer prior to installation to ensure that no damage occurred in transit and that a damaged component is not used. Proper installation cannot be overstressed, as improper installation voids any warranty by Sapphire Fountains and may affect the safety of the water feature and its users. Failure to read and follow the instructions may result in damage to the Controller.

This Controller has been evaluated for use with water features only and has not been approved for use in aquariums or other marine areas.

Sapphire Fountains is not responsible for losses, injury, or death resulting from failure to observe safety precautions, failure to follow the instructions, or any misuse or abuse of the Controller or equipment.

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WARNINGS

This unit must be hardwired and connected only to a supply circuit that is protected by a ground fault circuit interrupter (GFCI). A GFCI is generally a minimum requirement by most building codes and should be provided by the installer and must be tested before each use. Consult the GFCI manufacturer's instructions for correct installation, testing, and operation.



All electrical connections must comply with the National Electric Code, as well as any applicable state and local codes and standards. A qualified, licensed electrician must be used for all electrical connections. **DO NOT** attempt to install the Splash Wizard Basic Controller unless you are an experienced, licensed electrician.

DANGER - RISK OF ELECTRICAL SHOCK. Special care should be taken since water is employed in the use of this product and equipment. Electrical components for the Splash Wizard Basic Controller should be installed at least 10 feet (3 meters) away from any body of water. All electrical components should be properly bonded per national, state, and local codes. **DO NOT** permit any electrical apparatuses (i.e., a light, telephone, radio, televisions, etc.) within 10 feet (3 meters) of a body of water.

Ensure that the Controller power source is OFF prior to connecting to the Controller. Prior to beginning the Controller installation, anytime you connect or disconnect components, and before any other maintenance or cleaning, make sure the Controller is not plugged into any outlets and has been disconnected from all electrical connections. The Controller must be installed in a shaded



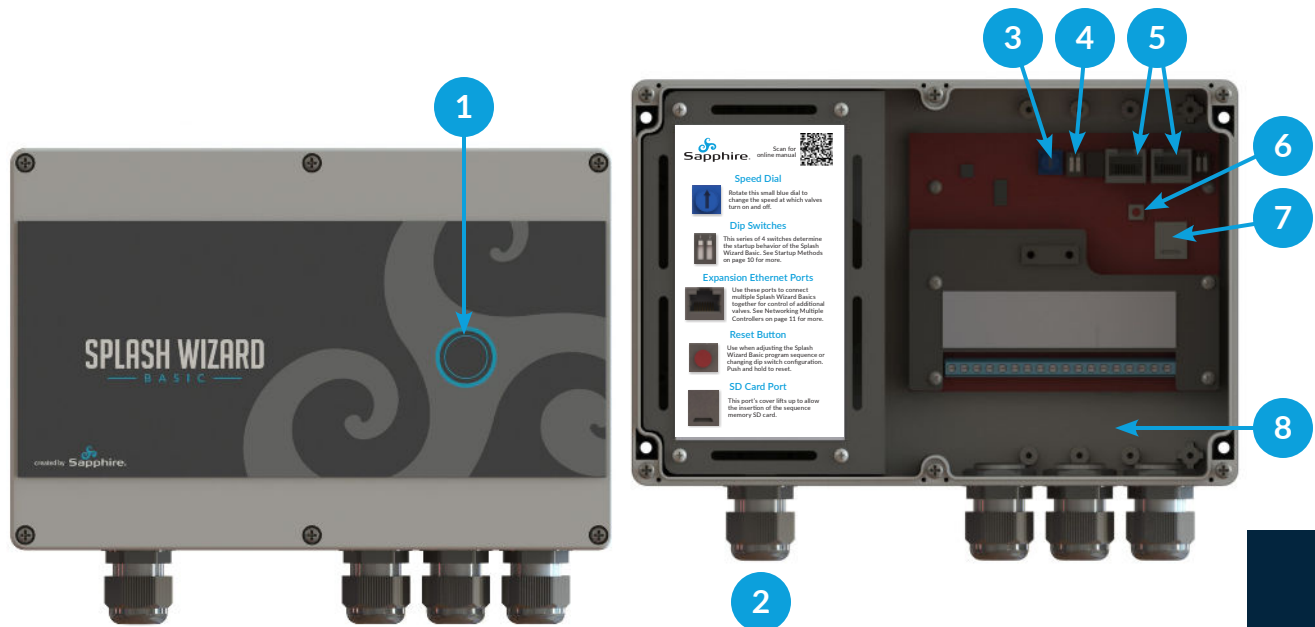
area and out of direct sunlight. Do not let the Controller become iced up. Do not make any contact with any components inside the Controller other than as provided in the installation instructions.

Inspect the power cable before using. The power cable should be protected at all times. Never cut the cord. Never handle the power cord with wet hands. Do not use the power cable to lift the Controller. Grasp the plug and pull to disconnect. Never yank the cable. Do not operate if the power cord is damaged or if it is malfunctioning.

If replacement of any part of the Controller is required, including fuses, replace only with the same type of part and rating. Installation of a higher amperage fuse is a fire hazard and can lead to serious injury, equipment damage, or death.

The Splash Wizard Basic Controller has been tested before leaving the manufacturing plant. A blown circuit board is not covered under any warranty of this product. It is important that a licensed electrician installs the Splash Wizard Basic Controller, they read the instructions provided, and examine the diagrams to ensure that the circuit board is not damaged during installation.

PRODUCT FEATURE OVERVIEW



1. Control Button: This button, with its distinctive blue ring, acts as the user's main point of control. Pressing will cycle the selected show, and holding will turn the controller on/off.

2. Power Cable: The main power cord provides power to the Splash Wizard Basic control panel.

3. Speed Dial: Rotate this small blue dial to change the speed at which valves turn on and off.

4. Dip Switches: This set of two switches (S2) determine the startup behavior of the Splash Wizard Basic. See Startup Methods on page 10 for more.

5. Expansion Ethernet Ports: Use these ports to connect multiple Splash Wizard Basics together for control of additional valves. See Networking Multiple Controllers on page 11 for more.

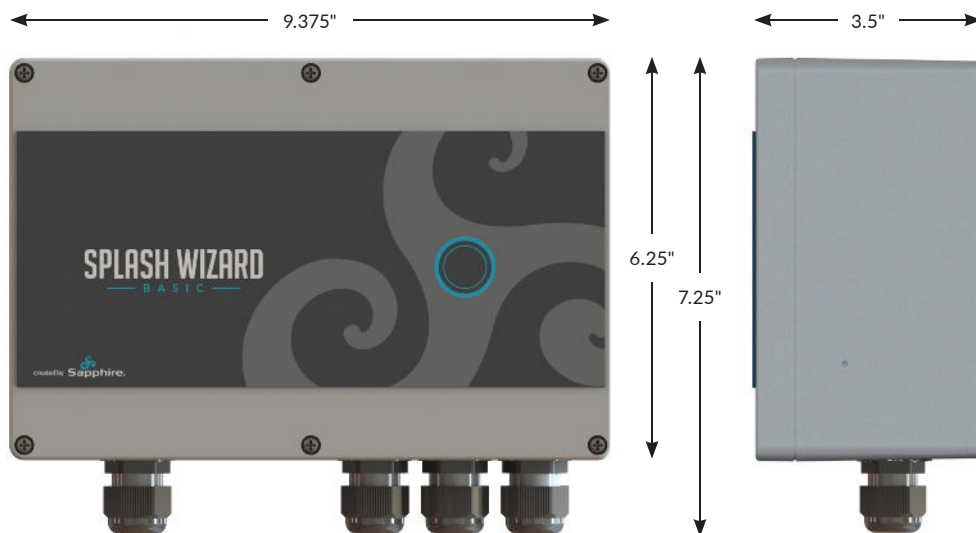
6. Reset Button: Use when adjusting the Splash Wizard Basic program sequence or changing dip switch configuration. Push and hold to reset.

7. SD Card Port: This port's cover lifts up to allow the insertion of the sequence memory SD card.

8. Serial Number: Shows the serial number of the Splash Wizard Basic Controller.

DEVICE INTRODUCTION AND DIMENSIONS

The Splash Wizard Basic Controller is designed for use in water features such as small jumping fountains and splash pads. Users can control the pattern (or sequence) of water flow via the Sequence Memory Card, which can be customized to users' specific needs.



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DEVICE FEATURE SUMMARY

A single unit of the Splash Wizard Basic can control 1 to 9 valves. It can also be networked with a second unit to increase the total number of valves from 10 to 18.

The Splash Wizard Basic includes three standard program sequences:

- 1. All On:** All valves activate when the power button is pressed.
- 2. Patterns:** Valves operate in a pattern based on the configurations inputted into the sequence memory card.
- 3. Random:** Valves operate at random (ideal for a splash pad)



ELECTRICAL SPECIFICATIONS

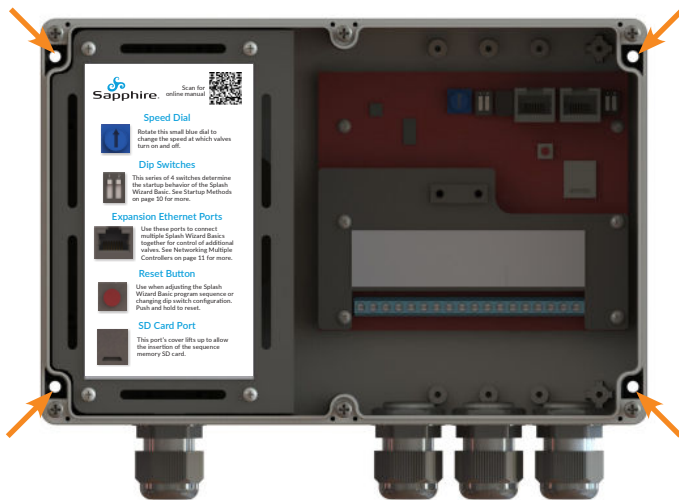
ATTRIBUTE	VALUES	
Controller Voltage	120VAC	
Controller Max Amperage	834 mA	
Operating Amperage	100 mA	
Wire Gauge Range	24AWG...16AWG	
Strain Relief Diameter	.475"	
Valve Specifications	TYPE	OPERATING VOLTAGE
	Solenoid Valve	24V AC
Number of Relays	9	



WARNING: Do not exceed the rated voltage or amperage of the relays. Doing so will damage them, and void the warranty.

MOUNTING INSTRUCTIONS

To mount the Splash Wizard Basic Controller, first remove the lid and disconnect the power button cable. Ensure the Controller is mounted within five feet of an electrical outlet. If the Controller is mounted further than five feet from an outlet, an extension cord will be needed.



MOUNTING WITHOUT FEET

Mount the Splash Wizard Basic Controller using a screw in each corner. Ensure each screw is drilled into a stud, drywall anchor, or concrete.

Use screw size #8

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MOUNTING WITH FEET

Note: The Splash Wizard Basic includes mounting feet

Secure the slotted hole of each foot from the back with the hardware provided.

Next, mount the controller with a screw in each foot. Screw each foot into a stud or drywall anchor for proper security.

Use screw size #8, counter sunk.



WIRING INTRODUCTION



WARNING: Disconnect power to the Splash Wizard Basic before wiring to avoid electric shocks.

WARNING: The line colors on the Splash Wizard Basic are for reference only. They do not represent the actual wire colors.

WIRING INSTRUCTIONS

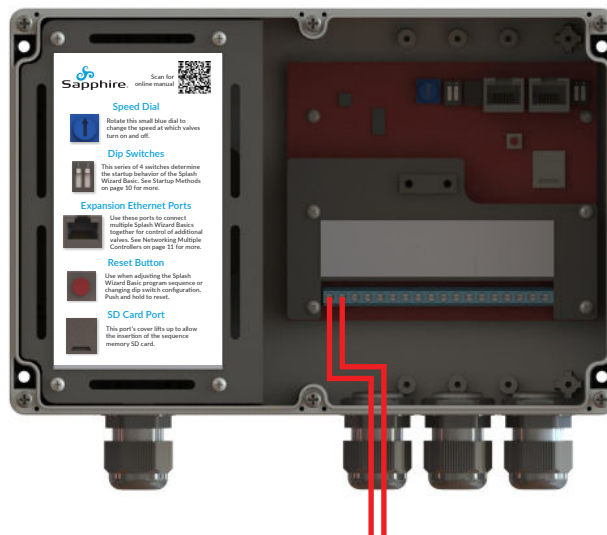
Use the following Instructions and diagram to properly wire field devices to the Splash Wizard Basic Controller. Verify the wiring is done correctly before applying power to the Controller. This prevents accidental damage to the devices.

For main power, plug the cord into a GFCI outlet.

For Valves, the Splash Wizard Basic has a row of terminals running along the bottom of the board. To connect the first valve to the Controller, wire it into terminals 1 and 2. For the second valve, wire to terminals 3 and 4. Repeat this process until all desired valves are installed.

If using multiple Splash Wizard Basics networked together, wire them the same way. See Networking Multiple Controllers on page 11 for Ethernet hookup.

NOTE: Wire size should not exceed 16 gauge as this is the largest wire size the Splash Wizard Basic can accommodate.



RUN CONFIGURATION

To run a configuration for the Splash Wizard Basic, first, set the dip switches to the desired configuration.

Next, determine the speed at which you'd like the valves to switch on/off.

You can then view your configuration by powering the controller.

Please reach out to Sapphire for custom programming.

START-UP METHODS

The Splash Wizard Basic has two sets of dip switches. **Only the left side set next to the speed dial (labeled S2) is in use.** The top corner of the dip switches says "ON". If the switches are pushed up toward the top, they are on, otherwise they are off. Use a small screwdriver to move switches.

Dip switch 1 can be used to set the start-up method. Dip switch 2 determines primary or secondary Controller for when networking is used. See page 11 for network settings.

The Splash Wizard Basic has 2 Start-up methods:



Auto Start When Powered On

Dip Switch 1 ON:

As soon as the controller gets power, it will start to run the valve sequence. The controller can be stopped by pressing and holding the control button for 2 seconds.



Start-Up With Control Button

Dip Switch 1 OFF:

When the user presses and holds the control button for 2 seconds, the controller will start up and run the valve sequence. The controller stops when the user presses and holds the control button for 2 seconds.

SEQUENCE OPTIONS

The Splash Wizard Basic Includes 3 standard programs. Press the control button to cycle through them.

1. **All On:** Turns all valves on, always.
2. **Patterns:** Valves are set to run in a specific pattern, pre-programmed by Sapphire Fountains.
3. **Random:** Each step randomly activates and deactivates valves.

Please reach out to Sapphire Fountains for custom programming.

NETWORKING MULTIPLE CONTROLLERS

The Splash Wizard Basic has 2 Network Settings:



Primary Controller

Dip Switch 2 ON:
Control any secondaries attached via ethernet.

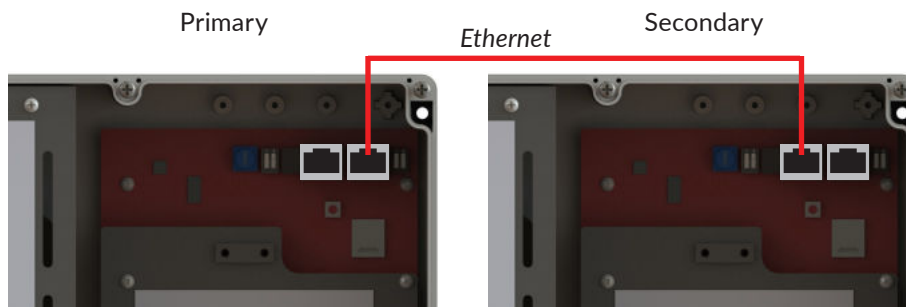


Secondary Controller

Dip Switch 2 OFF:
Wait until controlled by a primary.

In situations where 10-18 valves are required, two Splash Wizard Basic controllers can be networked together via an ethernet cable.

There are two ethernet ports, input J7 (left side), and output J8 (right side).



Set the dip switch for the primary and secondary controller, and then connect the output ethernet port of the primary controller to the input ethernet port of the secondary controller.

Both Controller's programs will be determined by the Primary's SD card.

