# spruce

# 16 Zone Irrigation Controller Quick Start Guide

## INSIDE THE BOX

Spruce controller

AC Adapter

Mounting Hardware
x2 Screws
x2 Drywall Anchors

## INSTALLING THE SPRUCE SMARTAPP

Establish a network connection with the SmartThings Hub first, before mounting the hardware. Perform the initial network connection in close proximity to the SmartThings Hub. Plug the power into Spruce and wait for Spruce to finish booting (the logo flashes purple/green when booting, and changes to blinking red when done).

In the SmartThings App, navigate to the Marketplace ✳ then tap + Connect New Device. SmartThings will start to search for devices.

While SmartThings is searching, tell Spruce to join the network: On the Controller, press the Function button (logo will turn teal), then touch Zone 9 (logo will flash red/blue). Spruce should connect to SmartThings within 1 minute. When Spruce is connected, the indicator light will switch to solid blue.

The SmartThings App should have also identified your new device as the Spruce Controller - select it now (If SmartThings identifies the device as a generic Thing or a different device, visit our Support Page for instructions to un-pair; then try connecting again).

On the next screen, add the Spruce Controller to the Spruce Room. If the Spruce Room does not exist, add it by tapping Select a Room, then Add a new room. Add the room and name it Spruce. When done, tap next. The next screen configures how Spruce will interact with other devices in SmartThings. Make any desired changes, then tap Done.

Unplug the Controller and prep to mount the hardware.

## INDICATOR LIGHT  CODES

Flashing Purple/Green
Booting up

Flashing Red
Not connected to network

Flashing Red/Blue
Searching for network

Blue
Connected to network

Flashing Blue/Green
Scheduled watering

Teal
Function button active

## ZONE NOTES

| 1 | 9 |
| 2 | 10 |
| 3 | 11 |
| 4 | 12 |
| 5 | 13 |
| 6 | 14 |
| 7 | 15 |
| 8 | 16 |

## REMOVE THE EXISTING CONTROLLER

Remove your existing controller and take note of which zone wires correspond to which zones. It will be helpful to take a picture. You can also use the table below to take notes.

## MOUNT THE MOUNTING PLATE

If necessary, install drywall anchors. Use a drill to drill two holes in alignment with the mounting holes, and insert the provided drywall anchors. Remove the faceplate from the Controller. Using the 2 screws provided, screw the Spruce Controller Mounting Plate into the drywall anchors, or directly into bare wood.

## INSTALL THE ZONE WIRES

Feed the zone wire bundle under the bottom bracket and insert the zone wires into the screwless connectors. It may be helpful to push down on the terminal block with a small screwdriver when inserting or releasing wires. Make sure all the connections are tight.

The common, 16 zones, and rain sensor ports are labelled on the board. It does not matter which common ports are used. The Master/Pump wire (if applicable) can be installed into any open zone and then configured as such in the Zone Summary and Setup section of the SmartApp. The 24VAC ports are optional and not necessary if using the supplied AC adaptor & power input port at the bottom of the unit.

Re-install the faceplate. Take care to align the pins. Plug the AC adaptor into Spruce and into a wall plug (Note: the faceplate must be re-attached before plugging in the power). The Spruce indicator will change to solid blue when connected. Remove the protective plastic from the faceplate when ready.

## MANUAL ZONE OPERATION

This would be a good opportunity to test that the wiring was installed correctly by toggling your zones manually. Zones can be toggled on or off manually on the Spruce Controller by simply touching the zone of interest to toggle the zone ON or OFF.

For manual control via the SmartThings App, navigate to My Home ⊞ -> Spruce Room and select your Spruce Controller. Tap on any of the zones to toggle the zones on or off.

NOTE: You may see an alarm state on the controller after rebooting. This will clear itself after the next schedule begins.

## TOOLS NEEDED

Phillips (+) Screwdriver

Drill & $^3/_{16}$'' drill bit (if mounting to drywall)

### Spruce Controller Faceplate

Function Button
Pauses watering if a schedule is running

Indicator Light

Function + 9:
Join Network

Zone Touch Buttons & Indicators

1 2 3 4 5 6 7 8

spruce

9 10 11 12 13 14 15 16

Zone Touch Buttons & Indicators

Function + 16:
Leave Network

### Spruce Controller Mounting Plate

Mounting Holes

Faceplate Connector

+ 24VAC
COM
COM
COM
1 2 3 4 5 6 7 8

RAIN
COM
COM
9 10 11 12 13 14 15 16

Terminal Blocks

Bottom Bracket

Power Input

## Need more help? Visit
**support.spruceirrigation.com**

## THE SPRUCE CONTROLLER DEVICE PAGE

Your Spruce Controller device page will look similar to the screenshot on the right. The first two circles are indicator icons and tell you if Spruce is running and the status of your rain sensor (if you have one attached). The third icon will manually start a schedule (only if a schedule is configured).

At the bottom, the Refresh icon will retrieve the current status from the controller, update the icon status for each of your zones, and report the result in the Recently tab. Note that when you toggle a zone in the SmartThings App, it will send the command and update the icon status regardless of whether Spruce actually receives the command. Tapping the refresh button is a good way to ensure that your screen shows the true current status. If your Recently tab does not refresh with the full list of zone states within a few seconds, you may have a range issue.

Finally, the Configure button will push any settings changes (accessible by tapping the gear icon in the upper right corner) made to the device. If you wish to configure options for scheduling and watering, do so in the Spruce Scheduler SmartApp.

## INSTALL THE SPRUCE SCHEDULER SMARTAPP

Navigate to the Marketplace ❄ then SmartApps, then Energy Management. Find the Spruce Scheduler, and tap Done to install.

## SETTING UP A WATERING SCHEDULE

Here you can set all settings for the Spruce SmartApp. A full explanation of settings can be found in the Spruce Support Page in the Spruce Scheduler category.

**Spruce Schedule Settings:** General settings for the app and global schedule settings such as watering start time and watering day restrictions.

**Weather Settings:** Configure some simple weather settings here.

**Zone Summary and Setup:** The majority of your configuration will take place here.

The **Zone Configuration** section contains a few settings which will affect all of your zones, including an option to globally adjust all watering times up or down. Of particular note is the moisture sensor Learn Mode. When disabled, Spruce will use its sensors in a "go/no-go" or "delay watering" mode. In this mode, the sensors will affect the watering days, and not the watering duration. When Learn Mode is on, Spruce will compare the current moisture value for that zone vs. the moisture sensor target value. In this mode, Spruce adjust watering times, not days.

**Valve and Contact Delays:** This section contains settings for pump or master valve delays, contact delays (for example, to configure a door sensor to pause watering if opened), and selection of a master controller (note: for users with multiple controllers only).

**In each Zone of interest**, you will need to choose your Sprinkler & Landscape types so that Spruce can calculate a suggested watering time for your zones. You would also assign your sensors here. The "Guideline value" setting will affect how many days per week your system will water; refer to our support page for further details and examples.

**GOT SENSORS?**
Connect them to SmartThings and assign them to a zone in the Zone Summary and Setup section of the SmartApp.

‹ Spruce Controller... ⚙ ☰

Right Now | Recently | SmartApps

ACTIVE | RAIN SE... | START

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

Configure