HYDRAWISE IRRIGATION CONTROLLER WITH INTERNET CONTROL

Thanks for purchasing a Hydrawise controller. This guide takes you through initial configuration of your controller and information on each of the controller's screens.

This guide does not cover configuration of the app. Our website at http://hydrawise.com/support contains many How-To guides covering configuration.
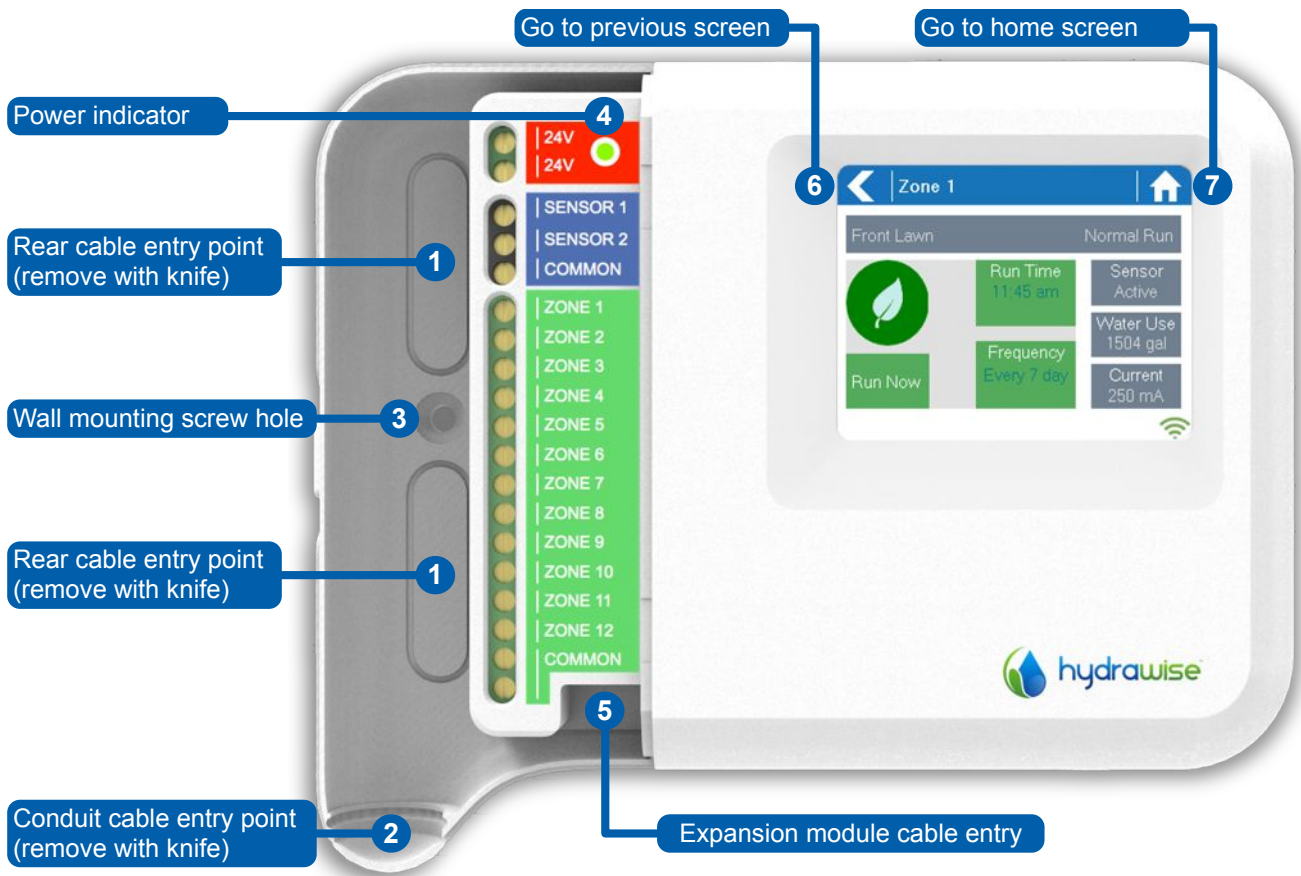
Hardware Installation

Controller Location

The Hydrawise Controller is designed for installation in a protected location.

The chosen location must have WiFi coverage. WiFi coverage can be easily checked using an iPhone or smart phone that has WiFi connectivity or on the Hydrawise unit itself (signal strength is shown when you select a wireless name).

Cable Entry

The controller has 2 cable entry options – from the rear of the case or via a conduit from the bottom of the controller.

Go to previous screen

Go to home screen

Power indicator

Rear cable entry point (remove with knife) — **1**

Wall mounting screw hole — **3**

Rear cable entry point (remove with knife) — **1**

Conduit cable entry point (remove with knife) — **2**

Expansion module cable entry — **5**

24V / 24V — **4**

SENSOR 1 / SENSOR 2 / COMMON

ZONE 1 / ZONE 2 / ZONE 3 / ZONE 4 / ZONE 5 / ZONE 6 / ZONE 7 / ZONE 8 / ZONE 9 / ZONE 10 / ZONE 11 / ZONE 12 / COMMON

6 Zone 1 **7**

Front Lawn — Normal Run

Run Time 11:45 am — Sensor Active

Water Use 1504 gal

Frequency Every 7 day — Current 250 mA

Run Now

Entry from rear of controller

Using a sharp knife remove the 2 cutouts on the rear of the controller as indicated on the diagram as ❶

Entry via ¾ inch conduit

Using a sharp knife cut around the semi-circular line on the controller as indicated on diagram as ❷. Cut around the matching line on the blue controller wiring cover

Mounting the Controller

1. Using a drill bit of 3/16 inch diameter, drill a hole of to a depth of 1 inch (25mm).
2. Insert plastic anchor so it is flush with the surface of the wall.
3. Screw 1 inch screw into plastic anchor leaving the head protruding about 1/8 inch.
4. Slide the controller case over the screw head.
5. Mark second mounting point (see ❸ in diagram), remove controller, drill hole, insert plastic anchor, slide controller case over first screw head and screw into place.

Connecting Solenoid Valves

Your controller has either 6 or 12 zones depending on the model you have purchased. There are 3 COMMON wiring points for convenience – any or all of them can be used.

Refer to the diagram below when connecting your solenoid valves to the controller.
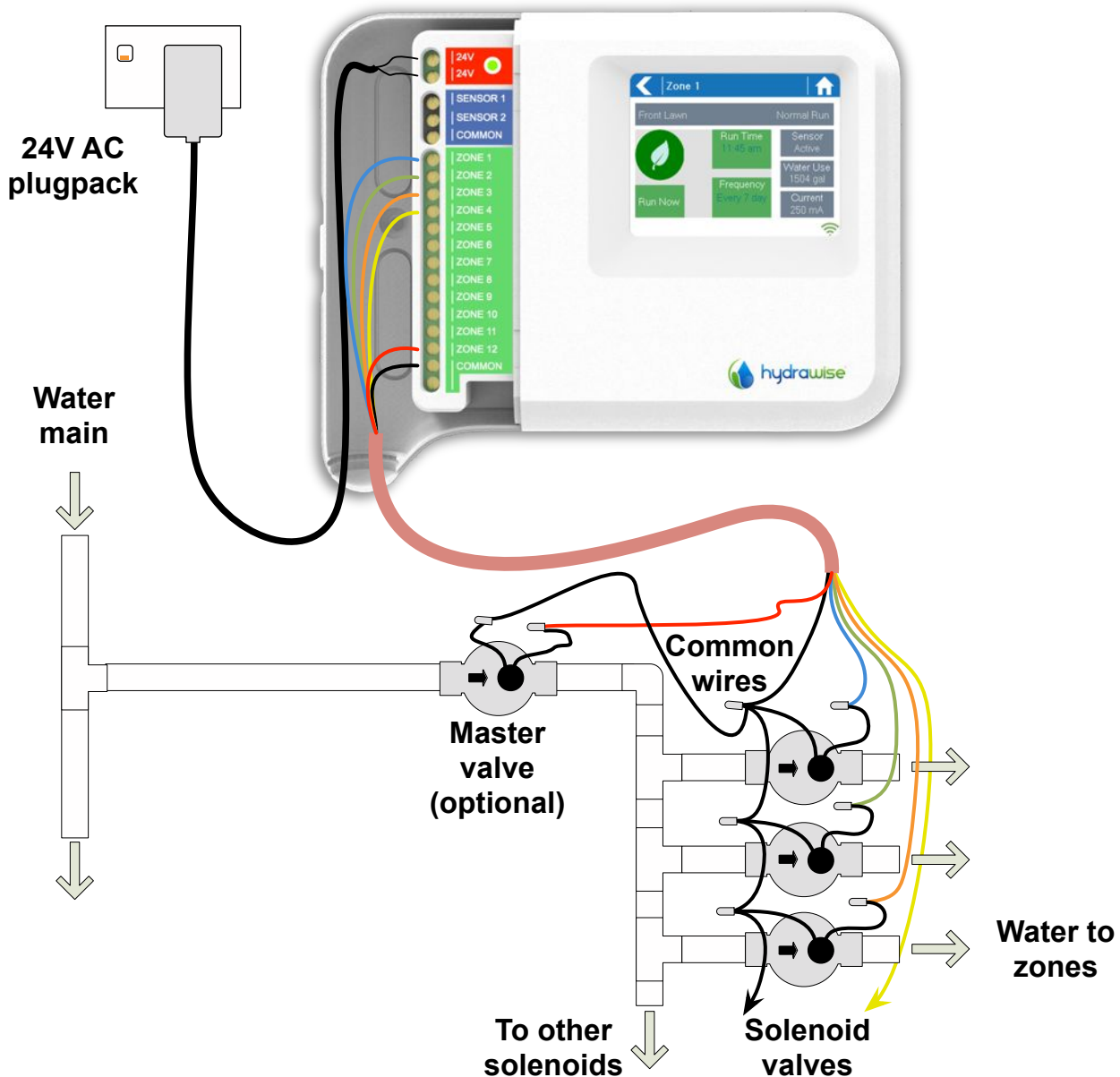
Solenoid Valve Wiring

1. Take one wire from each solenoid, twist together and connect to the common (usually black) wire of your multi-core irrigation cable.

> Hydrawise recommends that all connections be soldered and sealed against moisture for long term reliability.

2. Connect each of the other individual solenoid wires to a different wire in the multi-core cable and seal. Record zones against wire colour for later reference.
3. Connect the common wire from the multi-core cable (usually black) to any of the three terminals on the controller marked COMMON.
4. Connect each of the other solenoid wires to one of the ZONE inputs.
5. If a master valve (sometimes labelled as MV on other controllers) is installed this can be connected to any spare zone as any of the zones can be assigned as a master valve output. Configuration of the master valve in the Hydrawise app is required.
6. Click the blue wiring cover into place to seal the controller and protect the wiring.

Connecting the Plug Pack

7. Use the plug pack supplied and connect the wires to the red AC terminal blocks on the unit marked as 24V. Polarity of the wiring is not important.
8. Turn the power on. The power indicator will light up (see ❹ on previous page).

Connecting Sensors or Flow Meters (optional)

Hydrawise supports most open/close contact type of sensors such as standard rain sensors and soil moisture sensors.

1. Connect one sensor wire to COMMON on the controller.
2. Connect the Normally Closed or Normally Open wire from the sensor to SENSOR1 or SENSOR2 on the controller and configure in the Hydrawise app.

For full details, refer to the instructions provided with your sensor or flow meter. Instructions on configuring the controller for a sensor from the app are on our website.

Troubleshooting Zone Issues

- Try running a zone from the controller's touchscreen. If it works from the controller and doesn't work from the app then check that you have linked your controller's serial number to your account (see previous section for details) and check your controller's wireless status.
- If your old controller had a master valve (sometimes referred to as MV) then you must configure a master valve in the app and wire this to a spare zone on the controller. Detailed instructions can be found on the Hydrawise website.
- Check that your wiring is correct. If no zones start then check that your COMMON wire is correctly cabled.
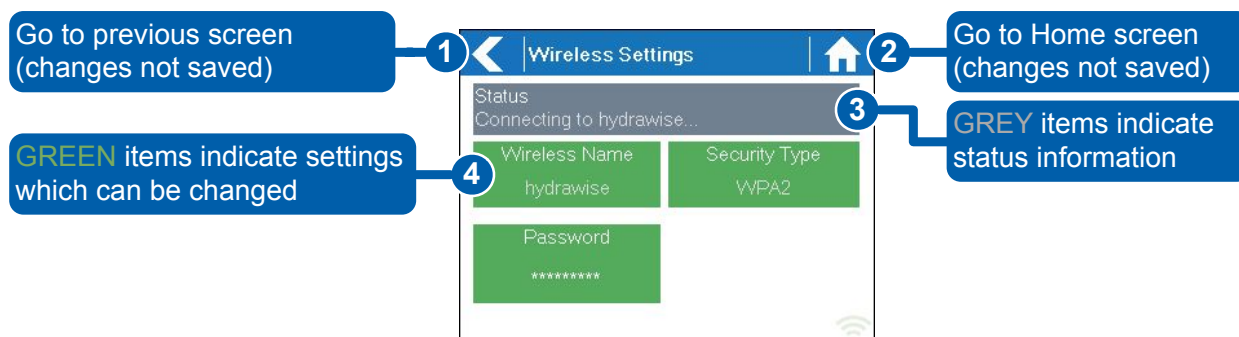
Configuring the Controller

Navigating Through the Controller Screens

The controller features a full color touchscreen making navigation easy.

The Home screen, shown below, has 3 buttons allowing you to view and run your irrigation zones, change controller settings or view status information.

Touch to view all Zones

Touch to change controller settings

Touch to view controller status information

Each screen (except for the home screen) has two buttons at the top of the page allow you to quickly navigate to the Home screen or the previous screen.

Go to previous screen (changes not saved)

Go to Home screen (changes not saved)

GREY items indicate status information

GREEN items indicate settings which can be changed

All items on each screen are color coded to indicate which screen elements are buttons and which screen elements indicate status information.

GREEN screen items indicate settings that can be changed. If you touch on the GREEN color item then you'll be able to change that setting.

GREY colored items indicate status information. Touching on these has no affect.

> **Note**
>
> If you're entering information into the controller and use the Home or Back buttons then your changes on that screen will not be changed.

Connecting to a WiFi network

When your controller is first powered on it will run a short wizard to connect your controller to your wireless router.

If you're not using the initial startup wizard then go to the section Viewing Wireless Settings to change your wireless settings.

Using The Wizard

1. Select your wireless network from the list shown on the controller display and press the **Confirm** button on screen.

> If your network is not listed then check that the unit is within wireless range.

2. Enter your wireless password and press the **OK** button on keyboard.

> Make sure you press the OK button after you've entered your password. Pressing the Home 🏠 or Back buttons ◀ will not save your changes.

> When connecting to your wireless, the WiFi Icon 📶 at the bottom right of the controller screen will flash. Connecting takes about 30 seconds and when successfully connected the WiFi Icon 📶 will stop flashing and stay on.

If you have issues connecting to wireless then the section Viewing Wireless Settings has more troubleshooting information.

Viewing Wireless Settings

From the Home screen 🏠 navigate to the Wireless Settings by pressing Settings➔Wireless Settings.
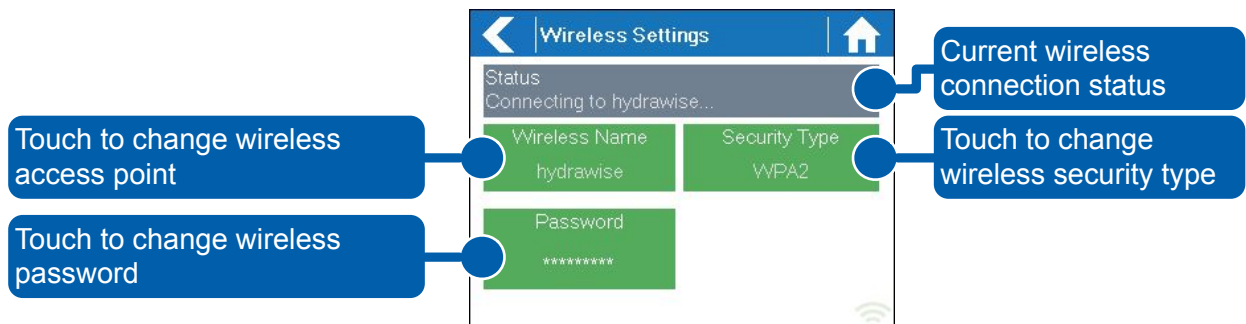
To successfully connect the Hydrawise unit to your wireless router you will need to correctly select your wireless router, wireless security mode and enter your wireless password.

The current status of the controller's connection to your wireless router is shown at the top of the screen. The controller will automatically attempt to connect to the configured access point if a connection is lost (for example, after power failure)

Touch on any of the green buttons to change the wireless type, security type or password.

Configuring Wireless Name

Touching on the currently configured **Wireless Name** will automatically start a scan of all local wireless routers and allow you to choose a new one.

After about 5 seconds a list of found wireless networks will be listed. To select a wireless name, touch on the wireless name and then touch **Confirm**. Do not press the **Home** or **Back** buttons after selecting your wireless router name – these options will not save your router name.

Each time you touch a wireless name the signal strength will be shown at the bottom of the screen.

If your wireless router is not shown then check the following –

- Your Hydrawise controller is within range of your wireless.

- Your access point is configured to accept connections from 802.11b/g wireless clients.

If your wireless router is hidden you may manually enter it by selecting **Manually enter wireless** and typing in the name.

Configuring the security type

The security type configured on the controller must match the security type configured in your wireless router. The Hydrawise unit can attempt to automatically detect this if you choose **Auto Detect** as the security type.

Hydrawise supports the following security types –

- Open
- WPA Personal
- WPA2 Personal
- WPA Auto

After choosing the security type press the **Confirm** button.

Setting your password

For any security mode (except for Open) your wireless router password must be entered. Wireless passwords are a minimum of 8 characters and are case sensitive.

After typing in your password press the **OK** button. Do not press the **Home** or **Back** buttons – these options will not save your password.

Wireless Connection Status Messages

The controller will show different status messages whilst connecting to your wireless router.

Looking for Wireless...   Controller is currently scanning for local wireless networks.

Connecting to...   Controller is currently trying to connect to your wireless router.

Waiting for IP   Controller has connected to your wireless router and is waiting for your wireless router to give it an IP address. Your wireless router must be configured as a DHCP server.

Connected   All is good. Controller has successfully connected to your wireless router.

Local Connection Only   Controller is acting as a local wireless router

Troubleshooting Wireless Connection Issues

After entering your wireless settings the controller will connect to your access point. The connection process takes about 30 seconds.

Upon successful connection the wireless status will show **Connected**.

If your controller fails to connect to your wireless router check the following –

- Your password is entered correctly. It is case sensitive and must be at least 8 characters long.

- Check that the wireless security types match between the controller and your wireless router. Hydrawise recommends use of WPA2 security between the controller and your wireless router.

Viewing Controller Status

From the Home screen 🏠 navigate to the Controller Status by pressing Status➔Controller Status.

The controller status screen shows your controller's connection to Hydrawise servers for synchronising schedule and weather information.
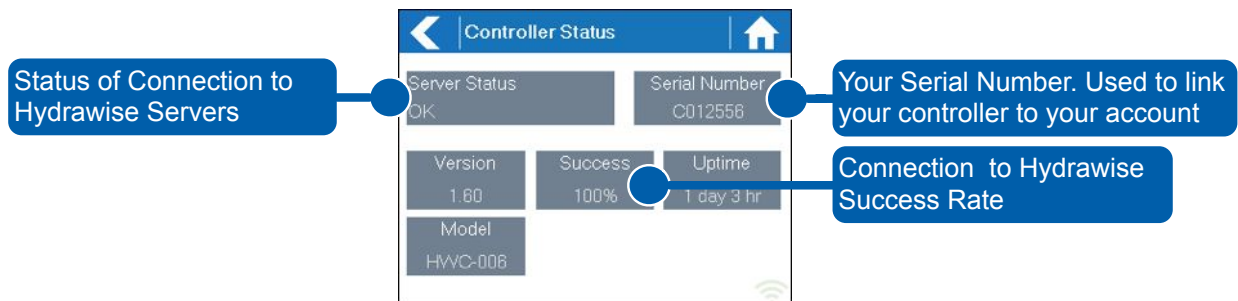
Server Status

A successful connection to the Hydrawise servers is indicated by **OK** as the Server Status.

Different types of status messages are shown below –

OK   All is good. Controller has a connection to Hydrawise servers.

No Internet   Controller has connected to wireless but is unable to connect to Hydrawise servers. Check that your internet is OK by connecting another device to the same wireless router. If this is OK then go to Status➔Network and select **Test Network** to perform a diagnostics test.

Wireless Down Controller has not connected successfully to your wireless. Go to Settings➔Wireless Settings to check the wireless status.

Checking   The controller is checking connection to Hydrawise.

Error XXX   The controller received an error whilst connecting to the Hydrawise server.

Success

The success percentage shows the percentage of time the controller successfully connects to Hydrawise servers to synchronise weather and schedule related information.

A low success percentage will indicate a poor wireless connection between the controller and your access point.

To improve your wireless signal strength you could try the following –

- Move the controller closer to your wireless router.
- Remove any obstacles in a direct line of sight between the controller and your wireless router such as metal items (metal is an extremely good isolator for WiFi signals).
- Move your wireless router closer to the controller.
- Install a higher gain antenna on your wireless router.
- Use Ethernet to a location closer to the controller and install a new wireless router.
- Consider a WiFi repeater between your wireless router and the Hydrawise controller to boost the signal strength.

Note that the Hydrawise unit is designed to work in poor wireless environments. However, if you wish to manually run or stop a zone and the wireless signal is down then these actions will fail.

If the controller loses signal strength for an extended period of time the controller will run in an Offline mode with its standard schedules. However, it won't be able to modify schedules based on weather conditions without WiFi access.

Serial Number

The serial number is used to link your actual controller with your Hydrawise account. This number is also printed on the rear of the controller.

Viewing Network Information and Testing Internet Connectivity

From the Home screen 🏠 navigate to the Network Status by pressing Status➜Controller Status.
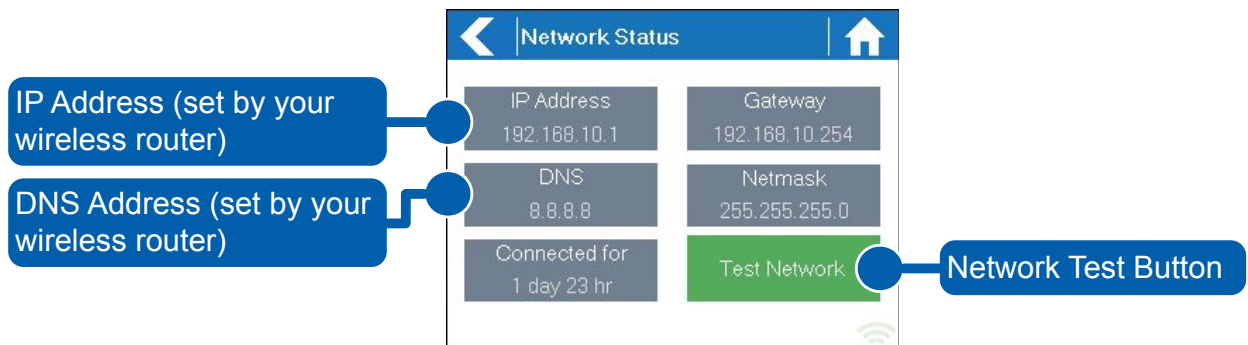
All settings on this page are provided to the controller by your wireless router when it first connects via a protocol known as DHCP. If any of these setting appear incorrect please change them in your wireless router.

Once the controller has successfully connected to your wireless router the Test Network button can be used to test network connectivity for troubleshooting purposes. The network test will verify connectivity to 4 destinations –

Checking WiFi   Performs a ping test to the Gateway address listed in the Network Status screen. If this test fails check that you don't have MAC address filtering enabled on your router.

Checking DNS   Performs a ping test to the DNS address listed in the Network Status screen. If this test fails check that the DNS address is correct – if it is wrong then correct the DNS address under DHCP Settings on your wireless router. It is possible that this test may fail if the DNS server doesn't not accept ping requests which does not indicate an issue.

Checking Internet   Performs a ping test to the Google server at IP address 8.8.8.8. This is a well known server which accepts ping requests on the internet. If this test fails then it indicates an issue with the internet configuration of your wireless router.

Checking Hydrawise Performs a ping test to the Hydrawise servers. If this test fails then it may indicate an issue with the internet configuration of your wireless router.

Viewing Time and Date

Time and date settings are synchronised with the settings that you configure in the Hydrawise app. The timezone is set based on the location you entered during the app wizard.
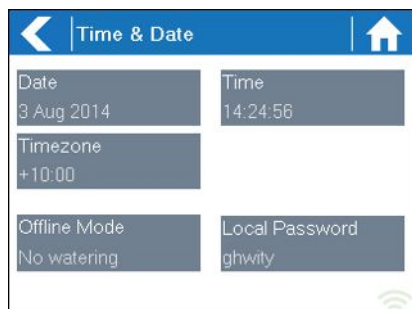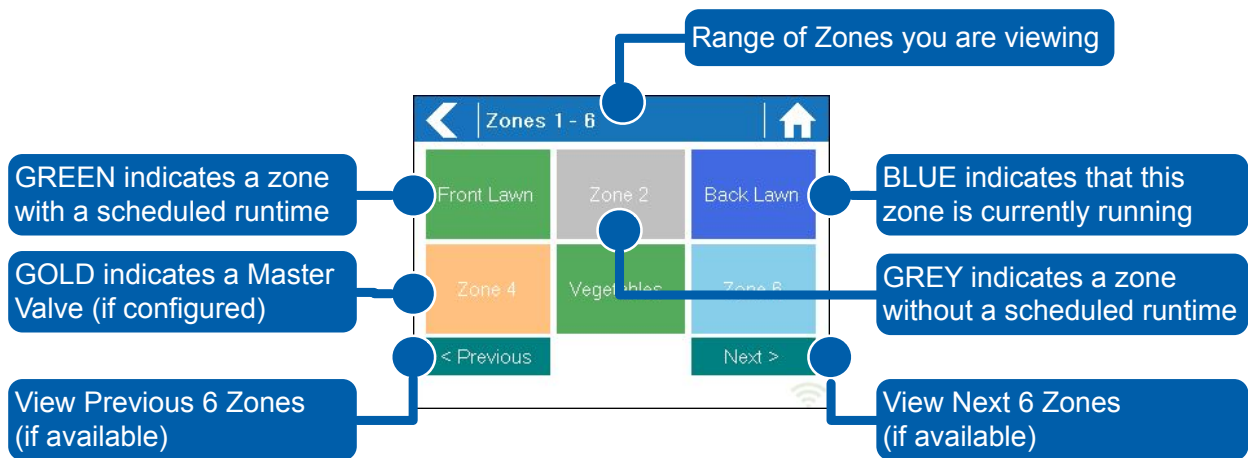

Controlling Zones From the Controller

Zone Summary

From the Home screen navigate to the Zone Summary screen by pressing Zones.

The Zone summary screen shows the status of 6 zones at a time. To view the next or previous group of zones use the **Next** and **Previous** buttons. The current range of zones that you are viewing is indicated at the top of the screen.
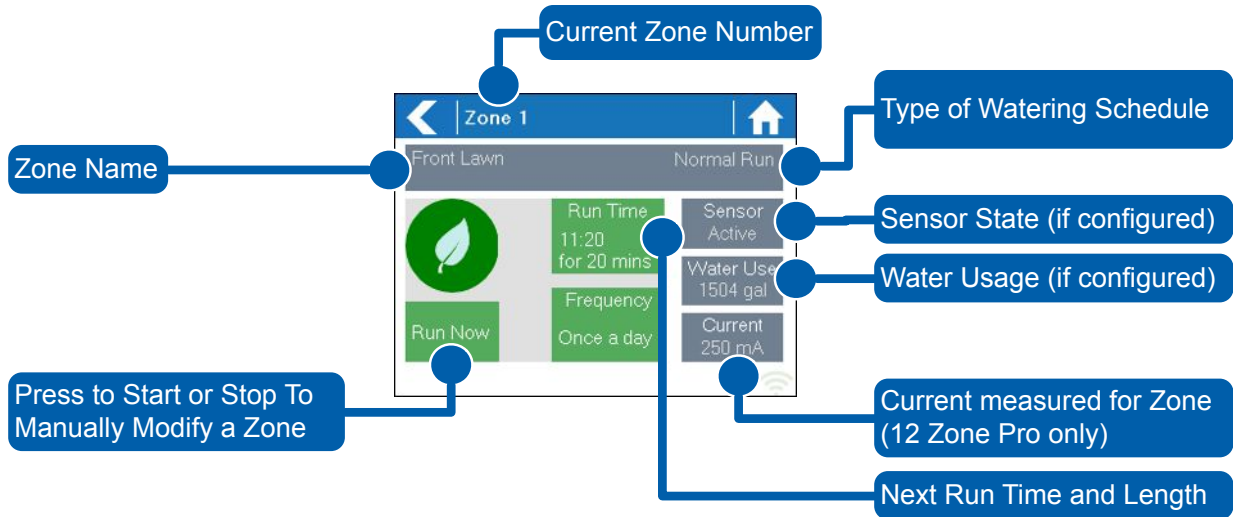
Range of Zones you are viewing

GREEN indicates a zone with a scheduled runtime

GOLD indicates a Master Valve (if configured)

View Previous 6 Zones (if available)

BLUE indicates that this zone is currently running

GREY indicates a zone without a scheduled runtime

View Next 6 Zones (if available)

Each zone is color coded to indicate the current status of the zone as follows –

Green   Zone is scheduled to run at some time in the future.

Grey   This zone is not scheduled to run in the future.

Blue (dark)   Zone is current active.

Blue (light) Zone is waiting for another zone to finish watering and then will start immediately.

Gold   This zone is a master zone.

Viewing Zone Information

From the Zone Summary screen touch the zone you wish to view.

Current Zone Number

Zone Name

Press to Start or Stop To Manually Modify a Zone

Type of Watering Schedule

Sensor State (if configured)

Water Usage (if configured)

Current measured for Zone (12 Zone Pro only)

Next Run Time and Length

The Zone Status screen allows you to view the following information –

Zone Name   This is the name of the Zone you've configured in the Hydrawise app.

Sensor   The current sensor state if configured in the Hydrawise app.

Water Usage Water usage for this zone run. This is only shown if you have a flow meter installed and the zone is currently running.

Current   Indicates the current that all solenoids are using (including a master solenoid if configured). Generally speaking, this value ranges from 200mA to 600mA depending on the number of solenoids attached to a single zone output. The controller has a built-in failsafe to automatically stop your zone if more than approximately 800mA is detected as this may indicate a faulty solenoid or wiring.

The Zone Status screen also allows you to manually start a zone using the **Run Now** button. When started, the zone will run for the zone's default configured run length. This can be overridden by clicking on **Run Time** prior to manually starting the zone.

When a zone is running the **Run Now** button will change to **Stop**, allowing you to stop a running zone.

Hydrawise App Configuration

Below is a quick list of steps to get your controller connected to your Hydrawise app.

This guide does not cover configuration of your irrigation settings in the app. Please see our How-To guides online at http://hydrawise.com/support for more information.

Register for an account online
1. If you have not already done so, create an account at the Hydrawise web site. Go to http://hydrawise.com/try-now and register for an account.

Log into your account
2. Log into your account. If this is the first time that you have logged in you will be guided through a setup wizard to help you with initial configuration of your controller.

Link your controller to your account
You must link your Hydrawise controller to your account before it will start watering.

If you entered your controller's serial number during the wizard then your controller is already linked and you don't need to follow these steps.

3. In the Hydrawise App or web browser, go to your **Dashboard**. Click on the Settings icon ✿ on the blue 'Watering Schedule' bar and then click the **Link to controller** menu item (see below).
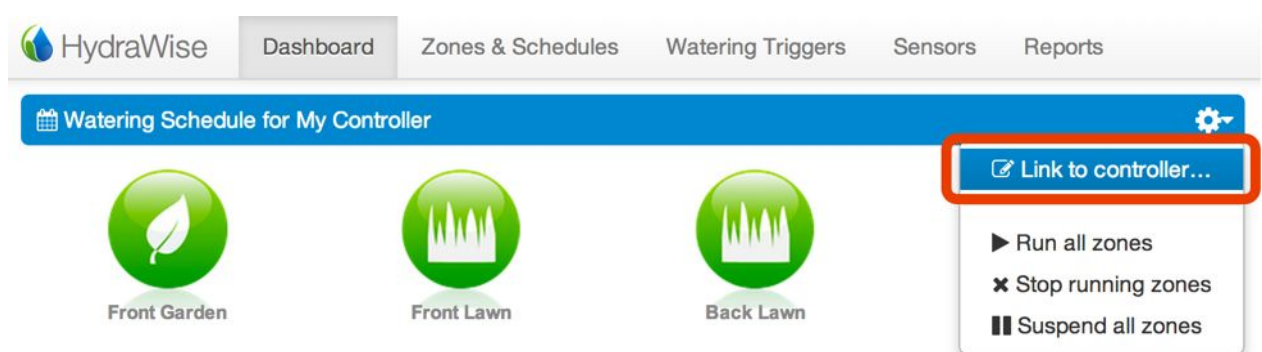
4. Enter the serial number of your controller. The serial number can be found on the rear of the unit or on the **Controller Status** screen in the Hydrawise unit.

Getting Help

Self-help guides are available at http://hydrawise.com/support.

Email support is available at support@hydrawise.com

Certifications

CE C N29732 FC

Canadian FCC Statement

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

US FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

To satisfy FCC RF Exposure requirements for mobile and base station transmission devices, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during operation. To ensure compliance, operation at closer than this distance is not recommended.

The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.