DROP
Professional Series

Installation Manual & User Guide

City Softener

Available on the App Store

ANDROID APP ON Google play

amazon alexa

Home Assistant

CHANDLER SYSTEMS

INTRODUCTION

Thank You for Purchasing a DROP System!

We know you'll love your improved water quality, leak detection ability and water conservation benefits of your new DROP Water Management System from Chandler Systems. You'll soon wonder how you ever lived without it. Improving your water and protecting your home are just a few of the ways that the DROP Water Management System can improve your water system.

Be sure to check out the dropconnect.com website periodically for more information about additional DROP products as they are released.

833.BUY.DROP
(833.289.3767)

drop.pro

To further help you operate your new DROP system, we have provided you with many other resources for you to learn more. Feel free to call Chandler Systems when you need additional help. We also have many resources located on our website including instructional videos, and images.

DROP Connect is also active on various social media pages! Feel free to follow us for the most up to date information and news!

@dropconnect

Privacy Statement

For more information about privacy, visit our privacy policy online.

DROP Patents

For the most up-to-date list of patents, visit our patents on our website: dropconnect.com/patents.

FCC Compliance Statement:
https://dropconnect.com/sites/default/files/FCC_Compliance_Statement.pdf

Industry Canada Compliance Statement:
https://dropconnect.com/sites/default/files/Industry_Canada_Compliance_Statement.pdf

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CAUTION:

- Do not subject tank to any vacuum. If there is a possibility that a vacuum could occur, a vacuum breaker must be installed.
- Do not locate unit where the tank or any lines (including drain lines) will be subject to temperatures below freezing.
- If there is not at least 10' of line between the water heater inlet and the outlet of the closest softener/filter, an expansion tank should be installed.
- Do not use Vaseline or any petroleum-based lubricants on O-rings or rubber seals. Only use food-grade silicone lubricant.
- O-rings are lubricated before leaving the factory and do not require additional lubrication before installation in most cases.
- Do not use pipe dope or any sealant other than Teflon tape on threaded connections. Threads on the control valve and on the bypass nut connections do not require any tape because they use an O-ring seal. Tape is only required on the inlet / outlet adapter fittings and on the drain line fitting (if applicable).

HOW TO USE SOFT WATER

Household Cleaning

Use less soap, detergent and household cleaners. Hardness minerals in water interfere with soap's cleaning ability. That's why most leading brands of soap, shampoo, laundry detergent and household cleaners contain chemicals that aren't necessary with soft water.

You can significantly reduce the amount of these products that you use. You may find you can use as little as one quarter of the amount you were using before you had soft water! Even though you'll use less soap, you'll get more suds and better cleaning results.

Bathing

Reduce your use of soaps and shampoos by half or more. Adjust according to your preference and results.

After bathing in soft water, your skin will feel "silky." What you'll feel is your own smooth skin without any leftover soap residue. When you bathed in hard water, you were never able to rinse this residue completely. The soap curd that left a ring on your bathtub also remained on your skin and hair, possibly causing drying and cracking. Now that you have soft water, you'll feel soft, smooth and clean. And you'll promote healthier skin and hair by eliminating the drying effects of hard water.

Laundry

Reduce or eliminate the use of fabric softeners. Fabrics washed in hard water retain soap residue making them "crackle" when removed from the dryer or stiff if air-dried. Fabric softeners are necessary with hard water to keep your clothing soft, but with soft water, you can reduce your use of fabric softeners or eliminate them altogether.

It's especially important to reduce the amount of laundry detergent you use by half or more. Washing clothes in soft water means you'll need less soap to get your clothes clean and it will rinse completely. Washing in soft water makes your clothes look whiter and brighter, and they'll last longer, too.

HOW TO USE SOFT WATER

Dishwashing

Reduce the amount of dishwashing detergent you use by half or more, too. Your dishes will get nice and clean without all of the hardness minerals left over by hard water.

Take special precautions with dishwashers. Caustic phosphates in some dishwasher detergents and very high temperatures in the dry cycle can etch dishes and glassware if you use soft water. To prevent this possibility:

- **Use the "no heat" dry cycle on your dishwasher.**
- **Use the minimum amount of a good quality, low phosphate dishwasher detergent needed to clean your dishes.**
- **Wash good china and crystal by hand.**

Other Considerations

Special care for plants and fish. Water your lawn, shrubs and outside plants from an outside hard water faucet, or turn off treatment from your DROP App. You may also prefer to water houseplants with hard water or water from a reverse osmosis system.

Fish accustomed to hard water may have trouble with an abrupt change to soft water. Make the change gradually over a period of seven to 14 days by blending hard and soft water until the tank contains 100 percent soft water. Once you begin using soft water, you should notice that your fish tank stays cleaner longer.

HOW TO USE YOUR SYSTEM

Your DROP Water Management System was selected to address your specific water conditions. Your system uses advanced technology to deliver effective and efficient water softening to protect your home plumbing system, deliver optimal water quality to you and your family, protect your home from leaks, and save you money, all while providing years of trouble-free operation.

Your system operates in two primary modes:

In Service: Your water passes through the softening resin in your system's media tank to remove the hardness minerals quickly and effectively.

Regeneration: Your system cleans itself by drawing a salt solution through the softening resin to dislodge all hardness minerals, backwashing the resin to remove the dislodged hardness minerals and using a final rinse to ensure the system is clean, before returning to In Service Mode. Water to your home is not treated while in regeneration.

Additional Features You'll Find on Your DROP System

- **Advanced Electronic Control Valve:** Incorporates the latest softener control technology for optimal performance, efficiency and longevity.
- **Optical Sensor Technology:** Optical sensors control regeneration for precise performance.
- **Demand Operation:** Your DROP system meters your water use and regenerates itself when necessary, saving you salt, water and money. Your system automatically adjusts to heavier or lighter water use.
- **High Flow Media Tank:** Your DROP system delivers the high flow rates required by today's demanding households.
- **High Efficiency Softening Media:** DROP softening media minimizes salt and water use to minimize operating expense.
- **Soft Water Brining:** Treated water refill for better brine saturation and a cleaner brine tank.
- **Integrated Bypass Valve:** Allows you to take your system out of service if necessary.
- **Power Backup:** To continue to protect your home during power outage
- **Water Usage Monitoring** - DROP monitors your water usage and provides real time information including: current water flow, peak flow today, daily average of the last 90 days, as well as many useful historical charts.

HOW TO USE YOUR SYSTEM

- **Automatic Low Salt Notifications** - The DROP salt sensor allows the system to provide notifications when you are running low on salt BEFORE you run out.

- **Automatically integrates with other components on your DROP System** - DROP is a smart water management system that integrates all of the water related devices in your home including: water softeners, backwashing filters, leak detectors, sump pump alarms, and much more!

- **Convenient User Interface on your Smart Phone or Tablet**

- **LED Light Codes:** Alert you to system status at a glance.

- **Regeneration Status:** During a regeneration, the App will show the cycle and the time remaining in that cycle.

- **Regeneration Cycle Override:** During regeneration, you can force the system to move to another cycle step immediately by selecting a different cycle step in the App.

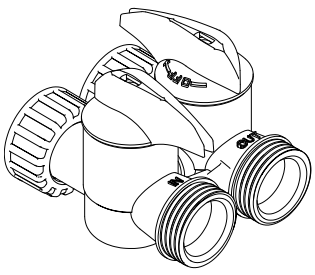
System Maintenance and Adjustments

Adding Salt: Maintain salt in your system at all times to ensure your softener can properly soften your water. Only use a quality grade of salt processed especially for use in water softeners. Ensure that the salt level in the brine tank is always above the water level. If your system ever runs out of salt, refill it, wait 30 minutes and then follow the procedures in the Extra Cycle / Manual Regeneration section of this manual.

* **NEVER USE ROCK SALT in your DROP system; the dirt and rocks inherent in rock salt will damage your system.**

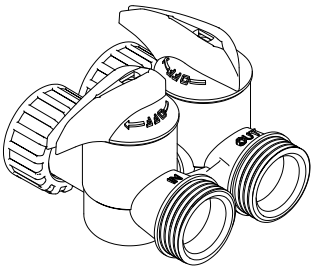
Manually Bypassing Your System: DROP's integrated bypass valve allows you to bypass your system should you ever wish to take it out of service. To bypass your system, turn both handles until they are perpendicular to the system inlet / outlet. To place your system back in service, turn both handles until they are parallel with the system inlet / outlet.

SERVICE



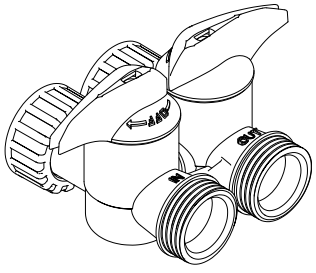
System In Service -Water to home is being treated

OFF



Water to home and softener is off

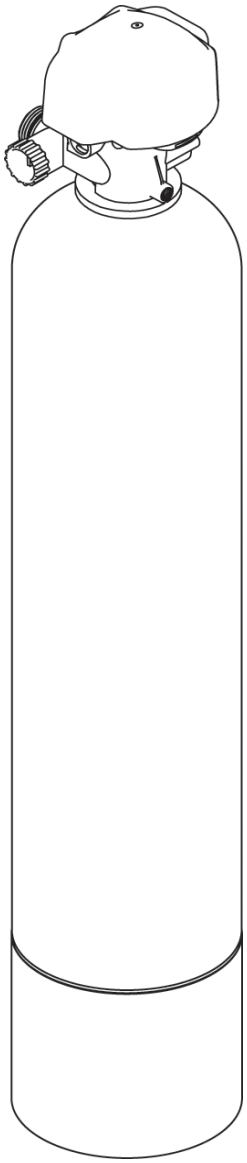
BYPASS



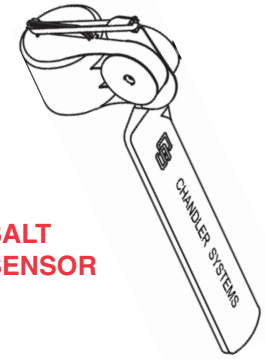
System Out of Service -Water to home is on and untreated

INSTALLATION INSTRUCTIONS

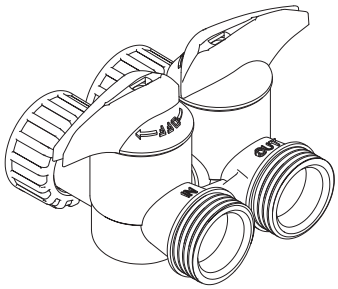
Contents of Carton



SOFTENER with CATALYTIC CARBON & RESIN

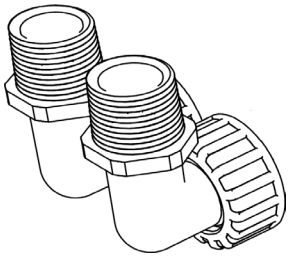


SALT SENSOR

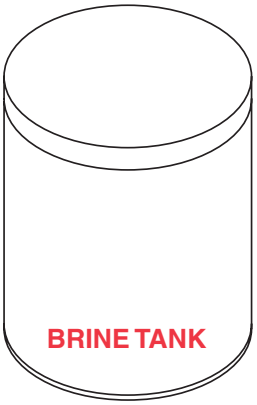


BYPASS

POWER SUPPLY (2)



CONNECTORS



BRINE TANK

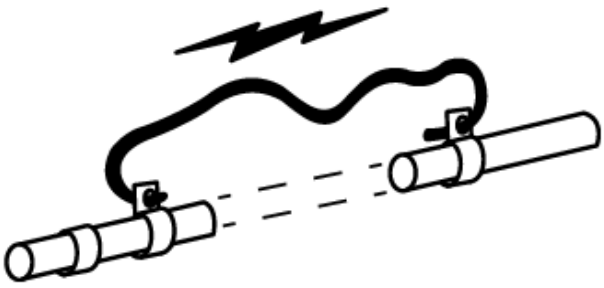
BRINE LINE

INSTALLATION INSTRUCTIONS

Precautions

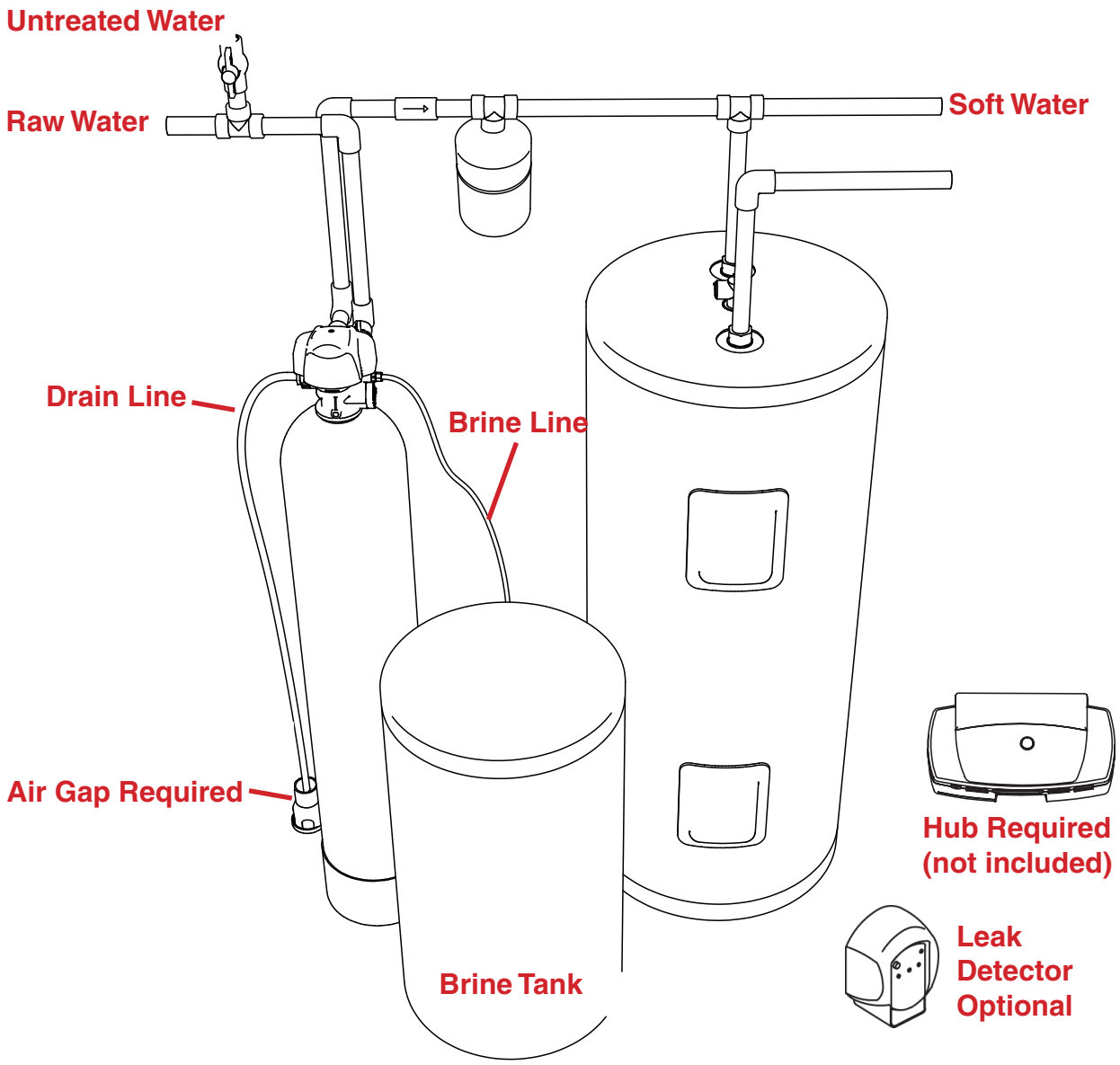
Read Installation Manual

If existing plumbing is copper, install grounding strap before creating plumbing gaps.



INSTALLATION INSTRUCTIONS

System Setup



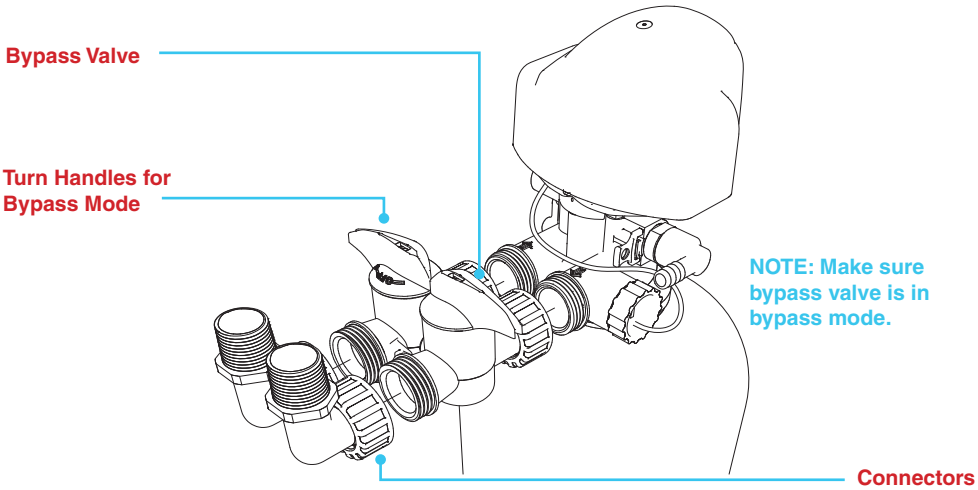
Note: Your installation may vary. Follow all local plumbing codes.

*If there is not at least 10' of line between the water heater inlet and softener outlet, a thermal tank expansion tank should be installed at water heater inlet.

INSTALLATION INSTRUCTIONS

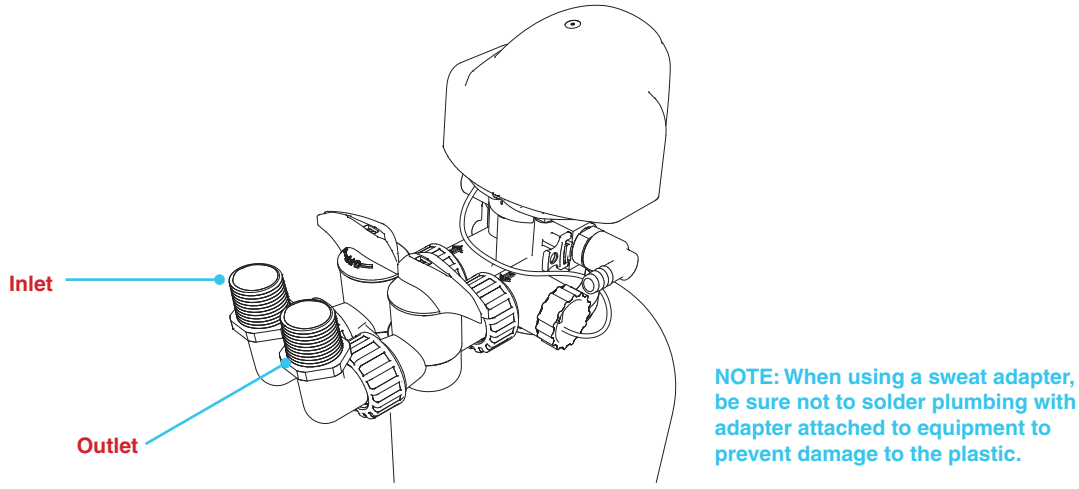
System Setup

Unpack equipment. Connect bypass valve, connectors. Attach components by pushing the adapters together and tightening the nuts by hand until they feel snug. Position system on a hard level surface with access to inlet plumbing, drain and electrical outlet.



Turn off main water supply and open nearest cold faucet to relieve pressure. Cut water supply line, and connect plumbing to the inlet and outlet accordingly.

Note: Inlet and outlet connections are 1" NPT. Additional piping and / or fittings may be necessary

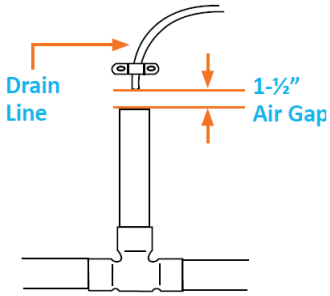


INSTALLATION INSTRUCTIONS

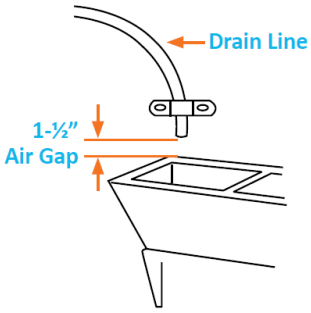
System Setup

Connect drain line to barbed drain adapter and run to appropriate discharge point. Use a 1/2" minimum pipe size for the drain. Use a 3/4" drain line for runs that exceed 20 feet. Make connection to a sanitary waste system through an air gap of 2 pipe diameters or 1", larger. Do not tee into any other drain lines.

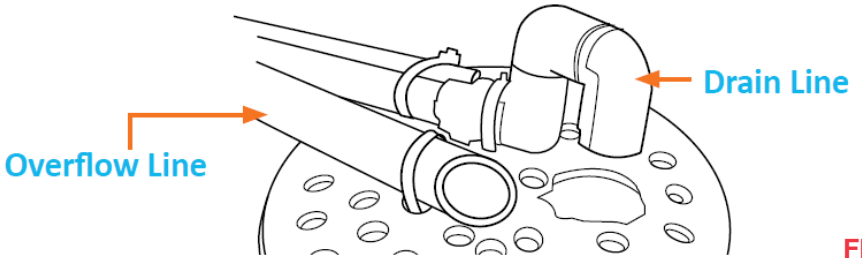
Discharge Options



STAND PIPE

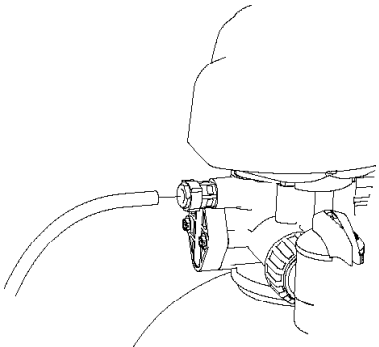


LAUNDRY TUB



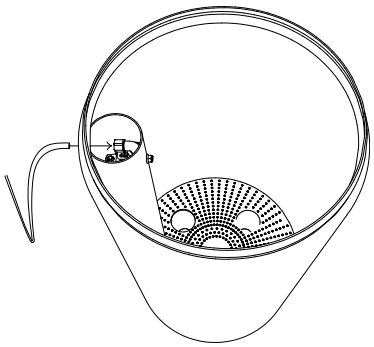
FLOOR DRAIN

Feed one end of brine line to brine line connection on control valve. Firmly insert it all the way into the push lock fitting. When the tubing is fully inserted, the filling will grab the tubing and hold it in place. A compression insert is NOT needed.



BRINE LINE CONNECTION TO CONTROL VALVE

Inside the brine tank, remove the cap from the top of the brine well. Feed the other end of the brine tubing through the hole in the side of the brine tank, and firmly insert it all the way into the push-lock elbow fitting inside the brine well. When this tubing is fully inserted, the fitting will grab the tubing and hold it in place.

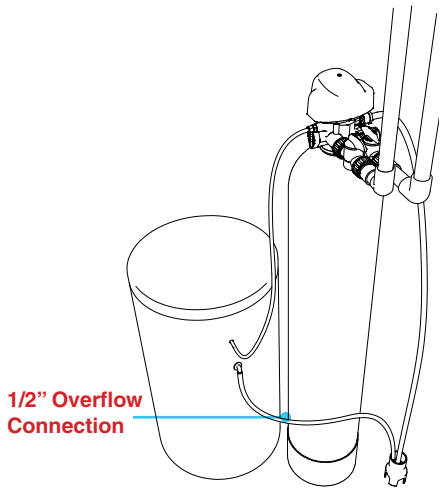


BRINE LINE CONNECTION TO BRINE TANK

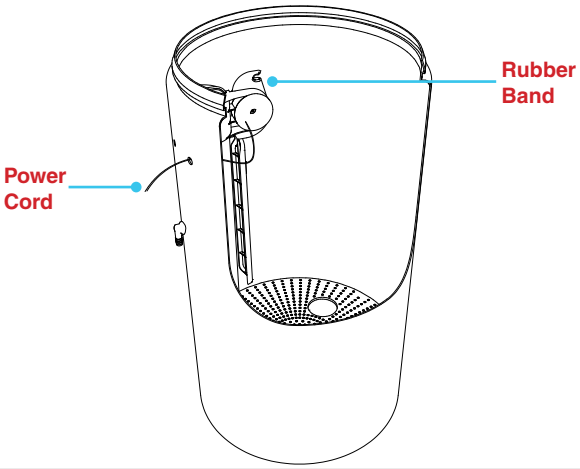
INSTALLATION INSTRUCTIONS

System Setup

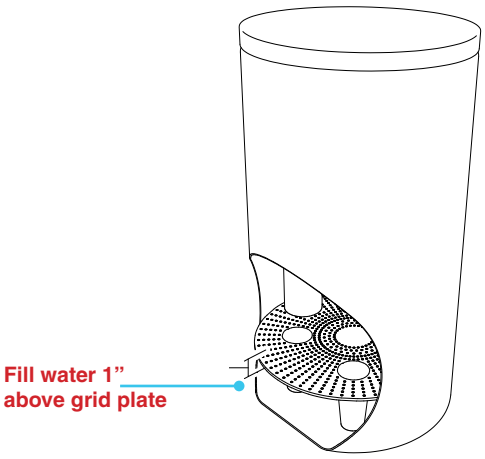
Attach safety overflow line (1/2" tubing) to barbed fitting on side of brine tank and run to appropriate discharge point that is lower than the overflow connection on the brine tank. Do not tee into any other drains.



Pass the salt sensor power cord through the provided hole from the inside of the brine tank. Install the salt sensor unit onto the top of the brine well. Install the cord grip around the salt sensor power cord and insert it into the hole in the brine tank. Install the supplied rubber band onto the hooks on top of the salt sensor unit.



Add water to brine tank approximately 1" above the grid plate. Do not add salt to the brine tank at this **time.**



INSTALLATION INSTRUCTIONS

System Setup

With the bypass valve in bypass position, turn on the main water supply. Open a cold soft water tap nearby and let run a few minutes or until the plumbing is free from foreign material (usually solder) that may have resulted from the installation. Once clean, close the water tap.

Place the DROP Hub in a central location in your home and plug it in. At this point, you can download the DROP Connect App on your device. When you open the app, it will walk you through the process of connecting to your Hub and connecting to WiFi, if desired.

Adding devices to the DROP system

Once you have connected to the Hub, you can use the app to connect your devices (softener, leak detectors, salt sensor, etc) to the Hub. First, unplug and remove any batteries from the DROP device you wish to add. Next, navigate to the 'System' (selection on left) > 'Advanced' (selection at top) page in the app and enable the 'Add Device Components' mode. The hub will enter a state where it will accept new connections. Plug in the device(s) that you are adding, or for a leak detector, simply install the batteries. After the device has joined the DROP network you will see it added to the "Manage Device Components" table, you can then disable the 'Add Device Components' mode or simply wait for it to automatically disable.
When a new device is added to the system, you can rename that device by choosing "System" on the left navigation menu and scrolling to the bottom of the System Status page. Devices such as the softener and salt sensor will already be labeled appropriately, but in the case of leak detectors, each individual leak detector will simply be labeled "leak detector." In this case, you can rename each leak detector according to where you put them, such as "water heater" or "kitchen sink."

Softener Programming

Your softener's control valve is setup from the factory with some default values that may need to be adjusted according to your water quality and personal schedule.

System Settings

The first settings that should be reviewed are the Regeneration Time and System Water Source. Choose "System" on the left navigation menu and it will bring you to the System Status page, where these settings can be adjusted if needed.

Regeneration Time

This setting controls the time of day when the system will begin to regenerate. While a softener is in its regeneration cycle, any water used in the house will not be treated. Therefore, it is important to choose a time of day where water use is least likely. It is also important to understand how long the regeneration of your system will take. For a softener with standard settings it will take approximately 1 hour and 30 minutes. Some DROP installations will require multiple filters and/or softeners. These stages can require regeneration on the same day and would occur one after the other starting at the regeneration time, so you should select a regeneration start time that would take these times into consideration along with your water usage schedule.

System Start Up

System Water Source

The system water source setting is used by the DROP system to know how to respond to power outages. It can be set to Private Well or Municipal Supply. If your water supply is not one of these choices, if your water supply is dependent on power to be available (i.e. it is supplied by an electric pump) set it to Private Well, otherwise set it to Municipal Supply.

Water Hardness Setting

The most important setting to adjust when setting up your DROP softener is the water hardness setting—this setting impacts the efficiency of your softener as well as the ability of your softener to correctly soften your water. To set the water hardness, select "Devices" on the left navigation menu and then select the softener from the devices list. You should then be viewing the Softener Status page. On this page you will be able to adjust your water hardness setting. The water hardness is a measurement of mineral content (calcium and magnesium) in the water and is measured in Grains Per Gallon (gpg). A water test should have been done on your water to determine the hardness measurement of your water source. Use this measurement as the value for the water hardness setting on your system.

Note: If you have had a water test performed, but the results are listed in Parts Per Million (ppm) or Milligrams Per Liter (mg/l), you can convert this number to Grains Per Gallon by dividing the ppm or mg/l by 17.1, and then rounding up to the nearest whole number.

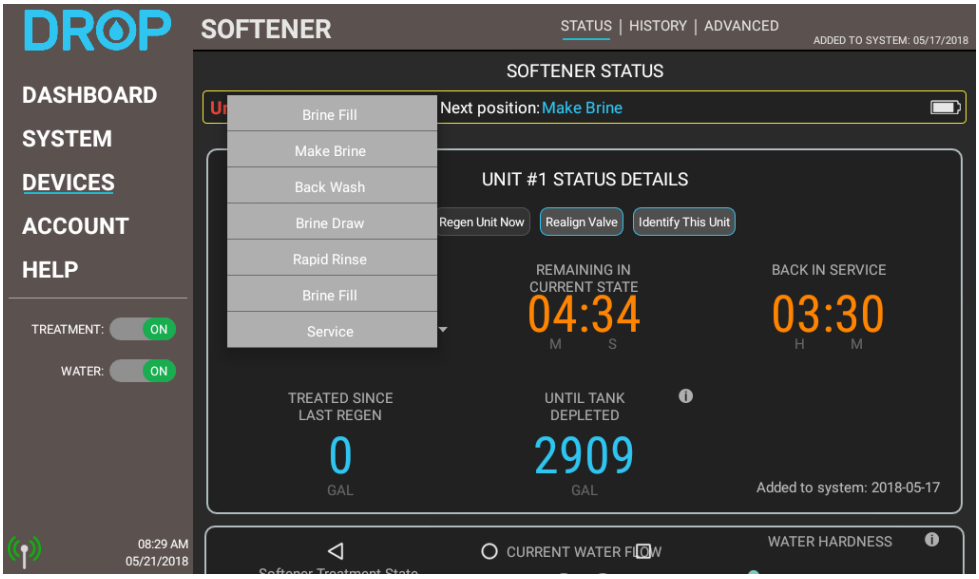
Note: If the water contains iron and / or manganese, add together the total ppm or mg/l of iron and manganese, and multiply this number by 4. Then add this number to the grains per gallon (gpg) of hardness to calculate your compensated hardness. Use this compensated hardness level when programming the hardness.

System Startup Procedure

Note: In the steps following it is necessary to skip regeneration cycle steps. To accomplish this, first you must be on the **DEVICES > SOFTENER > STATUS** page of the app. At the top, just below the Softener Status title, tap the softener unit that you are starting up (usually there will only be one choice, Unit 1). Once the unit is selected, the Unit Status Details will appear. When the unit is in regeneration, a Current Position will appear on the left. Tap on the Current Position and a list of all the regeneration positions will expand (see screenshot next page), they will be in order of the regeneration steps. Simply choose the step that you would like the valve to be in. You can even go back to a previous step if needed.

INSTALLATION INSTRUCTIONS

System Start Up



1. Navigate to the **DEVICES > SOFTENER > STATUS** screen in the app and select the “Start Regeneration Now” button. Skip the “Brine Fill” and “Make Brine” steps to cycle the softener to the backwash position.

2. Partially open the inlet valve on the bypass—about halfway—to allow water to slowly begin entering the softener tank. As water enters the tank, excess air will be expelled out of the drain line.

3. Once there is a steady flow of water coming out of the drain line, slowly open the inlet valve the rest of the way. After 10 minutes, the softener will enter the brine draw stage of the regeneration cycle. You do not need to stay in this step for long, but before you skip to the next step, look inside the brine tank and verify that water is being drawn out in this step. If there is no sign of water being drawn out, you may need to check the brine tubing connections.

4. Next, you can use the app to the “rapid rinse” step. In this step, there should be a strong flow of water coming out of the drain line, as there was in the first step. Stay in rapid rinse until the water runs clear.

5. After “rapid rinse”, you can skip to brine fill. The softener does not need to go through a complete refill, since you already filled the brine tank earlier, but you should stay in this step long enough to observe that water is entering the brine tank, and to make sure that the water level is at least 1” above the salt grid plate. Then you can return the control valve to the “Service” position.

6. Open the outlet valve of the bypass so that water is now able to flow through your softener and into your service lines. Your softener will now begin softening your water.

System Start Up

7. Last, add salt to your brine tank. When adding salt, make sure that you remove the rubber band from the top of the salt sensor, and that the salt sensor paddle is laying flush with the brine well. Add several bags of salt, pouring toward the salt sensor paddle. Once the salt level is high enough to hold the paddle in place, you can attach the rubber band to the top of it. When your salt level drops below the paddle, the paddle will flip out and send a signal to the DROP Hub, telling you that you need to add salt. When you receive a "low salt" indication—don't panic—you still have several regeneration cycles worth of salt; it reminds you early enough to make sure that you have plenty of time to remember to get salt. If you ever run out of salt completely, just add salt and then select the "Start Regeneration Tonight" button in the Softener Status menu of the app.

Resin Grains Capacity and Salt Settings

The settings used to configure your softener to correctly regenerate the resin in your softener treatment tank are found in the app by going to **DEVICES > SOFTENER > ADVANCED.**

The first setting to verify is the Resin Grains Capacity for each softener unit, located in the 'Unit Settings' section at the bottom of the Advanced page. Each valve should be preconfigured at the factory to match the capacity of the resin in the treatment tank. Match the model number and resin grains capacity values in the table below and confirm that the resin grains capacity of your DROP system is configured correctly.

The length of the Brine Refill regeneration step determines how much salt is used per regeneration. The recommended default brine fill time for each model is listed in the table below. Decreasing the amount of salt used during a regeneration makes the softener more efficient because each pound of salt used is more effective, but this uses more water during regeneration because the unit must regenerate more frequently. After selecting a Brine Refill step time, the app will display how much salt will be used for each regeneration, the effective resin grains capacity of the treatment tank, and a simple graph that illustrates the relationship between salt and water consumption during the regeneration.

It is recommended to begin using your softener with the default brine refill time. If you wish to increase salt efficiency (by decreasing the Brine Refill time) or increase water efficiency (by increasing the Brine Refill time), adjust the Brine Refill time incrementally and observe the effect on salt usage and regeneration frequency before making further changes.

RECOMMENDED SALT SETTINGS

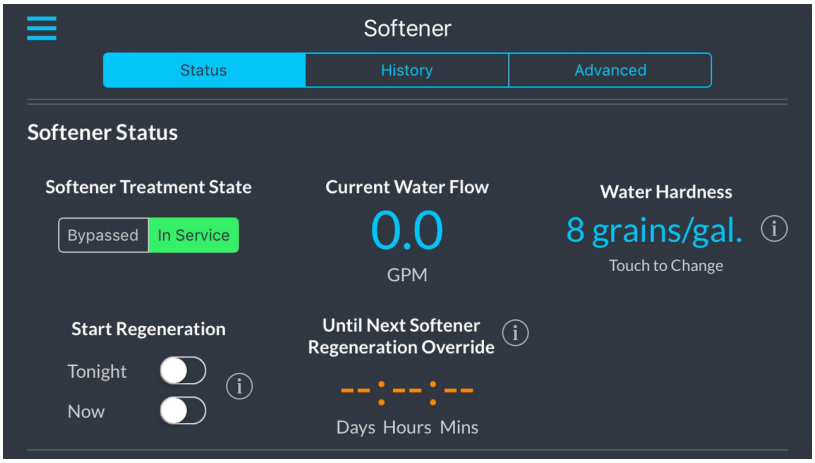
MODEL	CAPACITY	BRINE REFILL TIME	SALT LBS. USED PER REGENERATION
SC-32	32,000	5:52	8.8
SC-48	48,000	8:48	13.2

INSTALLATION INSTRUCTIONS

You will need to check your Brine Refill time setting and resin grains capacity setting and set them according to the table above. The Brine Refill time setting can be found in the app by going to **DEVICES > SOFTENER > ADVANCED.** This setting determines how much salt is used per regeneration. Do not change this setting away from the recommendation unless you understand the effects of the changes. Changes to this setting can great effect efficiencies and the softeners ability to make soft water.

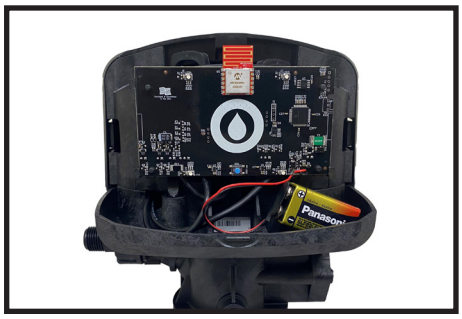
Extra Cycle / Manual Regeneration: Should you ever need to initiate an extra regeneration due to unexpected higher water use, use the **Regenerate Now** button in the App.

NOTE: If your hot water tank has refilled with hard water, it may take several days for it to empty and for your water to feel soft again.



DEVICES > SOFTENER > STATUS

COMMON QUESTIONS



9 Volt Battery back up enables your valve to continue to protect your home from leaks during a power outage.

There has been a drop in my home's water pressure. What can be the cause? A reduction in your home's water pressure can indicate that it is time to change your prefilter. If you do not have a prefilter with your system or changing the filter has no effect, contact your authorized DROP Water Management System representative.

My system seems to be regenerating more frequently. Is this normal?
Remember, your DROP system is demand operated, adjusting automatically to your water usage. If you do not think that your water usage has increased due to extra house guests, additional laundry or some other reason, check for any leaky plumbing, dripping faucets or running toilets, all of which can contribute to more frequent regenerations.

My water doesn't seem soft. How can I be sure that my system is regenerating properly? Be sure that the water supply to the softener is not by-passed and there is salt in the brine drum. Follow the instructions in the "Extra Cycle / Manual Regeneration" section on page 18 to manually regenerate the softener tank. If the unit does not advance through to the next regeneration automatically, please contact your DROP Water Management System representative for further assistance.

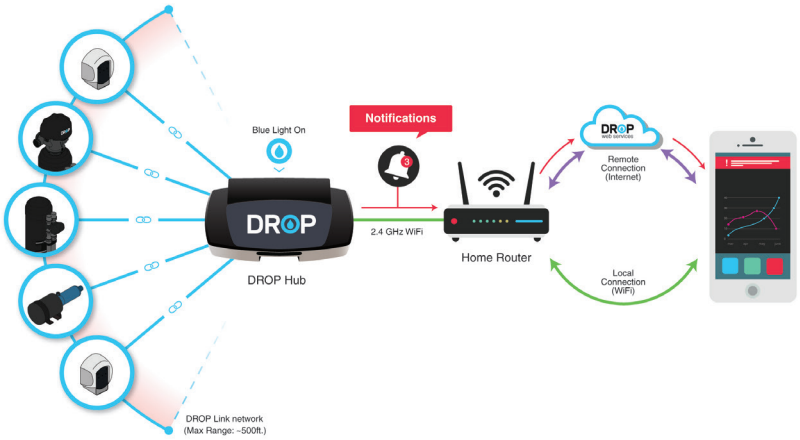
How will I know when it is time to add salt? DROP Systems provide notification when salt needs to be added. To check manually, lift the lid of the brine drum to check the level of salt. If you can see water, it is time to add salt. You can add salt anytime there is enough room to accommodate additional blocks or pellets.

Is it okay to drink soft water? Yes, soft water is okay for drinking and cooking. If your softener regenerates with sodium chloride (salt), keep in mind that there will be a small amount of sodium added to the softened water. People who are on sodium restricted diets should consider the added sodium as part of their overall sodium intake. If sodium is a concern, potassium based salt (potassium chloride) can be used as an alternative or an under-counter reverse osmosis system can be installed to remove sodium.

If at any time you feel your system is not operating properly, by-pass the system and call your authorized DROP Water Management System representative.

HOW IT WORKS

The DROP system has been designed to be your home water management system. It treats your incoming water supply to give you quality water in your home. It monitors water usage and can help to alert you to excessive water usage and prevent or reduce water damage in the event of a burst pipe or a failed appliance. The DROP system can be tailored to your home's unique needs and your personal desires.



The DROP devices that are a part of your home water system are coordinated and controlled by the DROP Hub. The DROP system uses a proprietary wireless network called DROPLink that operates all the devices on a network. DROPLink is separate from and on a different frequency from your home WiFi. This gives the system resilience in that even if your WiFi or internet goes down, your DROP system will continue to operate, monitor and protect. It also keeps unnecessary traffic off your WiFi network.

The Hub is the only component that has a WiFi radio on it. You can connect to in 3 modes that give a user complete flexibility to set up their DROP system to best suit their needs and desires.

1. Direct connection: the DROP Hub creates its own secure WiFi network. Using the DROP app on a smart phone or tablet you can connect directly to the Hub and view status and change settings. This mode allows someone who may not have an internet connection to still be able to take advantage of many of the features of the DROP system. Hub 2 can also accept direct connections using Bluetooth if you are close to the hub.
2. Local WiFi connection: is very similar to direct connection mode, with the advantage of being able to connect to the DROP system without having to change the WiFi network on the smart phone or tablet being used to connect.
3. Cloud connected: using DROP Connect web services. This allows the DROP Hub to connect securely to DROP Connect servers. This enables notifications to be sent when there is an event that you need to know about and it allows you to monitor and control the DROP system from anywhere that you have an internet connection.

The DROP system makes it easy to add to your system as the needs of your home change and as the DROP product line continues to expand. Adding a new device to the DROP network is as easy as setting the Hub to look for new devices, and then power up the device you would like to add. Your new device will be connected to the system and your DROP Hub will already know how to integrate it into the system.

The DROP system user interface is implemented using the "DROP Connect" App. The App is available for Android and Apple smart phones and tablets. This gives you the convenience to have an intuitive user interface that is always with you. You no longer need to be standing in front of the equipment trying to figure out how to change the settings using a few buttons and cryptic text. The App includes many helpful hints and full descriptions of system settings and operation so you are not guessing as to what the information or settings are about.

DOWNLOAD THE APP

Before you get started, there are few things you are going to need to do.

Install your Water Appliance(s) First!

It is recommended that you plumb your water appliance(s) into your water system before powering your DROP system. Please see the documentation regarding the installation of your particular water appliance(s) that you are installing for specific installation instructions related to that device.

Download the DROP Mobile App

The DROP Mobile App can be found on both the Apple® Store and Google Play store. Just open the QR code or search for “DROP Connect” on Google play or at the App Store and look for the DROP icon

Apple Store: https://itunes.apple.com/us/app/drop-connect/id1269747593?mt=8
Google Play: https://play.google.com/store/apps/details?id=com.chandlersystemsinc.dropconnect

BEFORE YOU BEGIN

Place your DROP Hub

The DROP system is a wireless operating system making placement of the Hub very flexible. However there are a few things to keep in mind when you locate the Hub. If you are planning to connect your Hub to your home WiFi be sure to place the Hub within range of that network. The range of the DROPLink network gives adequate coverage to a majority of homes without the use of repeaters. Any device on the DROP network that is powered from an outlet power source can act as a repeater. However, placing your DROP Hub in a central location in your home gives it the best chance of being able to reach all the devices on the network without the need for DROP repeaters.

BEFORE YOU BEGIN *CHECKLIST*

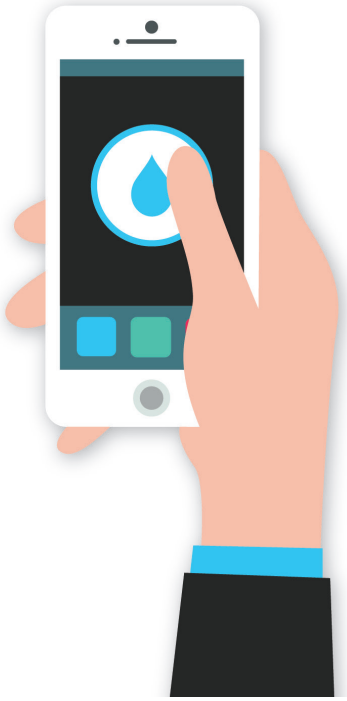
Quick Checklist

Before you continue with installation, let's make sure the following steps have been completed.

You have:

- ✓ Installed or plumbed in your Water Appliance(s)
- ✓ Downloaded the DROP Mobile app on your smartphone
- ✓ Placed the DROP Hub in a central location and powered it up

GUIDED SETUP *FIRST ITEMS*



Easy Configuration

Nearly all configurations and options are located in the DROP Mobile App! This section will walk you through the mobile setup to get you up and running!

Guided Setup

This guided setup process will connect your smartphone and DROP Connect App to your DROP system. If desired, it will also connect your DROP system to your WiFi network and create an account on DROP Web Services. This process is necessary to control your DROP system.

First launch of Mobile App

By simply starting the DROP Connect App for the first time, it will step you through the guided setup process.

If you need to get back to the guided setup process, you can choose “Guided Setup” from the account login page or the Account page in the app.

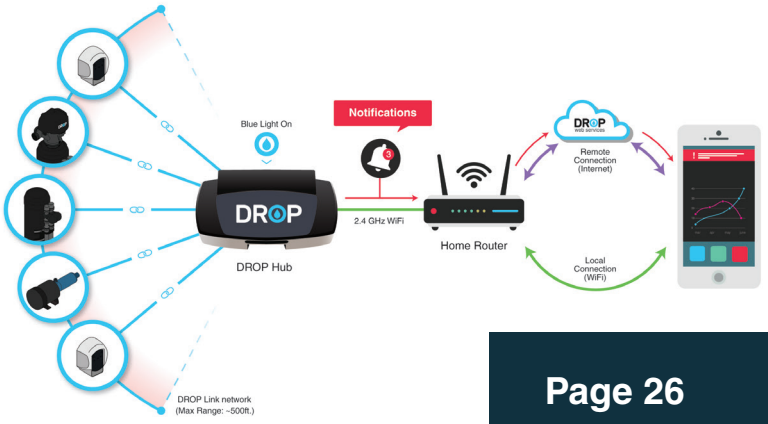
The following pages will help identify your home network setup and give you detailed instructions for how to get your system setup. For Apple iOS and Android devices, some steps will differ between the mobile operating systems.

Your Home Setup

DROP is a very dynamic system capable of working in any existing network environment. Whether or not you have an existing home WiFi network, you will be able to complete your setup and you can change your network settings later. Select your current setup below.

I have WiFi internet

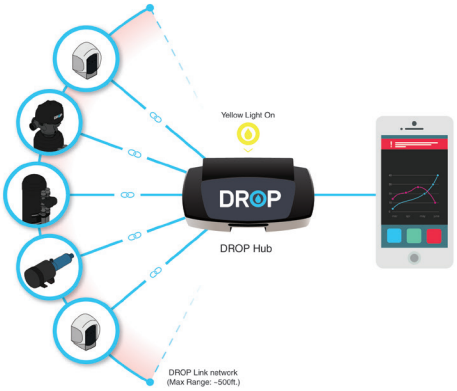
DROP has many features that work with your existing home network. This includes mobile notifications and remote controls when you are away from your water system.



Page 26

I do not have WiFi internet

DROP has the ability to work without any existing internet. This section will walk you through direct connection mode which lets you control your water system when in close range.



Page 28

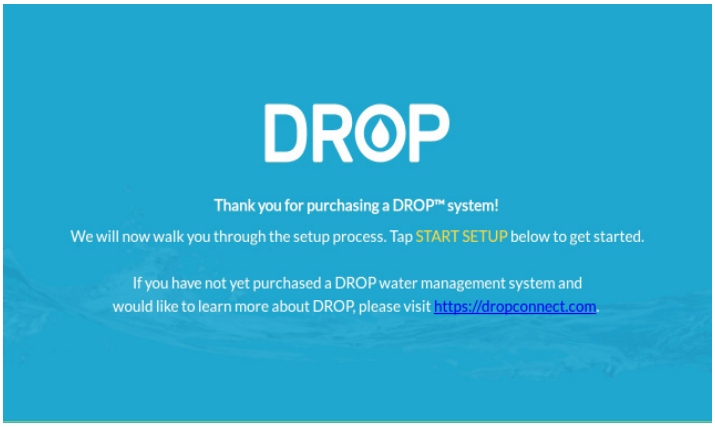
I am a Contractor installing DROP for someone else

Refer to Professional Installer's Guide

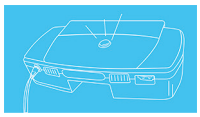
GUIDED SETUP *WITH EXISTING NETWORK*

Guided Setup with Existing WiFi Network

The guided setup process will help you connect your DROP system to an existing home network, and then configure your DROP system to enable remote access. Simply follow the instructions in the app and network configuration of your DROP system can be completed in just a few minutes.



Guided Setup Overview



Power on your DROP Hub – the light on the Hub will indicate when it is ready for configuration.

Connect your phone or tablet to the DROP Hub – the app will ask you to press the button on the Hub to pair the app with the Hub. Simply follow the instructions in the app.

Select your WiFi network from the list of available networks – after you enter the WiFi password, the app will connect the DROP Hub to your WiFi network.

Create a DROP Web Services account and enable remote access – with remote access enabled, you can access and control your DROP system from anywhere you have an internet connection. This also allows DROP to send you notifications if there are any issues with your DROP System.

GUIDED SETUP *WITH EXISTING NETWORK*

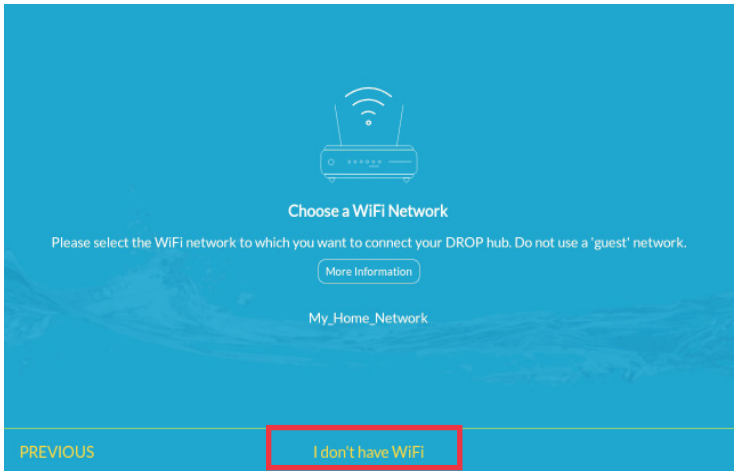
One Time Setup

This Hub setup process is a one-time installation and you will not have to perform these steps again in the future. Your DROP Hub will remain connected to your WiFi network for easy access from the DROP Connect app.

If your WiFi network name or password changes, you can repeat this guided setup to get your DROP Hub connected to a new network. For other issues and troubleshooting, please reference the Troubleshooting section on page 17.

Guided Setup With No Home Network

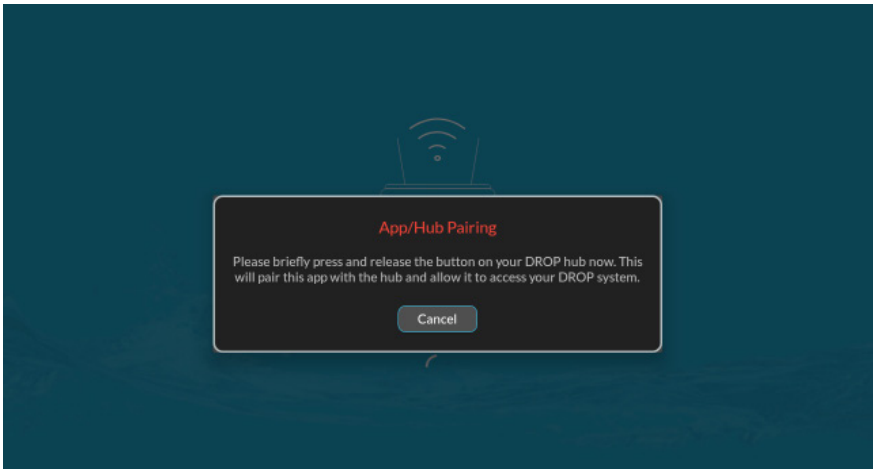
If you do not have a home WiFi network, follow all the steps in the guided setup process described on the preceding pages until you see the prompt “I don’t have WiFi”. The guided setup process will finish, and you can connect directly to the DROP system.



APP / HUB PAIRING

PAIRING

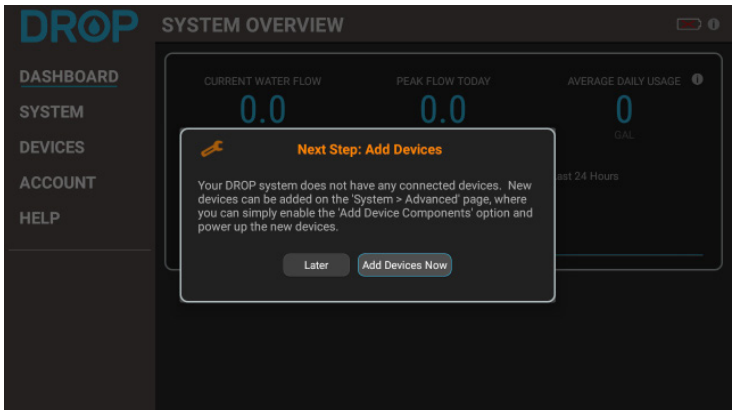
The DROP Hub will only communicate with the DROP Connect app on devices that have been paired with the Hub. When the app on a new device attempts to communicate with a DROP Hub for the first time on a local network connection, it will prompt the user to press the button on the DROP Hub to authorize the connection from that device. Once paired, the app will be able to communicate with that Hub. If a user is logged into the DROP Connect app and can connect to the Hub remotely, this pairing process will happen automatically, and the user will not need to press the button on the Hub.



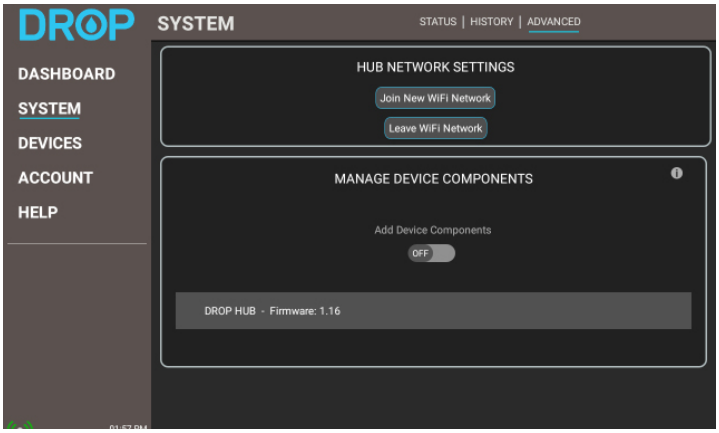
ADDING AND NAMING DEVICES

How to add your devices

To add new device components using the app, you must be connected locally to the DROP Hub that you wish to add components to. Make sure that in the app you have a green connection icon in the lower left corner of the Navigation menu. If not, see the section “Local Connection vs. Remote Connection”.



If no devices have been added to the Hub, the app will prompt you to “Add Devices Now”. This will take you directly to the **SYSTEM > ADVANCED** page in the app.



First, unplug and remove any batteries from the DROP device you wish to add. Next, turn on the “Add Device Components” switch by tapping on it. The Hub will enter a state where it will accept new connections. Last, immediately power up your DROP device by plugging it in, or inserting batteries. After the device has joined the DROP network you will see it added to the “Manage Device Components” table. You can then disable the ‘Add Device Components’ mode or simply wait for it to automatically disable.

Most DROP devices will be red when not paired and flash white when they are searching for a DROP system to pair to. Leak detectors are the exception; they will flash the network light slowly when not paired and quickly when they are searching for a DROP system to pair to. Once the device joins a DROP system it will show up in the list in the app under “Manage Device Components”. The device will also turn to its default LED color (typically green or blue) or, in the case of a Leak detector, will briefly turn on its green check mark LED.”

*** Please note that leak detectors will be listed on the SYSTEM > SETTINGS page in the same order that they are added to the Hub, which can help keep them straight when it comes time to name them. If you are not sure which leak detector is which, go to the DEVICES > LEAK DETECTORS page and press the Check/Silence button on one leak detector. A green checkmark will appear next to the leak detector that just checked in.**

ADDING DEVICES AND NAMING

Adjust System Settings

On the SYSTEM > SETTINGS page are many settings that you can customize to suit your personal water use needs.

The possible settings on this page include:

- Regeneration Time
- System Water Source
- Quiet Time Hours
- High Flow Rate Settings
- Long Flow Settings
- High Total Flow Settings
- System Pressure Settings

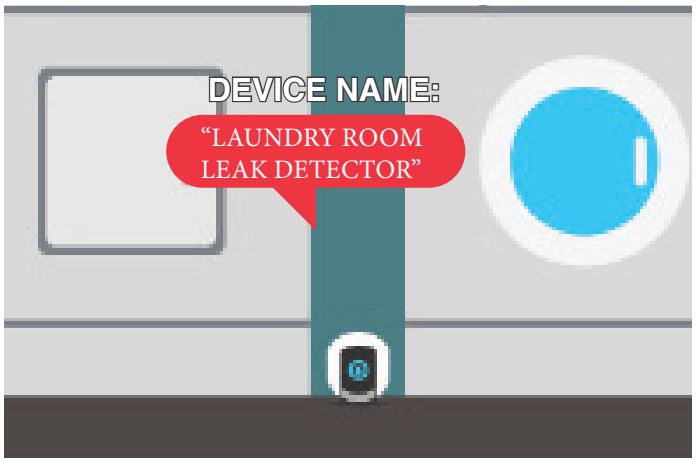
Each of the settings has an info icon in the app that you can press if you would like to know more about that particular setting.

Rename DROP system and devices.

Your DROP system and DROP devices can all be named to make identification easier. This can be done in the SYSTEM > SETTINGS page of the app. Naming your DROP system is especially useful if you have more than one DROP system to manage. Naming your DROP devices can be helpful when you have more than one of the same type of device. A good example of this is when you have multiple leak detectors; you can name one “Utility Room Leak Detector” and another “Upstairs Bathroom Leak Detector”. You will now be able to easily know which leak detector is reporting a leak.

*** If you are not sure which leak detector is which, go to the DEVICES > LEAK DETECTORS page and press the Check/Silence button on one leak detector. A green check mark will appear next to the leak detector that just checked in.**

SYSTEM > SETTINGS



TROUBLESHOOTING WITH EXISTING NETWORK

WiFi Router Configuration

If your App is having trouble making a local connection to your Hub there are a few things you can try to remedy the problem.

Troubleshooting Steps

1. Please note that the DROP Hub requires a 2.4 GHz WiFi network to connect to. Also Hub 1, should not be connected to a “guest” type network that has device isolation security enabled. This will prevent the app from being able to communicate locally with the Hub. Hub 2 technically can be used while connected to a “guest” WiFi network, but local communication with the app will be limited to Bluetooth connections.

2. Confirm that your smart device is connected to your local WiFi network, the same network that the Hub is connected to.

3. When scanning for your DROP system on your network (see page 10) if you press the “Rescan” button repeatedly a dialog will pop up that gives you the option to “Scan Entire Network”. If you are on a home network choose “OK” and then press “Rescan” one more time after it becomes available. This type of scan should find the Hub if it is on your network. If you are on a corporate network you should contact your network administrator regarding your problems connecting to your DROP system.

4. You can try rebooting the Hub by pressing and holding the button on the front. The button will turn pink after a few seconds (2-4 seconds for Hub 1, and 4-6 seconds for Hub 2) Releasing the button while it is pink will reboot the Hub. The Hub may take 30 seconds or so before it will show up in a scan after rebooting your DROP system. You may want to try scanning multiple times.

5. You can try rebooting your WiFi router. Typically, the easiest way to do this is to unplug your WiFi router for 10 seconds and then plug it back in. Routers can take several minutes to restart. Once you have confirmed that your WiFi network is on again, you can try scanning for your DROP system in the DROP app.

Customer Support

The DROP Connect website is full of helpful information. Visit our Knowledgebase Resources for more information, videos, and other help.

If troubleshooting hasn’t solved your issue, Chandler System Customer Support is available to help! Please call: 888-363-9434 for our customer support team.

SET UP COMPLETE

Setup Complete!

You have completed the initial setup of your DROP Device. Your home water is now ready to be controlled anywhere!

The following pages contain more documentation and graphics for further understanding your system. Everything from automating your devices to configuring your notifications can be found in the coming pages.

DROP works with Alexa

Connecting your DROP system to Amazon Alexa provides voice control for a few of the most commonly used DROP features. You can quickly check your daily water usage or turn your water back on after a weekend away by saying “Alexa, ask DROP Connect to check my water usage” or “Alexa, ask DROP Connect to turn my water on”. To learn more about the available commands, say “Alexa, open DROP Connect.”

How to connect Amazon Alexa to your DROP system
Simply enable the ‘DROP Connect’ skill in the Alexa app and follow the on-screen instructions to link Alexa to your DROP Web Services account

DROP works with Home Assistant

Home Assistant is the premier open-source home automation platform that prioritizes local control and privacy. It’s designed for the discerning homeowner who wants to automate their living space without reliance on an internet connection. By integrating with Home Assistant, DROP leverages a platform that supports a vast ecosystem of devices, allowing for sophisticated automation and monitoring capabilities. This collaboration aligns perfectly with our history of delivering cutting-edge technology that enhances your quality of life and our vision to revolutionize water systems.

Using the App

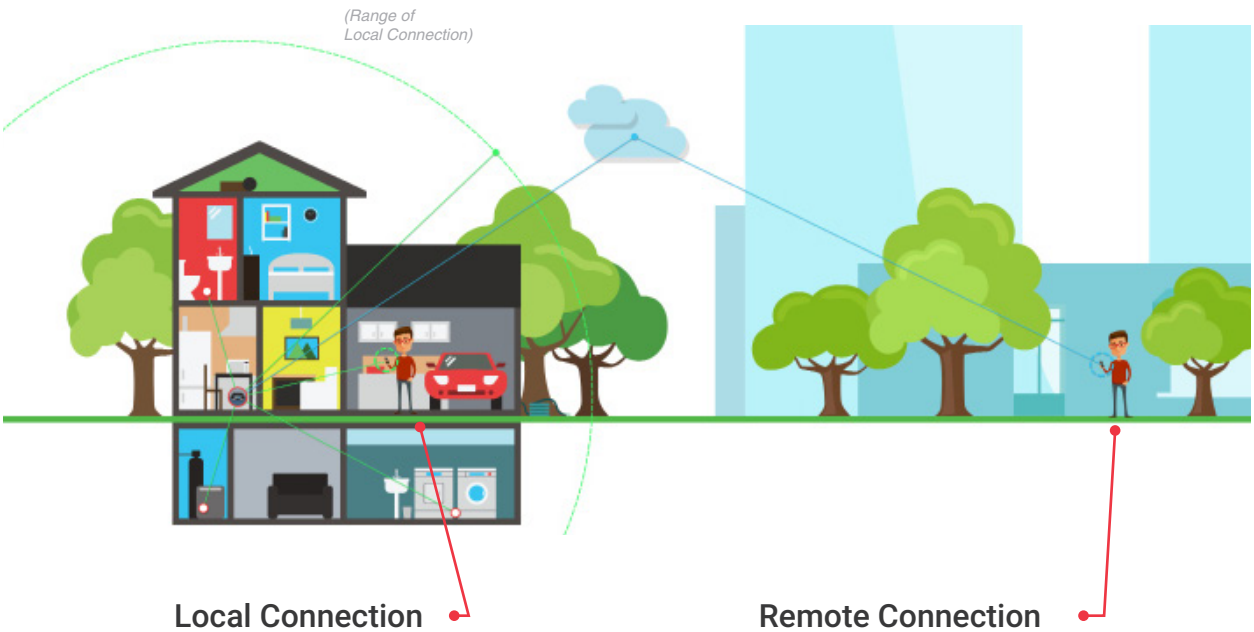
The DROP App has been designed to organize the many functions and settings of the DROP system in an intuitive manner. Almost all items in the App can be touched to change settings or to obtain more information. Any item or setting that could cause potential undesired operation will show a confirmation dialog box with more information when the setting is pressed. Also, information icons are available to give you more information about individual settings throughout the App.

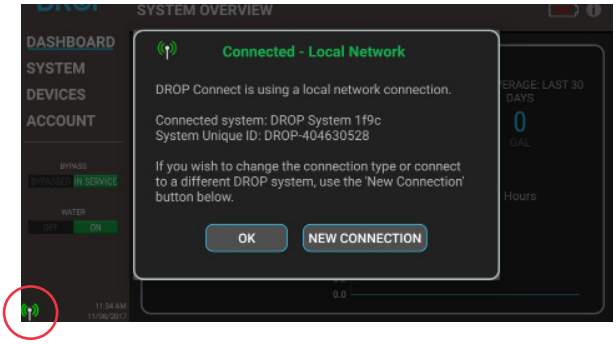
Common gestures are used in many areas of the DROP Connect app. The information icon is also helpful for learning about specific items.

All graphs of data can be expanded to see more detailed information by touching the graph. Once the larger graph view is opened the detailed data can be viewed by pinch zooming and scrolling the graph area. Common smartphone gestures can be used here. Use your fingers to tap, zoom in, zoom out, and move to any area inside the app.

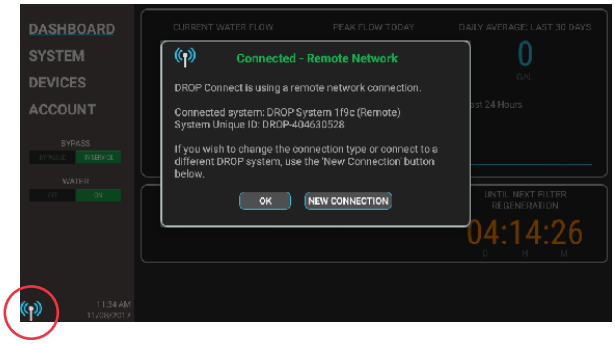
Local Connection vs. Remote Connection

Your DROP App should prefer to connect to your Hub using a local connection rather than the remote connection through the DROP Connect web services. You can tell whether your App is connected in local or remote mode based on the color of your connection icon in the lower left of your Navigation menu in the App. If the icon is green , you are using a local connection. If the icon is blue , you are using a remote connection. Another type of connection is a local Bluetooth connection. If you are connected to your Hub 2 using Bluetooth, the connection icon will be a white Bluetooth logo.





If you are within local range of your Hub, you will direct connect to the Hub. Shown with a Green symbol.



If you are connected to any mobile network or roaming network, you will connect via remote connection. Shown with a Blue symbol.

A local connection is preferred because it is faster, there are no limitations in functionality and a local connection is required to do firmware updates to the Hub and devices. If your App is connected to your Hub via a remote (blue icon) connection and you believe it should be able to connect locally, tap the connection icon and in the dialog box that pops up tap the “New Connection” button. This will cause the App to scan the network that the phone or tablet is connected to for any DROP systems that are connected. If your DROP system is connected to that same network it should show up on the list as a local connection.

DROP Hub WiFi Status

Similar to the mobile setup process, DROP can operate in any network environment, with or without WiFi. The color of your DROP Hub light will indicate to you what connection mode it is in. Here is an overview of each mode.

Connected to WiFi and DROP Connect Services

The Hub has connected to a local WiFi network and to DROP Connect servers. The Hub is able to accept remote connections. In this mode there are two ways that the app can communicate to the Hub. If the phone or tablet is connected to the same local network as the Hub, the app can communicate directly over that local network.

Connected to WiFi only

The Hub has connected to a local WiFi network. To communicate to that Hub using the DROP app your phone or tablet will need to be connected to that same local network.

Direct Connection

The Hub is using its own private WiFi network (this is the default state on first power up). To communicate to that Hub using the app your phone or tablet will need to be connected to the DROP WiFi which will be named starting with “DROP_System”. Follow the instructions for one of the connection modes in the section “Connecting the app to the DROP system” to have the app walk you through making that connection.

Lost WiFi Signal

The Hub cannot connect to the WiFi network it was previously connected to. If this persists for more than a few minutes, check that the WiFi network is available using another device, and make sure the SSID or password of that WiFi network has not changed. If it has not changed and can be connected to using other devices, reboot the Hub. If it has changed, set the Hub to direct connection mode (see Adv. Hub Pushbutton Functions) and then connect it using the new credentials.

DROP Hub Water Status

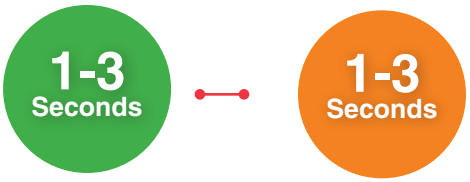
On the Hub, the pushbutton light indicates the overall water status of the DROP system. When the water is turned on the pushbutton light will be green, and when the water is off the pushbutton light will be orange.

DROP Hub DROPLink Status

The DROPLink indicator light at the lower-left corner of the Hub shows the status of the DROPLink mesh network at a glance. When all devices are connected and communicating normally, this light will be purple. Brief flashes indicate active communication with the devices. If a device is offline, this light will turn orange. When 'Add Device Components' mode is active, this light will turn white.

Advanced Hub Pushbutton Functions

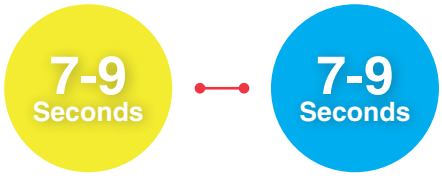
The pushbutton on the front of the Hub has been designed to perform some basic functions. By pressing and holding the pushbutton these functions can be accessed. As you hold the pushbutton, the button color will change for the different functions that are available. The following list explains the functions that are available:



Releasing the button while it is green will turn the DROP system water on, while releasing the button while it is orange will turn the water off.

The button will turn pink. If released during this time frame the Hub will reboot. This can be helpful if you think something just isn't working right and you want to try a fresh startup to see if it fixes the problem. A reboot takes only a few seconds to complete and is generally not disruptive to any of the normal functions of the system.

OPERATIONS *DROP HUB - PUSHBUTTON*



Seconds (yellow or blue): If the DROP Hub is connected to a local (blue or green before pressing the button) WiFi network, button color will be yellow. If released during this time frame the Hub will reset and temporarily revert to direct connection WiFi mode. Once in direct connection (WiFi Status blinking yellow with button not pressed) WiFi mode, if button is held again for 7-9 seconds the button color will be blue. If released in this mode the Hub will reconnect to the previous WiFi connection. Switching to direct connection WiFi mode can be helpful if you want to temporarily allow someone to access your Hub, but don't want to give them access to your local WiFi. This also can be helpful if your WiFi router is no longer available and you need to connect to your DROP system. Finally, it is a way that can be used to connect a Hub to a new WiFi without resetting the Hub.

The button will turn green. If released during this time frame the Hub will reset the app pairing key. This will cause all apps that only have local access to the Hub to be required to be repaired when they attempt to connect next. When the pairing key is reset, a notification will be sent out that the app pairing key has been reset. The local pairing key ensures that a user must have direct physical access to the Hub in order to connect and also ensures that the appropriate users are notified of the app pairing key change. Note: If a user has remote access to this DROP system, through DROP web services, they will not be required to repair their app to the Hub. To control who can remotely access the DROP system go to the "ACCOUNT" page in the app.

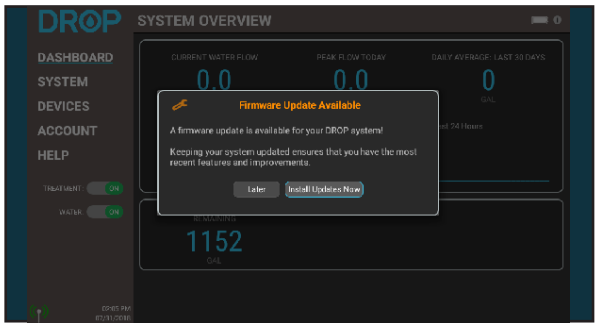
Factory Reset

A factory reset will clear all data from the hub and remove any connected devices. Typically, a factory reset is only necessary if suggested by DROP technical support staff. If a hub currently has remote access enabled it is recommended that remote access is disabled before a reset, especially if the hub will be used by someone else. Otherwise, the hub will remain locked to the original account and cannot be used by another account. To disable remote access, go to the Account page in the app and look for the 'Disable Remote Access' button.
To perform a factory reset, first remove the backup battery from the hub. Unplug the hub, depress the pushbutton, and plug in the hub while continuing to depress the pushbutton. After 30 seconds, the button will turn orange. Release the pushbutton while it is orange, and the hub will be armed for a factory reset while the button is red. If the button is pressed again while the button is red, a factory reset will be performed. If the button is not pressed again within 10 seconds, the factory reset will be canceled, and the hub will start normally.

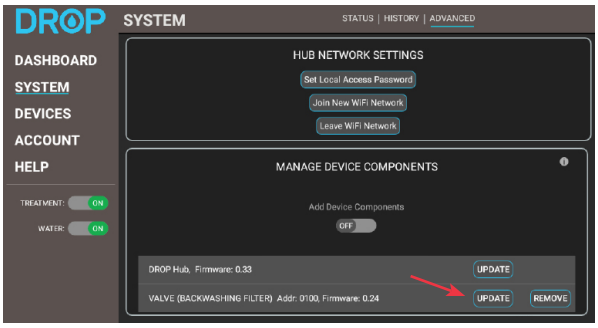
How to Update Firmware

The DROP Hub and all DROP devices have firmware that is programmed on each DROP component and controls how the DROP system operates. The DROP system is designed to be able to update the firmware in order to add new features and fix or improve operation. New firmware updates are distributed in the DROP App and can be downloaded to the DROP system using the app. The app will prompt you that new firmware is available when you open your app and connect to your Hub in local mode. Choosing “Install Updates Now” will take you direct to the System > Advanced Page.

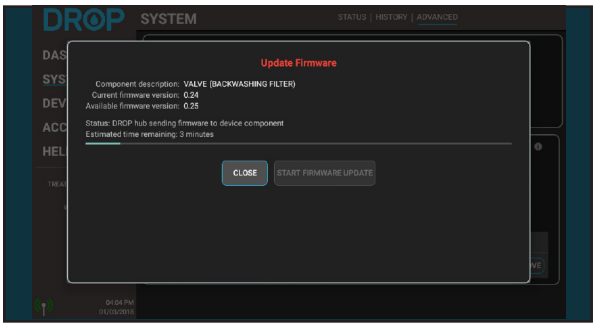
System > Advanced



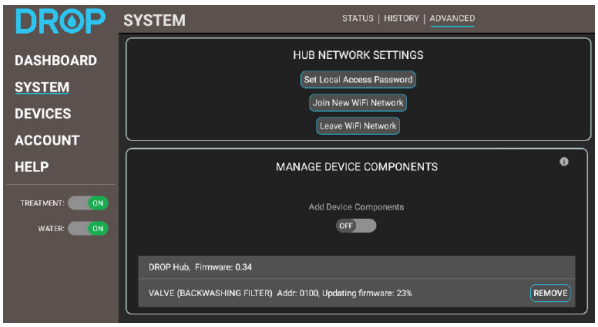
Firmware Updates Pending



Firmware Updates Pending



Sending Hub Firmware Update



Firmware will continue to be transferred. Once complete, the update has been initiated

Any devices that have an update available will have an “Update” button next to them. An available Hub update must be installed before device components can be updated.

NOTE: *The App needs to remain open while the firmware data is being sent to the DROP Hub.*

DROP Lights - Normal Operation

Your softener and/or filter will normally be in the service position. This is its normal position that treats the incoming water supply. The different treatment valve types have different colors when they are in their service position, so they can easily be identified by the color of their lights. These colors are identified in the list below:

Softener - Green

Filter Valve (Backwashing or Aeration Filter) – Blue

Cartridge Filter – Cyan

While observing your device, you will notice periodic purple flashes on the back lights. These indicate that it is wirelessly communicating to the Hub during that time. Also, when the water meter on your unit senses water flow, the front lights on your device will alternate. The rate of alternation of the lights will give a general idea of the current flow rate. The highest frequency of the lights alternating is determined based on the highest flow seen by your system.

The lights will change color when your device or devices are put into Bypass mode or Water Off. If your water is off, the lights on the valves will be orange. The water can be turned back on using the app or by shortly pressing the button on the Hub. If one of your valves is bypassed, its lights will be bright yellow. Bypassed means that water will not be treated by that device while it is in bypass mode. This may be helpful if you wish to not use treated water in a particular situation, such as watering the lawn.

DROP Lights - During Regeneration

When a treatment valve is in regeneration the lights will change color for each step in the regeneration process. While the valve is sitting in a step of the regeneration process the lights will be slowly fading from side to side (wobble). If the valve is moving to a position the lights will rotate according to the direction of the motor movement to get to that position. The colors for each position are as follows:

Softener

Position	Color
Backwash	Purple
Brine Draw	Light Pink
Rapid Rinse	Light Blue
Brine Fill	Spring Green

DROP Salt Sensor installed in the brine tank.

Salt Sensor Overview

A DROP Salt Sensor is supplied with every DROP softener system. Once it is connected to your DROP system it will notify you when more salt needs to be added in your brine tank. The height of the trigger point is specifically designed to give you plenty of notice to add more salt before you run out. If your DROP system is connected to DROP Web Services, then you will receive a notification that your system needs salt added. Otherwise, when you connect to your DROP system through your App, you will see the notification on the Dashboard page of the App.

Salt Sensors are ready to use as soon as they are connected as a device to your DROP system. If you have not yet connected your Salt Sensor to the system, please see the section “How to Add Your Devices” on page 14. Once connected, by default they send a notification when low salt is detected.

To add salt, remove the elastic band and make sure paddle is flush against the brine well and you are pouring towards the paddle so that salt doesn’t get between the paddle and the brine well.

Place the elastic band over the top of the transmitter and replace the brine tank lid.

DROP Leak Detector Device.

Leak Detector Overview

The DROP leak detector is designed to detect water leaks and temperature conditions that can cause water leaks. It is powered by 2 AA batteries, which under normal circumstances will last for several years of operation. A leak detector monitors its leak probe input for water.

If water should come in contact with the probes, the leak detector will immediately report the leak to the DROP system. The DROP system will immediately send a notification of the leak (if connected to DROP web services) and will shut the water off at the DROP valves. Shutting the water off can optionally be turned off if your leak detector is not monitoring a system component that is affected by normal source water (such as a condensate pump). The leak detector that sensed the leak will then chirp every 16 seconds and the yellow leak light will flash every 2 seconds.

Leak Detector Placement

In order to reliably detect a water leak, it is very important that the location where the leak detector is placed is well thought out. First, when considering where to place leak detectors think about the locations in your home that use water. Next, think about what locations are most vulnerable to problems. For example; appliances that use water and run unattended, pipes that are more susceptible to freezing, or toilets that are known to overflow or leak.

Also, think about the consequences of water in those areas. Maybe monitoring a water heater in an unfinished basement isn't as important as monitoring a bathroom on the second floor of a home. Prioritize the locations that need protected the most. Also, keep in mind that if more leak detectors are needed, you can add up to 52 leak detectors to your DROP system at any time. Finally when you place the leak detector we recommend that you test where water will tend to accumulate by purposely spilling a small amount of water in that area. Once you observe where water naturally moves to, you should accordingly place your leak detector in that location. Don't forget that you can name your leak detectors according to their location in the app, on the SYSTEM > STATUS page. This will help you locate a problem quickly if a leak does occur. Leak detectors can obviously be placed in the location that you want to detect leaks.

However, there are available accessories for leak detectors to allow more flexibility in their placement and use. A wall mount bracket and a leak detection extension cable are available and can be used to securely mount your leak detector and permanently mount the leak probes exactly where they need to be located.

DROP Leak Detector Extension Cable and Extension Cable being used.

Leak Detector Operations

Once you have placed the leak detector in the location that you would like, press the “Check/Silence” button. After a few moments, the green okay check mark should light up indicating that it was able to communicate with the Hub. If the red no network light turns on instead, then the leak detector is too far from a powered DROP component on the DROP device network. Any DROP device that is powered with a wall plug power supply can repeat the messages to the Hub.

The options for helping a leak detector connect to the Hub are:

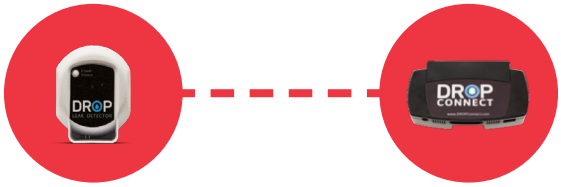
1. Move the DROP Hub to a more central location in your home.
2. Move another DROP powered component closer to the leak detector you are trying to connect to.
3. Add a DROP Remote to your network in-between the Hub and the leak detector that you are trying to connect to the system.

Leak Detector Settings

Leak detectors are ready to use as soon as they are connected as a device to your DROP system. If you have not yet connected your Leak Detectors to the system, please see the section “How to Add Your Devices” on page 25. Once connected, by default they will shut off the water when a leak is detected and send a notification.

By going to the Devices menu on the left side of your app and then choosing Leak Detectors, you can decide for each leak detector if it should shut off the water, or just send a notification. Leak detectors also monitor temperature. High and low temperature set points can be set for each leak detector. If the temperature should surpass the set point a notification will be sent.

Leak Detector Status screen.



Reporting Operation

Leak detectors report to the Hub every 10 minutes under normal circumstances. If the leak detector does not succeed in checking in, it will try again repeatedly until it succeeds. When the leak detector has missed a check in, it will flash its network light until it is able to connect to the Hub again. If it has not succeeded in checking in with the Hub after one hour, the Hub will send a notification that the leak detector has lost connection. If this happens regularly, you may need to help improve the DROP network as indicated at the end of the section Leak Detector Operations.

If a leak occurs, temperature changes significantly, or temperature surpasses a set point, the leak detector will report to the Hub immediately.

Battery Operation

Leak detectors use 2 AA batteries to operate. The detectors typically sleep most of the time and therefore use very little power. Under normal operating conditions, they will operate for several years on the same set of batteries. When they do get low the low battery light on the leak detector will begin to flash and the leak detector will chirp once a minute (but only outside “Quiet Time” hours). A low battery notification will also be sent by the DROP system.

Leak Detector Factory Reset

It is recommended that before performing a factory reset, that you remove the leak detector as a device on any DROP system that it might be attached to. This can be done while using a local connection in the App and going to SYSTEM > ADVANCED page. On that page, you will see “Manage Device Components” Find the leak detector in that list and press the “Remove” button associated with that unit. Once it is removed then perform the factory reset.

SYSTEM > ADVANCED : MANAGE DEVICE COMPONENTS

To reset a leak detector and cause it to forget any DROP network that it has been connected to, press and hold the button while inserting the batteries. Continue to hold the button for 15 seconds. During this time all the lights will be on solid. Once the button has been held for 15 seconds, the lights will begin flashing once per second. At this point the leak detector is armed for reset, release the button and then press it again to cause the leak detector to be reset.

DROP Remote Overview

The DROP Remote shows the status of your DROP system at a glance and allows you to conveniently turn your water supply on or off. The Remote also extends the range of the DROP Link mesh network.

If you have not yet connected your Remote to the system, please see the section “How to Add Your Devices” on page 14.

DROP Remote Placement

If the remote is going to be primarily used as a user interface, it should be hung on a wall or placed on a counter top so it is convenient to see and to control your home water state.
However, if you need to extend the range of the DROPLink network you can place the remote at a location between the Hub and the devices you need to extend to. The DROP Remote is a network extender that will improve communications between the DROP Hub and distant DROP devices. The construction of every home is different, and you may need to experiment with the location of the Remote to find the optimal placement.
Up to 8 DROP remotes can be connected to a DROP Hub as user interfaces and/or network extenders.

Lights

The lights on the DROP Remote indicate if the DROP system is in service or shutoff. While the system is in service, the lights on the Remote will be green. When the system is in shutoff, the lights will change to orange. You can control the behavior of the lights on the Remote in the DROP Connect App.

If there is a DROP notification that has not been seen in the app, the Remote will slowly blink a blue light. As with other DROP devices, periodic purple flashes indicate that the Remote is communicating with the DROP Hub and other DROP devices.

NOTE: *The notifications or network activity indication must be enabled in the App to be visible on the Remote.*

Pushbutton Functions

The DROP Remote has a recessed, touch sensitive button that can perform some basic functions. These functions can be accessed by pressing and holding the button. As you hold the pushbutton, the light closest to the button will turn white to confirm the button press, and the top lights will change for the different functions available. The following list explains the functions that are available:

OPERATIONS *DROP REMOTE*

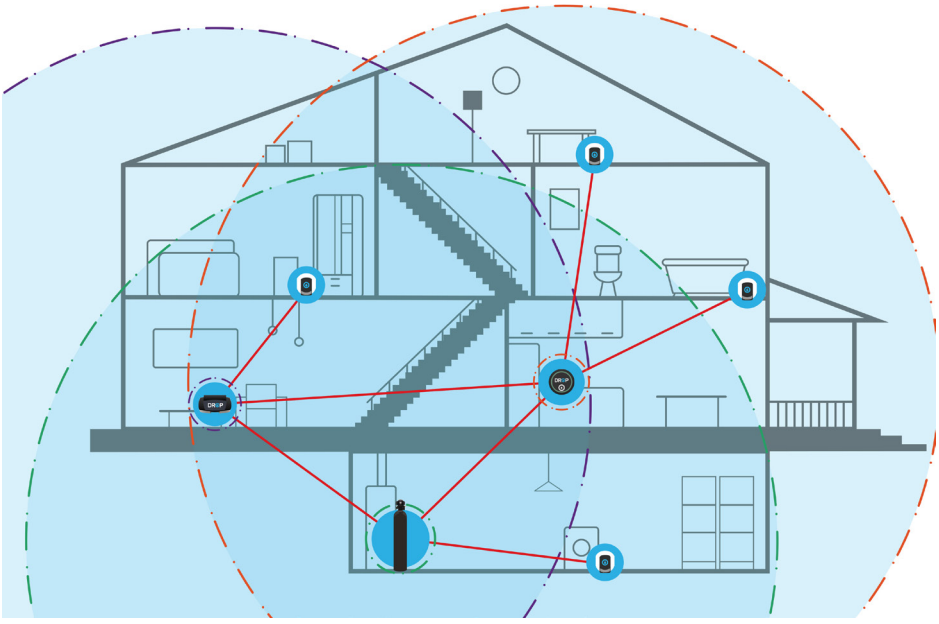
2-4 Seconds

The remote lights will turn orange or green, depending on the remote's current position. If the remote is in service (green lights before the button was pressed), releasing the button while the lights are orange will send the valve to the shutoff position. Likewise, if the remote is in shutoff (orange lights before the button was pressed), releasing the button while the lights are green will send the valve to the service position.

15-17 Seconds

The Remote lights will turn orange. If released during this time frame the remote will be armed for a factory reset and the lights will turn red. If the button is pressed again, once it is red, a factory reset will be performed on the Remote. It is recommended that before performing a factory reset, that you remove the Remote as a device on any DROP system that it might be attached to. This can be done while using a local connection in the App and going to System on the navigation menu on the left, and then the Advanced page (selected at the top). On that page you will see "Manage Device Components". Find the Remote in that list and press the "Remove" button associated with that Remote. Once the Remote is removed then perform the factory reset.

* **NOTE:** *The intensity of the LED lights can be changed in the app.*



As shown above, all DROP devices that plug into 120 volt outlets expand the DROPLink mesh network. When placing the DROP Hub and Remote, keep in mind that installing them in separate areas of the home will expand the network. This is important to consider if you have leak detectors that are located in far extremes of the home. Up to 8 DROP Remotes can be added to a DROP system.

* **If you wish to connect your system to local WiFi for remote control and notifications, please install the DROP Hub in a location that has a good WiFi signal.**

Chandler Systems Inc.
710 Orange St.
Ashland, OH 44805

P. 1 833 BUY-DROP
www.dropconnect.com

Note: 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.

This product may be covered by one or more patents. (https://dropconnect.com/patents)

DROP Limited Warranty

WATER MANAGEMENT SYSTEMS

This warranty cannot be transferred - it is extended only to the original purchaser or first user of the product. By accepting and keeping this product, you agree to all of the warranty terms and limitations of liability described below.

Important Warning: Read carefully the DROP Water Management Systems Equipment Installation, Operating and Maintenance Instructions Manual to avoid serious personal injury and property HAZARDS and to ensure safe and proper care of this product.

*FOR AS LONG AS YOU OWN AND LIVE IN YOUR SINGLE FAMILY HOME, this warranty covers your water treatment equipment, if you are the first user of this DROP Water Treatment Systems equipment and purchased it for single family home use - subject to all of the conditions, limitations and exclusions listed below. Purchasers who buy the DROP equipment for other purposes, and other component parts are subject to more limited warranties and you should read all of the terms included in this form to make sure you understand your warranty.

What is covered by this warranty?
Chandler Systems, Inc. warrants that at the time of manufacture, the DROP equipment shall be free from defects in material and workmanship as follows:

Product	Warranty
Residential Mineral Tank	10 Years
DROP Control Valves	5 Years
DROP Pump Controllers	5 Years
DROP Home Protection Valve	5 Years
Brine Tank	5 Years
DROP Hub and Remote	1 Year
DROP Wireless Low Salt Alarm	1 Year
Other Accessories and Parts	1 Year
Brine Tank Components	1 Year

* This warranty does not include media and/or cartridge filter elements.

Additional Terms & Conditions
What Chandler Systems Inc will do if you have a covered warranty claim; Chandler Systems Inc will at its discretion either make repairs to correct any defect in material or workmanship or supply and ship either new or used replacement parts or products. Chandler Systems, Inc. will not accept any claims for labor or other costs.

Additional Exclusions and Limitations
This warranty is non-transferable and does not cover any failure or problem unless it was caused solely by a defect in material or workmanship. In addition, this warranty shall not apply:

- If the equipment is not correctly installed, operated, repaired and maintained as described in the Installation, Operating & Maintenance Instructions Manual provided with the product.
- Defects caused as a direct result of the incoming water quality
- If the DROP equipment is not sized appropriately for the intended job.
- To any failure or malfunction resulting from abuse (including freezing), improper or negligent; handling, shipping (by anyone other than DROP)
- If the unit has not always been operated within the factory recommended temperature limits, and at a water pressure not exceeding 125 psi, during storage, use, operation, accident; or alteration, lightning, flooding or other environmental conditions.
- To any failure or malfunction resulting from failure to operate the system with potable water, free to circulate at all times; and free of damaging water sediment or scale.
- This warranty does not cover labor costs, shipping charges, service charges, delivery expenses, property damage, administrative fees or any costs incurred by the purchaser in removing or reinstalling the water management equipment.
- The warranty does not cover any claims submitted more than 30 days after expiration of the applicable warranty, and does not apply unless prompt notice of any claim is given to an authorized DROP Dealer or to DROP or a designated contractor is provided access to the installation and to the water treatment equipment.

THESE WARRANTIES ARE GIVEN IN LIEU OF ALL OTHER EXPRESS WARRANTIES. NO DROP REPRESENTATIVE OR ANY OTHER PARTY IS AUTHORIZED TO MAKE ANY WARRANTY OTHER THAN THOSE EXPRESSLY CONTAINED IN THIS WARRANTY AGREEMENT.

Additional Warranty Limitations
ANY IMPLIED WARRANTIES THE PURCHASER MAY HAVE, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL NOT EXTEND BEYOND THE APPLICABLE TIME PERIODS SPECIFIED ABOVE. Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.

Limitations of Remedies
The remedies contained in this warranty are the purchaser's exclusive remedies. In no circumstances will Chandler Systems, Inc. or the seller of the product be liable for more than, and purchaser-user's remedies shall not exceed, the price paid for the product. In no case shall Chandler Systems, Inc. or seller be liable for any special, incidental, contingent or consequential damages. Special, incidental, contingent and consequential damages for which Chandler Systems, Inc. is not liable include, but are not limited to, inconvenience, loss or damage to property, consequential mold damage, loss of profits, loss of savings or revenue, loss of use of the products or any associated equipment, facilities, buildings or services, downtime, and the claims of third parties including customers. Some states do not allow the exclusion or the limitation of incidental or consequential damages, so the above limitations or exclusion may not apply to you.

What to do if you have a problem covered by this warranty
Any warranty coverage must be authorized by Chandler Systems, Inc.. Contact the person from whom you purchased the product, who must receive authorization from a DROP Dealer.

If your product is new and not used and you wish to return it, contact your DROP Dealer.