BASEMENT SENTRY

BY **ZOELLER**®

HIGH PERFORMANCE SUMP PUMP COMBO

MODEL #STBC201

BasementSentry.com
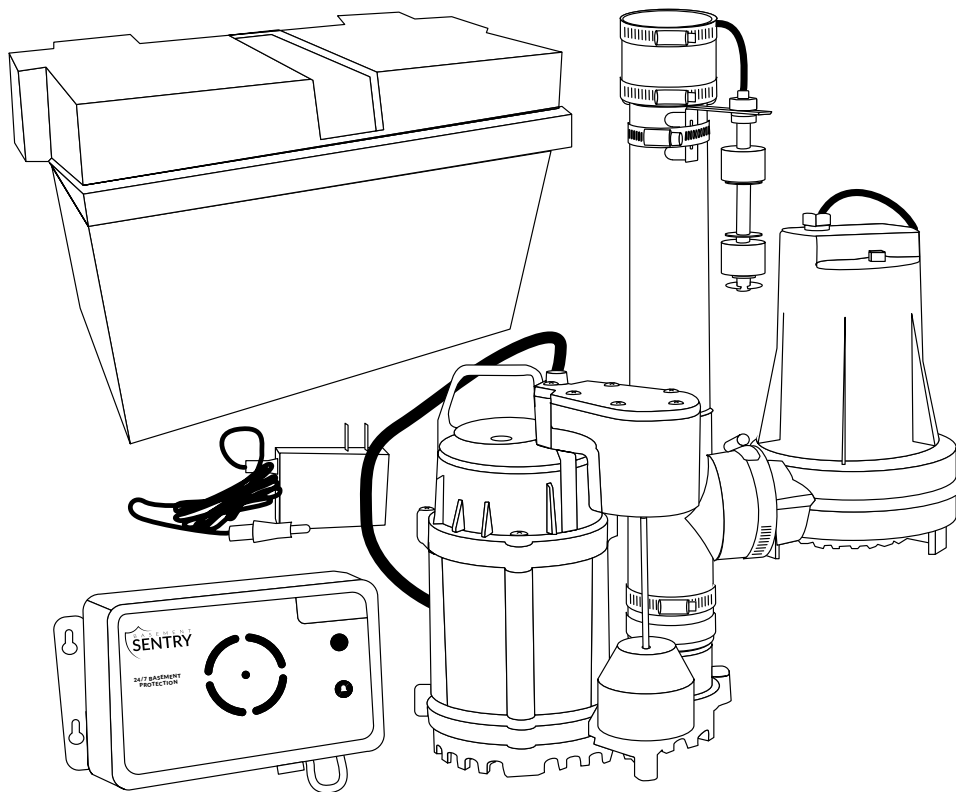
## ATTACH YOUR RECEIPT HERE

Purchase Date _____

☎ Questions, problems, missing parts? Before returning to your retailer, call our customer service department at 1-800-584-8089, 7:30 a.m. - 5:00 p.m., EST, Monday - Friday.

PN 156409 A SW1505 A

PACKAGE CONTENTS

	DESCRIPTION	QUANTITY
A	Primary/backup pump and pipe assembly (Includes a high-capacity primary pump, back-up pump, controller, alarm system, battery charger, PVC pipe with fittings, inline check valve)	1
B	Battery box	1
C	Controller	1
D	AC wall adapter	1
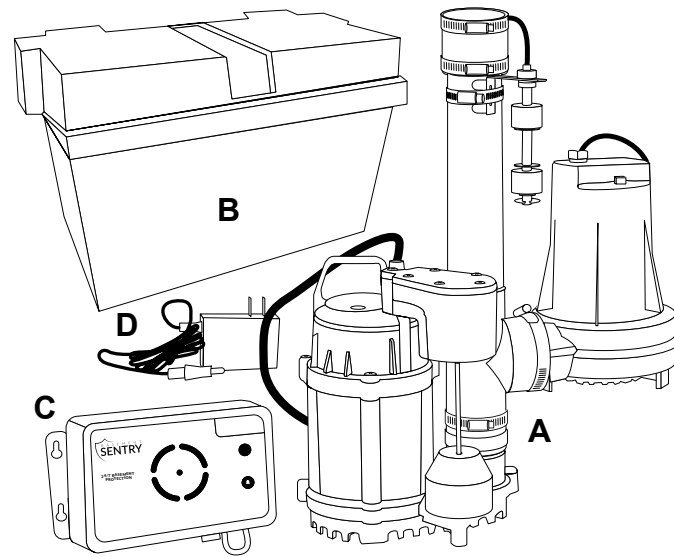
⚠ SAFETY INFORMATION

Please read and understand this entire manual before attempting to assemble, operate, or install the product.

⚠ DANGER

- **RISK OF CHEMICAL BURNS.**
  Battery acid is corrosive. Do not spill on skin, clothing or battery charger. Wear eye and head protection when working with battery. Connect and disconnect DC output terminals only after removing the charger from the AC outlet. Never allow the DC terminals to touch each other.
- **FIRE/EXPLOSION HAZARD.**
  Keep sparks and flame (pilot light) away from battery.
- **FIRE/EXPLOSION HAZARD.**
  Pump only clear water. Do not pump flammable or explosive fluids such as gasoline, fuel oil, kerosene, etc. Do not use in a flammable and/or explosive atmosphere. Failure to follow these warnings could result in death or serious injury and/or property damage.
- **RISK OF ELECTRIC SHOCK.**
  These pumps have not been investigated for use in swimming pool or marine areas.
- **RISK OF ELECTRIC SHOCK.**
  Always disconnect power source before attempting to install, service, or maintain the pump. Never handle a pump with wet hands or when standing on wet or damp surface or in water. Fatal electrical shock could occur.
- **RISK OF ELECTRIC SHOCK.**
  Keep pump out of reach of children.
- **PERSONAL INJURY OR PRODUCT DAMAGE MAY RESULT.**
  Failure to comply with instructions and designed operation of this product may void warranty. Attempting to use a damaged pump can result in property damage, serious personal injury and/or death.

⚠ SAFETY INFORMATION

⚠ WARNING

- **ELECTRICAL SHOCK ALERT.**
  Do not disassemble the motor housing. The motor has NO repairable internal parts and disassembly may cause dangerous electrical wiring issues.
- **ELECTRICAL SHOCK ALERT.**
  Before installing this product, have the electrical circuit checked by an electrician to ensure proper grounding. All electrical installations must conform to the National Electric Code and all local codes.
- **ELECTRICAL SHOCK ALERT.**
  Connect the AC adapter to a properly-grounded 115 volt circuit equipped with a Ground Fault Circuit Interrupter (GFCI) device. Make sure the electrical supply circuit is equipped with fuses or circuit breakers with a minimum capacity of 15 amps.
- **ELECTRICAL SHOCK ALERT.**
  Never use an extension cord.
- **ELECTRICAL SHOCK ALERT.**
  Do not remove or replace the power cord.
- **ELECTRICAL SHOCK ALERT.**
  Protect electrical cord from sharp objects, hot surfaces, oil, and chemicals. Avoid kinking the cord.
- **ELECTRICAL SHOCK ALERT.**
  Do not lift pump by the power cord.
- **PERSONAL INJURY ALERT.**
  Do not touch an operating motor housing. The motor is designed to operate at high temperatures.
- **PERSONAL INJURY ALERT.**
  Release all pressure and drain all water from the system before servicing any component.
- **PERSONAL INJURY ALERT.**
  Secure discharge line before starting pump. An unsecured discharge line can cause personal injury and/or property damage.
- **PERSONAL INJURY ALERT.**
  Wear safety glasses at all times when working with pumps.
- **PROP65 WARNING FOR CALIFORNIA RESIDENTS:**
  Cancer and Reproductive Harm – www.P65Warnings.ca.gov

CAUTION

- **PERSONAL INJURY OR PRODUCT DAMAGE MAY RESULT.**
  The AC adapter operates on 115 volts. Make certain that the power source conforms to the requirements of your equipment.
- **PRODUCT DAMAGE MAY RESULT.**
  The continuous operating water temperature for this pump must not exceed 104°F (40°C).
- **PRODUCT DAMAGE MAY RESULT.**
  This pump is designed to pump water only. It has not been evaluated for pumping chemicals or corrosive materials. This pump is not designed for pumping effluent or sewage and should not be used in applications involving salt water or brine.
- **PRODUCT DAMAGE MAY RESULT.**
  Inspect the pump regularly for damage and perform routine maintenance as needed. Remove any debris that may build up around the float.
- **PRODUCT AND/OR PROPERTY DAMAGE MAY RESULT.**
  This pump is not designed for continuous operation.

PREPARATION

Estimated Installation Time: 1-2 hours

Materials required for assembly: Basement Sentry brand deep cycle battery 1-1/2-in. Schedule 40 PVC pipe and fittings, PVC primer and glue, Phillips screw driver, hand saw

SPECIFICATIONS					
PUMP	PERFORMANCE IN GALLONS PER MINUTE				
	0 FT.	5 FT.	10 FT.	15	28 FT.
115V Primary Pump	42	38	30	12	-
12V Backup Pump	45	43	35	27	Shut Off

GENERAL PUMP INFORMATION

This complete system features built-in WiFi to provide mobile monitoring and alerts. The system includes a high-capacity primary pump, back-up pump, controller, alarm system, battery charger, PVC pipe with fittings and an inline check valve.

This combination system will replace an existing primary sump pump for premium protection against basement flooding. It is designed protect your home during power outages.

Choose this pump if your sump basin is at least 18-in. wide by 22-in. deep.

Place the battery in a cool, dry, well-ventilated area on a shelf or protective plywood board.

Carbon Monoxide Detectors

Whether you have a Basement Sentry backup pump system or a competitive brand, all use batteries that give off gaseous by-products when charging. Some of these by-products can produce a rotten egg odor. Also, some of these by-products can cause a CO detector to falsely activate. In order to help prevent false activation, Basement Sentry recommends moving the battery as far away from the CO detector as possible or, if necessary, vent the battery to the exterior. Basement Sentry provides the previous statements only as guidelines to help prevent false activation of the CO detector. In no way are they meant to supersede the instructions that accompany the detector, nor do they supersede advice from the CO detector manufacturer.

If the audible alarm associated with your CO detector is activated, we recommend the following actions:

1. Take immediate action for personal safety as recommended in the CO detector literature.
2. Contact the appropriate agency to determine if the CO is being produced by your furnace, water heater, or any other device which uses natural gas.
3. If you are certain that no CO is being produced, a charging battery may be producing gaseous by-products which are causing the CO detector to activate. Contact the manufacturer and ask for recommendations to prevent the alarm activation.
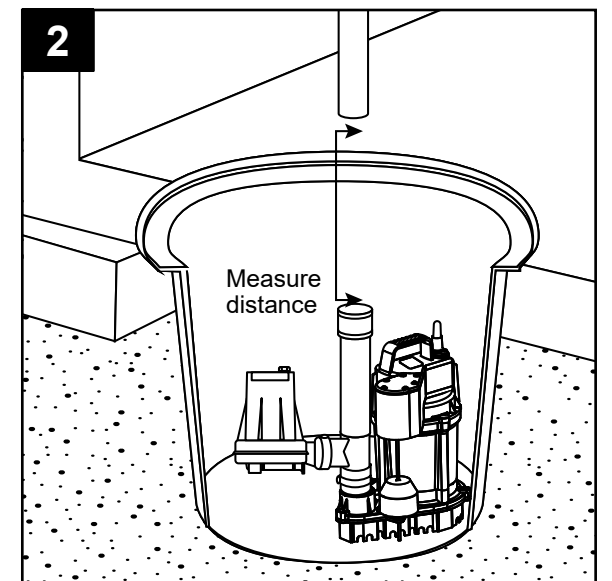
INSTALLATION INSTRUCTIONS

NOTE: Install the battery backup system when the primary pump is not needed. Read instructions and prepare all supplies before beginning installation.
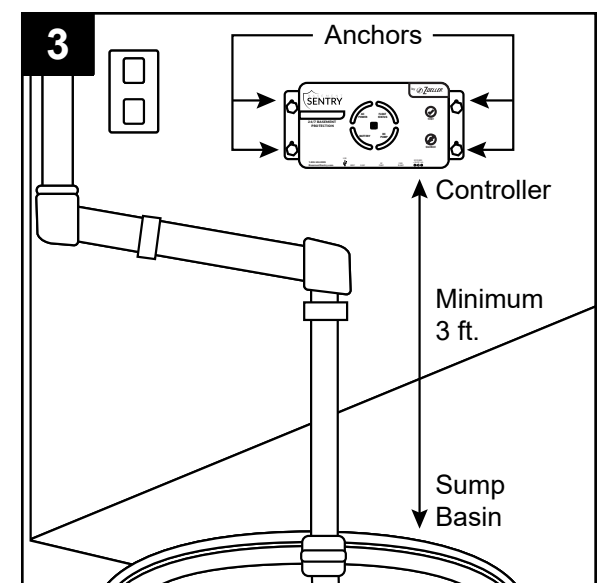
1. Disconnect power to primary sump and remove from sump basin.
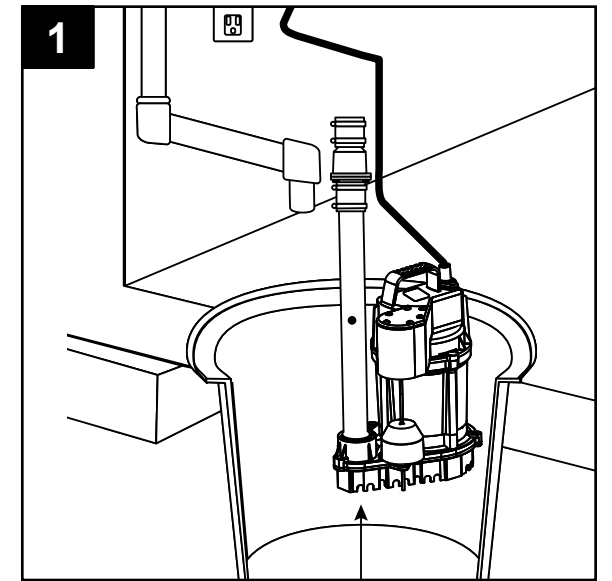
2. NOTE:; Before gluing any fittings, dry fit all connections to verify proper fit.
   Measure the distance from the flex coupling to the existing discharge piping and cut 1-1/2-in Sched 40 PVC to this size. Install 1-1/2-in flex coupling or 1-1/2-in union between pipe connected to the pump and the discharge piping.
   Glue all pipe and fittings once fit is verified.


Measure distance

3. Use the included anchors to install the controller. For best cooling, attach to wall. The controller must be installed at least 3 ft. above the sump pit.


Anchors
Controller
Minimum 3 ft.
Sump Basin

4. Place the battery inside the battery box and connect the leads from the controller to the battery terminals. Connect positive (+) lead to positive terminal on the battery and black negative (-) lead to the negative battery terminal.
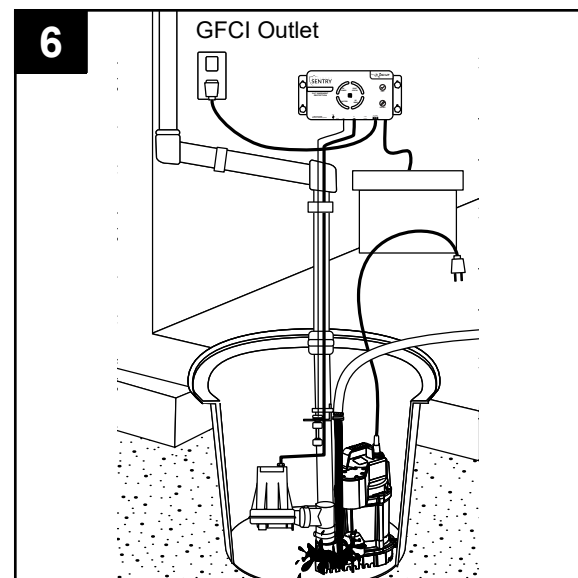
   NOTE: If wires are not connected properly, a loud, constant audible alarm will sound until the leads are attached to the correct terminals.
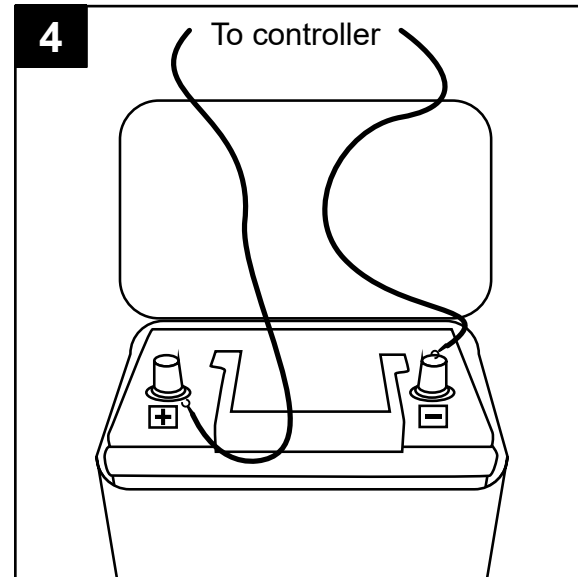
4 To controller

5. Connect backup pump and float leads to the controller

5

From float

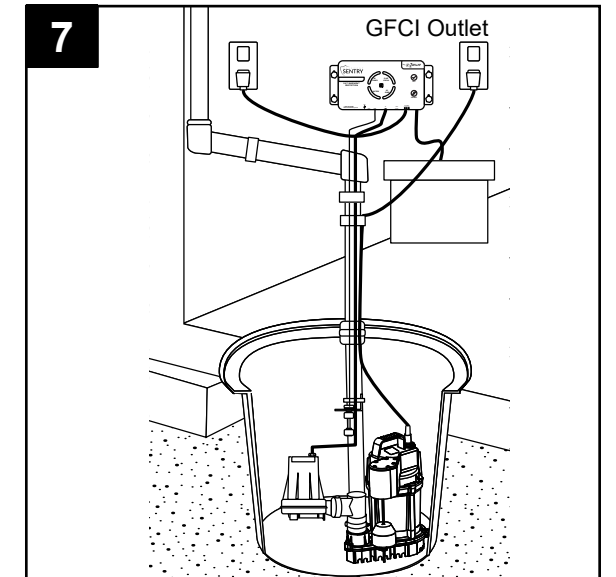From backup pump

From battery charger

From battery
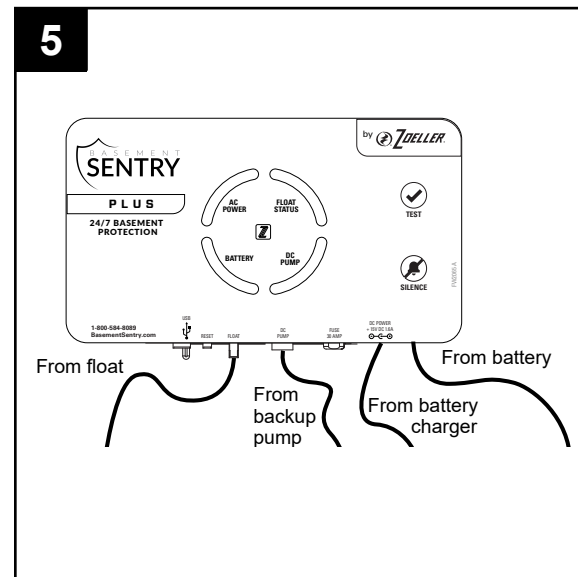
6. Plug the controller into a GFCI-protected 115V outlet.
   NOTE: The primary pump and controller should be on separate circuits.
   Test for backup pump operation by adding water to the sump basin.

6 GFCI Outlet

7. Reconnect power to the primary sump pump.

7 GFCI Outlet

BASEMENT SENTRY CONTROLLER FUNCTIONS

There are two buttons on the front of the controller.

1. Silence/Reset - Can be pressed to silence current alarms for 24 hours.

   Can be held for 3+ seconds to reset (or clear) alarms and LEDs. Flashing LEDs for conditions such as bad/disconnected battery or power outage, for example, can't be cleared by Silence/Reset. These conditions must be resolved to eliminate the LED indicator.

1 Silence/Reset
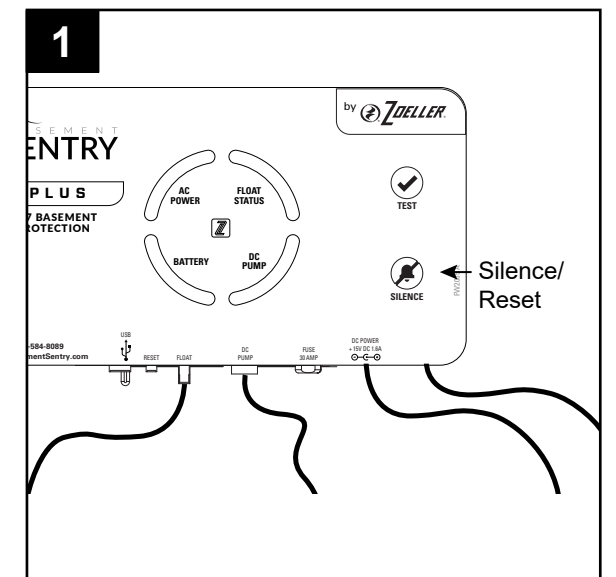
2. Test - Will run the pump to determine if amp draw of pump is within range.

   Controller is factory programmed to self-test the pump for several seconds every 7 days. This schedule may be modified once the controller is connected to the Z Control Cloud.

   Pressing the test button will start the 7 day timer for self-testing.

   Test and Silence/Reset -

   Holding both buttons together for about six seconds will initiate a factory reset. This returns the firmware's device configuration to the state in which it left the factory. Any over-the-air firmware updates that have been installed will be retained.

2 Test
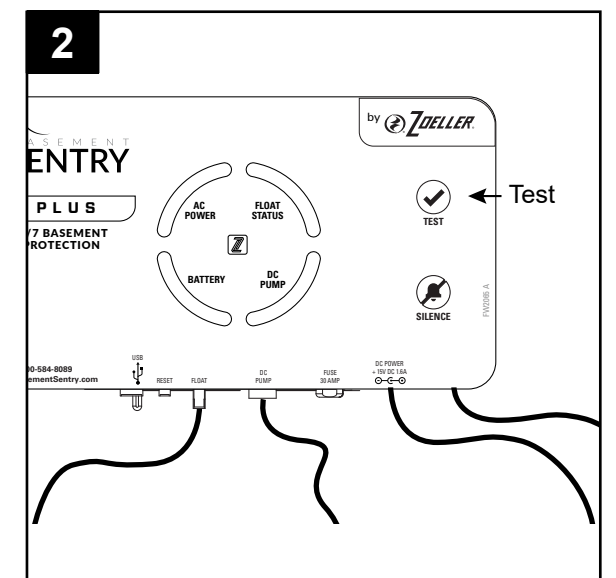
BASEMENT SENTRY LED LIGHT FUNCTIONS

These segments work together to indicate overall system condition.
Green = good, blue = charging, yellow = caution, and red = warning

Float Status
- Operational Float Not Installed > 5 mins – Double Flash Red
- Operational Float Not Installed < 5 mins – Slow Flash Yellow
- Float Fault – Fast Flash Red
- High Water – Slow Flash Red
- Operational Float Active – Slow Flash Yellow
- No Faults – Solid Green

AC Power LED
- AC Power Not Present > 12 Hours – Fast Flash Red
- AC Power Not Present < 12 Hours – Slow Flash Yellow
- No Faults – Solid Green

DC Pump
- No Current Pump – Fast Flash Red
- Low Amp Pump – Fast Flash Red
- High Current Pump – Slow Flash Red
- Pump Running Current – Fast Flash Yellow
- Pump Cycled – Slow Flash Yellow
- No Faults – Solid Green

Battery
- Low Battery – Fast Flash Red
- Charging – Slow Flash Blue
- No faults – Solid Green
- No Battery/Reverse Polarity – Fast Flash Red
- Bad Battery – Slow Flash Red

Z Control® LED
- Connected to router and cloud – Solid
- Communicating to the cloud – Temporary Flash
- AP mode – Off
- Connecting to router – Slow Flash
- Attempting to reconnect to a known router – Fast Flash
- Connected to router but no internet – Fast Flash then Slow Flash alternating

(AC POWER / FLOAT STATUS / BATTERY / DC PUMP diagram with Z logo)

CONNECTING THE CONTROLLER TO Z CONTROL®

By connecting the controller to the Z Control® Cloud using the built-in WiFi, the user can set up free alert messages via email, text, and mobile app "push" notifications. In addition, the user can verify controller readiness, remotely silence alarms and reset the unit, configure settings, and modify how notifications are sent. Other visual information such as input status and battery level are available through the web and app interfaces.

Option 1 - Use the Mobile App (iOS and Android)

Before you begin:

- Know what the WiFi router is named (i.e. SSID) and password. To prevent the most common troubleshooting issues, double check to be sure you know exactly how the password is spelled, including capitalization.
- Verify that your mobile device has working WiFi with a strong signal when you are standing next to the Basement Sentry controller. If the signal is questionable, the controller may not be able to maintain a stable connection.
- Verify your WiFi router is connected to the internet and that it is broadcasting a visible, secure, 2.4Ghz network.
- 2.4 Ghz network is required. If you only see 5 Ghz networks, you may need to log into your dual band router to choose to broadcast the networks separately.

There are two ways to connect the Basement Sentry controller to the Z Control® cloud.

Option 1 - Use the Z Control® mobile app. See Use the Mobile App section below.

Option 2 - Use a mobile device or computer to connect to the controller directly. See use Mobile Device Page 12.

- Band steering may need to be temporarily turned off during setup.
- The 2.4Ghz network must use WPA or WPA2 security. WEP and open networks are not acceptable.
- Any VPNs or other network controls may need to be temporarily turned off during setup.
- Locate the Basement Sentry Device ID located on the top of the controller.
- Like most internet connected devices, the Basement Sentry controller WiFi connectivity should be used behind the security of a firewall. Most routers have a firewall built into them. Consult a networking professional for specific questions about firewalls.

NOTE: The list above will also help troubleshoot connectivity issues.

CONNECTING THE CONTROLLER TO Z CONTROL®

Option 1 - Use the Mobile App (iOS and Android) (Continued)

These instructions provide an overview of what the app will do. You may find additional steps needed.

1. Open the app and sign in to your account, or create an account using the link at the bottom. If you do not have an account, you will need to click the link at the bottom of the home screen to create an account.

1

Click to create account
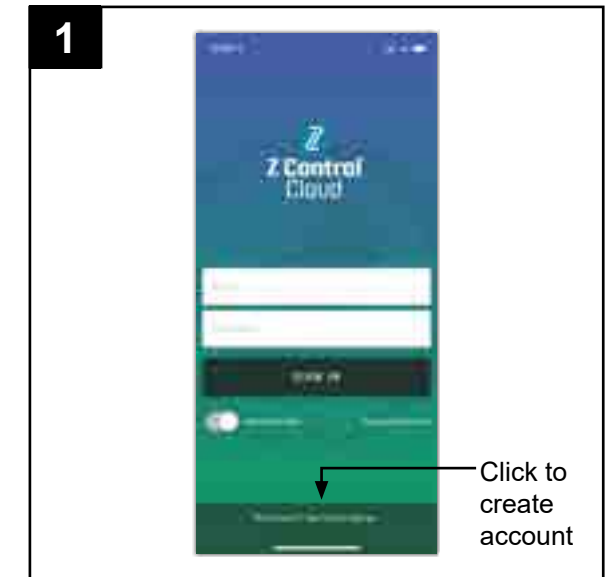
2. Open your profile to set up any additional phone numbers or email addresses where notifications should be sent.

2

3. Once you're logged in to your account, create locations by touching the "+ " from the Locations screen.

3

Touch + to create locations
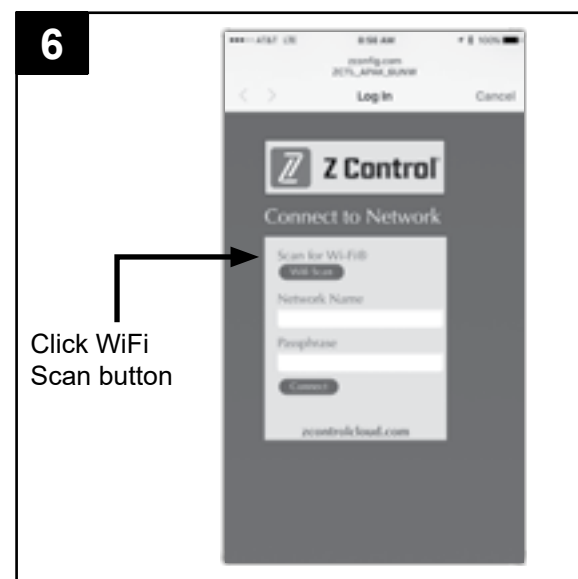
Use the Mobile App (iOS and Android) (Continued)

4. Once a location is created, you will need to add a device. To add a device, choose the desired location name and then touch the "+" to start adding a device. Allow access to the camera so you can scan the data matrix.

4

Touch + to add a device

5. The app will ask you to scan the data matrix QR code on the controller. You can also bypass this step and manually input the SSID of the controller, which is found on the controller label.

5 Click to manually input SSID

SSID input field
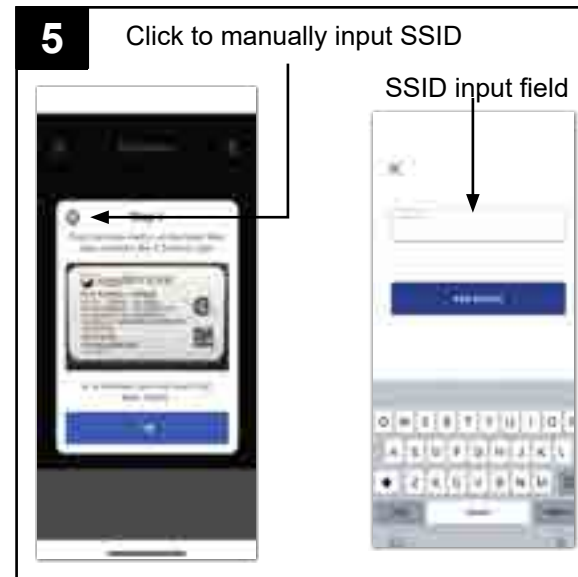
6. When the captive screen opens, use the WiFi Scan button to find the WiFi network you want the controller to use, select it from the list provided at the bottom of the screen (you may need to scroll), and type the password in the field. The Z Control® LED should be solid within a minute, indicating successful connection to the router and the Z Control® Cloud. Upon first connecting to the cloud, the Basement Sentry controller may immediately update its firmware over-the-air (OTA), if an update is available. If an update is taking place, the Z Control® LED will flicker for up to one minute while the update is downloaded. The Z Control® LED will be solid and all other LEDs will turn off while the update is being installed. After up to one minute, the controller will restart and return to normal operation. The controller alert history on the Z Control® Cloud will also be updated with the firmware update information, and any email accounts that are set up will be notified.

6

Click WiFi Scan button

10

Use the Mobile App (iOS and Android) (Continued)

7. You can now return to the Z Control® app to find your new device set up in the location you previously selected. You can always change a device to a different location in your account.

7

8. Open the Basement Sentry app to explore current status, configuration settings, and commands available, such as Pump Test, Buzzer Test, Silence, etc. Perform these test to be sure everything works as expected. Reset all alarms when you are finished.

8

11

Option 2 - Use your mobile device or computer to connect directly to the Basement Sentry controller

Instead of using a mobile device and the Z Control® app, you can also use your mobile device or computer to directly connect to the controller.

Before you begin:

- Know what the WiFi router is named (i.e. SSID) and password. To prevent the most common troubleshooting issues, double check to be sure you know exactly how the password is spelled, including capitalization.

- Verify that your mobile device has working WiFi with a strong signal when you are standing next to the Basement Sentry controller. If the signal is questionable, the controller may not be able to maintain a stable connection.

- Verify your WiFi router is connected to the internet and that it is broadcasting a visible, secure, 2.4Ghz network.

- 2.4 Ghz network is required. If you only see 5 Ghz networks, you may need to log into your dual band router to choose to broadcast the networks separately.

- Band steering may need to be temporarily turned off during setup.

- The 2.4Ghz network must use WPA or WPA2 security. WEP and open networks are not acceptable.

- Any VPNs or other network controls may need to be temporarily turned off during setup.

- Create a free account at zcontrolcloud.com.

- Locate the Basement Sentry Device ID located on the top of the controller.

NOTE: The above list also helps to troubleshoot connectivity issues.

If the controller still will not connect after trying the above suggestions, follow the same steps to connect the controller to a mobile phone hotspot instead of the home WiFi router. If the controller successfully connects to the cloud through the hotspot, then the conflict is probably related to router settings.

1 Apply AC power to the controller. The Z Control® LED will blink and then turn off, indicating the controller is in AP Mode* and is transmitting an SSID).

If the LED is blinking and not in AP mode, press the Z Control® button for 12 seconds and let go.

The LED will now be off, indicating the controller is in AP Mode. A pen or toothpick or similar is required to press the Z Control® button.

*AP Mode is when the controller is broadcasting its "name", or SSID. The SSID is in a format similar to ZCTL_ Fit_xxxx where "xxxx" is the first 4 digits of your controller device ID (See Figure 2). The Basement Sentry controller SSID will show up in your phone/tablet/computer's list of available WiFi options, and selecting it will give you direct connectivity to the controller. This is required in order to give your controller the password credentials needed to connect to the WiFi of your choice.

Connecting with your mobile device or computer (Continued)
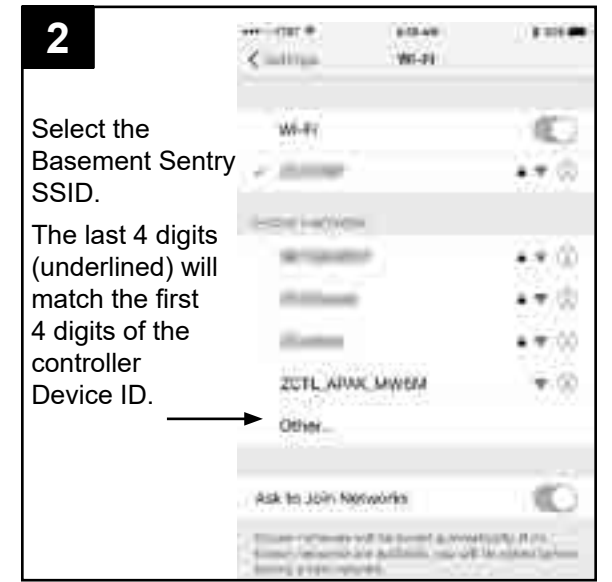
2. Standing near the controller, use your phone, tablet, or computer to look for the Basement Sentry controller SSID in your WiFi settings. It will look similar to "ZCTL_Fit_xxxx" where "xxxx" is the first 4 digits of your controller device ID. Select this, and be sure your device displays a check mark or similar indicator that you are connected to the controller local network. If so, two things will happen:

   A. The Z Control® LED will flash quickly.

   B. A Z Control® setup screen (Figure 3) will open. This may take up to 30 seconds.

   If the setup screen does not appear, open a browser on the same device and type "192.168.125.1" in the address bar. If the setup screen appears but is not used (canceled or otherwise closed), the controller will return to AP mode and the Z Control® LED will turn off until the next WiFi setup attempt. If the setup screen still does not appear, verify your device is still connected to the controller SSID. If it isn't, repeat Step 2 and be sure your device's WiFi stays connected to the controller. If your device shows a warning message about no internet or no security on the controller network, ignore this and connect to it anyway.

Select the Basement Sentry SSID.

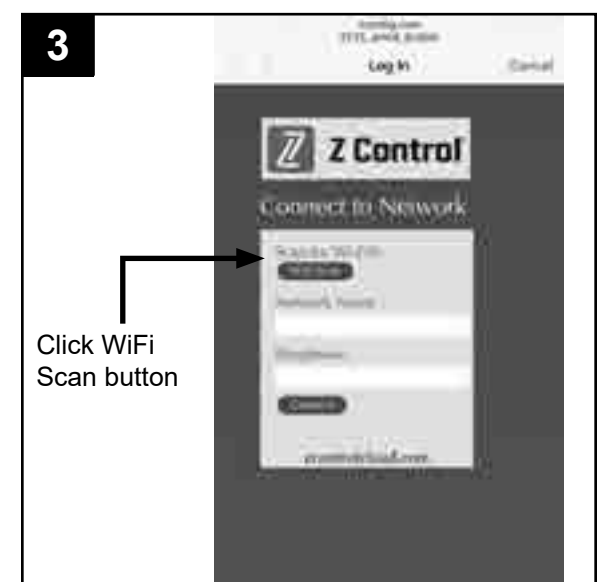The last 4 digits (underlined) will match the first 4 digits of the controller Device ID.

3. On the setup screen, press the WiFi Scan button, scroll down to see the list of WiFi signals found, and choose the WiFi you want the Basement Sentry controller to use for internet connectivity. Enter the password for the router you chose in the field indicated. If the password is correct, the controller will connect to the router and start sending status updates to zcontrolcloud.com. You will see the Z Control® LED go from blinking to solid. This could take up to a minute or so.

   If the LED does not turn solid, then the password entered is incorrect, the router's security is insufficient (see note below**), or some other network restriction is in place (see your network administrator). The controller will return to standby mode if the connection to router is not successful. If you need to force the controller into AP mode again, press the Z Control® button for 12 seconds (See Figure 1). This will cause the controller to re-enter AP mode and begin transmitting the SSID again. Repeat Steps 2 and 3.

** The controller will not connect to routers with 'WEP' or 'OPEN' security.

Click WiFi Scan button

Connecting with your mobile device or computer (Continued)

4. Once the controller LED is solid, log in to your account (or create one) at zcontrolcloud.com.

Click WiFi Scan button

Available WiFi will show here. Choose the one you want.

The controller will not connect to routers with 'WEP' or 'OPEN' security.
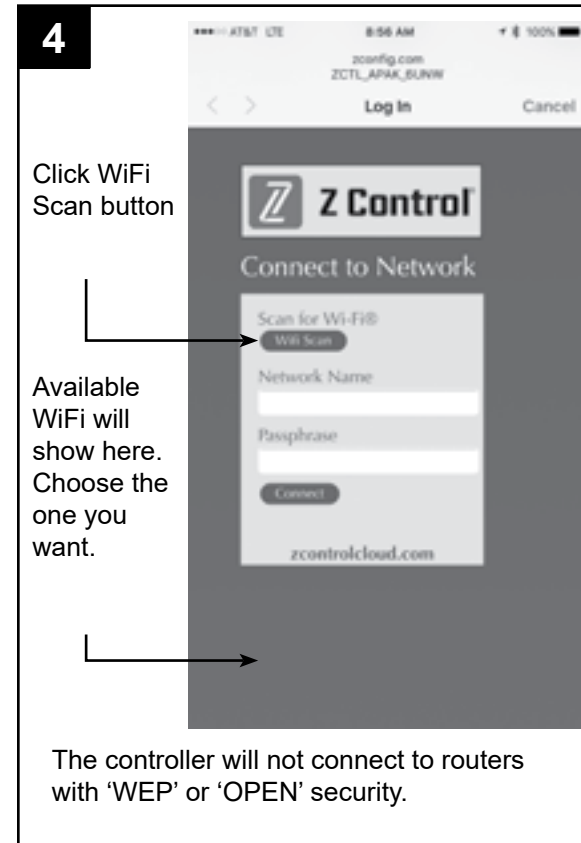
5. Choose the Add New Device button next to the location you want the controller. Follow the directions to add your controller by either auto-detect or entering the Device I.D. When successful, a Basement Sentry product tile will appear in your account.
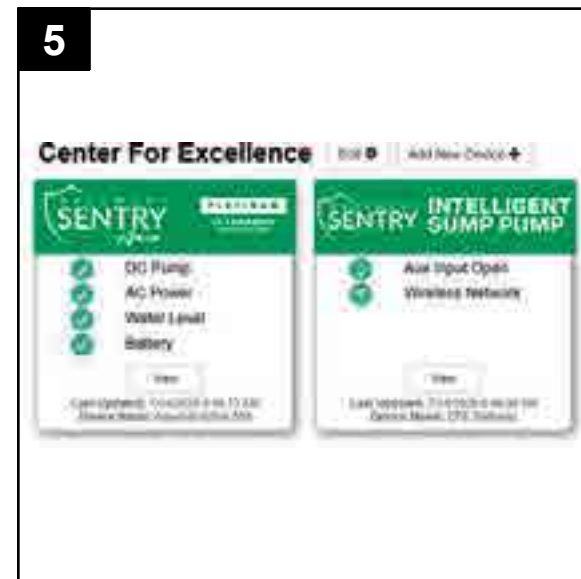
Firmware Updates

The Basement Sentry controller is capable of OTA, or over-the-air firmware updates. It's possible that the controller could perform an update immediately if one is available at the Z Control® Cloud. If an update is taking place, the Z Control® LED will flicker for up to one minute while the update is downloaded. The Z Control® LED will be solid and all other LEDs will turn off while the update is being installed. After up to one minute, the controller will restart and return to normal operation. The controller's alert history on the Z Control® Cloud will also be updated with the firmware upgrade information, and notification to email accounts will occur.

Controller Set-Up

Your Basement Sentry controller is now online. Be sure you have added the contact information for phone numbers and email addresses that should receive notification. This can done by selecting "Manage Contacts" from the main menu (the square with 3 lines in the upper right corner). You can also edit how each device sends out notifications from the devices

"Alarm Settings" tab. You can now open the product's configuration by clicking the "View" button to modify the controller device and notification settings. You can also install the Z Control® mobile app on your mobile device (Android and iOS versions available, search "Z Control®" in the app stores).
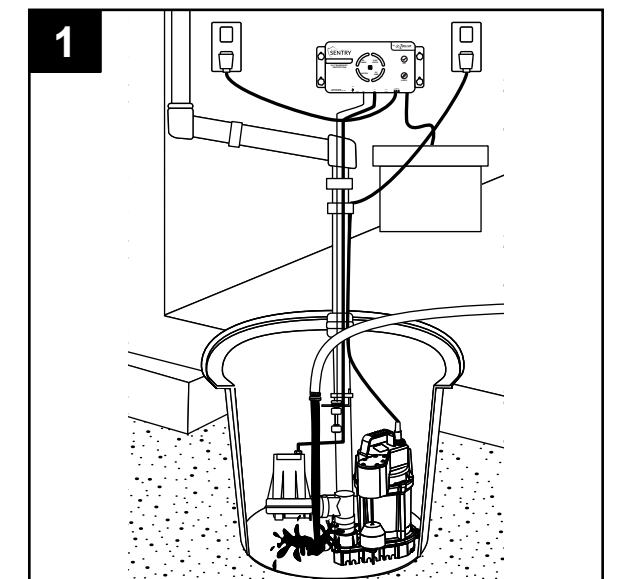
START-UP AND OPERATION

The Basement Sentry controller is able to recognize potential air lock situations and remedy the issue with an on/off/on/off/on routine which purges air from the pump. Other potential issues such as a stuck float can also be sensed and resolved by the controller to prevent damage to the equipment.

In addition, the following LED functions provide a visual cue to the proper function of the DC pump:

- The DC pump LED will stay yellow after pumping water, alerting you when the DC pump has turned on and has pumped water.
- If the the DC pump runs and does not pump water, the LED will not stay yellow. This can occur during a test of the system when the float is lifted manually while the pump is above the water line. This allows the system to be tested without having to reset it each time.

1. **WARNING:** Disconnect the primary pump from the 115V outlet before touching any component in the sump basin.

   Test the installation for leaks by running water into the sump basin. The primary pump should operate normally.

2. Check the controller. The system light should be green when the unit is plugged into a 115V outlet.



All lights will be green when plugged into 115V outlet
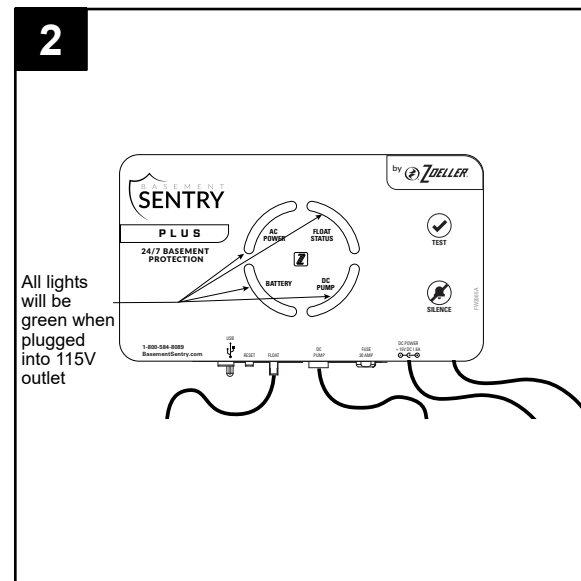
3. NOTE: When the unit is first plugged in, all lights will flash and an alarm will sound to verify proper operation. The charger may not begin charging for several minutes. When the battery begins charging, the four lights in the circle will turn blue, with the battery light flashing blue.

Flashing blue light when charging

Solid blue light when charging
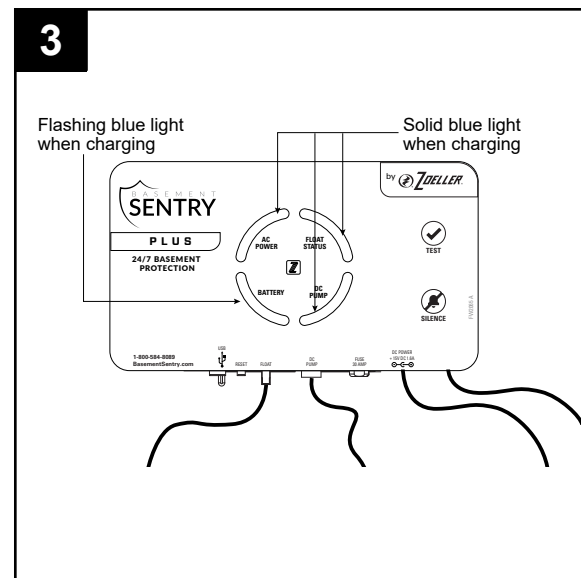
4. Once the battery is fully charged, the four lights will turn green. To clear any other lights or alarms, press and hold the 'Silence' button for three seconds.

The following LED functions provide a visual cue to the proper function of the DC pump:
- The DC pump LED will stay yellow after pumping water, alerting you when the DC pump has turned on and has pumped water.
- If the the DC pump runs and does not pump water, the LED will not stay yellow. This can occur during a test of the system when the float is lifted manually while the pump is above the water line. This allows the system to be tested without having to reset it each time.

Solid green light when charged

Press to silence alarms
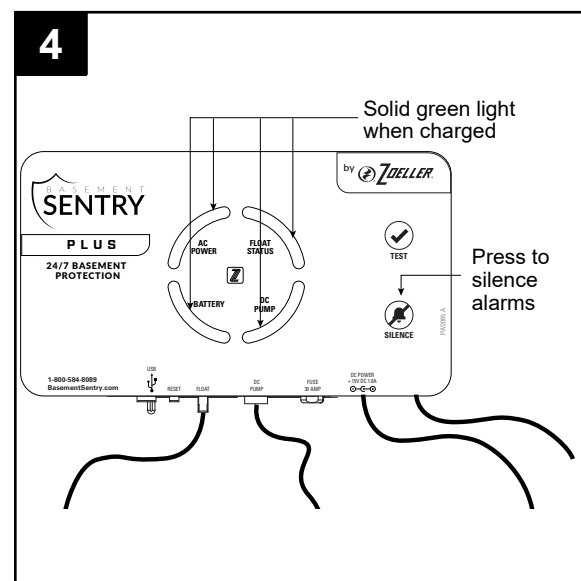
5. Lift the lower (operational) float on the backup pump float switch. After one second, the backup pump will run and the alarm will sound. Be sure the inlet of the backup pump is above the inlet of the primary pump. Press 'Silence' for 3 seconds to cancel the alarm and reset the unit.
CAUTION: Continuously running the pump dry may cause overheating and damage the pump. Once the lower float is released, the backup pump will run for an additional ten seconds or until it senses that water is no longer being pumped.


Lift lower float to test
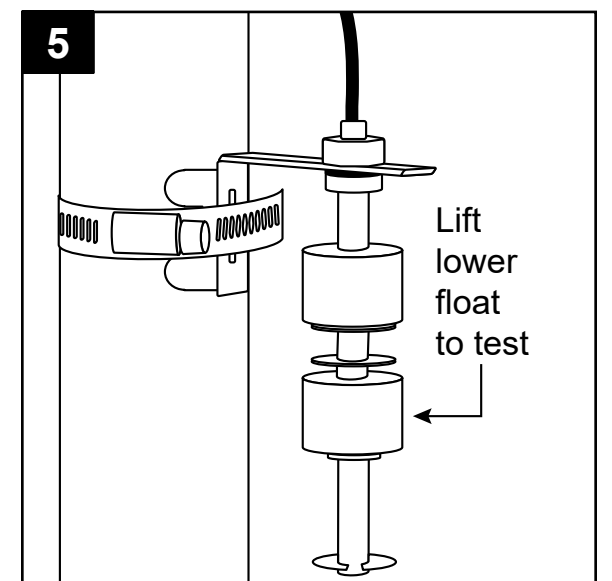
6. Lift the upper (high water) float on the backup pump float switch. After one second, the backup pump will run and the alarm will sound. Be sure the inlet of the backup pump is above the inlet of the primary pump. Press 'Silence' for 3 seconds to cancel the alarm and reset the unit.
CAUTION: Continuously running the pump dry may cause overheating and damage the pump. Once the upper float is released, the backup pump will run for an additional ten seconds or until it senses that water is no longer being pumped.

Be sure there are no obstructions around the float.

Lift upper float to test
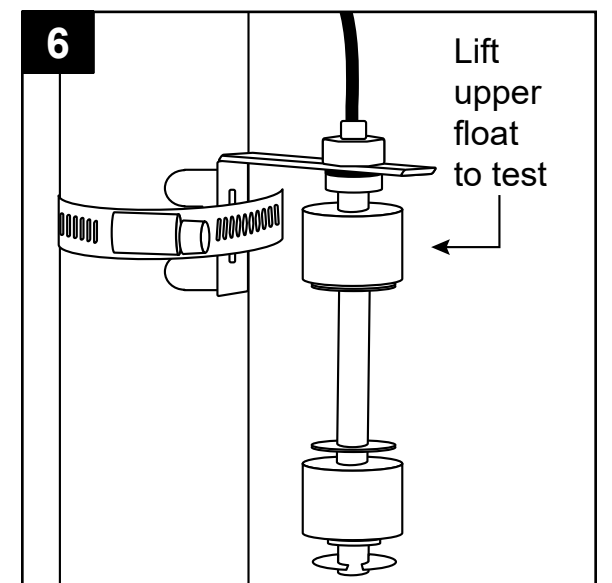
7. Complete the final test of the installation. Be sure the primary pump is still disconnected from power. Unplug the controller from the 115V outlet. Run water into the sump basin until the backup pump turns on. Check all connections for leaks.


Unplug controller to test
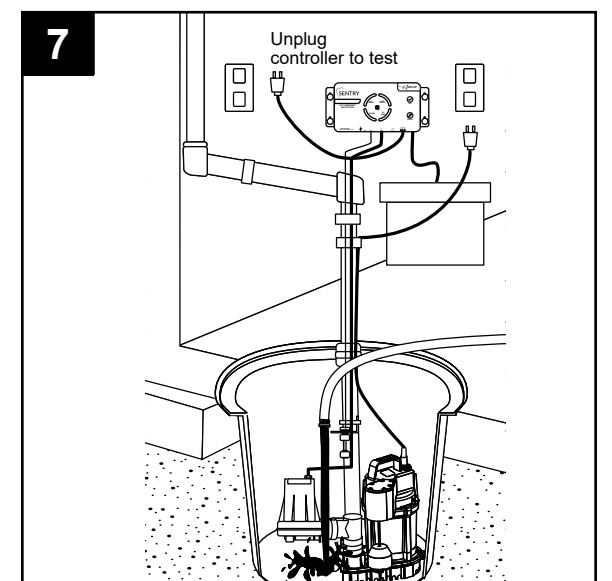
START-UP AND OPERATION

8. Push the 'Silence' button when the pump is running to turn off the alarm. The pump will continue to run for an additional ten seconds after the float has been lowered or until the controller senses water is being pumped.

Press to silence alarms
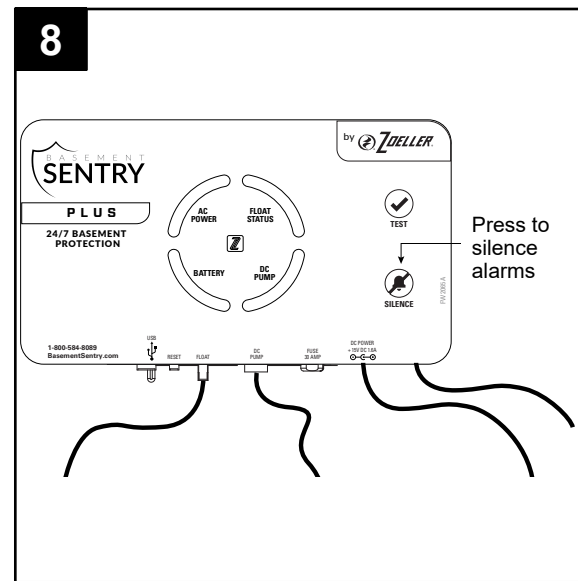
9. Press and hold the 'Silence' button for three seconds to reset the system and clear all faults and alarms.

Press and hold three seconds to reset system
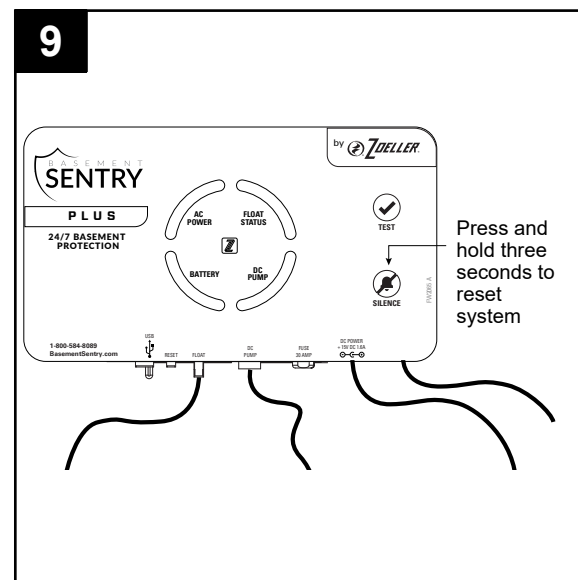
10. The four circle LED's will be blue when charging the battery. The battery LED will flash slowly. Once charging is complete, all four circle LED's will turn green.


Solid green light when charged

Press to silence alarms
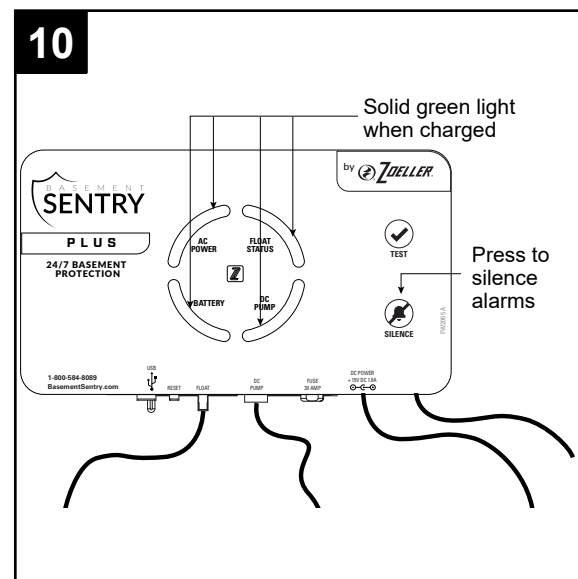
CARE AND MAINTENANCE

WARNING: Always disconnect pump from power source before handling.

At least every three months inspect and test operation:

1.. Check to be sure green 'system ready' light is on (indicates AC power is on and there are no alarm conditions)

2. Test for operation:

A. Unplug primary pump and controller.
Fill basin with water to the 'on' level of the backup pump and allow the pump to run for several minutes.
NOTE: The alarm will sound approximately one second after the pump starts to run.

B. Push the Silence/reset button - the alarm will shut off. The pump will shut off after the water level is lowered and the float drops to the 'off' position.
Hold the Silence/reset button for three seconds to reset the controller and clear any alarms or indicators

C. Plug the controller and the primary pump into the 115V outlets. The primary pump will turn on and then off when water reaches normal level.
The pump will continue to run after the float is lowered or until the controller senses water is being pumping. The four circle lights will be blue. The battery light will flash slowly after the test as it recharges the battery. The lights will turn green once the battery is recharged.
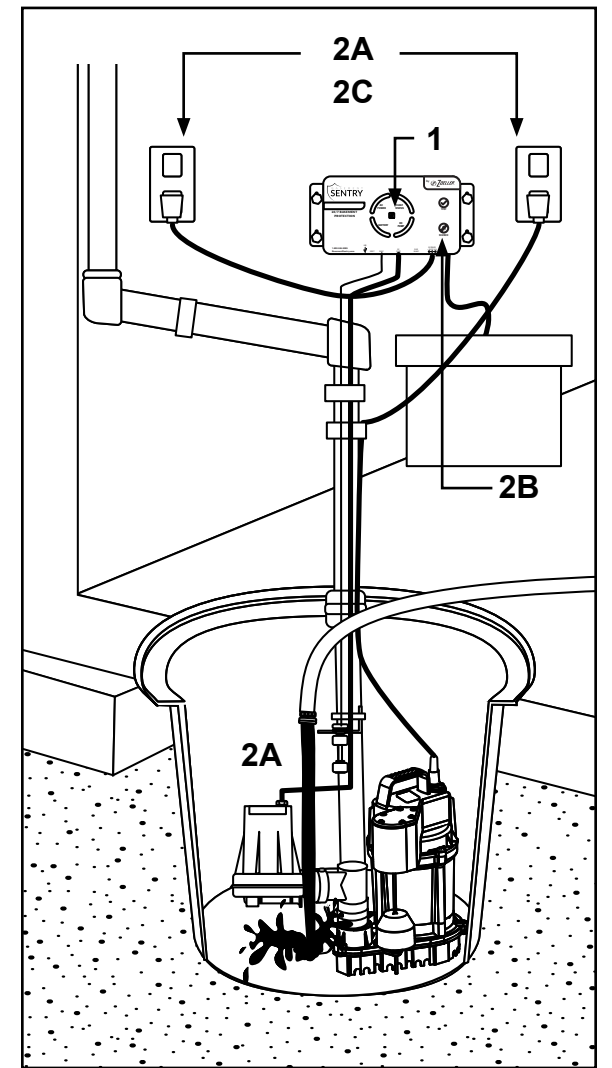
BATTERY

This backup system requires a good quality, 12V battery in order to provide maximum pumping time when needed. A Basement Sentry brand battery is recommended. Otherwise, use an AGM deep-cycle 12 volt 105 amp-hour marine battery or larger. Wet cell batteries contain acid and precautions must be taken when handling.

DO NOT USE gel batteries or automotive batteries. Batteries with top terminals are recommended for ease of installation.

Battery box will accommodate a maximum battery size of 13-1/2-in L x 7-in. W x 9-1/2-in H.

NOTE: The water level in a wet cell battery should be checked every month. AGM batteries should not be checked.

Battery Troubleshooting:

If pump runs without AC power but moves little or no water, the battery may be low.

- Battery will recharge if green power 'on' light indicates power has been restored and the float switch is in the off position.
- If immediate use is required, replace old battery with a fully charged battery.
- NOTE: The pump may continue to run on a low battery without sufficient power to remove water. Pump will not stop running until battery drops below minimum voltage.
- CAUTION: Weak batteries can be recharged but may not store enough energy for full service. A weak, recharged battery will provide reduced pumping time. If the backup pump is used frequently, the battery should be checked by a qualified battery dealer.
- NOTE: The battery may take up to 72 hours to recharge after use. This will depend on the size of the battery and the amount the battery is discharged during use.

If the alarm sounds during the recharge cycle, reset the alarm. If the alarm will not reset, unplug the charger from the 115V outlet and disconnect the black (-) negative lead from the battery post. Check battery and replace if necessary. Reconnect and refer to the battery installation section in the instructions.
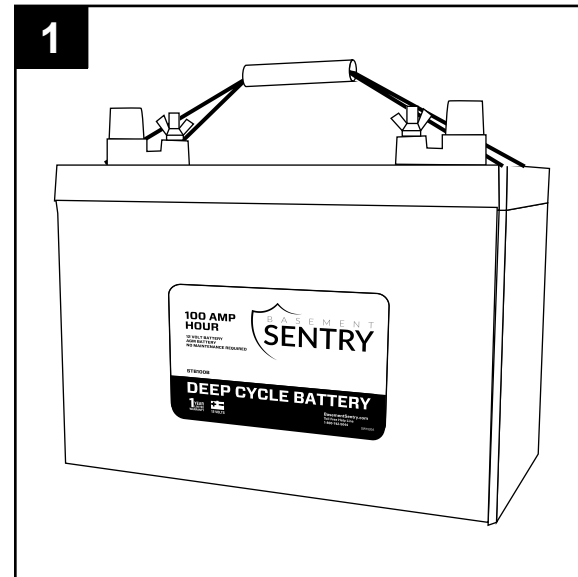
TROUBLESHOOTING

⚠ DANGER
RISK OF ELECTRIC SHOCK.
Always disconnect power source before attempting to install, service, or maintain the pump. Never handle a pump with wet hands or when standing on wet or damp surface or in water. Fatal electrical shock could occur.

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Backup pump won't run	Connections are incorrect or loose	Verify connections are correctly installed
	Wire terminal points are dirty	Check all terminals and clean if required
	Battery is low	Service or replace battery
	30 Amp controller fuse is blown	Replace with 30 amp automotive blade fuse
Pump runs but delivers little or no water	Connections are incorrect or loose	Verify connections are correctly installed
	Weep hole is plugged and unit is air-locked	Clean weep hole
	Discharge pipe is blocked	Clear discharge pipe
	Check valve may not be working correctly. It should allow water to go out of discharge pipe but not allow water to flow back into the sump basin after pump has shut off.	Replace the check valve if necessary
Float switch in 'on' position for 3 seconds or more but pump won't run	Pump is obstructed	Remove pump and clear any debris from impeller or pump cavity
Pump runs but pumps water intermittently	Incoming water is causing pump to air lock	Divert incoming water to reduce turbulence
Water level stays high but pump continues to run	Battery is low	Service or replace battery
	If power is restored, check primary pump	Service or replace if required
Alarm sounds during battery recharge cycle	Alarm needs to be reset	Press 'Silence' button for 3 seconds
	Battery is defective. Check voltage with a multimeter. Disconnect the controller from the battery and re-check voltage. If voltage is below 12V after disconnecting, battery must be replaced.	Check battery and replace if necessary

WARRANTY

This product is warranted for three years from the date of purchase. Subject to the conditions hereinafter set forth, the manufacturer will repair or replace to the original consumer any portion of the product which proves defective due to defective materials or workmanship. To obtain warranty service, contact the dealer from whom the product was purchased. The manufacturer retains the sole right and option to determine whether to repair or replace defective equipment, parts, or components. Damage due to conditions beyond the control of the manufacturer is not covered by this warranty.

THIS WARRANTY WILL NOT APPLY: (a) To defects or malfunctions resulting from failure to properly install, operate, or maintain the unit in accordance with printed instructions provided; (b) to failures resulting from abuse, accident, or negligence, or use of inappropriate chemicals or additives in the water; (c) to normal maintenance services and the parts used in connection with such service; (d) to units which are not installed in accordance with normal applicable local codes, ordinances, and good trade practices; and (e) if the unit is used for purposes other than for what it was designed and manufactured.

RETURN OF WARRANTED COMPONENTS: Any item to be repaired or replaced under this warranty must be returned to the manufacturer at Kendallville, Indiana or such other place as the manufacturer may designate, freight prepaid.

THE WARRANTY PROVIDED HEREIN IS IN LIEU OF ALL OTHER EXPRESS WARRANTIES, AND MAY NOT BE EXTENDED OR MODIFIED BY ANYONE. ANY IMPLIED WARRANTIES SHALL BE LIMITED TO THE PERIOD OF THE LIMITED WARRANTY AND THEREAFTER ALL SUCH IMPLIED WARRANTIES ARE DISCLAIMED AND EXCLUDED. THE MANUFACTURER SHALL NOT, UNDER ANY CIRCUMSTANCES, BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES, SUCH AS, BUT NOT LIMITED TO DAMAGE TO, OR LOSS OF, OTHER PROPERTY OR EQUIPMENT, LOSS OF PROFITS, INCONVENIENCE, OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY TYPE OR NATURE. THE LIABILITY OF THE MANUFACTURER SHALL NOT EXCEED THE PRICE OF THE PRODUCT UPON WHICH SUCH LIABILITY IS BASED.

This warranty gives you specific legal rights, and you may have other rights which vary from state to state. Some states do not allow limitations on duration of implied warranties or exclusion of incidental or consequential damages, so the above limitations may not apply to you.

In those instances where damages are incurred as a result of an alleged pump failure, the Homeowner must retain possession of the pump for investigation purposes.