

PUMPSPY[®]

WIFI CONNECTED BATTERY BACKUP
SUMP PUMP & MONITORING SYSTEM
24/7 AUTOMATED REMOTE SUMP PUMP MONITORING

INSTALLATION AND OPERATING INSTRUCTIONS

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*ELECTRONICS AND PUMP COMPONENTS ASSEMBLED IN THE USA
MONITORING SOFTWARE AND TECHNOLOGY MADE IN THE USA*



PumpSpy™ PS2000

SPECIFICATIONS

12VDC Sump Pump

Power Supply Requirements	12VDC
Motor	Brushless DC
AMP Rating	18 Amps
Temperature Rating	40°F to 120°F
Discharge	1 1/2" NPT
MAX Flow	3000 GPH

System Solid State Pump Controller

Power Supply Requirements	120 VAC, 60 Hz, 15 AMP
Electrical Ratings	12Amps @ 120VAC; 18 Amps @ 12VDC
Relative Humidity	0 to 80%
Storage Temperature	0° to 70°C
Operating Temperature	0° to 50°C

The PumpSpy System requires a 12V Deep Cycle Battery (not included), 40 amp/hr minimum, 75 amp/hr or higher recommended. SLA/AGM Battery strongly recommended.

IMPORTANT!

READ ALL INSTRUCTIONS CONTAINED IN THIS MANUAL BEFORE USING THIS PRODUCT.

Save these instructions for future reference. Failure to read and follow the warnings and instructions within this instruction manual could result in property damage, serious injury or death.

SAFETY FIRST!

This instruction manual contains very important information for you to know and understand. This information is provided for your safety and to help prevent equipment problems from occurring. Please observe all safety information labeled danger, warning and caution.



WARNING

WARNING INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH, SERIOUS INJURY OR MAJOR PROPERTY DAMAGE.

RISK OF ELECTRIC SHOCK. TO REDUCE THIS RISK, OBSERVE THE FOLLOWING WARNINGS:

- WARNING!** To reduce the risk of electrical shock, this system must be properly grounded in accordance with the National Electric Code (NEC) and all applicable state and local codes and ordinances. The receptacle should be protected with a Ground Fault Circuit Interrupter (GFCI).
- WARNING!** To reduce the risk of electrical shock, always disconnect the pump / system from the power source and battery BEFORE handling or servicing.
- WARNING!** Never remove the ground prong from the plug, or use an adapter that eliminates the ground prong.
- WARNING!** Never plug this pump system into an electric outlet while standing on a wet surface.
- WARNING!** Cables should be protected at all times to avoid punctures, cuts and abrasions that may result in exposed wiring. Never handle connected power cords with wet hands.
- WARNING!** The PumpSpy™ System has not been investigated for use in or around swimming pools, marine areas, recreational water installations, decorative fountains or any installation where human contact with the pumped fluid is common.
- WARNING!** Do not use an extension cord. Extension cords could present a safety hazard if not properly sized, become damaged or the connection falls into the sump pit. Do not attempt to disassemble the PumpSpy controller or Backup Pump. There are no field serviceable parts or repair options!



RISK OF EXPLOSION. TO REDUCE THIS RISK, OBSERVE THE FOLLOWING WARNINGS:

- WARNING!** Do not use to pump flammable or explosive liquids such as gasoline, fuel oil, kerosene, etc.
- WARNING!** Do not use in a flammable or explosive atmosphere.



NOT SUITED FOR POTABLE WATER APPLICATIONS.

- WARNING!** Do not use this pump to transfer water that will be used for potable (drinking) water. This pump is only to be used in applications for which it is designed.



CAUTION

CAUTION INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, MAY RESULT IN MINOR INJURY OR PROPERTY DAMAGE.

TO REDUCE THE RISK OF HAZARDS THAT CAN CAUSE INJURY OR PROPERTY DAMAGE, OBSERVE THE FOLLOWING WARNINGS:

- CAUTION!** Do not use discharge hose. Discharge hose may whip under pressure. Use rigid piping and fittings to secure the pump in the sump basin to reduce movement.
- CAUTION!** Do not install the pump if it has been damaged in any way.
- CAUTION!** Do not carry or lift the pump by the power cord. Use the pump's lifting handle.



UNPACKING

Inspect this unit before beginning installation. Occasionally, products are damaged during shipment. If the pump or any components are damaged, contact PumpSpy™ at support@pumpspy.com for replacement.



The PumpSpy System requires a 12V Deep Cycle Battery with a minimum 40 AMP/HR rating, 75 AMP/HR rating (or higher) recommended. AGM Battery is strongly recommended.

INSTALLATION



WARNING

BEFORE INSTALLING BACKUP PUMP



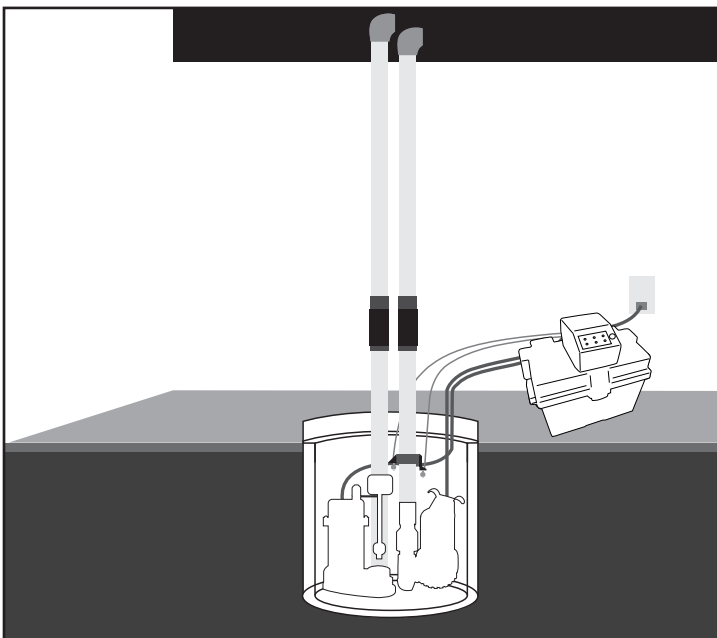
WARNING! Turn power to main pump off!

WARNING! Electric shock hazard. DISCONNECT power before servicing.



- Backup Pump must be installed using 1-1/2 in. rigid PVC pipe!
- **DO NOT** over tighten or cross-thread plastic fittings or check valves.
- Check valves **MUST** be installed in the discharge line of both the main AC pump and the back-up DC pump.
- Installation of this unit **MAY** take several hours. Before disabling your main pump, have a standby pump ready or an appropriate means of evacuating the sump basin.
- Verify that the existing AC pump is in good working order. If the AC pump is questionable, replace.
- Remove any debris from the sump pit and surrounding area.

The PumpSpy™ Backup Pump can be installed with a separate discharge line (Method 1), or connected to an existing discharge line (Method 2).



METHOD 1 (Separate discharge line) - See Figure 1

1. The backup pump has a 1-1/2 in. NPT discharge.
2. Cut a 3 ft. section of 1-1/2 in. rigid PVC pipe. Glue 1-1/2 in. pipe to a threaded fitting.
3. Screw pipe from step 2 into pump discharge.
4. Place the pump with the 3 ft. section of PVC pipe on a solid, level surface in the sump pit. Do NOT place the pump on a loose or sandy surface. Small stones or sand may damage the pump resulting in pump failure.
5. Attach a check valve (sold separately) to the top of the discharge pipe. A check valve is required for proper operation of system.

The remainder of the discharge pipe installation will vary depending on individual circumstances. Using sound plumbing practices, route the discharge pipe to an exterior wall by the shortest path. Keep turns to a minimum because they reduce flow output of the pump.

FIGURE 1 - Separate discharge line

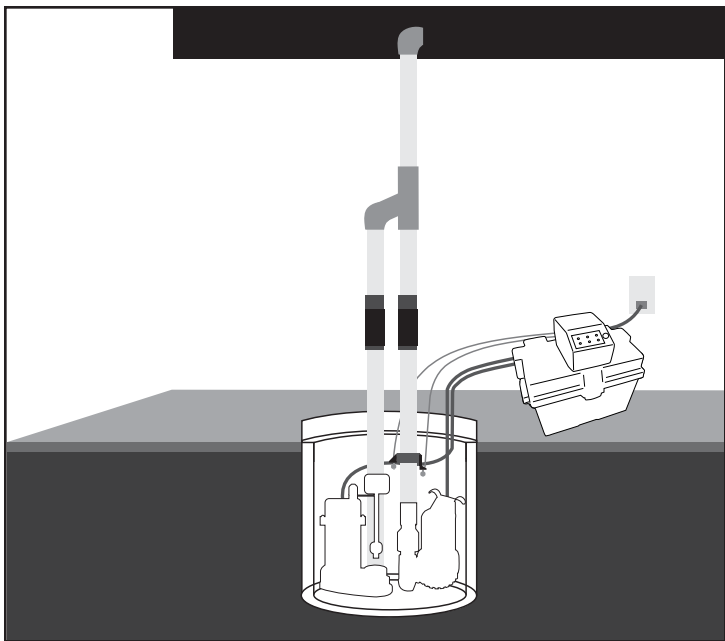


FIGURE 2- Connecting to existing discharge line

METHOD 2 (Connecting to existing discharge line) - See Figure 2

If a separate, dedicated discharge is not desired as in Method 1, the Backup Pump can be tied into the main pump's discharge pipe by installing a "Y" connector. Two check valves will be required.

1. This pump has a 1-1/2 in. NPT discharge.
2. Cut a 3 ft. section of 1-1/2 in. rigid PVC pipe. Glue 1-1/2 in. pipe to a threaded fitting.
3. Screw pipe from step 2 into pump discharge.
4. Place the pump with the 3 ft. section of PVC pipe on a solid, level surface in the sump pit. Do NOT place the pump on a loose or sandy surface. Small stones or sand may damage the pump resulting in pump failure.
5. Attach a check valve (sold separately) to the top of the discharge pipe. A check valve is required for proper operation of system.
6. Duplicate the discharge piping arrangement for the primary AC pump if the existing discharge line has to be adjusted to accommodate a second pump.
7. Glue a 45° elbow to the pipe on the Backup DC Pump. Glue a "Y" adapter to the pipe on the main pump, as shown in illustration for Method 2.
8. Glue a short piece of PVC pipe between the 45° elbow and the "Y".



THE CHECK VALVES FOR BOTH PUMPS MUST BE INSTALLED BELOW THE "Y" FITTING!

The remainder of the discharge pipe installation will vary depending on individual circumstances. Using sound plumbing practices, route the discharge pipe to an exterior wall by the shortest distance.

AFTER PLUMBING IS COMPLETED, FOR BOTH METHODS 1 AND 2:

Install float sensors at least 10" - 12" above bottom of sump pit, making sure that the sensors are at least 1" - 2" higher than the normal "on" level for main pump.

Make sure power wires and hose clamp ends do not interfere with float switches or pump operation. Failure to position properly may cause improper operation. Position all switches so they will not interfere with any portion of the plumbing, wiring, or sump pit.

BACK-UP PUMP OPERATION:

1. The backup pump will turn on when either the bottom or top float sensor rises and is engaged for 3 seconds.
2. The backup pump will keep running for 10 seconds after the float sensor drops.
3. Your PumpSpy™ system activates and tests the backup pump and battery health at least 3 times per week.



WARNING! PUMPSPY SYSTEM TESTS MAY OCCUR AT ANY TIME. THE BACKUP PUMP MAY CYCLE AT ANY TIME WITHOUT NOTICE.

NOTICE

This pump was not designed to handle salt water, brine, laundry discharge, water softener discharge or any other application that may contain caustic chemicals. Damage to the pump may occur and will void the pump's warranty.

CONNECTING THE PUMPSPY CONTROLLER



1. Install the Backup Pump using good plumbing practices. Both the Primary and Backup pumps should set on the bottom of the basin.
2. Install the switches for the primary pump and backup pump. The ON level of the lowest backup switch should be approximately 1" - 2" higher than the ON level of the primary sump pump.
3. Connect the Backup Sump Pump to the PumpSpy™ Controller's white jack.
4. Connect the backup switches to the PumpSpy™ Controller's color coded jacks.
5.  **VERY IMPORTANT!** Connect the Main Sump Pump to the AC outlet on the PumpSpy™ controller.
6. Open the battery case and place 12 Volt battery inside.
7. Connect the PumpSpy™ controller to the battery. Black to – (negative), Red to + (positive). Replace and lock lid onto battery case.
8. Plug the PumpSpy™ controller into an AC outlet. Consult your local codes for GFCI requirements.
9. The PumpSpy™ system will initialize and boot up. After booting, MAIN PUMP, BACKUP PUMP & WIFI should be YELLOW. WATER LEVEL, POWER & BATTERY should be GREEN. MAIN PUMP & BACKUP PUMP will turn GREEN after a successful test cycle.

TEST THE SYSTEM IN THIS ORDER! PUMPSPY RECOMMENDS RUNNING INITIAL CYCLES WITH WATER AND CHECK ALL PLUMBING FOR LEAKS DURING TESTING.

Lift the lowest Battery Backup switch and hold. Release when the battery backup pump cycles. BACKUP PUMP will turn GREEN. MAIN PUMP will turn RED and the alarm will sound. Press ALARM MUTE to silence, if desired.

REFILL BASIN WITH WATER.

Cycle the Primary Sump Pump. The alarm will stop and MAIN PUMP will be green.

WIFI will turn GREEN after the completing the WiFi setup with the PumpSpy app.

CONNECT YOUR SYSTEM TO WIFI AND THE PUMPSPY MONITORING SERVICE

Your PumpSpy system, once online, connects to PumpSpy's Remote Monitoring Service. PumpSpy watches over your system automatically, 24 hours a day. PumpSpy collects operating data on your sump pumps and battery and analyzes this information to make sure your pumps are always in top working condition.

IF A PROBLEM WITH YOUR MAIN SUMP PUMP, BACKUP PUMP OR BATTERY IS DETECTED AT ANY TIME, THE PUMPSPY SYSTEM WILL IMMEDIATELY SEND AN ALERT TO THE PUMPSPY APP.

YOU SHOULD COMPLETE ALL PLUMBING AND INSTALLATION BEFORE CONNECTING YOUR SYSTEM TO WIFI!

The PumpSpy App is available for Android and Apple iOS devices.

ACTIVATING YOUR PUMPSPY WIFI CONNECTED BACKUP SYSTEM



STEP 1:
Download and Install the PumpSpy App from the App Store or Google Play, depending on your device.

STEP 2:
Open the app and create a new PumpSpy Account.

- After entering your info, press Done.
- Press the home button on your Apple/Android device.

STEP 3:
Make sure the PumpSpy System is in WiFi Setup Mode

- The WiFi LED light on the system should be yellow (setup mode).
- If the WiFi LED is not yellow, gently press and hold the WiFi setup button using a pencil/paper clip. The unit will turn yellow/enter setup mode after 3 seconds.

STEP 4:
Connect to the PumpSpy System

- On your Apple/Android device, open Settings.
- Select WiFi.
- Select the WiFi network named "PumpSpy."
- Press the home button on your Apple/Android device.

STEP 5:
Enter your WiFi Network Credentials

- Open the PumpSpy app.
- The PumpSpy app will ask your permission to send you notifications. Click OK.
- Select your WiFi network from the list of available networks.
- Enter the password for the selected WiFi network and press Done.
- The Wi-Fi LED will turn red for several seconds, then green once successfully connected to PumpSpy servers. If it stays red after 60 seconds, start over. (Make sure you enter the correct Wi-Fi password!)
- A Success message will be displayed once connected. Press OK.
- Continue the setup process on the app by entering the location of the PumpSpy Backup System.

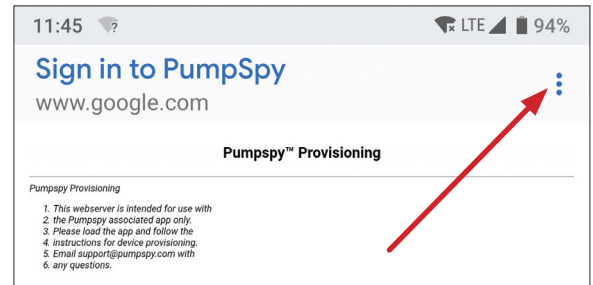
STEP 6:
Enter Alert Contacts

- On the PumpSpy App, select Contacts.
- Following the onscreen prompts, enter cell phone numbers and/or email addresses that should receive PumpSpy alerts.

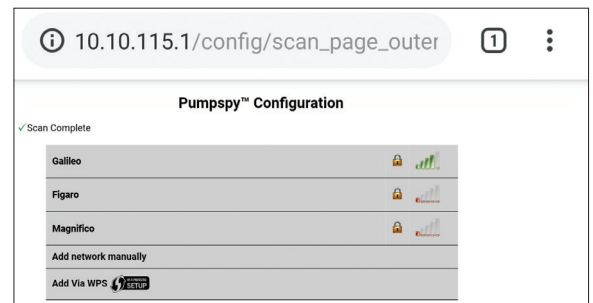
ADDING YOUR DEVICE MANUALLY

If you are having issues with setting up your PumpSpy device via the app, you can manually set up the device. *This process works on all Apple and Android devices.*

- On your Apple/Android device, go to Wi-Fi settings and connect to the PumpSpy device's Wi-Fi network
- If your device warns you that there is no internet connection available, that is normal. Stay connected to the PumpSpy Wi-Fi network.
- Some Android devices will request that you sign in to the PumpSpy network. In this event, click the sign in notification. When you reach the PumpSpy Provisioning page, select options (3 dots) at upper right, then select "Use this network as is" (Fig. 1)
- Once successfully connected, open a web browser on your Apple/Android device
- Enter the following address: 10.10.115.1/config/scan_page_outer.html (Fig. 2)
- Select your Wi-Fi network from the displayed list of available networks
- Enter your network password
- The screen will go dark and a message will be displayed. Close your browser.
- Your PumpSpy device's Wi-Fi indicator will turn red for several seconds, then green once successfully connected to PumpSpy's servers. If it stays red after 60 seconds, start over.
(Make sure you enter the correct Wi-Fi password!)
- Once the Wi-Fi indicator is green, open the PumpSpy app and select "Connect Device Manually"
- Enter your PumpSpy device's 15-digit serial number and press "Submit"



(Fig. 1)



(Fig. 2)

STATUS INDICATOR REFERENCE CHART

Use the chart below to identify the message associated with the color of each LED light on the PumpSpy Controller.

Y = Yellow

 = Blinking Red

R = Red

R/G = Red/Green Alternating

MAIN PUMP	Y	No Cycle Recorded
	R	Main Pump Fail - Backup Pump Activated
		High Amp Draw - Jammed Pump
	R/G	Excessive Run Time

BACKUP PUMP	Y	No Cycle Recorded
	R	Backup Pump Fail
		High Amp Draw - Jammed Pump
	R/G	Excessive Run Time

WATER LEVEL	R	High Water Alert
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POWER	R	AC Outage
		No Battery / Reverse Polarity

BATTERY	Y	Low Battery - 25% Charge
	R	Critical Battery - 10% Charge
		No Battery / Reverse Polarity

WIFI	Y	WiFi Setup Mode
	R	Offline / Attempting to Connect

ALARM MUTE BUTTON

- Silences the alarm for 24 hours
- Press and hold for 10 seconds to initiate system test

LIMITED THREE-YEAR WARRANTY

WHAT THIS WARRANTY COVERS

When used and maintained in normal use and in accordance with the Installation and Operating Instructions, your PumpSpy™ product is warranted against original defects in material and workmanship for a full three years from date of purchase (the “Warranty Period”). During the warranty period, PumpSpy™ will repair or replace at no cost to you, to correct such defects in products found upon examination by PumpSpy™ to be defective in materials or workmanship.

WHAT THIS WARRANTY DOES NOT COVER

This warranty does not cover use of the product in a non-residential application, improper installation and/or improper maintenance of the product, damage due to misuse, acts of God, nature, vandalism or other acts beyond the control of PumpSpy™, owner’s acts or omissions, use outside the country in which the product was initially purchased and resales of the product by the original owner. This warranty does not cover pick up, delivery, transportation or house calls. However, if you mail your product to PumpSpy™ for warranty service, cost of shipping will be paid one way. This warranty does not cover products purchased from a party that is not an authorized retailer, dealer, or distributor of PumpSpy™ products.

OTHER IMPORTANT TERMS

This warranty is not transferable and may not be assigned. This warranty shall be governed and construed under the laws of the state of Ohio. The warranty period will not be extended by any replacement or repair performed under this warranty. **THIS WARRANTY IS THE EXCLUSIVE WARRANTY AND REMEDY PROVIDED BY PumpSpy™. ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OR MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT WILL PumpSpy™ BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND OR NATURE TO OWNER OR ANY PARTY CLAIMING THROUGH OWNER WHETHER BASED IN CONTRACT, NEGLIGENCE, TORT OR STRICT PRODUCTS LIABILITY OR ARISING FROM ANY CAUSE WHATSOEVER.** Some states do not allow for the exclusion of consequential damages, so the above exclusion may not apply to you. This warranty gives you specific rights. You may also have others that vary state to state.

Installed by:_____

Model: PS2000

Date of Installation:_____

Serial Number:_____