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## Installation, FAQs & Warranty Information

Thank you for purchasing BILGE-B-DRY™ with mobile connectivity which includes:

- BILGE-B-DRY pump assembly
- Bilge low-profile water pickup and mounting bracket
- Tubing lengths (based on pump configuration) for low-profile water pickup to pump, and pump to overboard discharge

### **Features:**

- A **Mobile App** is available for download to control BILGE-B-DRY wirelessly via Bluetooth
- The **low-profile water pickup** is designed with an integrated filter to minimize impact on the environment and protect the pump.

### **Default Operation:**

BILGE-B-DRY is pre-programmed to run for two minutes, 5 times per day. The pump will start running for two minutes within 10 seconds after power is applied. Connecting to BILGE-B-DRY with the Mobile App is not required if you only want to run the default schedule. To change the schedule or run the pump on-demand, you can connect with the Mobile App.

### **Installation Instructions:**

1. BILGE-B-DRY is equipped with two wires, RED (+) and BLACK (-). The red wire should be connected to your battery with a waterproof 3-amp inline fuse or panel with a circuit breaker. Install the fuse as close to the battery as possible. Connect the black wire to ground. Read the footnotes at the end of these instructions on best practices for electrical connections.<sup>[1]</sup>
2. Cut tubing to desired lengths. The end of the tubing must be cut “square” to ensure a proper fit. Insert one end of the tubing into the press-fit connector on top of the low-profile water pickup.
  - a. Pressure must be applied when inserting all tubing into the press-fit connectors to a depth of 1/4” to 5/16” to ensure a proper fit. If not fully seated, the unit will “pull/suck” air, reducing pump performance.
3. Place the low-profile bilge water pickup(s), with the holes facing down, flat against the bottom of the lowest location in the bilge, evaporator, basin, or the location you choose for water removal. Zip ties or the provided bracket work well to ensure the low-profile water pickup remains where you want it.
4. Place the BILGE-B-DRY unit in a location where it cannot be submerged. Longer tubing can be used if needed. Use PVC or PU tubing with an outer diameter (OD) of ¼.” For multi-pump systems, use 3/8” OD tubing for the outlets.
5. Insert the other end of this tubing to the input press-fit connector on the BILGE-B-DRY unit.



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6. Insert a second piece of cut tubing into the output press-fit connector on the BILGE-B-DRY unit.
7. The output tubing should be routed to an existing overboard hose, shower basin, AC basin or to a dedicated overboard drain.



**Figure 1: Single and Multi-Pump Water Flow**

### **Mobile Application Instructions:**

The BILGE-B-DRY Mobile App is available through the Apple Store or Google Play Store.

1. After applying power to the BILGE-B-DRY system, open the Mobile App on your smart device.
  - o *Note: Do not open your Bluetooth settings to “pair” to your system. “Pairing” is not required.*
2. Upon opening the BILGE-B-DRY App on your smart device, note the very bottom of the App will indicate if connected or not connected.
3. The distance to your smart device, along with engine room or bilge equipment, *could* cause interference. Consider moving around your vessel (if needed), and re-open the App to establish a connection.
4. Check pump operation by selecting the Timer menu. Run pump for two minutes and slide the blue dot to enable. The pump status will indicate running/not running.
5. Select the Schedule menu to set your Daily Schedule. Change the Daily Schedule by tapping the time to open the clock widget. Slide your finger around the wheel to set your daily time, choose your run duration



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from one to twenty minutes, and enable the schedule by sliding the blue dot to the right. Choose up to five Daily Schedule options. BILGE-B-DRY will run your Daily Schedule automatically until you choose to update or cancel your selections.

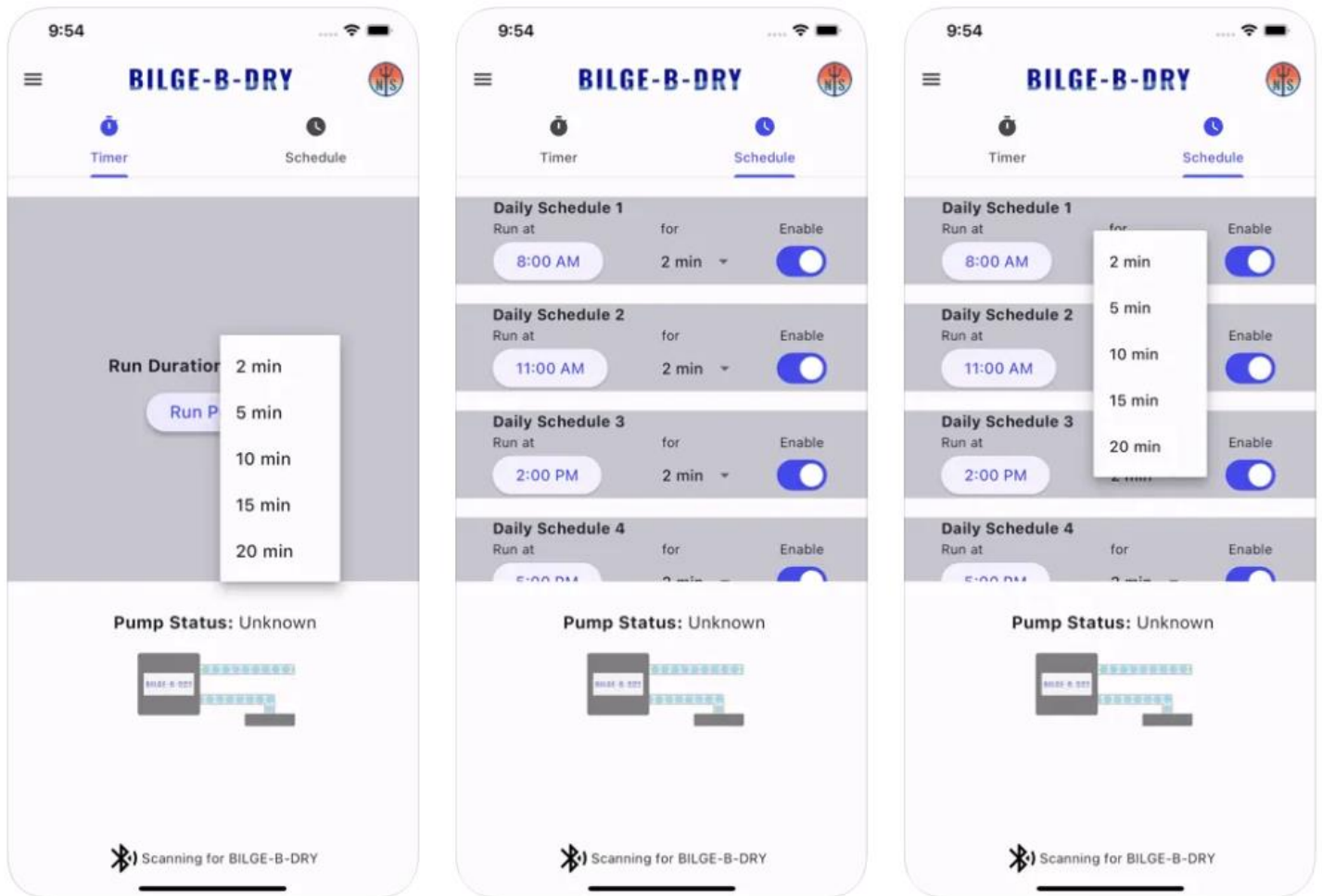


Figure 2. Mobile Application



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### **Note: If you purchased TWO units**

To keep operation simple, we did NOT provide a dropdown menu to connect to multiple BILGE-B-DRY systems. Wireless connectivity will not allow for connecting to multiple systems at the same time; therefore, our design is based on first-in connection followed by first-out with a delay to reconnect. (The last system connected will not advertise its location for 10 seconds, allowing connection to the other unit).

### **Example:**

*One unit is in your cabin bilge, the other is in your engine room bilge. Upon opening the Mobile App, the App will connect to the cabin or engine bilge (first-in). You will be able to schedule and run the timer for this unit only. When done, close the App (swipe-up) and re-open the App to auto-connect to the other bilge unit for scheduling or timer operation. Each unit will now have saved your changes and will run the schedules you programmed.*

### **Winterization**

We recommend running antifreeze through the pump for 30 seconds, then allow the pump to run dry for 2 minutes.

### **FAQs**

1. What do you mean by quad pumps? Is this one pump with four pickups?

The multiple pump systems have dedicated pumps for each of the individual pickups. Example: The three-pump system has three independent motors with diaphragm pumps for each of the three inputs to the pump. The outputs are “joined” inside the enclosure to allow easier plumbing of the discharge hose.

2. What is the maximum distance a low-profile bilge water pickup can be run from the BILGE-B-DRY pump, and from the pump to an overboard discharge?

Thorough testing has proven that a maximum run of 25 feet from the pickup to the pump is acceptable. This is not a limitation - it is only what has been tested to date. The pump to overboard discharge run is not defined and no limitations have been observed.

3. What is the maximum suction or head height?

The maximum demonstrated total vertical height is 8 feet, as demonstrated on a sailboat with a pickup placed five feet below the BILGE-B-DRY pump in the keel and additional three feet vertical rise from the pump to the overboard discharge. This is not a limitation - it is only what has been tested to date.

4. Why does my Mobile App show incorrect status or is not responding?

Please try to force close the BILGE-B-DRY App, wait 10 seconds, and re-open the App to see if the issue is resolved.

5. Why does my BILGE-B-DRY run at different times than selected in the Schedule?

If power was disconnected from BILGE-B-DRY and then restored, the internal clock will start at 12:00 AM.

Once you connect again with the Mobile App, the internal clock will be restored to your local time.

The BILGE-B-DRY internal clock can “drift” over time. To update, re-connect to BILGE-B-DRY with the Mobile App and the internal clock will be updated automatically.



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6. Why is my BILGE-B-DRY pump running, but no longer pumping water?

You might have restricted water flow due to debris or petroleum. If your bilge experienced a significant oil spill, the pickup filter will become oil saturated, restricting water flow. Excessive pumping of oil, diesel or fuel will cause a "viscosity-lock" of the rubber diaphragm to the small ports and rubber gland inside the pump and may require replacement of the BILGE-B-DRY pump.

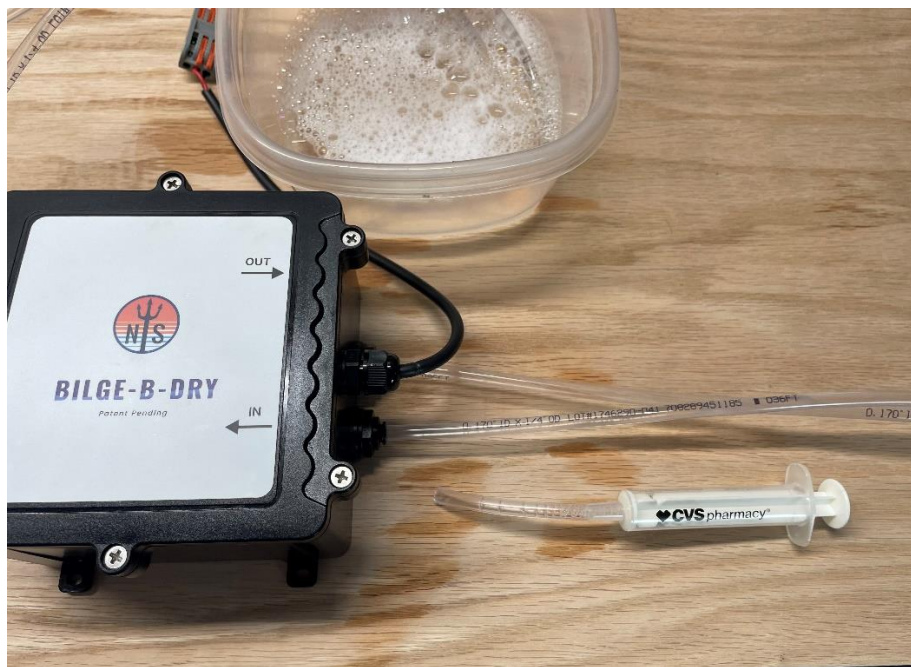
**Troubleshooting:**

1. 12vdc Power

Verify you have power; this is visible through the clear/white gasket along the lid.



2. If your BILGE-B-DRY is not pumping water, please visit this video link to clear any potential debris that might be causing a blockage. Link: <https://youtu.be/NbdCgbLjQs0>



**IMPORTANT: You will damage the pump if attempting to clear it with compressed air.**

3. If your unit has not resumed to normal operation, please use the [Warranty Return link](http://www.neptunianskyllc.com/warranty) to provide a description or visit [www.neptunianskyllc.com/warranty](http://www.neptunianskyllc.com/warranty).



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**Warranty information:**

Neptunian Sky LLC warrants this product to be free from defects in material or workmanship for a period of one (1) year following the date of purchase, provided that the product is used as intended.

**EXCLUSIONS AND LIMITATIONS**

This Limited Warranty does not cover failures due to abuse, accidental damage, unintended use or when repairs have been made or attempted by anyone other than Neptunian Sky LLC and its authorized dealers and resellers.

- The Warranty is **VOID** if the enclosure screws have been removed, as removing the cover will result in Internal wiring damage.
- The BILGE-B-DRY low-profile water pickup **MUST BE USED** during operation, otherwise the pump will ingest small debris and clog.
- The Warranty does not cover a clogged pump and/or oil, diesel, and fuel damage.
- If your bilge experienced a significant oil/diesel spill, the pickup filter quickly becomes oil saturated resulting in restricted water flow and may require replacement. If you pump excessive oil, diesel, or fuel, this will cause a "viscosity-lock" and will require replacing the BILGE-B-DRY pump, not covered under Warranty.



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## **[1] Notes on proper electrical connections:**

American Boat and Yacht Council (ABYC) standards state that “current-carrying conductors shall be routed as high as practicable above the bilge water level and other areas where water may accumulate. If conductors must be routed in the bilge or other areas where water may accumulate, the connections shall be watertight (11.14.4.1.5 ).” Wires run in engine spaces need to be “75°C”.

Per ABYC (E-11.16.3.7) “solder shall not be the sole means of mechanical connection in any circuit.”

Per ABYC (11.14.3.8) “solderless crimp-on connectors shall be attached with the type of crimping tools designed for the connector used, and that will produce a connection meeting the requirements of E-11.14.3.3.”

When attaching a wire to a terminal screw, always use a ring terminal (preferred) or captive spade terminal rather than bare wires or a non-captive spade terminal.

Crimp connectors are recommended but only when using a quality crimp tool that was designed for the specific connector being used.

The connections should be sealed using heat shrink tubing with adhesive to prevent corrosion and water ingress.

Wires should **NOT** be joined with wire nuts or by twisting together and covering with electrical tape.