

# Model HC8000

## Electronic Sump Pump Switch

Patents Pending

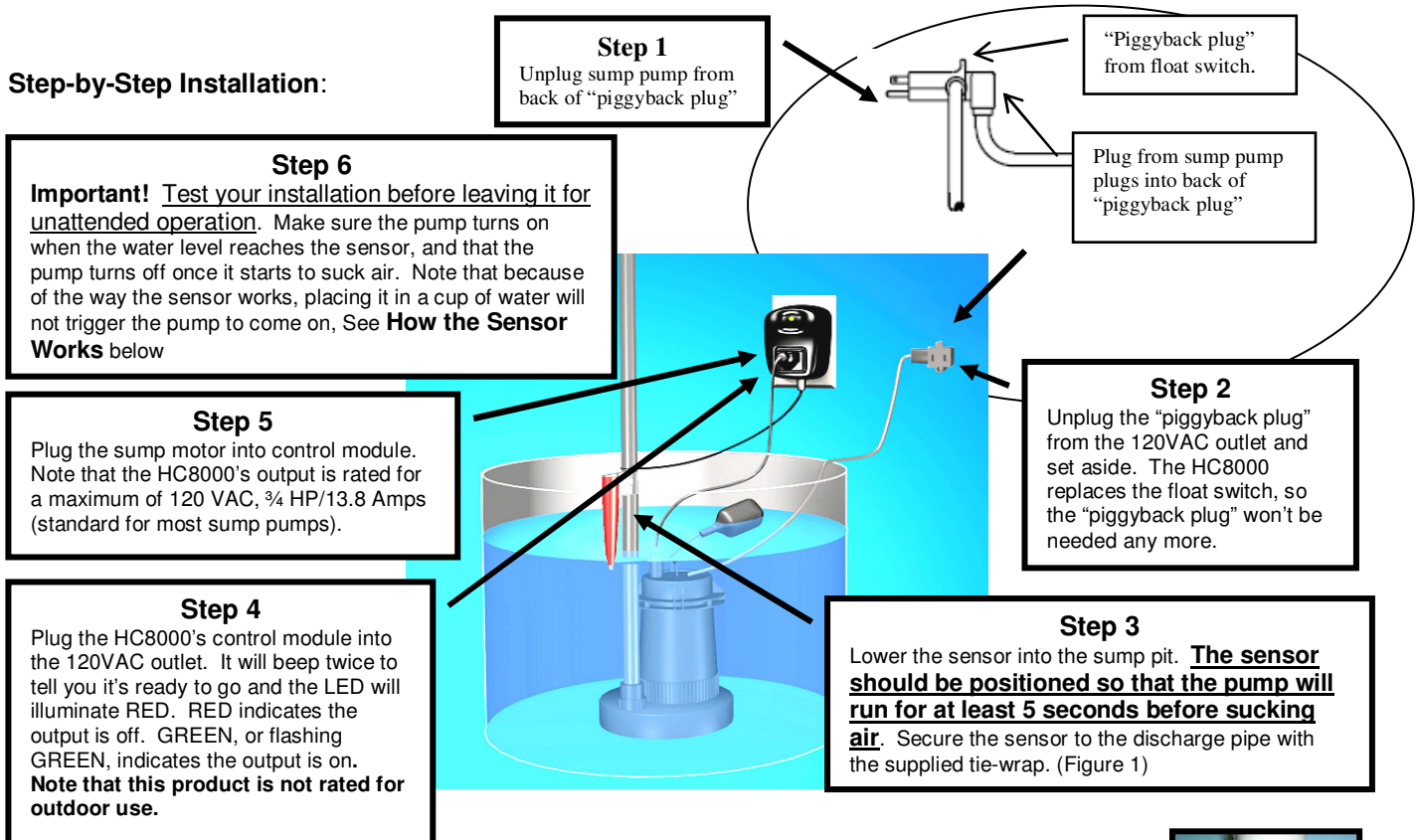
### Installation Instructions

#### Overview

The installation of the HC8000 Sump Pump Switch is simple and straightforward, but there are **THREE VERY IMPORTANT** things to remember for HC8000 to give you years of trouble free, worry free, service:

1. The "piggyback plug" attached to the mechanical float switch **cannot be used with the HC8000**. It must be disconnected and remain disconnected. Just let it lay on the floor after the HC8000 is installed.
2. If your sump pump has internal float switch wiring, i.e. doesn't have a "piggyback plug," then you **MUST** secure the float up as if the pit were full so that the internal switch is always closed and the pump enabled.
3. *The HC8000 turns the pump off when detects the loss of suction by the pump. In order to do this reliably, the sensor should be set at a level to insure that **the pump runs for at least 5 seconds before it starts to suck air!***

#### Step-by-Step Installation:



#### How the Sensor Works:

The sensor detects the presence of water by using a continuity circuit, which, when the tip of the sensor is in water, allows a small voltage to flow from the sensor, through the water, to ground. When no water is present, the circuit is broken and no voltage flows. Normally, the pump provides the ground needed for the continuity circuit, but occasionally it won't. When this happens, it is necessary to provide a ground for the sensor to work. This can be done with a length of wire (14 AWG) having a couple of inches of insulation stripped off at both ends. Secure one end of the wire around a water pipe or electrical conduit. Place the other end into the pit far enough down so that the end of the wire is below the sensor. **Note that placing the sensor in a cup of water will not trigger the pump to come on because there is no ground reference to complete the continuity circuit.**



Figure 1

## HC8000 Sump Pump Switch Troubleshooting Chart

The Model HC8000 Sump Pump Switch has a number of built in alarms that warn of problems with the pump or discharge plumbing. The available alarms are described in the table below. To disable the alarms perform the following steps:

- |                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> <li>1. Unplug pump from control module.</li> <li>2. Lift sensor out of water.</li> <li>3. Unplug control module from 120 VAC outlet. Wait 10 seconds.</li> <li>4. Plug control module back into outlet. Wait 10 seconds.</li> </ol> | <ol style="list-style-type: none"> <li>5. Unplug control module from 120 VAC outlet. Wait 10 seconds.</li> <li>6. Plug control module back into outlet. Wait 10 seconds.</li> <li>7. Plug pump back into control module</li> <li>8. Place sensor back into water</li> </ol> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Alarm/Indicator/Problem	Description	Possible Causes
2 Beeps	Can't turn pump on	<ol style="list-style-type: none"> <li>1. Pump not plugged in</li> <li>2. Float piggy-back plug not disconnected</li> <li>3. Float switch not secured in "on" position (internally wired float switch)</li> </ol>
3 Beeps	High Level Alarm	<ol style="list-style-type: none"> <li>1. Pump can't keep up with water coming in</li> <li>2. Discharge plumbing blocked</li> <li>3. Debris on sensor</li> </ol>
Steady Slow Beep*	Motor current above normal	<ol style="list-style-type: none"> <li>1. High motor current. Replace pump and/or perform Master Reset as described below.</li> </ol>
Steady Fast Beep*	Motor current too high	<ol style="list-style-type: none"> <li>1. Very high motor current. Replace pump and/or perform Master Reset as described below.</li> </ol>
Steady Red LED	Pump off, no water detected	<ol style="list-style-type: none"> <li>1. Normal operation</li> </ol>
Flashing Red LED	Pump off, no water detected, switch in short cycle mode	<ol style="list-style-type: none"> <li>1. If, during a calibration cycle, the switch does not detect the drop in motor current indicating an empty pit, it defaults to a 6 second cycle time to protect the pump motor from being run dry</li> </ol>
Steady Green LED	Pump on, water detected by sensor	<ol style="list-style-type: none"> <li>1. Normal operation</li> </ol>
Slow Flashing Green LED	Pump on, water below	<ol style="list-style-type: none"> <li>1. Normal operation</li> </ol>
Pump doesn't turn on	Sensor in water but pump doesn't start. LED is steady Red and switch isn't beeping	<ol style="list-style-type: none"> <li>1. Sensor isn't getting good ground from pump. Install ground wire as described in "How Sensor Works" on front of sheet</li> </ol>
Pump turns off too soon	Pump starts okay, but shuts off before it starts to suck air	<ol style="list-style-type: none"> <li>1. Problem with pump's discharge path. Try to reduce resistance by decreasing number of bends, shortening discharge distance, etc.</li> </ol>

\*Master Reset Procedure:

1. Unplug the pump from the HC8000
2. Unplug the HC8000 from the 120 VAC outlet
3. Wait 5 seconds then plug the HC8000 back into the 120 VAC outlet
4. Wait for the HC8000 to finish its startup checks (about 5 seconds) then plug the pump back in.

### Model HC8000 Sump Pump Switch Limited Lifetime Warranty

STAK Enterprises Inc. warrants the **Model HC8000 Sump Pump Switch** to be free from defects in materials and workmanship for its normal, useful life, from the date of purchase. STAK Enterprises Inc. makes no other express warranty for this device. No agent, representative, dealer, or employee of STAK Enterprises Inc. has the authority to increase or alter the obligations or limitations of the warranty. The company's obligation of this warranty shall be limited to the repair or replacement of any part of the HC8000 which is found to be defective in materials or workmanship under normal use and service during the duration of product use by original product owner commencing with the date of purchase. Owner must pay all shipping charges necessary to replace product covered by this warranty. This warranty shall not apply to acts of God, nor shall it apply to products which, in the sole judgment of STAK Enterprises, Inc. have been subject to negligence, abuse, accident, tampering, alteration, misapplication, or improper installation. Units in need of repair should be returned, shipping prepaid, to

Customer Service Department  
 STAK Enterprises, Inc.  
 2413 West Algonquin Road  
 #309  
 Algonquin, IL 60102

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