

ABBREVIATED INSTALLATION INSTRUCTIONS

**BATTERY BACKUP SUMP PUMP  
MODEL RH-1400**

- Protects against power outages and main pump failures.
- Fully Automatic!
- Uniquely placed outside of sump water.
- High Pump Performance!
- Easy installation.

Please read all the instructions before attempting to install the RH-1400.

The pumping capacity of the RH-1400 may vary depending on your piping configuration, battery age, and capacity.



Specifications:		Physical Size:
<b>Pump Motor:</b>	12 VDC, 21 Amps	Pump Length: 9 1/2" Width: 6" Height: 6"
<b>Battery Charger:</b>	1.5 AH @ 12 VDC, 0.4 Amp Load	Battery case L: 17", W: 9-1/2", H: 11"
<b>Charger Service:</b>	120 VAC, 60 HZ, GFCI Outlet	Pump weight: (without battery): 10 Lb
<b>Float Switch:</b>	Vertical Style, with mounting clamp	Total shipping weight: 22 Lbs.
<b>Water Alarm:</b>	Integrated	1-1/4" PVC Connection
<b>Battery Requirements:</b>	12 Volt Marine deep cycle or Sealed Lead acid, Size 27	
<b>BATTERY NOT INCLUDED</b>		
<i>NOTE: Extra battery case available as an add-on kit to double pumping time; not pumping rate</i>		
Flow Rates:		Pumping Times:
<b>At 5 feet:</b>	1800 Gallons Per Hour	Using Marine Deep Cycle Battery/30 second cycles
<b>At 9 feet:</b>	1400 Gallons Per Hour	At 1 minute intervals 12 Hours
<i>NOTE: Do not exceed 15 feet total lift; pumping capacity will be affected</i>		At 5 minute intervals 48 Hours
		At 15 minute intervals 96 Hours
Included Parts:		
Motorized Pump Unit with stainless steel mounting bracket		One-Way Foot Valve, screen, and female reducer
Battery Case with Cover and Charger		PVC Tee Connector with elbow and 2 adapters
Vertical Switch to activate pump (pre-wired) and (1) large metal clamp		Extension Cord
(3) Cable ties, (3) Smaller Hose Clamps, (1) 90° PVC Elbow & Coupling		Flexible Discharge Hose: 4 Feet
Installation Instructions; safety specifications		Rigid PVC Pipe: (2) pieces 12" ; (1) piece 6" Long
Additional Parts & Supplies Needed:		Tools Needed:
Check valve for primary pump (existing?)		Hand saw and/or PVC cutting tool
PVC Primer and Cement (small cans) for PVC connections		Phillips and slotted screwdrivers
Teflon Tape or Pipe Sealant (Dope) for threaded connections		Utility knife, tape measure, large adjustable pliers
Deep cycle Marine, Lead Acid, Gel, or AGM Battery		

## STEP 1: Place RH-1400 On Floor

Decide which way the battery box will face with respect to the pump motor/bracket. There are positioning holes on one long side as well as one short side of battery box for attaching the stainless steel mounting bracket. Use the two stainless steel screws and nuts provided and attach bracket to battery box so that the bracket sits on the floor and can be positioned next to the sump, as shown. Position battery box and pump in final position on the floor close to the sump pit.

## STEP 2: Disconnect Primary Pump

Unplug primary pump and drain discharge pipe.

## STEP 3: Install Suction Pipe

Prime and cement the foot valve together then glue the end of one short rigid PVC pipe supplied with RH-1400 into the narrow end of the female reducer attached to the foot valve and allow time to dry. Measure the vertical distance from pump inlet fitting to approximately 2 - 4 inches from bottom of sump pit. Use coupling supplied to connect a second piece of the PVC pipe (*cut to fit if necessary*) to the first section with the foot valve attached. Connect 90° elbow and use the last piece of PVC pipe for the horizontal section (*cut to fit if necessary*) and push into socket fitting on pump suction inlet.

## STEP 4: Install Discharge

Assemble the Tee fitting to the other parts as supplied in the parts bag. Prime and glue the white PVC Threaded x Socket adapter into the side opening of the Tee and thread the elbow and black barbed adapter into place using Teflon tape. Locate the assembled Tee fitting in the discharge pipe of the main sump pump at a point above the existing check valve. Use the flexible hose from the pump to the tee to help you determine the proper position of the tee. If the main pipeline is 1-1/4" PVC use the white PVC bushing adapters provided and glue into the Tee fitting. Once you have located the Tee position, carefully cut and remove a 2" section from your main pump discharge pipe. Prime, glue, and insert the Tee fitting into position on the main pump discharge pipe and allow time to dry completely. While drying, you may attach the flexible hose to the pump discharge connection and do the same at the Tee fitting by attaching the hose to the black barbed hose connector. Secure the hose at both ends using the stainless steel hose clamps provided.

## STEP 5: Float Switch

Attach vertical float switch to side of the suction pipe using the larger hose clamp provided. Float should be positioned in its fully down position just above the "normal primary pump" level. Slide float up the rod by hand to simulate a normal response to high water and confirm the location of the "high" level. The float will need to rise to the top of the rod to turn the pump on and travel all the way down to the bottom of the rod to turn the pump off. Make sure the pump will come on before the float reaches the top of the pit so water never rises to the floor level. Pump must turn off before the water drops down below the foot valve so air does not enter the system and break the suction prime.

## START UP

Connect all **Red (+) Pos** wires from charger **and** pump motor together to positive (+) battery terminal. Connect all **Black (-) Neg** wires from charger and pump motor together to negative (-) battery terminal using wing nuts on terminals. Tighten securely. Plug charger into a GFCI protected wall outlet using extension cord supplied. Plug primary pump into wall outlet.

**Battery Charging:** A new battery or one that's discharged may take 24-48 hours to fully charge. The charger green indicator light means the charger is receiving power from the wall outlet. The red light will glow to indicate the battery is fully charged.

**DON'T FORGET TO PLUG THE PRIMARY PUMP BACK IN WHEN YOU ARE FINISHED!**

## WATER ALARM

This alarm is activated at the same time that RH-1400 activates, to let you know there is a high water situation. It will sound each time RH-1400 runs and turn off at the end of each cycle.

## MAINTENANCE PROCEDURES

3-4 times per year lift the RH-1400 float by hand and confirm pump operation and water removal. Confirm that the float is allowed to move freely and hits no obstacles. Check battery age and charger status lights.