



Computer Controlled A/C - D/C Sump Pump System

Instruction Manual



Table of Contents

Important Safety Instructions

General1
AC Power Requirements1
Personal Precautions1
Preparing to Charge1
DC Connection Precautions1

Introduction

Items Included in System2
Additional Items Needed2

Pump & Pipe

Installation Instructions

Direct Discharge to Outside3,4
Hookup to Existing Discharge Pipe5,6

Battery Instructions

Preparation of the Battery7

Control Unit Hookup

Positioning the Control Unit8
Selecting Main or Backup Mode8
Positioning the Float Switch8
Installing the Battery Fluid Sensor8
Hooking Up the Pump9
Hooking Up the Battery9
Initiating the Full Test9

Understanding the Warning

Lights and Alarms

Silencing the Alarm10
Battery Hooked Up Improperly10
Battery Fluid is Low10
Battery Discharged10
Battery Problem10
Cable or Terminal Problems10,11
Replacing the Battery11
Power Failure11,12
Pump Failure12
Pumping12
Pump was Activated12
Replacing the Pump12
Battery Fuse has Blown13
System Operating13
Hour Lights13
Charging Battery13
Testing the Battery and Pump13
Testing the Float Switch14

Parts & Service Information

Technical Support14

Important Safety Instructions

General

Do not expose the control unit to rain or snow.

Pull the plug rather than the cord when disconnecting the control unit.

An extension cord should not be used unless absolutely necessary. If an extension cord must be used, be sure the plug has the same configuration as the plug on the control unit.

To reduce the risk of electric shock, unplug the control unit and disconnect the cables from the battery before attempting any maintenance or cleaning.

Do not disassemble the control unit. When service is required contact Glentronics technical support at (800) 991-0466, select option 3.

AC Power Requirements

The control unit must receive 115 volts AC +/- 5% from the AC outlet. Any voltage lower than this will cause the power failure alarm to activate. Lower voltages can be caused by utility company brown outs or heavy power draw from other appliances on the same circuit.

Personal Precautions

Wear eye protection and avoid touching your eyes while working near the battery.

If battery acid contacts skin or clothing, wash immediately with soap and water. If acid enters eye, immediately flood eye

with running cold water for at least 10 minutes and get medical attention.

Never smoke or allow a spark or flame in the vicinity of the battery.

Remove personal metal items such as rings, bracelets, watches, etc. when working with a lead-acid battery.

Preparing to Charge

Charge only LEAD-ACID batteries with the Basement Watchdog control unit. Do not use the control unit for charging dry-cell batteries that are most commonly used with home appliances.

Be sure the area around the battery is well-ventilated.

When cleaning or adding water to the battery, gas can be forcefully blown away by using a piece of cardboard or other *nonmetallic* material as a fan.

Clean the battery terminals. Be careful to keep corrosion from coming in contact with your eyes.

DC Connection Precautions

Connect and disconnect the battery cable rings only after removing the AC power cord from the electric outlet. *Never allow the rings to touch each other.*

Coat the terminals with a thin coat of petroleum jelly to retard corrosion.

Attach the rings on the ends of the battery cables to the battery posts and secure them with wing nuts to insure a good connection.

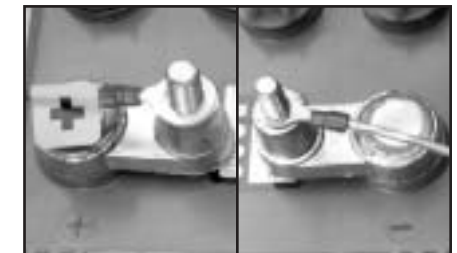
Follow these steps when the battery is installed. A spark near the battery may cause a battery explosion. To reduce

the risk of a spark near the battery:

Check the polarity of the battery posts. The POSITIVE (+) battery post usually has a larger diameter than the NEGATIVE (-) post.

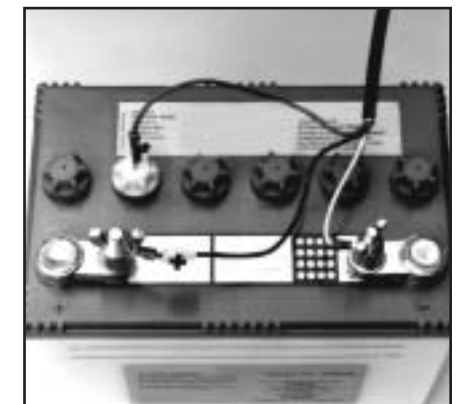
Connect the large ring on the POSITIVE (BLACK) wire from the control unit to the POSITIVE (+) post of the battery. Connect the small ring on the NEGATIVE (WHITE) wire from the control unit to the NEGATIVE (-) post of the battery.

When disconnecting the control unit, first disconnect the AC power cord, and then remove the rings from the battery terminals.



POSITIVE POST HAS LARGER DIAMETER

NEGATIVE POST HAS SMALLER DIAMETER



Introduction

The Basement Watchdog Computer Controlled A/C-D/C Sump Pump is strong enough to be used as your main and only pump, but we recommend using it as an emergency battery backup system to support your regular AC sump pump. It has a state-of-the-art monitoring system, and it will automatically begin pumping if your main AC pump fails. Should any malfunction or emergency occur that involves the sump pump, the battery, or the AC power, your Basement Watchdog sump pump system will sound an alarm and indicate the nature of the problem and the solutions by means of a lighted display on the control panel.

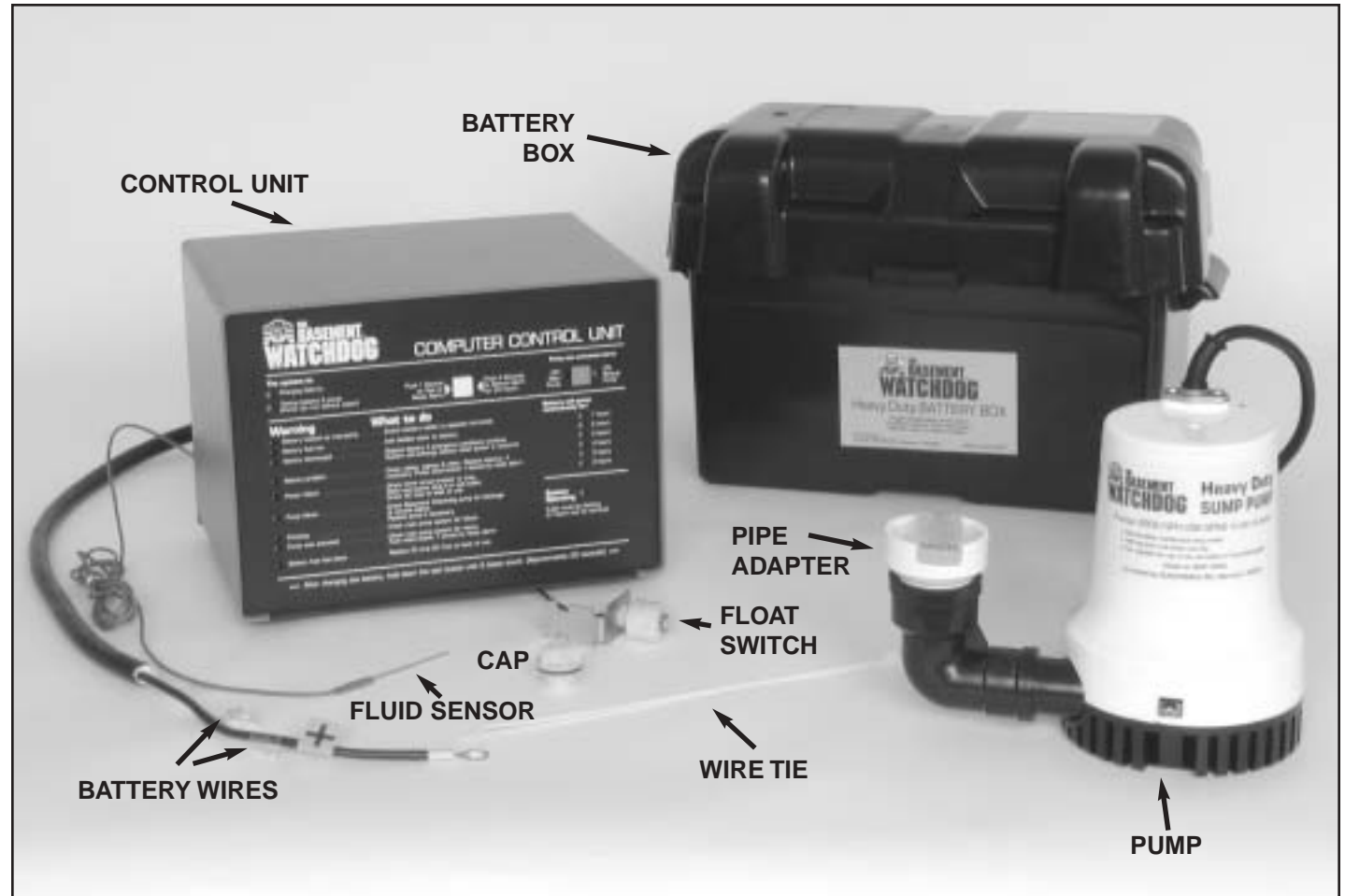
If the main pump breaks or is unable to keep up with all the incoming water, the Basement Watchdog pump is capable of running without discharging the battery as long as the AC power is on.

The Basement Watchdog A/C-D/C Sump Pump System includes:

- 1 Control unit with a float switch and a battery fluid level sensor
- 1 Pump with 1 1/2" PVC pipe adapter
- 1 Battery box with safety strap
- 1 Plastic wire tie for mounting the float switch
- 1 Battery cap with a hole to accommodate the fluid sensor

You will also need to supply:

- A Basement Watchdog 7.5 Hour Standby Battery (A maintenance-free battery is not recommended.)
- 1 1/2" PVC pipe and fittings
- PVC cement and primer
- A rubber union with hose clamps or a "Y" connector and two (2) check valves depending on the installation method you use
- Six (6) quarts of 1.265 specific gravity battery acid



For narrow sump pits you will need some additional parts:

- An "L" bracket at least 6 inches long. (Preferably one that will not rust.)
- Two (2) stainless steel hose clamps
- One (1) stainless steel screw (#8-32 x 3/4"), a matching washer & nut



Pump & Pipe Installation Instructions (Direct Discharge to Outside)

There are two basic methods that can be used to install the pump, (A) a direct discharge to the outside of the building, or (B) a hookup to an existing discharge pipe.

Whenever possible, install your Basement Watchdog backup sump pump with a direct discharge to the outdoors. By using this method, there will always be an outlet for the water from the sump. During times of very heavy rain, many storm sewers fill up. If your pump is trying to discharge water into a full sewer, there is nowhere for the water to go. This defeats the purpose of the backup system. By discharging directly outdoors, there is always an outlet for the water that is pumped out of the sump.

There are two options for installing your sump pump with a direct discharge to the outside. If you have a sump pit wide enough to place the backup pump next to the main pump, use Method A. If your sump pit is too narrow, the pump may be mounted above the main pump. In this instance use the instructions for Method Aa.

METHOD A: DIRECT DISCHARGE TO THE OUTSIDE OF THE BUILDING (Diagram A)

1. Cut a four-foot (4') piece of 1 1/2" rigid PVC pipe and cement it to the threaded fitting that is attached to the elbow on the pump.
2. Secure the pump wire so that the plug on the end will not fall into the sump. Attach the wire to the pipe with a piece of tape.

3. Place the pump with the 4' PVC pipe attachment on the bottom of the sump floor next to the main AC pump. *Do not mount the pump to any existing pipes...it should be placed on the floor of the sump.* A brick may be placed under the pump if there are rocks or other debris on the sump floor.

4. Attach a rubber union (sold separately) to the top of the 1 1/2" pipe. This will allow the pump to be removed easily, should the need arise.

The path of the rest of the pipe and the details of each installation will vary. Using sound plumbing practices try to route the discharge pipe to an exterior wall via the shortest path with the fewest turns. The pipe section exiting the building should be on a downward slope so that the water in the pipe will exit outside rather than return to the sump. Extend the discharge pipe outside the building as far as possible to avoid the return of discharged water to the sump. *Be sure to seal the hole in the wall where the pipe exits and cement or clamp all connections securely to prevent leaking.* No check valve is needed with this method of installation, as long as you use *less than 20 feet* of pipe.

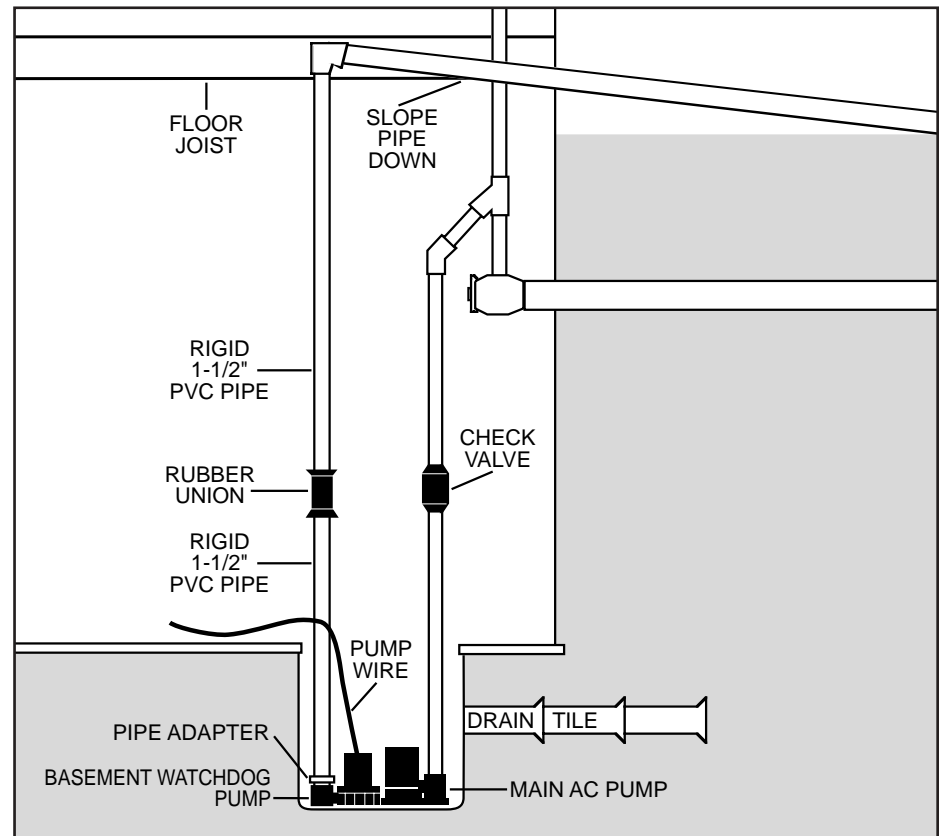
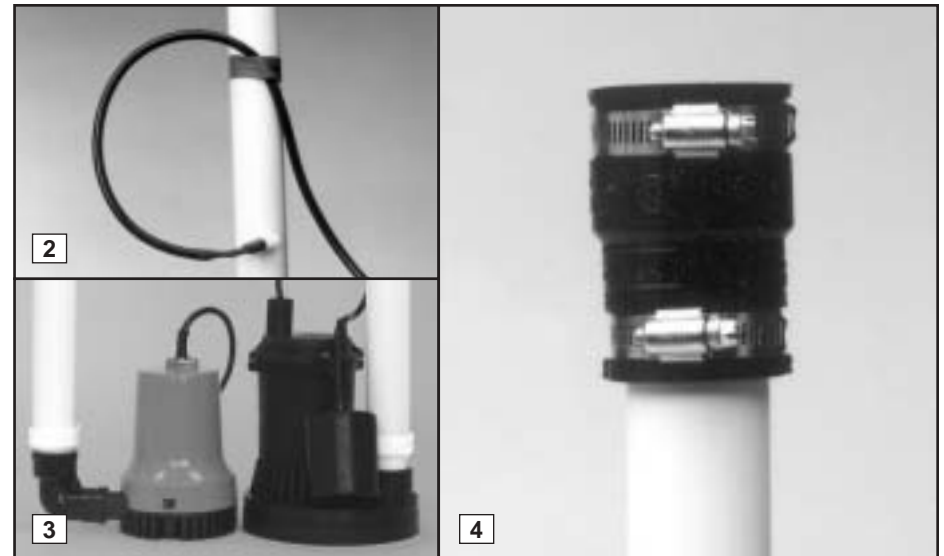


Diagram A

Pump & Pipe Installation Instructions (Direct Discharge to Outside)

METHOD Aa: DIRECT DISCHARGE TO THE OUTSIDE OF THE BUILDING FOR NARROW SUMP PITS (Diagram Aa)

- Attach an "L" bracket to the discharge pipe of the main AC pump with two (2) stainless steel hose clamps. Position the bracket so the bottom of the "L" is just above the top of the main pump, and out of the way of any float switch on the main pump.
- (a) Remove the black bottom strainer of the pump by pressing in the two tabs on the strainer. There are holes suitable for mounting on the bottom of the strainer. (b) Using a #8-32x3/4" stainless screw, washer & nut, attach the strainer to the "L" bracket. (c) Once the strainer is attached, simply press the pump body onto the mounted strainer.
- Cut a three-foot (3') piece of 1 1/2" rigid PVC pipe and cement it to the threaded fitting that is attached to the elbow on the pump.
- Secure the pump wire so that the plug on the end will not fall into the sump. Attach the wire to the pipe with a piece of tape.
- Attach a rubber union (sold separately) to the top of the 1 1/2" pipe. This will allow the pump to be removed easily, should the need arise.

The path of the rest of the pipe and the details of each installation will vary.

Using sound plumbing practices try to route the discharge pipe to an exterior wall via the shortest path with the fewest turns. The pipe section exiting the building should be on a downward slope so that the water in the pipe will exit outside rather than return to the sump. Extend the discharge pipe outside the building as far as possible to avoid the return of discharged water to the sump. *Be sure to seal the hole in the wall where the pipe exits and cement or clamp all connections securely to prevent leaking.* No check valve is needed with this method of installation, as long as you use *less than 20 feet* of pipe.

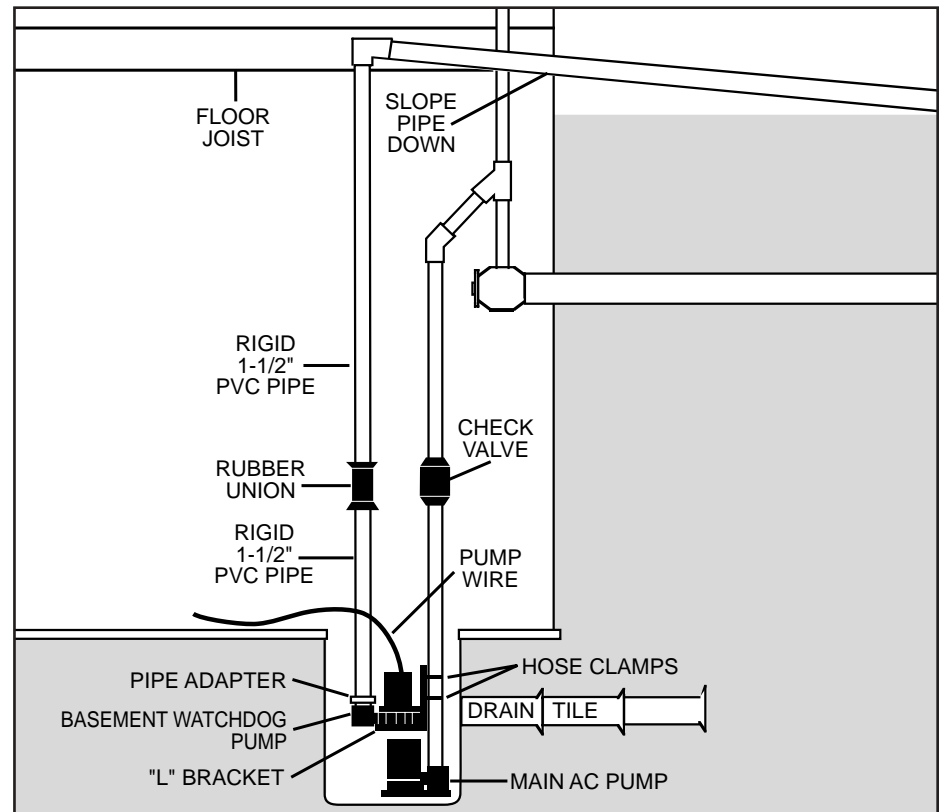
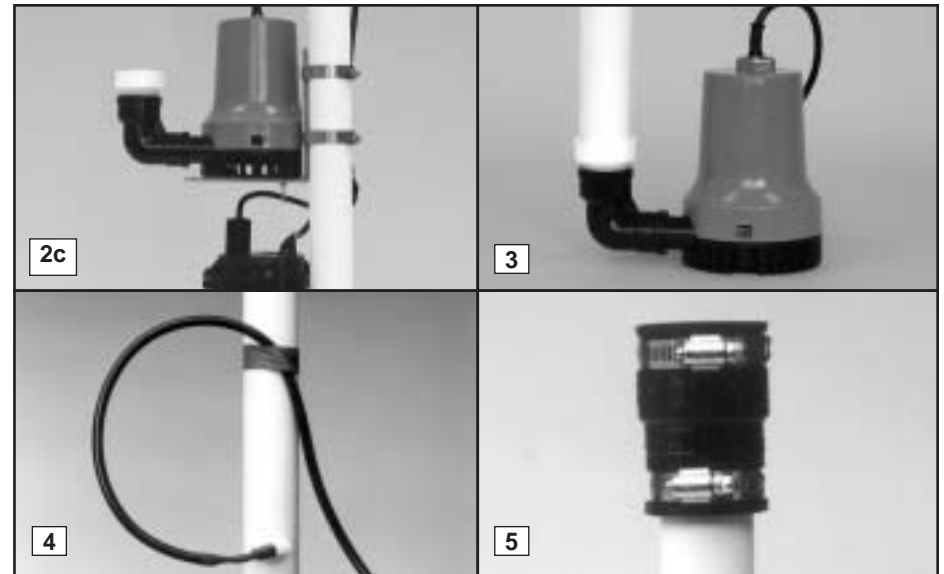
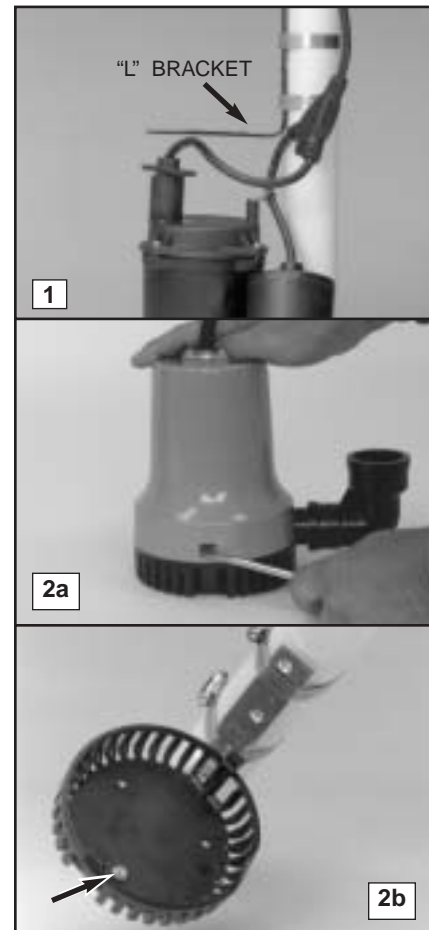


Diagram Aa

Pump & Pipe Installation Instructions (Hookup to Existing Discharge Pipe)

If the direct discharge method (Method A) is not possible, the Basement Watchdog A/C-D/C Sump Pump System can be hooked up to the same pipe as your AC sump pump by installing a "Y" connector and two check valves.

Check your local plumbing codes. Some municipalities prohibit the discharge of sump water into the sewer system.

If you have a sump pit wide enough to place the backup pump next to the main pump, use Method B. If your sump pit is too narrow, the pump may be mounted above the main pump. In this instance use the instructions for Method Bb.

METHOD B: HOOKUP TO AN EXISTING DISCHARGE PIPE (Diagram B)

1. Cut a four-foot (4') piece of 1 1/2" rigid PVC pipe and cement it to the threaded fitting that is attached to the elbow on the pump.
2. (a) Install a check valve on the PVC pipe attached to the Basement Watchdog pump. (b) IMPORTANT: WHEN A CHECK VALVE IS USED, DRILL A 1/8" HOLE IN THE 1 1/2" PVC PIPE THREE INCHES (3") ABOVE THE CONNECTION TO THE BASEMENT WATCHDOG PUMP. Drill the hole at a 45° angle toward the bottom of the sump to avoid splashing water outside the sump pit. If a 1/8" hole is not drilled above the pump, an air lock may prevent the pump from pumping.
3. If there is no check valve on the pipe of the main AC pump, one



must be installed at this time. Then install a "Y" connector above the check valve on the discharge pipe for the main AC pump.

4. Secure the pump wire so that the plug on the end will not fall into the sump. Attach the wire to the pipe with a piece of tape.
5. Place the pump with the 4' PVC pipe attachment on the bottom of the sump floor, next to the main AC pump. *Do not mount the pump to any existing pipes...it should be placed on the floor of the sump.* A brick may be placed under the pump if there are rocks or other debris on the sump floor.
6. Connect a 1 1/2" diameter discharge pipe above the check valve of the Basement Watchdog sump pump, and attach a 45° elbow to that pipe. Extend another piece of pipe to reach the "Y" connector you have inserted above the check valve on the discharge pipe of the main pump.
7. Cement or clamp all connections securely to prevent leaking.

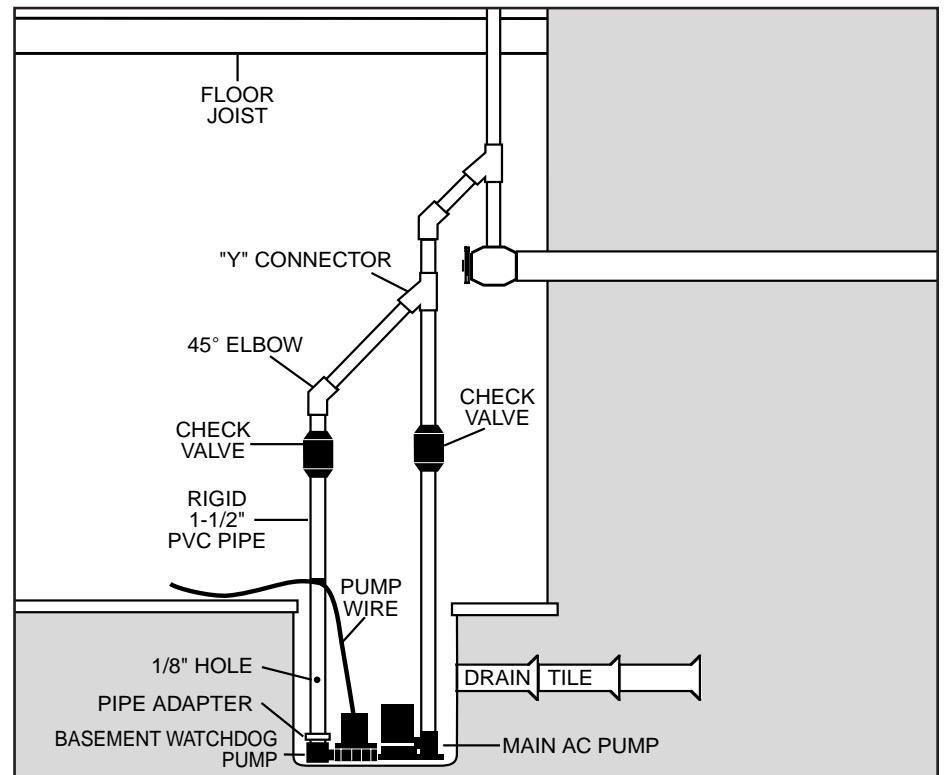
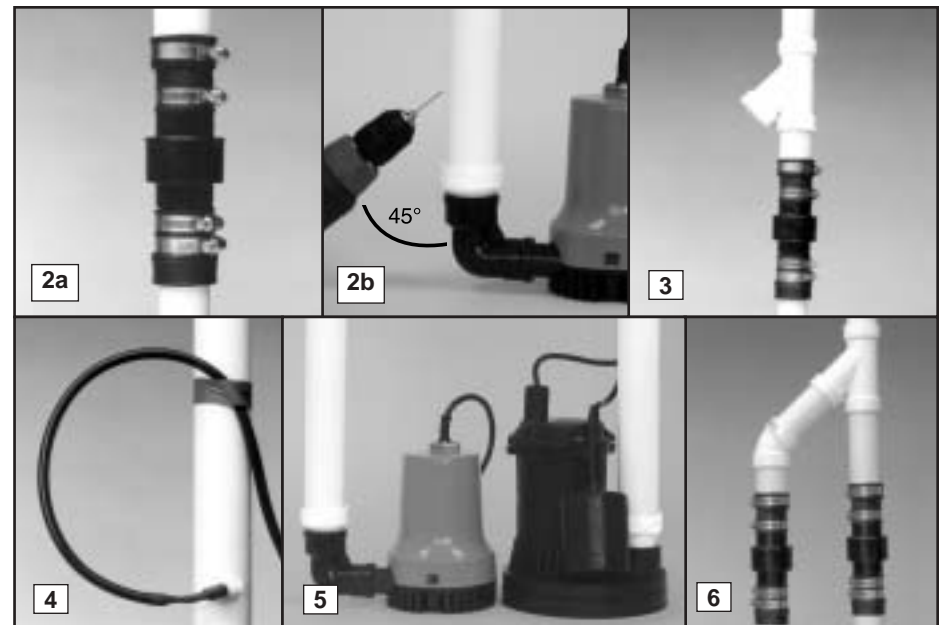
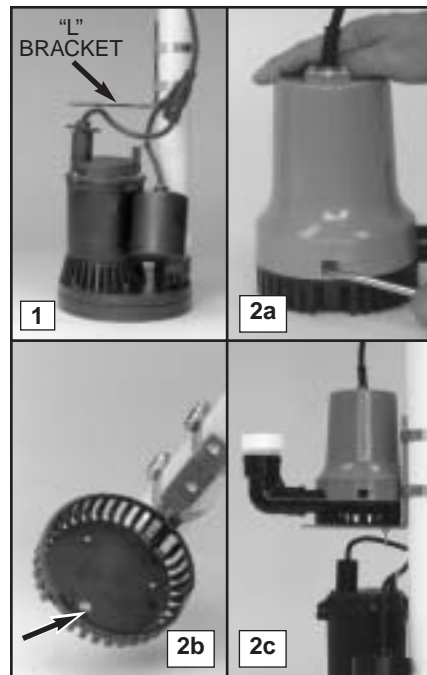


Diagram B

Pump & Pipe Installation Instructions (Hookup to Existing Discharge Pipe)

METHOD Bb: HOOKUP TO AN EXISTING DISCHARGE PIPE FOR NARROW SUMP PITS (Diagram Bb)

- Attach an "L" bracket to the discharge pipe of the main AC pump with two (2) stainless steel hose clamps. Position the bracket so the bottom of the "L" is just above the top of the main pump, and out of the way of any float switch on the main pump.
- (a) Remove the black bottom strainer of the pump by pressing in the two tabs on the strainer. There are holes suitable for mounting on the bottom of the strainer. (b) Using a #8-32x3/4" stainless screw, washer and nut, attach the strainer to the "L" bracket. (c) Once the strainer is attached, simply press the pump body onto the mounted strainer.
- Cut a three-foot (3') piece of 1 1/2" rigid PVC pipe and cement it to the threaded fitting that is attached to the elbow on the pump.
- (a) Install a check valve on the PVC pipe attached to the Basement Watchdog pump. (b) IMPORTANT: WHEN A CHECK VALVE IS USED, DRILL A 1/8" HOLE IN THE 1 1/2" PVC PIPE THREE INCHES (3") ABOVE THE CONNECTION TO THE BASEMENT WATCHDOG PUMP. Drill the hole at a 45° angle toward the bottom of the sump to avoid splashing water outside the sump pit. If a 1/8" hole is not drilled above the pump, an air lock may



prevent the pump from pumping.

- If there is no check valve on the pipe of the main AC pump, one must be installed at this time. Then install a "Y" connector above the check valve on the discharge pipe for the main AC pump.
- Secure the pump wire so that the plug on the end will not fall into the sump. Attach the wire to the pipe with tape.
- Connect a 1 1/2" diameter discharge pipe above the check valve of the Basement Watchdog pump, and attach a 45° elbow to that pipe. Extend another piece of pipe to reach the "Y" connector you have inserted above the check valve on the discharge pipe of the main pump.
- Cement or clamp all connections securely to prevent leaking.

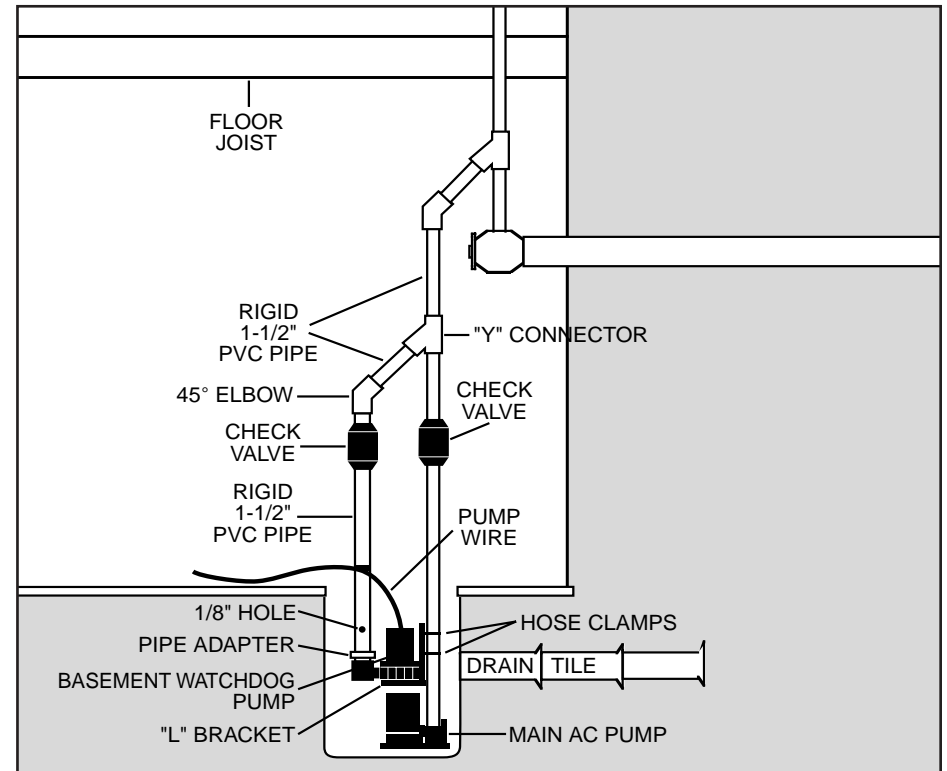
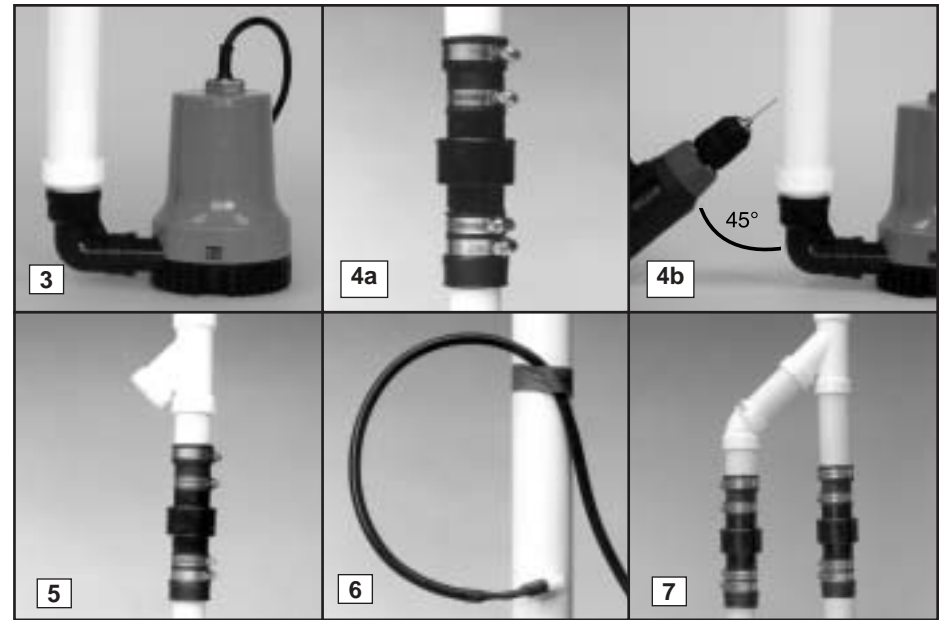


Diagram Bb

Battery Instructions

The Basement Watchdog 7.5 Hour Standby Battery has been designed to run this system for a minimum of 7.5 hours of continuous pumping. However, most of the time the pump will turn on and off, and the battery will run the pump intermittently for days. In addition, the unique materials in the battery enable it to last for five to seven years in standby service.

The use of automotive batteries is *not* recommended. Automotive batteries are not designed for this application. They will only run the pump for a short time and will have a shorter life than a standby battery.

In addition, the battery fluid sensor and cap are designed to fit the Basement Watchdog batteries. *(As a safety precaution, do not use the cap on batteries of a different brand, and do not drill a hole in the cap of another brand of battery to accommodate the fluid sensor.)*

PREPARING THE BASEMENT WATCHDOG STANDBY BATTERY

The Basement Watchdog 7.5 Hour Standby Battery is shipped dry (without acid) so it never loses power before you take it home. A battery is activated when the acid is added, and then it slowly begins to deteriorate as it ages. By adding the acid just before use, the battery will always be fresh. Use 1.265 specific gravity battery acid to fill the battery. It is available where you purchased the battery.

IMPORTANT: REVIEW THE SAFETY INSTRUCTIONS BEFORE YOU PROCEED

1. Place the battery box on the floor. Position the battery box safety strap under the box and through the loop on the top of the battery box.
2. Place the dry (unfilled) battery into the battery box. Remove the foil seal on the top of the battery.
3. (a) Carefully push in the perforated tab at the top of the acid pack. Pull up the large tab and pull out the dispensing hose. Hold the hose upright above the pack and squeeze the hose forcing all the acid back into the pack. Cut off the tip of the hose. (b) Position the acid pack and battery as shown in picture 3b. Insert the end of the hose into each cell. Control the flow by pinching the hose with thumb and forefinger. *Fill each cell of the battery to a level just covering the battery plates, and then go back and top off each cell equally. It is important to have the cells filled equally.* (c) The acid should reach a level just below the cap ring. (Diagram C)

A newly filled battery will sometimes require additional acid after about ten minutes. Re-examine the fill level and add additional acid, if necessary. The battery acid may bubble at this time and give off a sulfur-like smell, but this is normal. After the battery has been filled, screw the caps on the top of the battery.

Always be careful and avoid contact with skin, clothing, furniture or floor.

When you fill the battery for the first time, it will be the only time you add acid to the battery. When the fluid level is low, add distilled water to the cells. Never add more acid.

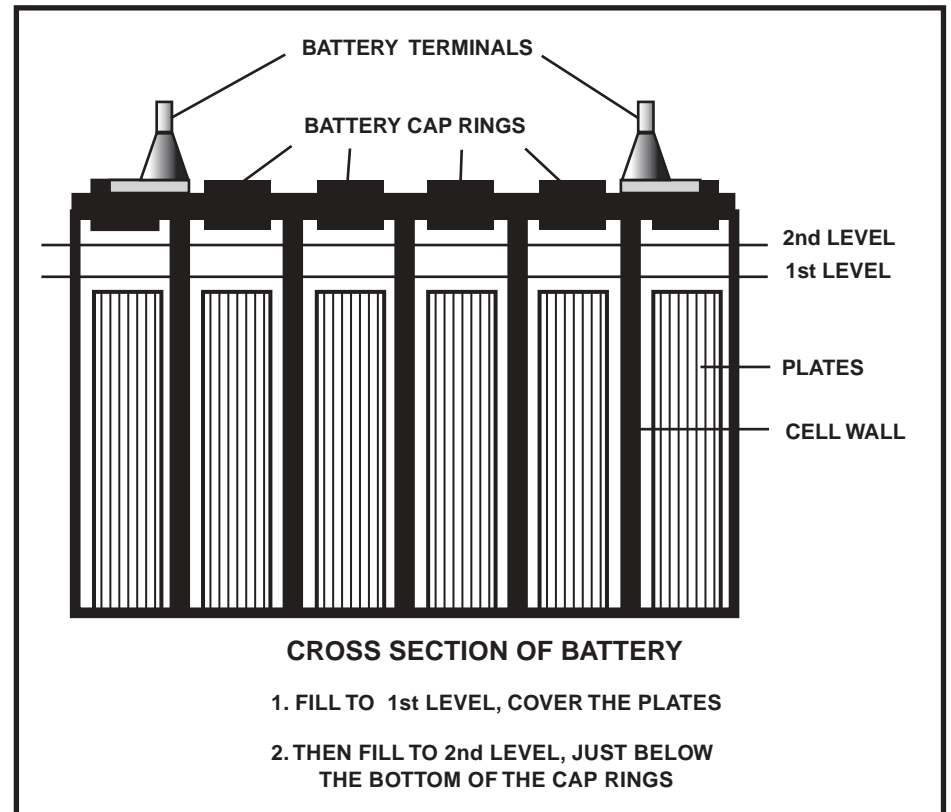
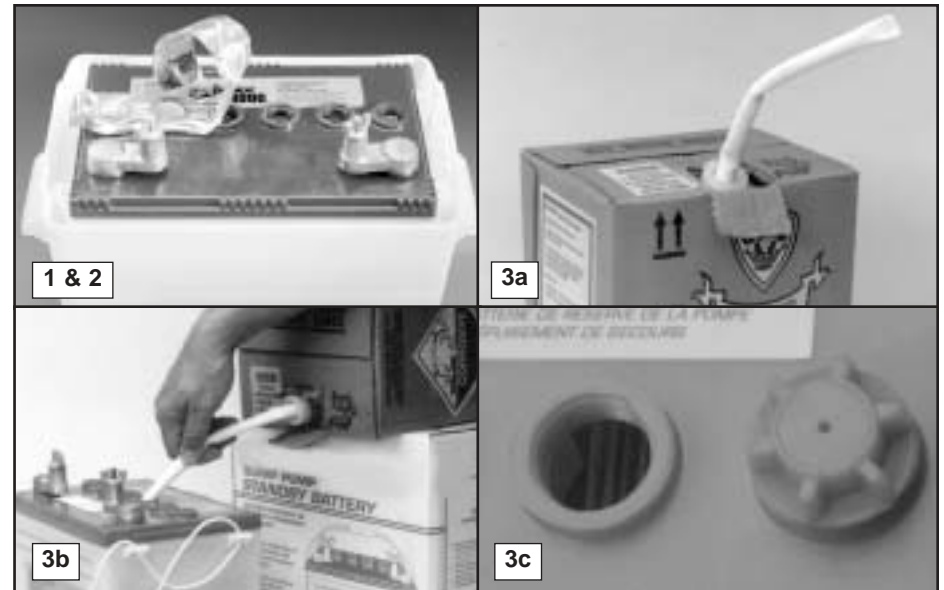


Diagram C

Control Unit Hookup

1. Positioning the control unit:

Position the control unit in a secure place approximately four feet (4') above the floor. Be sure the power cord will reach the AC power outlet and the pump cable and the float switch will reach the bottom of the sump. Position the unit in a well-ventilated area. Do not place it on top of the battery. Do not place anything on top of the control unit. (Diagram D)

2. Selecting the main or backup mode:

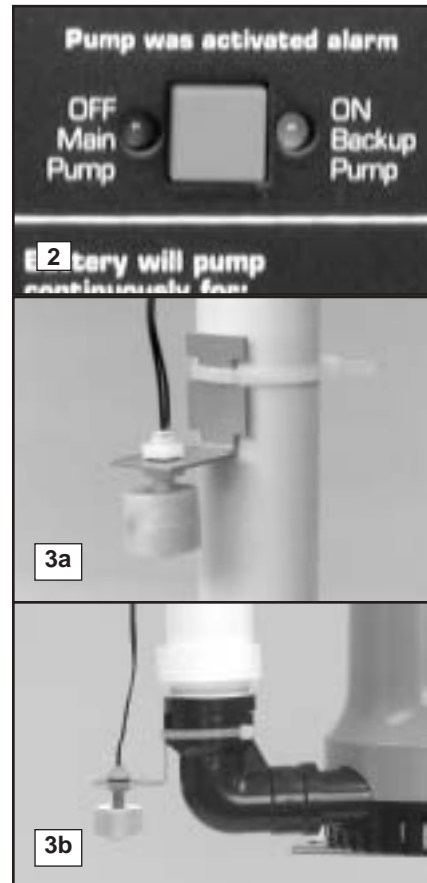
The Basement Watchdog is strong enough to be used as your main and only pump, or it can be used as a backup pump to support your AC sump pump. If you are using it as a MAIN pump, push the blue button for 1 second to turn OFF the "Pump was activated" alarm, or the control unit will sound an alarm every time the pump goes on. The RED light next to the button should be lit.

If you are using the Basement Watchdog as a BACKUP pump, push the blue button for 1 second to turn ON the alarm. The GREEN light will be lit. In this mode the alarm will notify you if the water rises high enough to activate the pump. It may be caused by heavy rains, a power outage, or because your main pump broke.

3. Positioning the float switch:

The float switch will turn on the pump when the water rises to the top of the switch, and it will remain running as long as the water is above the float switch. When the water drops below the float, the internal timer in the control unit will keep the pump running an additional 30-40 seconds to empty the sump pit. The switch

should be mounted six inches (6") above the activation level of the main AC pump. Attach the float switch very securely to the discharge pipe of the backup pump with a wire tie. (If you are stacking the pumps in a narrow sump pit, the float may be attached to the elbow of the Basement Watchdog backup pump.) *Make sure the switch is positioned vertically with the mounting bracket at the top. Do not tilt the switch. Do not position the float switch on the side of the discharge pipe facing the drain tile or any incoming rush of water! Do not position it next to the power cord from the AC pump.*



4. Installing the battery fluid sensor:

Replace the battery cap that is 2nd from the POSITIVE (+) post of the battery with the battery cap that is provided in the Basement Watchdog sump pump package. An arrow on the top of the battery marks this position. There are two holes in the battery cap. Insert the fluid sensor in the hole that is off-center on the top of the cap. Do not glue the sensor into the cap. If you are not using the Basement Watchdog Standby Battery, you cannot use the battery fluid sensor. However you must attach the sensor to the POSITIVE (+) post of the battery or the alarm will sound continuously.

The Basement Watchdog Sump Pump System will not warn you if the fluid level is low in this configuration. You will need to check your battery every couple of months to see if it needs water.

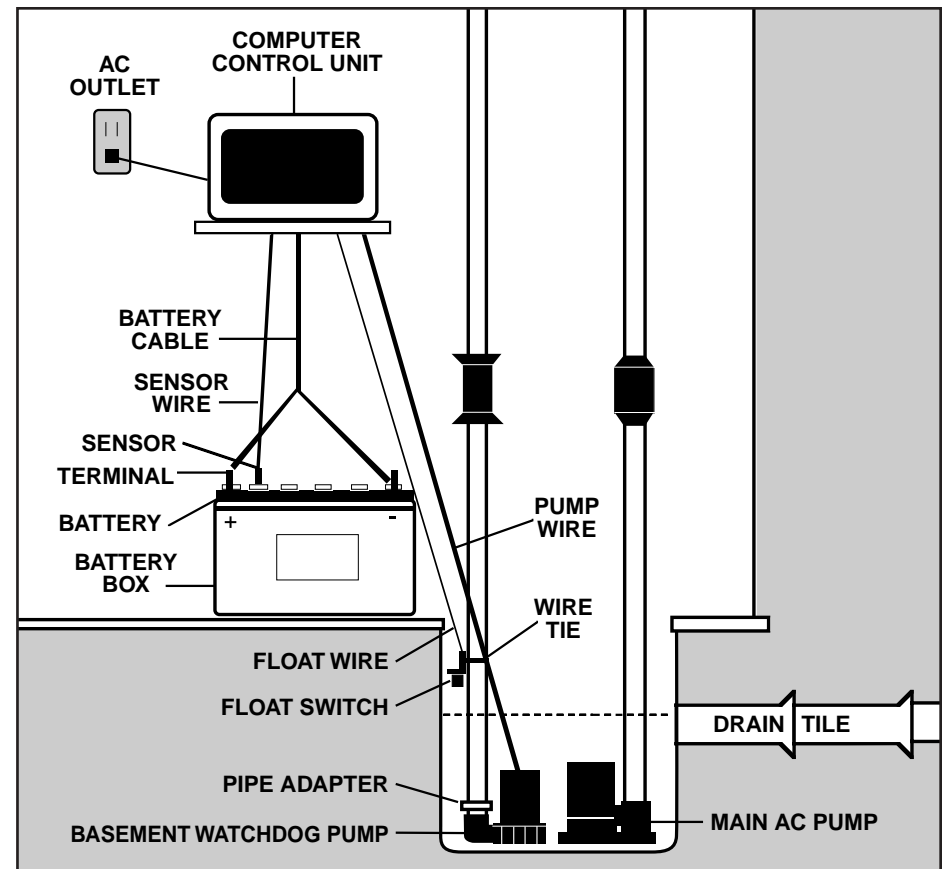
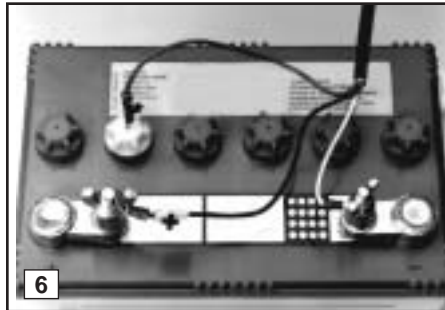


Diagram D

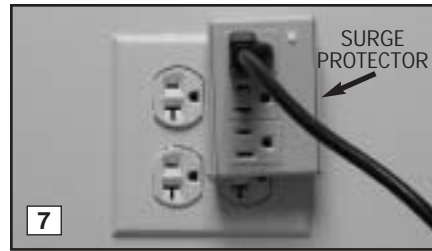
5. **Hooking up the pump:** Plug the pump wires into the pump connector on the back of the control unit.



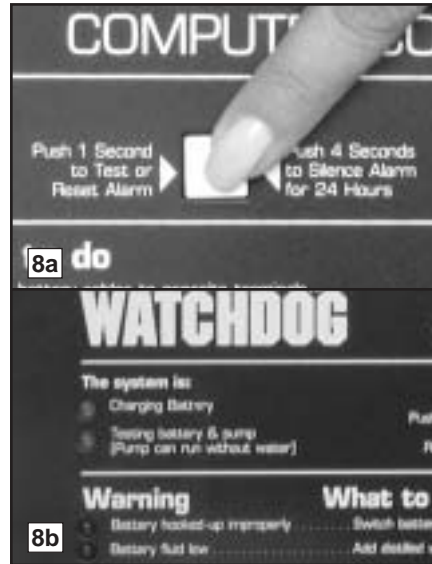
6. **Hooking up the battery:** Remove the wing nuts. Coat the terminals with a little petroleum jelly to prevent corrosion. Attach the battery cables to the battery...the BLACK wire to the POSITIVE (+) post, the WHITE wire to the NEGATIVE (-) post. Tighten the wing nuts.



7. Immediately plug the AC power cord into a grounded AC wall outlet. (A surge protector that protects all three pins on the power line is recommended.) You will have 10 seconds before the power failure alarm will sound. The alarm will be silenced once the unit is plugged into the wall. At this time the computer control unit will perform a quick test of the battery and pump. However, until a full test has been completed, the reading under the "Hours of continuous pumping" will not be accurate.



8. **To initiate the full test:** Press the white "SILENCE/TEST" button and hold it down for approximately 20 seconds until three long "beeps" are heard. This will activate the full test and charge cycle. The "Battery charging" and "Testing battery" lights will both be lit on the front panel of the control unit. When the test is completed (a process that takes from six to eight hours) the hour lights will be correctly displayed on the control panel.



9. Put the cover on the battery box and secure it with the safety strap.

The Basement Watchdog A/C-D/C Sump Pump System is ready to use!

Understanding the Warnings & Alarms

THE BASEMENT WATCHDOG

COMPUTER CONTROL UNIT

The system is:

- Charging battery
- Testing battery & pump (Pump can run without water)

Push to Silence Alarm

Push to Test System

This system is being used as:

Main Pump

Back-up Pump

Warning

- Battery hooked-up improperly
- Battery fluid low
- Battery discharged
- Battery problem
- Power failure
- Pump failure
- Pumping
- Pump was activated
- Battery fuse has blown

What to do

- Switch battery cables to opposite terminals
- Add distilled water to battery
- Replace battery if emergency conditions continue (power failure or excessive rain). System will recharge battery when power is restored.
- Check cables, tighten & clean if necessary. Replace battery. Press test button to silence alarm.
- Check home circuit breaker or fuse. Make sure power plug is in wall outlet. Check fuse on back of unit.
- Check Basement Watchdog pump for blockage & remove debris. Replace pump if necessary.
- Check main pump system for failure.
- Check main pump system for failure. Push white button to silence alarm.
- Replace fuse on back of unit.

Battery will pump continuously for:

- 7 hours
- 6 hours
- 5 hours
- 4 hours
- 3 hours
- 2 hours

System Operating

- (Light must be flashing or return unit for service)

— After changing the battery, hold down the test button until 3 beeps sound. (Approximately 20 seconds) —

Warning	Light	Alarm	Alarm can be silenced before problem is corrected	Alarm shuts off automatically when problem is corrected
Battery hooked up improperly	Steady red	No	Not applicable	Yes
Battery fluid low	Steady red	Yes	Yes	Yes
Battery discharged	Steady red	Yes	No	Yes
Battery problem	Steady red	Yes	Yes	No, must push white test button
Power failure	Steady red	Yes	Yes	Yes
Pump failure	Steady red	Yes	No	No, must push white test button
Pumping	Steady red	No	Not applicable	Yes
Pumping	Flashing red	Yes	No	Yes
Pump was activated	Steady red	Yes	No*	No, must push white test button
Battery fuse has blown	Steady red	Yes	No	Yes

*Note: During a continuing emergency the pump may be activated many times. To silence the alarm, you may set the blue switch to "OFF" instead of "ON". Be sure to switch it back when the emergency is over.

Understanding the Warnings & Alarms

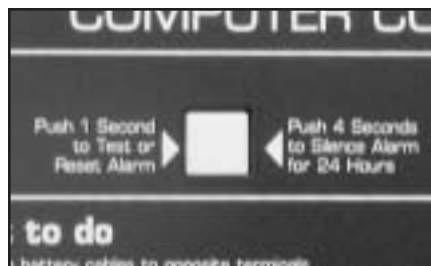
The Basement Watchdog control unit features a series of warning lights that pinpoint potential problems. In addition, an alarm sounds to alert you to the problem. In some cases, the lights and the alarm will go off automatically when the problem has been solved. In others, the white "SILENCE/TEST" button must be pushed to silence the alarm. Refer to the table at the left for a quick review of the features and their corresponding alarm status.

SILENCING THE ALARM DURING AN EMERGENCY

If the alarm can be silenced before the problem is corrected, you may silence it for two minutes by holding down the white "SILENCE/TEST" button for **one** second. The alarm will be silenced, but the warning light will stay on.

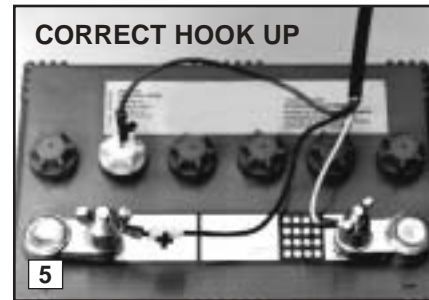
To silence the alarm for 24 hours, hold down the white "SILENCE/TEST" button for **four** seconds. Within five seconds, one short beep will sound to tell you that the alarm has been silenced. It will automatically reactivate after 24 hours. The warning light will stay on.

To reactivate the alarm before 24 hours, hold down the white "SILENCE/TEST" button for **four** seconds. Within five seconds two beeps will sound. The alarm is now reactivated.



BATTERY HOOKED-UP IMPROPERLY

If the battery cables have been hooked up to the wrong posts, this warning light will go on. No audible alarm will sound, but the unit will not operate. Your Basement Watchdog will protect itself from damage. Reverse the battery cable connections and continue with the system hookup.



BATTERY FLUID LOW

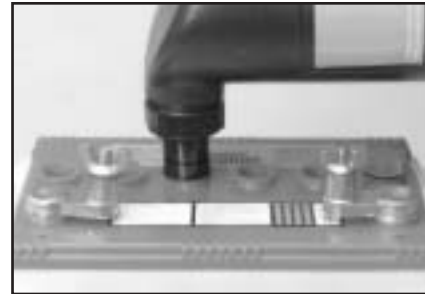
If this warning light and alarm are on, you need to add distilled water to the battery.

You can silence the alarm for two minutes by pressing the white "SILENCE/TEST" button for one second. You can silence the alarm for 24 hours by holding the white button for **four** seconds. The light stays on, but the alarm will not sound. The system will continue to operate and pump while the alarm is silenced.

IMPORTANT: REVIEW THE SAFETY INSTRUCTIONS BEFORE YOU PROCEED

Remove the top of the battery box. Unscrew the six battery caps and place them in the battery box top.

Add distilled water to each cell. If distilled water is not available, tap water with a low mineral content may be used. Do not use well water. *Never add more acid.*



Fill the battery to the 2nd level shown in Diagram C on page 7.

Replace the caps and the fluid sensor. Be sure the fluid sensor is positioned in the 2nd cell from the positive post of the battery. It's marked with an arrow on the top of the battery. The warning light will turn off automatically when the battery is refilled.



BATTERY DISCHARGED

This light and alarm will go on when the computer control unit senses that the battery has less than 1 1/2 continuous hours of pumping energy left. This could occur when the pump has been running for many hours and is reaching the last hours of operating power, or it could occur because the battery is getting old and should be replaced.

If this warning goes on during a flood or emergency, you will have a minimum of 1 1/2 hours to replace the battery. In most cases the pump does not run

continuously, and therefore it will run much longer. In a severe emergency, if a replacement battery is not available, you could temporarily use your car battery.

Once the AC power is restored, the battery will quickly recharge, unless it is old or damaged. The alarm will go off when the pumping energy reaches more than 1 1/2 hours.

BATTERY PROBLEM

There are many ways a battery can fail. The Basement Watchdog is constantly monitoring the battery and will warn you if it detects a battery failure, or if the battery has less than 3 hours of continuous pumping power left.

The alarm can also be triggered by corrosion or loose connections between the battery cable and the battery terminals. Remove the battery cables and clean and tighten the battery terminals as described below and on page 11.

Once the AC power is restored, the battery will recharge, unless it is old or damaged. Press the white "SILENCE/TEST" button for one second to reset the alarm.

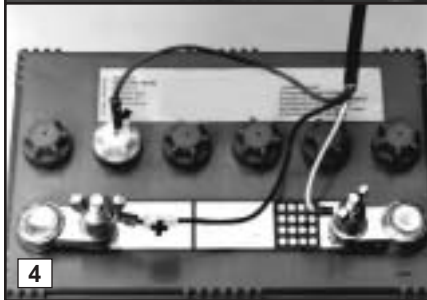
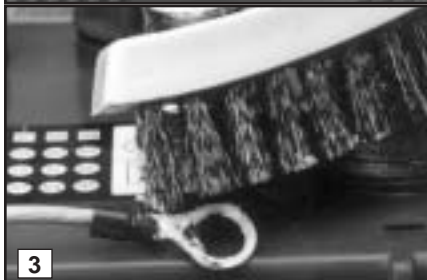
To silence the alarm during an emergency, press the white button for four seconds. This will silence the alarm for 24 hours.

TO CHECK FOR CABLE OR TERMINAL PROBLEMS

IMPORTANT: REVIEW THE SAFETY INSTRUCTIONS BEFORE YOU PROCEED

1. Unplug the power cord from the wall outlet.

- Remove the battery cables and clean the battery posts with a battery post terminal cleaner or a wire brush and a 50/50 solution of water and baking soda. Do not allow the soda water to enter the battery. Thoroughly dry the posts and apply a thin coat of petroleum jelly or another terminal protective material.
- Clean the corrosion off of the connectors on the end of the battery wires. Use a stiff brush or sandpaper.
- Replace the battery cables, BLACK to the POSITIVE (+) post, and WHITE to the NEGATIVE (-) post, and tighten the wing nuts.
- Plug the power cord into the wall outlet.



REPLACING THE BATTERY

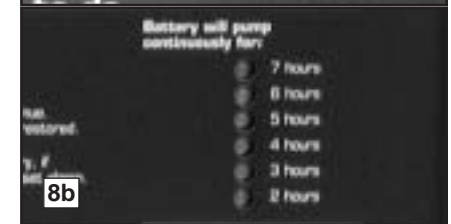
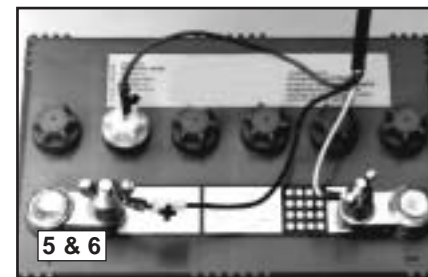
IMPORTANT: REVIEW THE SAFETY INSTRUCTIONS BEFORE YOU PROCEED.

- Unplug the power cord from the wall outlet.
- Remove the battery cables from the battery posts.
- Remove the fluid sensor and save the special battery cap.



- Fill the new battery following the instructions on page 7.
- Coat the battery terminals with a thin layer of petroleum jelly and replace the battery cables, BLACK to the POSITIVE (+), post and WHITE to the NEGATIVE (-) post. Tighten the wing nuts.
- Replace the battery cap in the cell 2nd from the POSITIVE post with the yellow cap from the old battery. Insert the fluid sensor in the cap.

- Plug the power cord back into the wall outlet.
- Press the white "SILENCE/TEST" button and hold it down for approximately 20 seconds until three "beeps" are heard. This will activate the test and charge cycle. The "Battery charging" and "Testing battery" lights will both be lit on the control panel. When the test is completed, a process that takes from six to eight hours, the "Continuous hours of pumping" will be correctly displayed on the computer control unit front panel.



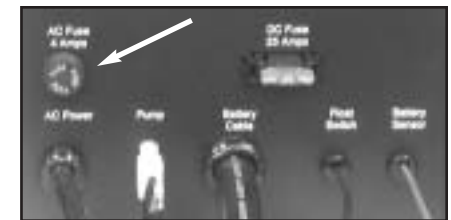
POWER FAILURE

There are several causes for power failure. The most common is a power outage by your electric company. During this emergency, the Basement Watchdog Sump Pump System will automatically switch to battery power and protect your basement from flooding.

If the power is on in the rest of the house, check the home circuit breaker or fuse box for failure, and correct the problem.

Check the power plug. Make sure it is securely plugged into the wall outlet.

If the control unit has been struck by lightning or subjected to a power surge, the AC safety fuse in the back of the unit may have blown. Check the 4-amp barrel fuse in the back of the unit, and replace it if it has blown. If the fuse blows again, call the Glentronics' service department for instructions.

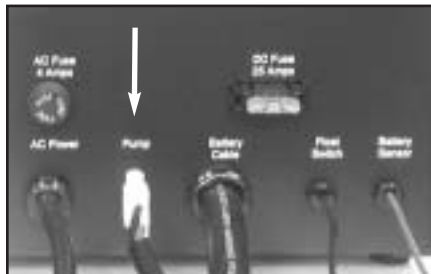


The control unit must receive 115 volts AC +/- 5% from the AC outlet. Any voltage lower than this will cause the power failure alarm to activate. Lower voltages can be caused by utility company brown outs or heavy power draws from other appliances on the same circuit.

You can silence the "Power" alarm for 24 hours by pressing the white button for **four** seconds. The alarm will reset automatically 24 hours later. The light stays on, but the alarm will turn off. The system will continue to operate and pump while the alarm is silenced.

PUMP FAILURE

Every day, the Basement Watchdog will turn the pump on to check it and its wire connections for possible pump failure. If this alarm is on, check the pump plug in the back of the unit to make sure it is firmly plugged in. Check the pump wires for any possible breaks.



If debris has jammed the pump, the computer control unit will sense it and automatically turn the motor on and off trying to dislodge it. The pump failure light will be lit. Disconnect the pump wire and clean out the pump. Then reconnect the pump wire. To test the pump, lift the float switch. Do not push the white "SILENCE/TEST" button to test the pump during this procedure. If the control unit still indicates "Pump failure", replace the pump. To order, contact Glentronics' service department.



PUMPING (STEADY RED)

This light will go on when the pump is operating. If the "Pump was activated" alarm switch is OFF, no alarm will sound. (This is a normal function of the pump.)

PUMPING (FLASHING RED)

Your Basement Watchdog should not have to pump continuously for more than 15 minutes before turning off, even briefly. If the float switch is stuck, or there is so much water coming into the sump that the pump runs continuously for more than 15 minutes, the alarm will sound and the "Pumping" light will flash. Check the float switch, or determine why the pump is running so long. In cold climates, check the outside discharge pipe to see if it is frozen.

PUMP WAS ACTIVATED

This alarm will sound only if the "Pump was activated alarm" is in the ON mode, and it can be silenced by pushing the "SILENCE/TEST" button for one second.



The "Pump was activated" warning stays on to alert you to the fact that the Basement Watchdog backup pump was used to empty water from the sump. Try to determine what caused the system to operate. Check the main pump for failure. Another possibility is that the power was out while you were away and the backup system automatically pumped the water out of the sump. Or, if the incoming water was more than your AC sump pump could handle, then the backup system automatically pumped along with your AC pump. Inspect your check valve. It could be stuck or defective and needs to be replaced.

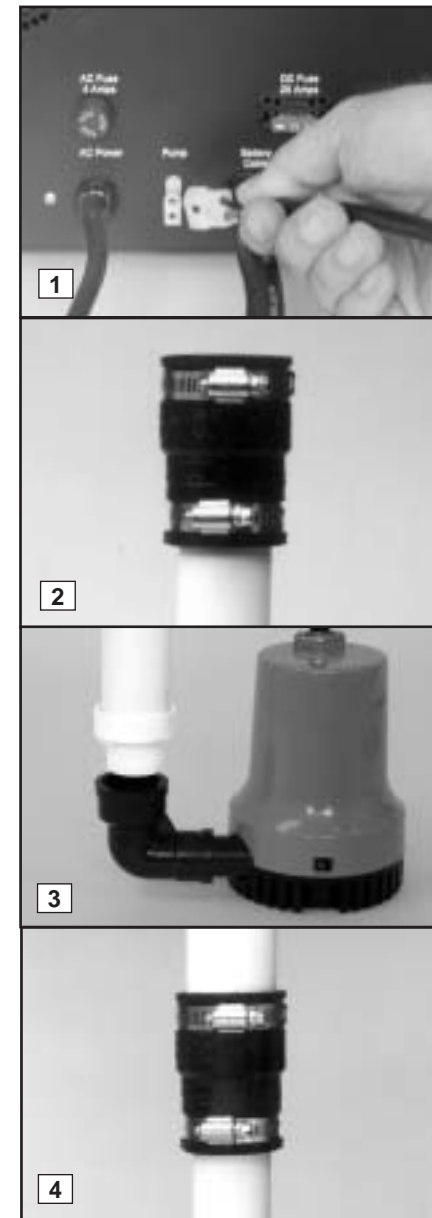
In a continuing emergency, the alarm will sound each time the pump is activated. To silence the alarm for an extended period, you may switch the "Pump was activated alarm" to OFF. Then press the white button for **one** second to silence the alarm. Don't forget to switch it back to ON when the emergency is over.



REPLACING THE PUMP

1. Unplug the pump from the back of the control unit.
2. Release the rubber union or check valve and remove the pump and the rigid PVC pipe section from the sump.
3. Unscrew the pipe and fitting from the old pump and screw them into the new pump.

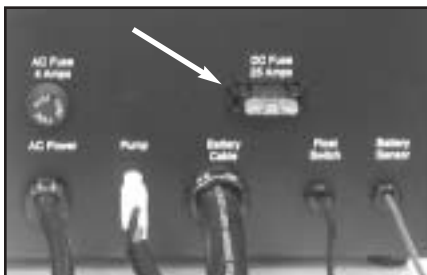
4. Lower the pump into the sump and reconnect the rubber union or check valve.
5. Plug the pump wires into the back of the control panel.





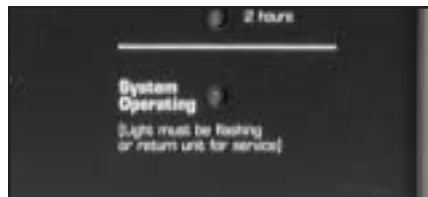
BATTERY FUSE HAS BLOWN

Your Basement Watchdog has a 25-amp DC safety fuse in the back of the cabinet to protect the unit and the battery. If the fuse blows, the alarm will come on to alert you to the problem. Replace the 25-amp fuse. If it blows again, unplug the computer control unit from the wall and call Glentronics' service department for instructions.

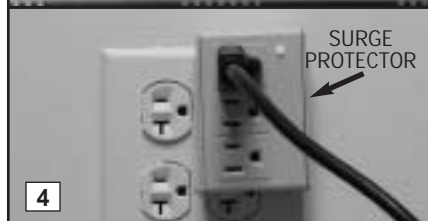


SYSTEM OPERATING

This green light is the "Watchdog" of the system. The flashing on and off indicates that the system is operating and continuously monitoring the pump and battery. If this light is on or off continuously without flashing, there is a problem with the unit. To check the system:



1. Disconnect the power plug from the wall outlet.
2. Disconnect the battery cables from the battery.
3. Now, reconnect the battery cables. Attach the BLACK wire to the POSITIVE (+) post, the WHITE wire to the NEGATIVE (-) post.
4. Plug the AC cord back into the wall outlet. If the "System operating" light is not flashing, the unit must be returned to Glentronics for service.



HOURS OF CONTINUOUS PUMPING

This unique feature will tell you exactly how many hours of pumping energy are available in the battery.

When hooking up a new, fully charged battery, the lights will not always be accurate. After the full test cycle is completed, the unit will display the accurate hours of pumping (7 hours if it is a Basement Watchdog 7.5 hour battery, less if another battery is used). Other batteries, even when new, may not have a full 7 hours of pumping power.



The Basement Watchdog will continue to measure the hours of pumping time, year after year. Once every two months, the system will automatically turn on, test and recharge the battery and display the hours of pumping time available.

As the battery ages, its capacity will diminish, and the "Hours of continuous pumping" lights will go down accordingly. The hours may go down to 5 or 6, and then back to 7. This is normal. The system is allowing the battery to discharge before recharging it, so it can measure the capacity of the battery to hold a charge. This also prevents overcharging the battery and prolongs the life of the battery.

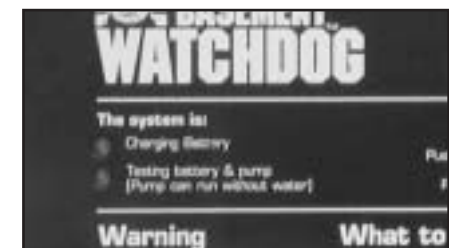
After several years of use, the capacity of the battery will eventually fall below three hours of pumping time. When this happens, the alarm will sound. The

"Hours of pumping" will register 3 hours on the computer control panel, and the "Battery problem" light will be on. Replace the battery with a new Basement Watchdog 7.5 Hour Standby Battery.

In the event of an emergency, such as a power failure or excessive rain, the Basement Watchdog will automatically begin pumping. The hours of pumping will be continuously monitored, giving you an accurate measure of the pumping time left in the battery. When three hours of continuous pumping time are left, the alarm will sound. This will give you a minimum of three hours of pumping time to replace the battery.

CHARGING BATTERY

This green light goes on when the battery is charging. The Basement Watchdog has a state-of-the-art 20 amp charging system. It only operates when the battery needs charging and turns off completely when not in use. This will increase the total life of the battery and keep the battery at full charge.



TESTING BATTERY & PUMP

This green light will be lit when the system is running any test. When the system is first plugged in, a quick test is initiated.

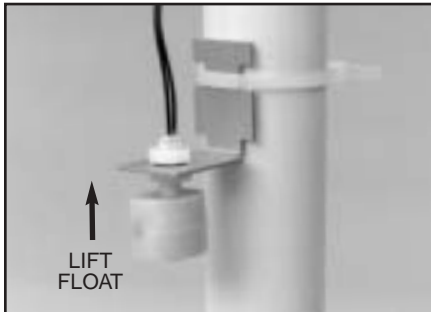
Everyday, the system automatically tests the battery and pump in a quick ten-second test.

Every 60 days, the system automatically initiates an extensive battery test lasting approximately six to eight hours.

TESTING THE FLOAT SWITCH

Manually testing the float switch periodically is highly recommended.

Lift the float up and let go. This will activate the pump. The controller will run the pump for approximately 30-40 seconds so it can empty all the water in the sump pit. If there is no water in the sump, the pump can run dry for this amount of time. The alarm will sound and the "Pump was activated" light will go on. After the pump has stopped, push the white button for **one** second to silence the alarm.



PARTS & SERVICE INFORMATION

You can receive technical support, parts, or service information by calling Glentronics, Inc. at (800) 991-0466, option 3.

Send your unit to the following address for repairs:

Glentronics, Inc.
1150 Willis Ave.
Wheeling, IL 60090-5817



©2001, Glenronics, Inc.

1806000