



StealthFULL™ SCU-151 System User Manual

Thank you for purchasing the *Level Waters*™ SCU-151 *StealthFULL*™ Electronic Filling System. The system provides an almost hidden sensor and incorporates a failsafe circuit to prevent overfills in the event of a fault.

The system is engineered with the Level Waters™ dependable patent pending sensing process in a compact, integrated design. It is a great choice for fountains where aesthetics are important, but may be used in many applications including ponds, water gardens and other water features.

The Stealth Sensing Unit is the main component senses water level without moving parts and will not clog like standard float valves can. It is hand assembled from PVC material instead of molded ABS plastic. PVC provides for better endurance in sunlight and heat and will extend the life of the components over time than using other plastics would.

The SCU-151 requires the use of a standard 24vac irrigation valve and zone wire to connect to the valve. Installation is a snap with simple plumbing and wiring.

For more information on the SCU-151 or our full line of professional leveling systems, visit us on the web at www.aquilitysystems.com.



Safety Overview

The *StealthFULL*™ Pond Filling System is designed to provide the user a safe product that is easy to install and use. When installed as described in this manual, the system presents no unsafe shock hazards. However, altering any of the components may present an unsafe circumstance.

Some other considerations to keep in mind during installation and operations are as follows:

Never mount the power supply in an outdoors environment where it will get wet. The power supply is **for indoor use**

only and must be housed in a weather-protected receptacle for outdoor use.

Do not insert metal objects into sensor probes while unit is turned on.

Do not break seals on unit. Doing so may expose the user to potentially dangerous voltages when unit is turned on and will void the warranty.

Do not extend the power or sensor wires. Doing so will cause the unit to malfunction and will void the warranty.

Always use safety equipment, such as eye protection, and dust mask when cutting PVC piping along with other normal safety precautions.

Always carefully follow all installation instructions.

Installation

The SCU-151 Automatic Pond Filling System is simple to install, requiring simple PVC pipe installation and screw mounting the sensing unit. The limited plumbing that is necessary to provide the system with filling water requires only a hacksaw (or other appropriate saw), PVC cement and sufficient PVC and adapters.

Preparing for Installation

Open the package and ensure that all of the components are present and have not been damaged in shipping. Items included in the system are:

- SCU-151 Control Unit
- 24V 450ma Power Module (tethered to control)
- Sensor Unit (tethered to control)
- Mounting Accessory Kit

Identify where the *StealthFULL*™ will be mounted.

Mount the control on a flat surface using 4 or 6 of the supplied #6 screws in an area desired within reach of the sensor wire and power wire.

A **weather-protected** receptacle for power will need to be located within reach of the control wires on the *StealthFULL*™ Control Unit to install the power module.

An outside water feed, such as a spigot will need to be run to the valve and then to the water feature that will be filled.

Warning! Always consult with an electrician when installing electrical wiring! Not doing so could result in a dangerous condition and/or noncompliance with electrical codes. **Do not extend the power wires.**

Installing the Sensing Unit



Determine a location where the *StealthFULL*™ sensing unit will be mounted (try to find an

inconspicuous place.). If the unit is to be mounted in a skimmer, locate the surface it will mount on and verify that the sensor window will maintain the level at the optimum height for the skimmer.

Position the *StealthFULL*™ sensing unit so that the probes are at the top of the probe window and at the water line with the bottom of the probes at the lowest water level desired. To avoid overflows, the bottom of the sensor probes should fall approximately 1-½ - 2 inches below the fountain edge. The *StealthFULL*™ has no capacity for delaying fills in turbulent waters due to ancillary water systems such as fountains and waterfalls. Therefore care must be taken when choosing the mounting location and water level.

Mark the mounting surface to match the two mounting holes in the *StealthFULL*™ housing. (If no holes are desired, the unit may be affixed using silicone sealant) Drill a small #4 pilot hole at the marks and screw the *StealthFULL*™ snugly to the mounting surface with the #8 stainless screws provided. **DO NOT** over-tighten the screws!

Installing the Valve

Plumb the input and output of the valve to an always-on water source using PVC pipe or garden hose (see 'Plumbing the Unit' for PVC installation tips). We recommend installing a ball valve on the output of the valve to control flow volume to the water feature.

Warning! The fill valves must be installed in an upright position with the wires extending upwards from the unit to function correctly.

Connecting the Fill Valve

Wiring the *StealthFULL*™ SCU-151 control unit to the fill valve requires 2 conductor 18 awg zone wire to reach from the SCU-151 control unit to the fill valve. Connection is made to the two screw terminals on the left side of the unit. Strip the zone wire back ½" and wrap the wire around the terminal in a clockwise fashion. Tighten the terminal screws snugly. **DO NOT overtighten!** Connect the other end of the zone wire to the valve power leads using wire nuts and self-adhering tape and electrical sealant.



Warning! Do not plug the power supply in until all wiring is complete and leads are not exposed!

Plumbing the Unit

Valve kits are available in 3 sizes to meet the fill needs of your fountain or water feature and include 10 feet of zone wire, 24vac valve and valve wiring accessory kit. Kits available are:

- ❖ VK-14 1/4" Valve Kit
- ❖ VK-34 3/4" Valve Kit
- ❖ VK-10 1" Valve Kit

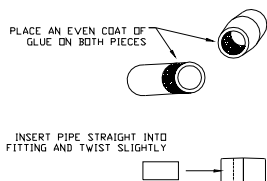
Depending on the size valve used, run the appropriate size water supply from the fill valve outlet to the pond routing it the way desired.

Parts needed:

- Hacksaw (or other suitable fine-toothed saw)
- PVC glue
- Required lengths of 3/4" PVC
- Required angle adapters.

Cut and fit all PVC pipe from the fill valve to the water feature without gluing to make sure that the pipes are where the user desires them.

Clean and glue all parts with general PVC cement to form a watertight seal. Allow joints to dry for 24 hours before connecting water to the system.



Once all components are installed, plug the power supply into the weather-protected receptacle. The unit is ready for operation

Operation

Once the *StealthFULL*™ is connected properly and plugged in it will fill anytime the water level drops below the sensor probe window. Depending on how turbulent the water is, the *StealthFULL*™ may cycle on and off from time to time. This is normal and will subside once the water level has reached a point where the ends of the probes are completely submerged.

Note

Note! If the level of the water at the time of power up is low, the unit will fill until the water level reaches the probes before turning off. In the event the sensor does not sense the water level in approximately 1 1/2 minutes, the **fail-safe circuit will turn the unit off** to avoid an overflow situation. If this occurs, the red light will light on the control unit. The unit may be reset by unplugging it and re-plugging it back in.

Maintenance

The *StealthFULL*™ requires very little maintenance.

Periodically clean the sensor probes with a medium bristle brush, such as a toothbrush, to remove debris and film. No other maintenance is required.

Troubleshooting

The SCU-151 *StealthFULL*™ Automatic Leveling System should maintain the level in your pond for many worry-free years. However, if you should experience problems with it, it may be caused by some of these common issues that can be resolved by the user:

- ✗ Pond overflows when filling
 - ✓ Verify valve is installed upright, flow direction is correct and manual fill screw is tight.
 - ✓ Readjust sensor height to lower water level.
 - ✓ Verify proper connection with the white wire from the sensor.

- ✓ Fountain or Water Feature may not have filled within time (see operation note).

- ✗ Fountain or Water Feature will not fill

- ✓ Check to make sure power is available at receptacle.
- ✓ Check for debris on sensor and clean per instructions.
- ✓ Check to ensure valve connections are tight and that the wires are not damaged.

Warranty

Aquility Systems, Inc warrants this product to the original purchaser for a period of one year against defects in material or workmanship when used for normal residential purposes it is intended for. In order to obtain a replacement unit or repair the existing unit, you must obtain a RMA number and return the complete unit, postage prepaid, to the place of purchase, or to the Aquility Systems facility. (6949 SW 21st Lane, Gainesville, FL 32607)

This warranty is intended to cover product defects only. Aquility Systems, Inc. is not liable for indirect, incidental or consequential damages in connection with the use of the Level Waters product covered by this warranty. This warranty does not cover any cost or expense incurred by the purchaser in providing substitute equipment or service during reasonable periods of malfunction or non-use of this product, while waiting for completion of repairs under this warranty. Some states do not allow exclusions of incidental or consequential damages, so the above exclusions may not apply in all states. This warranty gives you specific legal rights in your state, which vary from state to state.

If you wish to contact Aquility Systems, Inc., please direct inquiries to:

Customer Service
Aquility Systems, Inc.
6949 SW 21st Ln.
Gainesville, FL 32607

or:
info@AquilitySystems.com