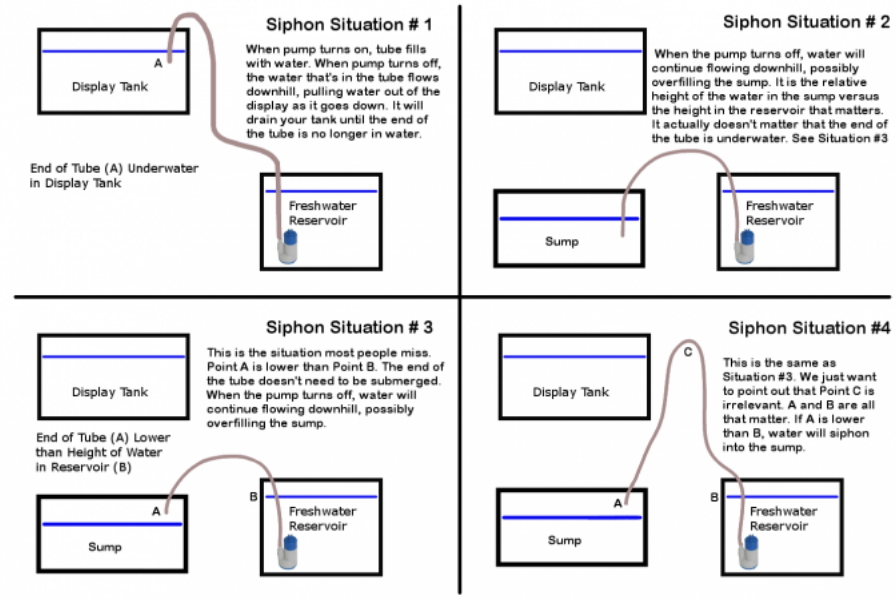
1) A siphon, if it is a siphon the issue will be seemingly random, it will tend to only occur when the reservoir is full and the water will fill to a level possibly above or just below the float. Siphon situation 3 is the most probable cause but note as shown in 4 that a loop will not solve it, the end of the hose must always terminate above the reservoir water level.



2) A sensor issue. The first test is to use the self diagnostic test on the Osmolator to verify the sensor is in working order.

1) With the sensor completely wiped dry, plug in the controller. The sensor MUST be clean and dry for this test to work, a wet or dirty sensor will always fail.
2) All 4 lights will flash and it will beep, a single light will show for 1 seconds and then the normal 15-20 second pump run at startup will begin.
3) This light that is on one second is the optic sensor status, green means pass, yellow means it is marginal, red means it failed.
4) For further confirmation, you can rerun this test with the sensor in water, in this scenario instead of a green light we should get a red fail light, a unit that passes both tests we can say with 90%+ certainty the sensor is working properly.

Assuming it passes the self test the issue is bubbles, optic sensors work by detecting the refraction of air vs water and make no differentiation between a bubble or being dry. The most overlooked source of bubbles is placing the top off hose in the vicinity of the sensors, the incoming splash will introduce bubbles and cause a fill. The hose can be routed to any area of the sump or main tank, and the optic sensor must be in a calm and bubble free area. A definitive test to verify bubbles are the cause is if you can catch it in the act of an overfill and wipe your finger across the sensor and filling stops within 5 seconds, the cause was bubbles.

3) There is a 3rd possibility but this is relatively obscure and only will apply to tanks under 50 gallons or due to a misunderstanding of how the Osmolator works. The Osmolator has timed functions in addition to sensor controlled functions and for the first 25-30 seconds it is not actually detecting water levels and is instead running a series of self diagnostic tests. The pump will always run for 15-20 seconds when you

first power it up, this is so the installer can verify the pump is operational and the pump and tubing are primed and ready to fill. Also, the Osmolator always waits 5 seconds to fill to account for waves and surface movement and overfills for 5 seconds so the pump is cycled on less often. If the tank is under 50 gallons you need to open the controller and reduce the pump speed to “nano” and if it is under 30, an additional restriction such as a drip irrigation valve might be needed, this will reduce the amount of water added by these timed sequences to avoid raising the float.

4) Optic sensors utilize infrared light, refugium grow lights use infrared and may cause interference. The optic sensor should not be exposed to such a light. The float switch is a magnetic switch, magnets can affect it and it is critical that no other magnet is within 4” and that the magnet holders are properly aligned. Lower quality electronics can emit electromagnetic fields and directly affect the controller, ballasts and power supplies that are not OEM to a name brand from Europe or the US where compliance with radio interference and safety laws is required are suspect and it is worth trying with such devices eliminated from the system