



## **SOLAR POOL HEATING SYSTEM DESCRIPTION OF OPERATION**

Your solar pool heating system is fully automatic, using the pool pump that circulates water through your filter along with an automatic control and valve to divert the flow of the water through the solar collector panels when solar energy is available and the pool needs to be heated. When solar energy is not available or the desired pool temperature is reached, the diverting valve switches position to bypass the solar panels and pool filtration functions as normal.

To operate the system the pool pump must be on. Your pump should be on during the hours of 8 AM to 5 PM to achieve maximum heating.

The switch in the automatic control box must be set to the "AUTO" position and the temperature dial set to the desired position. For heating to take place there must be sufficient solar energy available and the pool temperature must be lower than the temperature set on the control unit.

When there is flow through the solar collector panels it is normal for the pool filter pressure to operate at between 5 to 10 PSI higher than normal. Please keep the actual pressure increase for your system in mind when making a decision as when to backwash the filter.

When the solar collectors fill in the morning there will be a large amount of air bubbles pushed into the pool as the collectors are purged of air. This is normal and will usually last three to five minutes.

If bubbles continue for a prolonged period of time (over 30 minutes) switch the pool control unit to "OFF". If bubbles continue then you have an air leak somewhere in the piping between the filter pump and the pool in the suction lines. Also check the seal on the strainer basket. If bubbles cease after turning the unit off, try backwashing the filter and then return the switch to the "AUTO" position.

If you don't think the unit is operating properly:

1. Check that there is power to the unit (power light on).
2. Check that the switch is in the "AUTO" position.
3. Is solar energy available? Are black surfaces warmer than your pool?
4. Is the pool already warm? Turn the temperature control to a higher temperature.  
Does the unit now come on?
5. Is the control valve in the flow through collectors position. If not turn the switch to "ON".  
Does the valve now move? You may have a defective control unit or a bad sensor.

**Remember that freezing conditions can damage your panels. If freezing conditions are anticipated overnight be sure to turn off the pool pump and drain just the solar panels. A full winterization is not necessary in May or September.**

**If your system has manual shutoff valves on the feed and return lines to the solar panels only close these valves if the panels are empty and the solar control unit is switched to the "OFF" position.**