

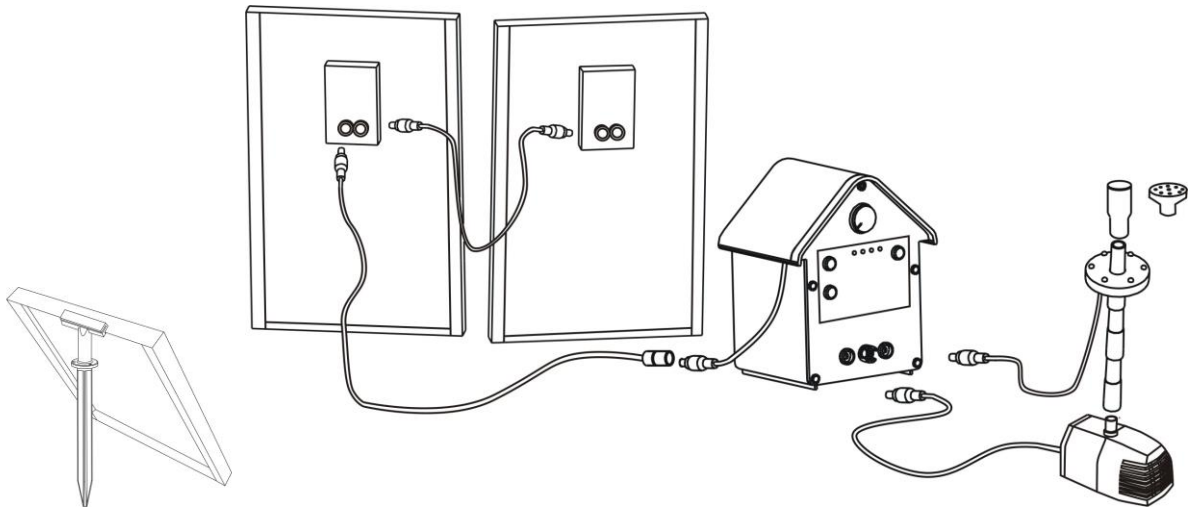
# SOLAR PUMP USER'S MANUAL

## P019C

### 1. OVERVIEW

- ✧ The solar pump is designed for fountain, pond or water reservoir. Solar panel powers the pump and charges the battery by converting sunlight into electricity;
- ✧ This solar pump can be used almost any time: strong sunlight, weak sunlight or cloudy weather.
- ✧ This solar pump is designed with LED fountain light; when running the solar pump during the night, the fountain light will automatically illuminate the water spray.

### 2. ASSEMBLY



- Unpack all components carefully.
- Connect the ground stake to the rear side of frame of the solar panel.
- Connect two solar panel and then to the control housing.
- Place the pump underwater and make sure that it is **fully immersed** in water. In case the pump tube is too far from the surface of water, you can raise the pump by using stones or brick underlay.
- Select a favorable water jet and connect fountain heads and fountain light as diagram.
- Connect the pump cable and fountain light cable to the socket of the control housing.
- The solar pump is now ready to use.

### 3. CAUTIONS

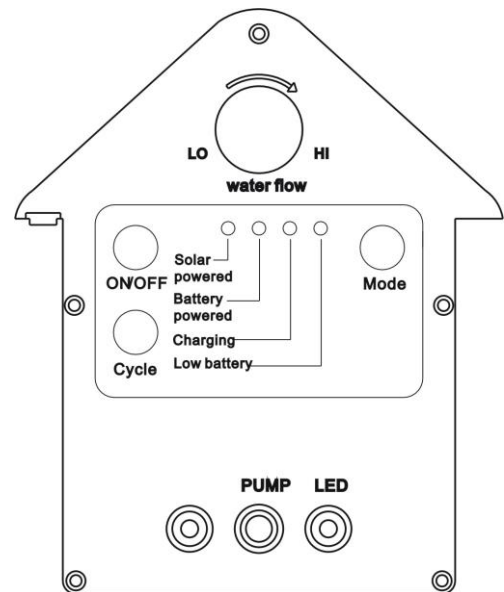
- Any altering of the product itself or changing of the components is forbidden.
- Do not connect the pump to any AC voltage power, it is intended **ONLY** for DC Voltage power.
- Operate in freshwater only (never above 50°C).
- Do not strike the solar panel.
- Do not let the pump run dry for long time.

### 4. OPERATING INSTRUCTIONS

Once installed, allow the solar pump to charge at least eight hours in direct sunlight in order to fully charge the Battery.

**Test the control system:** press the “on/off” button, the “solar powered” indicator light is on; push the “Mode” button repeatedly, the indicator light will cycle through the “solar powered”, “Battery powered” and “Charging” positions; push “ON/OFF” button again, the indicator light will be turn off.

**Mode of “Charging”:** If you would like to charge the battery quickly, switch to the Mode “charging”, the system will charge all energy from sunlight to the battery without running the pump. We recommend you turn to “Charging” mode under direct sunlight for at least 8 hours when you first time use it. We have an overcharge protection design in the system. It will extend the life span of the battery.



#### **4.1 Mode of “Solar powered”:**

Press the “on” button, the first indicator light of solar powered will illuminate; the pump operates in direct sunlight only, any surplus power is used to charge the battery. The performance of the pump will very according to sunlight condition.

#### **4.2 Mode of “Battery powered”:**

Press the “Mode” button to “Battery powered”, the second indicant light will blink, the pump will run for 2 hours using battery power. The default “battery powered” mode is 24hours cycle. If the pump runs in this mode during darkness the LED fountain light will illuminate automatically.

**4.2.1 Cycle:** If you wish the pump not turn on automatically same time the next day, push “Cycle” button under “Battery powered” mode, the second indicator light will illuminate and the pump will only work 2 hours using battery power.

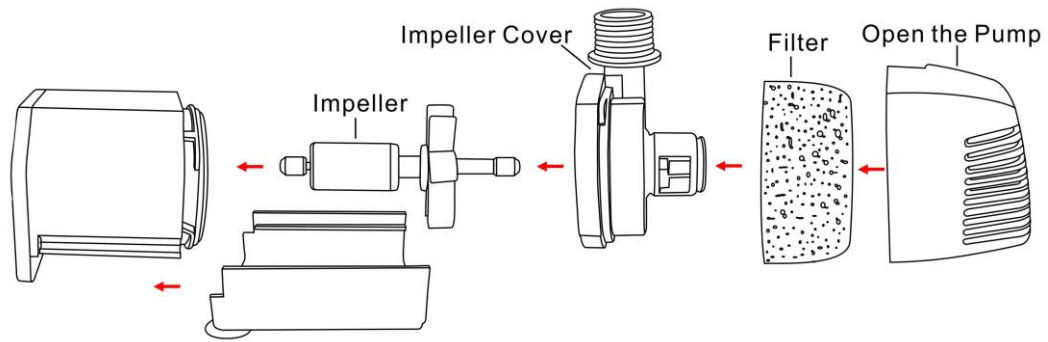
**4.2.2 Adjustable water lift:** water lift is controlled by a variable speed valve, you can only adjusted the water lift under mode of “battery powered”. (Note: greater water lift means more energy is consumed, therefore shorter operating time)

**4.3 Lower battery:** the system is designed with battery over discharge protection. When battery voltage lowers than design, the 4<sup>th</sup> indicant light will blink. Allow the system recharges the battery for at least 4 hours in direct sunlight.

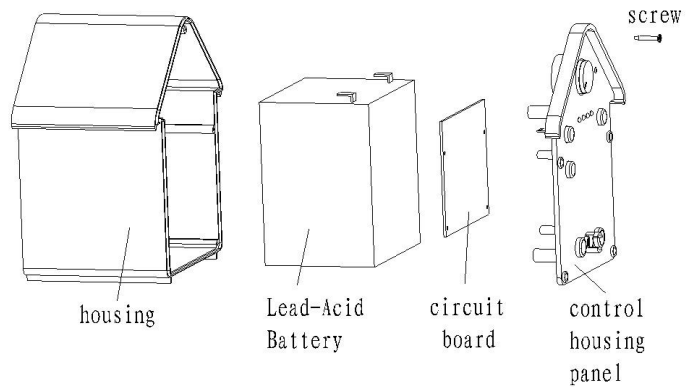
### **5. Maintenance**

**Solar panel:** The panel should be cleaned periodically with a soft tissue. Regular cleaning of the panel is advised to maintain optimum conversion of the sun’s energy into direct current.

**Pump:** If, after a period of time, the pump starts to lose power or stops working check for the build up of sediment, scale or dirt in the filter. Remove the pump cover and the impeller cover. Clean them and the filter by fresh water.



**Battery:** If the pump stops working after it has been used for about over 12-18 months, maybe the battery is beyond its life span. You may open the control housing to change a new battery. Lead-Acid 12V-4AH



## 6. TROUBLE SHOOTING

(a) Pump does not operate even though the solar module is in full sunlight.

**Check:** No connection to the solar module – check connection to the solar module; Check connection to the DC pump, LED light.

**Check:** Impeller is blocked – To clean the pump, remove the cover as above.

Use a small brush or stream of water to remove any debris.

(b) Pump does operate but there is no water running through the fountainhead.

**Check:** build up of sediment or scale in the tubes or the filter- clean the tubes and the filter.

(c) On Mode of “battery powered”, operating time is shorter than 2hours.

This pump is designed with a battery over discharge protection. Please allow the solar pump to charge at least eight hours in direct sunlight and don't frequently operate the solar pump during as the battery is charging.

## 7. TECHNICAL DATA

Solar Panel:	2pcs 10W
Operation Voltage:	12-18V DC
Water Flow Max.	1600LPH
Water lift Max.:	2.7M
Water Projection Height	Max. 1.8M
LED Light	6 LED white light
Cable Length	5M
Rechargeable Battery	Lead Acid 12V-4AH