

# SOLAR PUMP & PANEL KIT AMP-P022C

*Read this manual carefully before using this product and save this manual for future reference.*

## 1. OVERVIEW

This kit is designed to operate with solar-powered and battery-powered modes.

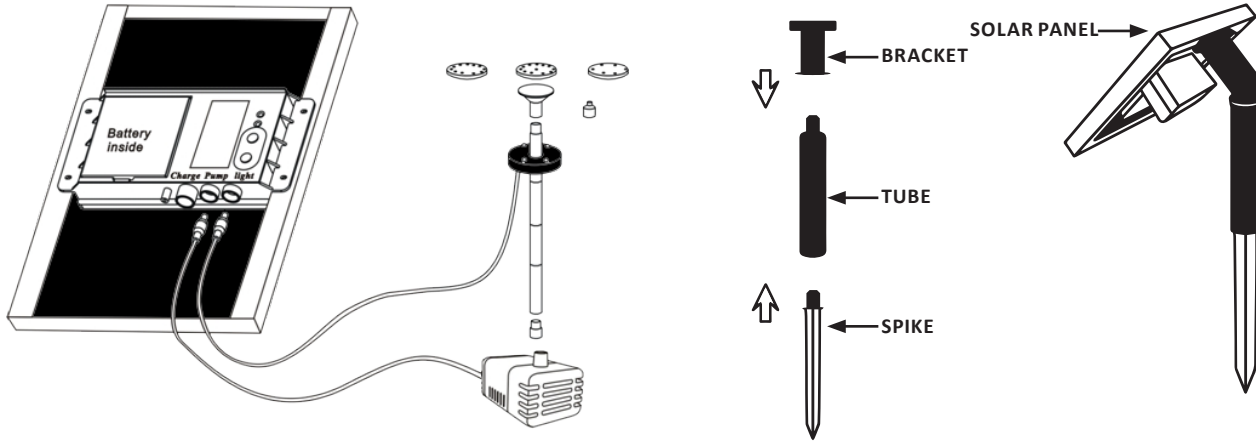
The solar-powered pump is intended for fountain, pond or outdoor use and was designed with dry-run protection to prevent the pump from burning out if the fountain, pond or pool dries out. The pump derives its power directly from the solar panel or the power stored within the rechargeable batteries. For the pump to operate, the solar panel must be placed in direct sunlight. The performance of the pump depends on the season and the position of the solar panel, as well as the amount of power stored within the battery pack.

## 2. ASSEMBLY

Carefully unpack all components.

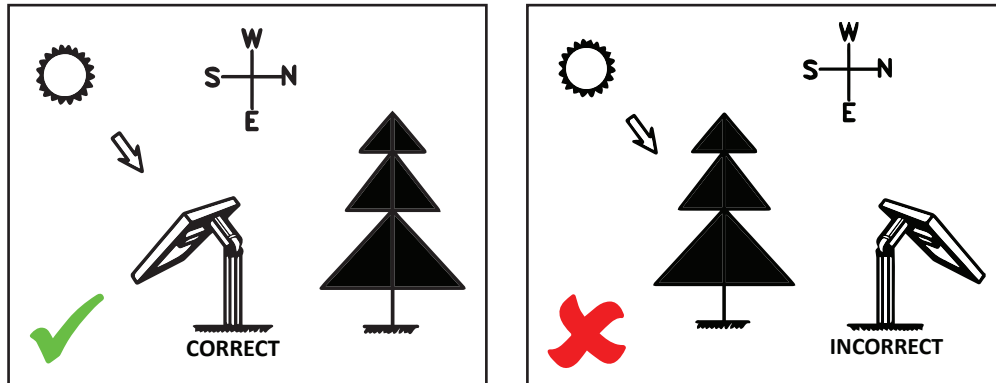
Connect pump accessories to obtain performance for the intended use. Place the pump underwater, ensuring that the pump will remain submerged during operation. For use with a water fountain, attach the pump directly to the fountain tubing; if the tubing is not long enough to allow the pump to remain completely submerged in water, you may use flat stones or bricks to elevate the pump to the proper height.

Install the included rechargeable 'AA' batteries into the battery case of the solar panel. Connect stake pieces and affix the solar panel frame to the bracket on the stake. Connect the pump and light cables to the solar panel and place the panel in full, direct sunlight avoiding areas that will become shaded during the day.



## 3. PANEL PLACEMENT

Insert the spike into the ground. Position the solar panel to face South (in the Northern hemisphere) to make the most of daylight hours. It is important to angle the solar panel towards the sun when the sun is at its highest point. Ensure trees, shrubs or buildings do not shade the solar panel.



## 4. OPERATING INSTRUCTIONS

**NOTE:** The LED light (optional) is designed to only work at night when the solar panel is set to "battery-powered" mode.

### Solar Powered Mode:

Recommended mode for daytime use.

Press the "solar on/off" button. The green indicator light will illuminate when the panel power is on; the pump will only run in bright or good sunlight conditions. On bright sunny days, surplus power will charge the battery. The pump will not work on cloudy days as there is insufficient power to run the pump.

### Battery Powered Mode:

Recommended mode for nighttime or a cloudy day.

While the "solar-powered" mode is turned on, press the "Battery on/off" button, the red indicator light will illuminate when this mode is on. This mode allows the pump to continue to operate at nighttime or if a day becomes overcast/cloudy. On bright sunny days, the batteries will fully charge, allowing the pump to run up to 4 hours. On cloudy days the pump will run for significantly less time because the batteries did not receive an adequate charge. The mode will switch to "solar-powered" automatically when battery power is low; "battery powered" mode must be turned back on manually – *it is not automatic*.

### **Low Battery:**

If the red indicator light is blinking, the battery power is low.

Allow the solar panel to recharge the batteries for a minimum of 4 hours in direct sunlight. Do not attempt to repeatedly turn on the "battery-powered" mode until a sufficient charge has been allowed, as doing so will deplete the battery power.

### **Adjustable Water Rate:**

While the mode is "battery-powered," the water rate can be adjusted by pressing the "batt. on/off high" button. The water flow will be adjusted higher or lower, once the water flow is at a satisfactory level, stop pressing the button.

## 5. BATTERY INFORMATION

Rechargeable batteries become less efficient with repeated charge and discharge cycles. If you find the batteries appear to be less efficient or do not run as long, try a **boost charge**. To do this, disconnect the pump and light cables from the solar panel for 2 to 3 sunny days to allow for a maximum charge to the batteries. After a boost charge, if the batteries are still not performing to expectations, the lifespan may have been exceeded and they should be replaced. Open the battery cover to replace the (4) AA rechargeable batteries.

**IMPORTANT!** Only use compatible rechargeable batteries, alternatives may be incompatible which may damage the system and will void the warranty. See contact information under WARRANTY to order the correct replacements; have the product number from the top of this manual available for faster service.

**Dispose of the batteries in accordance with local laws and regulations.**

## 6. CLEANING AND MAINTENANCE



**DO NOT USE BLEACH to clean this product**

### **Solar Panel:**

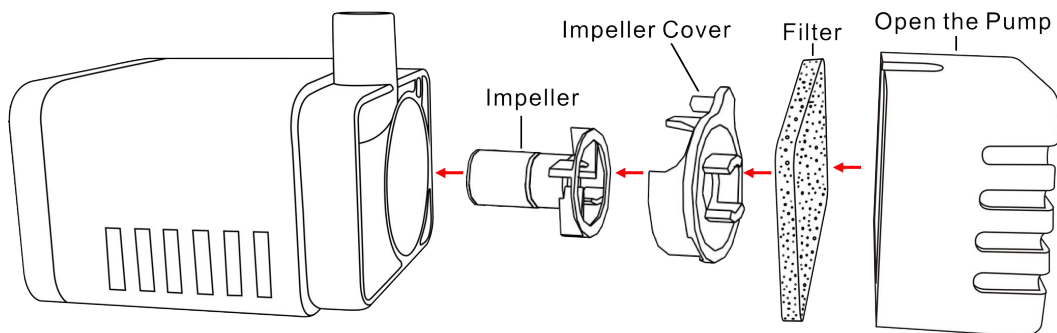
Clean the face of the solar panel often to ensure optimal performance. Solar panels can become extremely hot in the sunshine. It is recommended that cleaning be performed early in the morning, late in the evening, or during a relatively cool day.

The solar panel should only be cleaned with a soft tissue, soft cloth or soft sponge and a propriety glass cleaning solution. Take care not to scratch the glass of the solar panel while cleaning.

### **Pump (6V DC):**

After some time of use, if the pump starts losing power or stops working, check for buildup of sediment or scale in the filter and/or in the pump housing. The filter housing can be removed by pressing down on the bottom of the filter housing.

To clear the impeller, open the pump housing at the front by sliding up the front plastic cover.



## 7. TROUBLESHOOTING

Pump is not operating even though the solar panel is in full sunlight.

- ▶ Pump is submersed – ensure the pump is fully submerged in water as it will not operate if it is not.
- ▶ Cable connection secure – ensure the pump cable is securely attached to the solar panel.
- ▶ Solar panel is turned on – check to make sure the solar panel is powered "ON."
- ▶ Impeller may be blocked – disassemble the pump as shown above. Use a small brush or stream of water to remove any debris.
- ▶ LED light is not turning on during the day – the kit is designed so the light only works at night and only when the "battery powered" mode is turned on.

Pump is operating but there is little or no water running through the fountainhead.

- ▶ Clear debris – check to ensure debris is not blocking the front of the pump.
- ▶ Buildup of sediment or scale – check the pump, filter, tubes and fountainheads for blockages. Clear loose blockages by hand and clean pump components. Fountain cleaning products are recommended for cleaning fountain components; **do not use bleach** to clean this product as using bleach will invalidate the product warranty.

Battery-Powered mode is not working as I thought it should.

- ▶ Set the mode – check to see if the red indicator light is steady on.
- ▶ Ambient light – if the red indicator light is on, the solar panel may be receiving too much ambient light for the "battery-powered" mode to operate. If the ambient light is originating from sources such as street or flood lights, the panel may need to be moved.
- ▶ Red light is blinking – if the red light is blinking, the battery power is low and the fountain will soon turn off. The batteries will need to be recharged before this mode can be used again.
- ▶ Boost Charge – unplug the pump and light cables and allow the battery pack to recharge for 2 or 3 sunny days. Avoid testing the battery powered mode during a boost charge as this will diminish the battery power.
- ▶ Replace – if a boost charge does not revive the batteries, replace the batteries with compatible batteries.

## 8. TECHNICAL DATA

Solar Panel	2.5W
Pump Operation Voltage	6V-9V DC
Max. Water Lift	1.2 meters
Max. Flow Rate	250 L/H
LED Light Operation Voltage	6V DC
Rechargeable Battery	AA Ni-MH 1500mAh

## SAFETY STATEMENTS & WARNINGS

- Altering of this product or changing components is prohibited.
- Do not connect the pump to any AC voltage power; it is intended ONLY for DC voltage power.
- Do not use this product to pump flammable liquids.
- Do not use pump with water above 50°C (122°F).
- Do not allow kit to freeze. During freezing weather, dry all components of the kit and store inside.
- Do not strike the solar panel.
- Do not lift the pump by the power cable.
- Operate the pump in freshwater only.
- Do not use bleach or corrosive chemicals to clean any components of the unit.

**Any modification to the product or failure to follow recommended care will void the product warranty.**