

# SOLAR PUMP & PANEL KIT

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

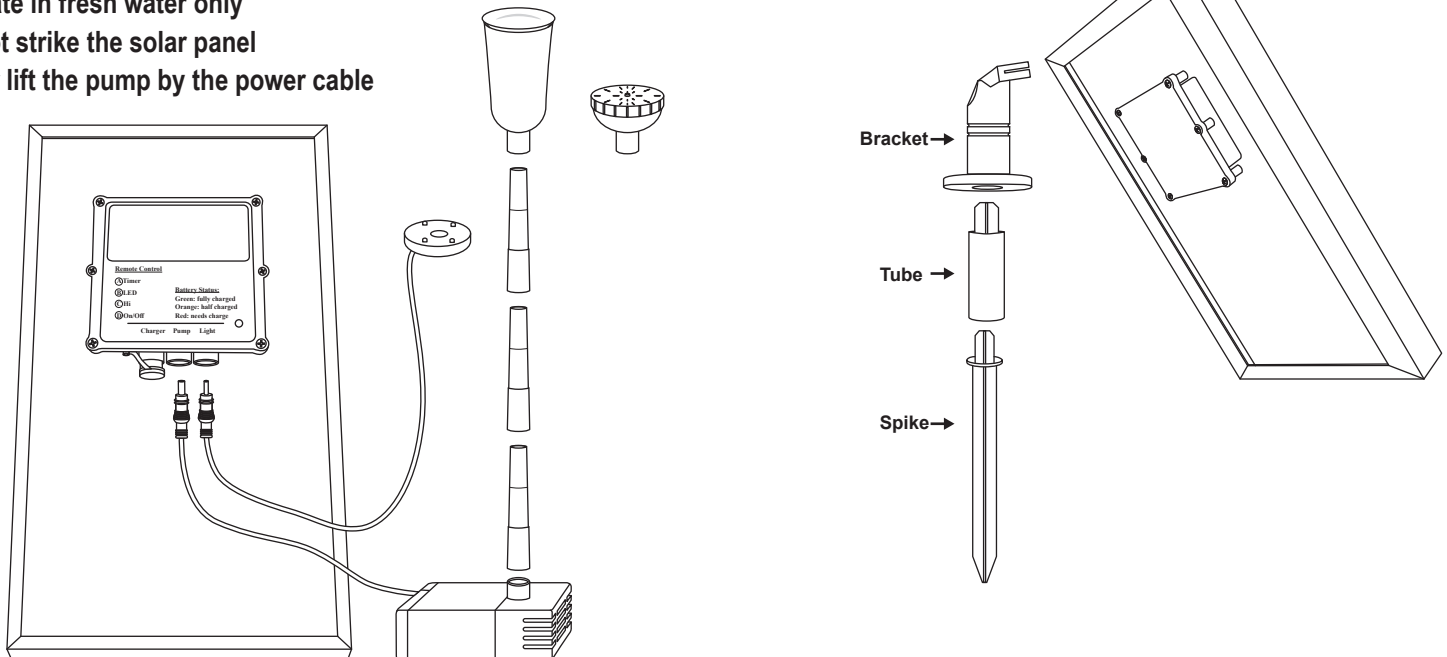
## OVERVIEW

- ▶ This solar pump kit is designed for outdoor use in a fountain, birdbath or freshwater pond. **NOTE:** the pump is not designed for use in a natural pond as it can quickly become clogged by debris such as algae, plant matter, pond sludge, etc.
- ▶ The solar panel must be placed in direct sunlight for the pump to operate.
- ▶ This solar panel is equipped with battery pack and operates by remote control only.
- ▶ The optional LED light ring will automatically illuminate at night when no sun or ambient light is hitting the solar panel.

## ASSEMBLY AND USE

### ⚠ CAUTION:

- Operate in fresh water only
- Do not strike the solar panel
- Never lift the pump by the power cable



Carefully unpack all components. Save the box for storing the unit during winter.

Connect extension tubes, LED light ring, and fountain spray head as required for your intended use; adjust components as needed.

Unwind the pump and light power cables.

Place the pump under water, it is important to ensure the pump body remains fully submerged under water during operation. If the spray head is too far below the water surface, use flat stones or bricks to elevate the pump to the proper height. For use with a water fountain, attach the pump directly to the fountain tubing.

Connect the pump and light cables to the solar panel; ensure each cable is in the correct port and they are firmly inserted.

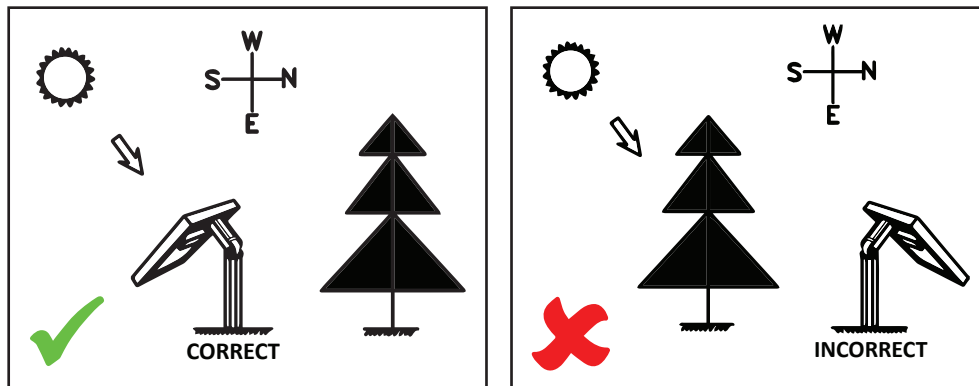
Assemble the solar panel stake as shown in the diagram above. Wait to affix the solar panel to the stake until after the stake has been installed into the ground.

# PANEL PLACEMENT

**First time use**, fully charge the battery for at least 8-10 hours in full, direct sunlight.

Select an area where the solar panel will receive full, direct sunlight all day long.

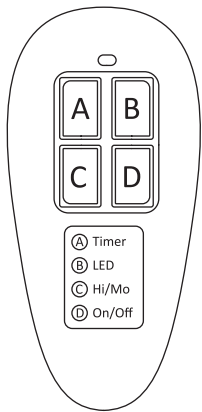
Insert the spike into the ground. Position the solar panel to face South (in the Northern hemisphere) to make the most of daylight hours. It is important to angle the solar panel towards the sun when the sun is at its highest point. Ensure trees, shrubs or buildings do not shade the solar panel at any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



## OPERATING INSTRUCTIONS

**NOTE:** This unit is operated by remote control. The LED light ring (optional) is designed to only work at night.

### Remote Control:



**A TIMER:** Press this button to turn on the pump for 1-4 hours running.

One press for one hour, two presses for two hours, three presses for three hours, and four presses for four hours. The indicator light will give you a feedback blink number your preset, eg: you preset 2 hours, the indicator light will blink twice. Press D button to turn the pump off.

**B LIGHT:** Press this button to turn the LED light ring on/off.

**NOTE:** The light will automatically turn on at night, when the panel sensors no longer receive sunlight or ambient light.

**C WATER LIFT:** Press this button to control the water lift height, there are five lift levels.

**D ON/OFF:** Press this button to turn on the pump without timer; the pump will run until the stored battery power has been depleted. Press this button again to turn the pump off.

### Solar Panel:

#### Charging the Battery:

Ensure the pump is turned 'OFF'. Place the solar panel in direct sunlight until the battery pack is fully charged.

#### Battery Status:

When pump is ON: The indicator light color on the back of the solar panel indicates the battery status as noted below:

When pump is OFF: Press **C** on the remote, the indicator light will illuminate for 5 seconds to indicate the battery status as noted below:

**Green:** Battery fully charged. Pump will run approximately 4-5 hours.

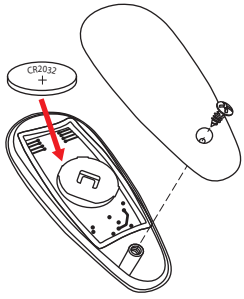
**Orange:** Battery half charged. Pump will run approximately 1-3 hours.

**Red:** Battery requires charging. Pump will run less than 1 hour.

**NOTE:** Operating time may be reduced when using the LED light and when the water lift is set to a higher level.

# BATTERY INFORMATION

**IMPORTANT!** Only use a compatible battery in the remote and compatible battery pack in the solar panel; alternatives may damage the unit and will automatically void the product warranty.



## **Remote Control:**

Carefully separate the front and back covers. Carefully remove the motherboard and place on a soft, clean surface. Observe the direction of the button cell battery. Use a thin tool such as a flat screwdriver to very carefully remove the expelled battery; take care not to damage the motherboard or the welds between the motherboard and the conducting plate. Insert a new CR2032 battery (not included), ensuring the polarity and contact are good. Ensuring A,B,C,D correctly align with the front of the remote, place the motherboard back into the remote and gently snap the front and back cover together.

## **Solar Panel:**

Rechargeable batteries become less efficient with repeated charge and discharge cycles. If you find the battery pack becoming less efficient or does 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 battery pack lifespan may have been exceeded and should be replaced. To ensure the correct battery pack is used, contact us via one of the methods mentioned at the top of page 1; to expedite your request, please have the item number and order information available to help expedite your request.

To change the battery pack, use a Phillips screwdriver to remove the four screws holding the battery compartment cover on the back of the solar panel. Remove the cover. Taking great care, gently disconnect the plug from the socket; be sure not to disconnect the socket from the motherboard. Remove the battery pack; the end of the battery pack may be secured to the panel with an adhesive, slight force may be required to remove the battery pack. Insert the plug of the new battery pack (not included) into the socket and place the battery pack into the designated space. Replace the battery cover and secure using the previously removed screws.



This product uses a rechargeable battery pack and a button battery. When the batteries can no longer be used, they should be removed from the unit and recycled in accordance with local laws and regulations. The batteries must not be incinerated or composted.

# CLEANING AND MAINTENANCE

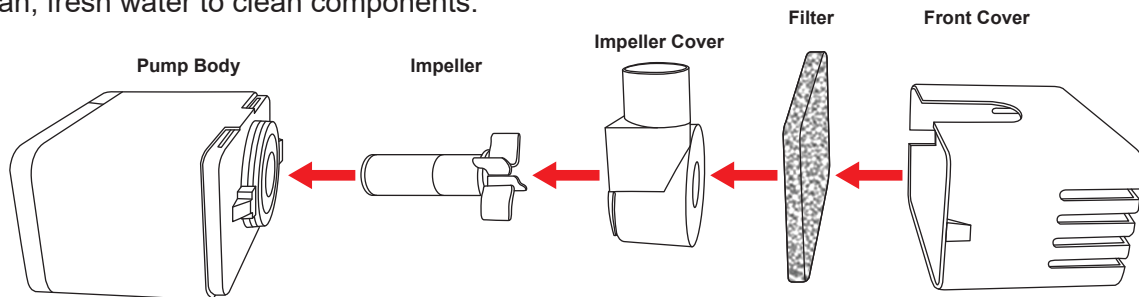
## **Solar Panel:**

Clean the face of the solar panel often to ensure optimal conversion of the sun's energy into direct current. 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 cool, cloudy day.

Only use a soft tissue, soft cloth or soft sponge and a propriety glass cleaning solution to clean the front of the solar panel. Take care not to scratch the glass while cleaning.

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

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. Use clean, fresh water to clean components.



Press down on the top of the front cover and pulling it off by the sides.

Remove the impeller cover by turning it clockwise. Then, remove the filter and impeller. Wash all components using clean water. Use a soft cloth or brush, such as a toothbrush or a nylon pipe brush, to clean the pump components.

When re-assembling the pump, ensure the impeller cover is replaced correctly.

## STORAGE

Ensure the solar panel battery is fully charged before storing, doing so will prolong the life of the battery pack.

Before storing, unplug the pump and LED light ring from the solar panel. Place the solar panel in full, direct sunlight until the battery is fully charged. Ensure the battery status is Green (see *Operating Instructions*) before storing the solar panel.

Do not allow components to freeze. Store all components in a warm, dry indoor location.

## TROUBLESHOOTING

### **Pump is not running even though the solar panel is in full sunlight.**

- ▶ Pump is submersed – ensure the pump is fully submerged under water. The pump is equipped with dry-run protection which prevents the motor from running unless the internal mechanisms of the pump are wet. You may need to gently tap the side of the pump to release trapped air bubbles.
- ▶ Cable connection secure – ensure the pump cable is fully inserted into the 'Pump' port on the solar panel.
- ▶ Solar panel is turned on – press the "ON" button on the remote.
- ▶ Impeller may be blocked – disassemble the pump as shown in *Cleaning and Maintenance*, page 3. Use a small brush or stream of water to remove any debris.

### **Pump is running but little or no water is flowing.**

- ▶ 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 spray heads for blockages. Clear loose blockages by hand and thoroughly clean pump components. Fountain cleaning products are recommended for cleaning fountain components; **do not use bleach!**
- ▶ Check connections – make sure the extension tube(s), adapter, and spray head are firmly connected; loose connections can reduce water flow.

### **I turned the panel ON using the remote, but water is not flowing.**

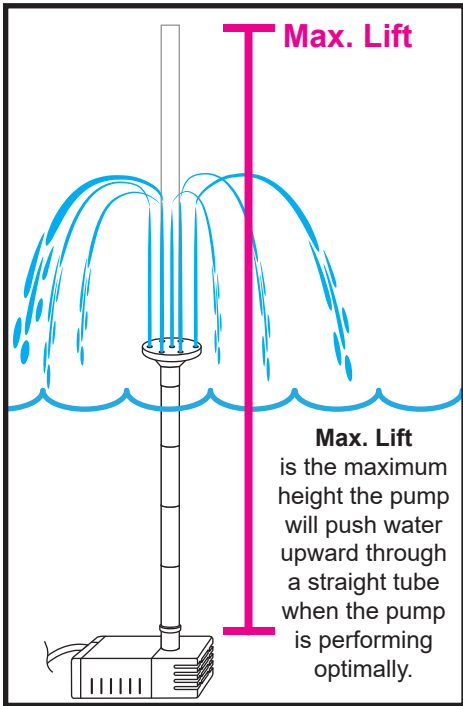
- ▶ Distance and obstacles – the distance between the remote and solar panel is greater than 10 meters. Make sure there are no major obstacles, such as trees, shrubs, lawn decor between the remote and the solar panel.
- ▶ Battery depleted – Press any button on the remote, if indicator light on the front of remote does not illuminate, the battery may need replacing.
- ▶ Boost Charge – unplug the pump and light cable from the solar panel. Place the solar panel in full, direct sunlight for 2 to 3 sunny days. Avoid testing the panel during boost charging as this will diminish the battery power.
- ▶ Replace the battery – if a boost charge does not revive the battery pack, replace the battery pack. Only replace with a compatible pack, contact our customer service team directly for a suitable replacement (see top of page 1).
- ▶ Solar panel battery charger – the battery pack can be charged using a compatible solar panel battery charger (sold separately), contact our customer service team directly to purchase a compatible charger (see top of page 1).

### **The LED light ring is not turning on.**

- ▶ Time of day – the light is designed to only turn on at night.
- ▶ Cable connection secure – ensure the light cable is fully inserted into the 'Light' port on the solar panel.
- ▶ Turned on – make sure the light function is turned on by pressing button **B** on the remote.

*If you are still experiencing issues, please contact our customer service team through one of the methods mentioned at the top of page 1. Please have the item number and order information available to help expedite response time.*

# SPECIFICATIONS



Solar Panel	7W
Operation Voltage	9V DC
Max. Water Flow	600 LPH
Max. Water Lift	1.4M
Water Projection Height	0.8M Max.
LED Light (optional)	4 LED White
Cable Length	5M
Battery	Lithium 7.4V-4000mAh

Remote Control	RC
Parameters	3V/180mAh
Working Temperature	32°F - 140°F
Working Humidity	0% - 95%
Battery	CR2032

This device complies with part 15 of the FCC Rules.

Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are

designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

## ⚠ SAFETY STATEMENTS & WARNINGS ⚠

- Operate the pump in fresh water only.
- Do not use bleach or corrosive chemicals to clean any components of the unit.
- Do not charge the solar panel using 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) and never at or below 0°C (32°F).
- Do not allow any components to freeze. During freezing weather, dry every component and store in a warm, dry indoor location.
- Do not strike the solar panel.
- Do not lift the pump by the power cable.
- Altering of this product or changing components is prohibited.

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

## ⚠ WARNING!

**Manufacturer and seller expressly disclaim any and all liability from personal injury, property damage or loss, whether direct or indirect, or incidental, resulting from the incorrect attachment, improper use, inadequate maintenance, or neglect of this product.**