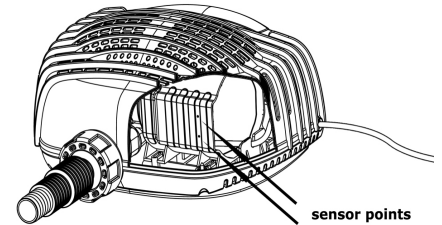


SOLAR PUMP USER'S MANUAL

Item No.: AQUAJET-CUSTOM-KIT-24V-V2

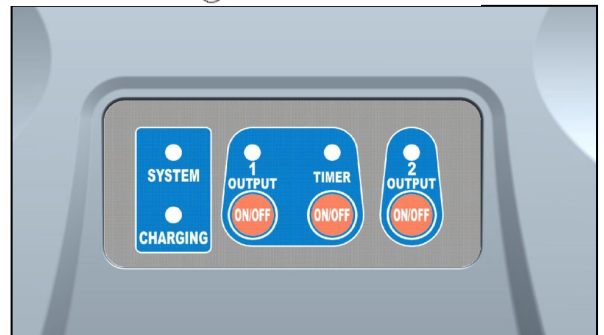
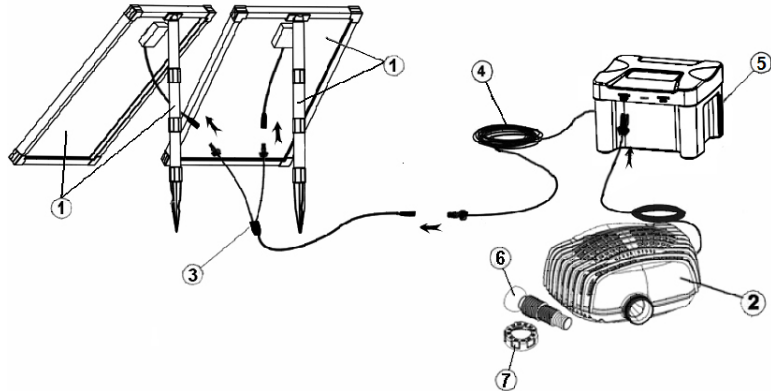
1. OVERVIEW

- 1) The solar water pump is designed for fountains, small waterfalls or pond water filtrations, etc. and is powered by a solar module.
- 2) The solar module needs to be placed in the sunlight with its solar cells facing the sun as much as possible.
- 3) The power supply of the pump is provided by a battery station which is charged by the solar module, so that the pump is capable of working at nights and on overcast days.
- 4) The latest DC brushless motor technology is introduced in the pump design and manufacturing, so that the pump has high efficiency and long service life.
- 5) The pump has a built-in function of dry-run protection. The dry-run protection function is provided by two sensor points on one side of the pump body (not visible from outside). The pump works if both of the points are submerged in water. If either or both points emerge out of water, the pump stops working.



2. COMPONENTS

- 1) Solar module and ground spike
- 2) Pump
- 3) "Y" connector
- 4) Extension cord
- 5) Battery station
- 6) Hose connection
- 7) Gland nut



3. ASSEMBLING

- 1) Unpack all components carefully.
- 2) Electrically connect the two solar panels and the input power cord on the back of the battery station through the "Y" connector and the extension cord as shown in the figure above, and then tighten the plug protection screws. Install the two solar panels at a sunny place by the ground spikes, adjust the angle to face the solar panels toward the sun.
- 3) Electrically connect the pump to the 18V output port 1 of the battery station and tighten the plug protection screw.
- 4) Mount the hose connection to the pump outlet by means of the enclosed gland nut. Thanks to the ball joint design, the angle of the hose connection could be adjusted under water when necessary.
- 5) Attach the hose onto the outlet of the hose connection. The hose connection is suitable for various hose diameters (inside diameter 25,32 or 38 mm).
- 6) Completely immerse the stream pump into the water.

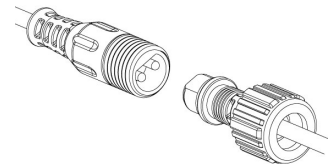
- 7) Turn the "ON/OFF" switch of the battery station to the "ON" position, then the "SYSTEM" status LED on the battery shows green and the system is activated. **The "SYSTEM" status LED may show red with battery outputting no power when the battery station operates for the first time, since the battery station may lose its energy during the storage. It just needs to be charged for several hours in the sunshine by facing the solar module towards the sun, then the "SYSTEM" status LED shows green and the battery station is ready to work.**
- 8) The power output will be automatically cut off while the battery station is discharged to its low voltage limit, and the "SYSTEM" status LED shows red in the meantime.
- 9) The "SYSTEM" status LED stays in red before the battery is recharged to its starting voltage. After recharged to its starting voltage, the battery shall continue to be charged for an extra hour with the "SYSTEM" status LED flashing red-green twice every 10 seconds. Then the power output is resumed and the "SYSTEM" status LED shows green again.
- 10) Activate the output port 1 by pressing the corresponding "OUTPUT 1 ON/OFF" button on the top of the battery station, the output 1 indicator shows green and the pump starts to work. To stop the pump, just disable the output 1 by pressing the "OUTPUT 1 ON/OFF" button again.
- 11) The "TIMER ON/OFF" button switches the running mode of the pump hooked up to output 1 between "intermittent mode" and "continuous mode". In the "intermittent mode" (i.e., "TIMER ON"), a build-in timer is enabled to run the pump for 10 minutes per hour to save the energy, and it is especially useful in winter or on cloudy days. In the "continuous" mode, the build-in timer is disabled and the pump shall run continuously until the battery exhausted.
- 12) The "CHARGING" yellow LED indicator lightens when the battery is being charged, otherwise the LED indicator shuts off.
- 13) If you want the pump to have longer operating time in the evening, then turn the battery "ON/OFF" switch to "OFF" position during the day time and turn it to "ON" position whenever you need.



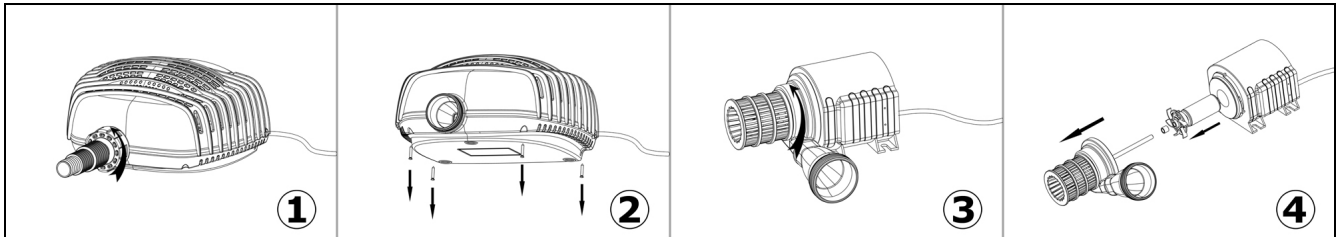
Note: * The battery will always be charged in the sunlight no matter whether the battery "ON/OFF" switch has been turned to "ON" or "OFF"! And the system automatically cuts off the charging current when the battery is charged to its high voltage limit (fully charged).

4. CAUTIONS

- 1) Any altering of the product itself or changing of the components voids warranty.
- 2) Do not connect the pump to any AC voltage power directly; it's ONLY for DC voltage power.
- 3) Operate the pump in water only (never above 40°C), especially keep it away from flammable liquids.
- 4) All the connectors are protected against reverse polarity as shown in the right figure. Don't insert the plug with reverse polarity by using unnecessary force.
- 5) The pump is dry run protected. The pump will automatically stop when there is no enough water.



5. CLEANING AND MAINTENANCE





If the pump starts losing power or stops working after operating for a certain time, please clean up the sediment inside the pump or the debris on the filter cribs.

The pump can be opened by unscrewing the four screws on the four corners of the filter housing bottom.

To clean the pump, disassemble the pump according to the above figure and then clean all the parts with water.

Be careful, never drop down the ceramic axis while cleaning the impeller, it breaks easily.

6. TROUBLE SHOOTING

Pump does not operate, please check the following possible reasons:

- 1) No connection to the power supply.
- 2) Impeller is blocked—to clean the pump as described in “**CLEANING AND MAINTENANCE**”.
- 3) To be sure the pump is fully submerged in water.

***Pump does operate but there is no water running through the tubes: Clear the tube and the filter to make sure the tube is through completely.**

7. TECHNICAL DATA AND PUMP CURVE

