

SOLAR AIR PUMP (SA3) KIT INSTRUCTION MANUAL

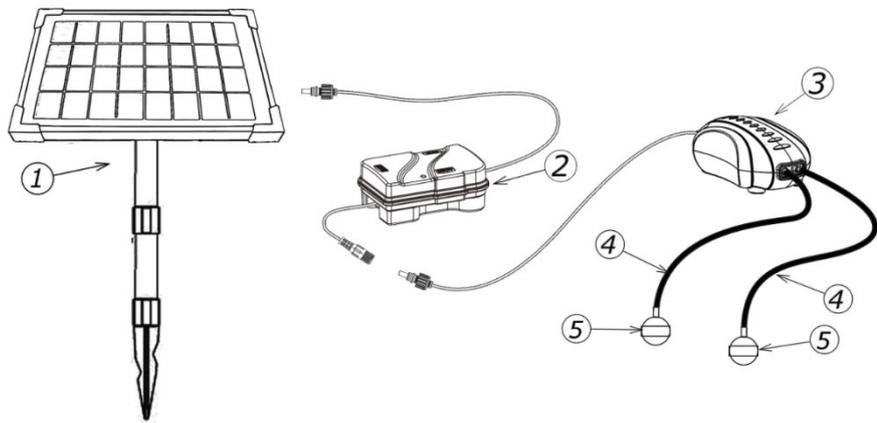
Item No.: 23SA203

1. OVERVIEW

- 1) The system is designed for oxygenating the water to create a healthy environment in any outdoor water body that keeps fish, such as outdoor aquarium, garden pond, and garden water feature.
- 2) The power supply of the air pump is provided by a battery which is charged by a solar panel, so that the air pump is capable of working at night and on overcast days.
- 3) In order to make the pump work by solar energy, the solar panel needs to be placed in the sunlight with its solar cells facing the sun as much as possible.
- 4) The latest DC brushless motor technology is used in the pump design, so that the air pump offers the highest efficiency and longest service life.

2. COMPONENTS

- 1) Solar panel
- 2) Battery backup
- 3) Air pump
- 4) Air hoses
- 5) Air stones



3. ASSEMBLING

- 1) Roll out the air hose and the cables on the air pump and battery backup.
- 2) Fit each of the two hoses to the connector of each of the two air stones.
- 3) Connect the other spare end of each hose to each of the two air outlets of the air pump respectively.
- 4) Place the air pump and battery backup on a dry and safe place near the pond. The place to sit the air pump should be higher than the water level to prevent the water from flowing backward into the pump through the hose when the air pump is not in operation.
- 5) Lay the two air stones in the pond, it is better to keep a proper distance between the two stones so that the air can be distributed more evenly and pervasively.
- 6) Put the three pieces of the ground spike together and mount it on the back side of the solar module with the gland nut.
- 7) Mount the solar module in a sunny place by the ground spike and face the solar panel towards the sun.
- 8) Insert the plug of the battery backup into the socket of the solar panel and tighten the nut completely.
- 9) Insert the plug of the air pump into the socket of the battery backup and tighten the nut completely.
- 10) Turn the "ON/OFF" switch on the back of the "ON/OFF" switch to "ON" position, then the indicator LED shows GREEN and the solar pump starts to operate. The LED may show RED when the battery operates for the first time, because the battery has lost energy slowly



during transportation. It just needs to be charged for 2 to 3 hours in the sunlight, then the LED turns to GREEN and the pump starts to work.

- 11) The air pump automatically stops running when the battery is discharged to its low voltage limit, and the indicator LED turns to red.
- 12) The LED stays in red before the battery is recharged to its starting voltage. After recharging to its starting voltage, the LED then changes to yellow and the battery will continue to be charged for extra 2 hours. Then the pump automatically operates and the LED turns green again.
- 13) If you need the air pump to run with no or insufficient sun shine, pre-charge the battery by turning the "ON/OFF" battery switch to "OFF" position in a sunny day time and turn it to "ON" position to run the pump when necessary.

Note: * The battery will always charge in the sunlight no matter whether the "On/Off" switch has been turned to "On" or "Off"! The system will automatically cut 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 dip the air pump in water, it is not waterproof.
- 3) Do not leave the battery back-up in direct blazing sunlight or heavy rain; do not dip it into water; do not expose it to extremes of heat or cold which can affect its service life. If possible place the battery in the shadow of the solar panel.
- 4) Do not expose small components, such as air stone, to children since they may swallow the small components and therefore be suffocated.
- 5) Do not strike the solar panel.

5. CLEANING AND MAINTENANCE

The air system requires little maintenance. The following two points must be completed regularly.

- 1) Keep the surface of the solar module clean and wipe it with soft and moist cloth when necessary.
- 2) Check the air stone from time to time and replace it with a new one if the stone is blocked.

6. TROUBLE SHOOTING

*Pump does not operate even though the solar panel is in full sunlight, please check the possible failures below:

- 1) In cloudy or rainy days, the battery cannot get sufficient power supply during the daytime. The indicator stays in red, which means the battery is in low voltage, it needs to be charged in a sunny day.
- 2) No connection—check the electrical connections.
- 3) The storage battery inside the box may lose efficiency after a year and a half and therefore needs to be replaced.

7. TECHNICAL DATA

Solar Panel:	Air pump:	Battery backup:
Power: 5 Watt Nominal voltage: 7.68 V Nominal current: 651 mA Safety class: IP 44	Operating voltage: DC 6.4V Max flow rate: >3 LPM Max. air pressure: >500 mmHg Safety class: IP 44 Cable length: 6ft Hose length: 15ft; 2 pcs	Storage battery: Fe-Li, 6.4V, 3000mAh Input voltage: 8V-9V Output voltage: 6.4V Safety class: IP 44 Cable length: 4ft



WARNING: Discharged batteries are still explosive and contain toxic chemicals. NEVER DISPOSE OF A BATTERY BY THROWING IT INTO THE TRASH, LANDFILL, INCINERATOR OR TRASH COMPACTOR. Take it to a service station or recycling center.

