# OXYBOX© SI & SII- (inc Revised SIII)

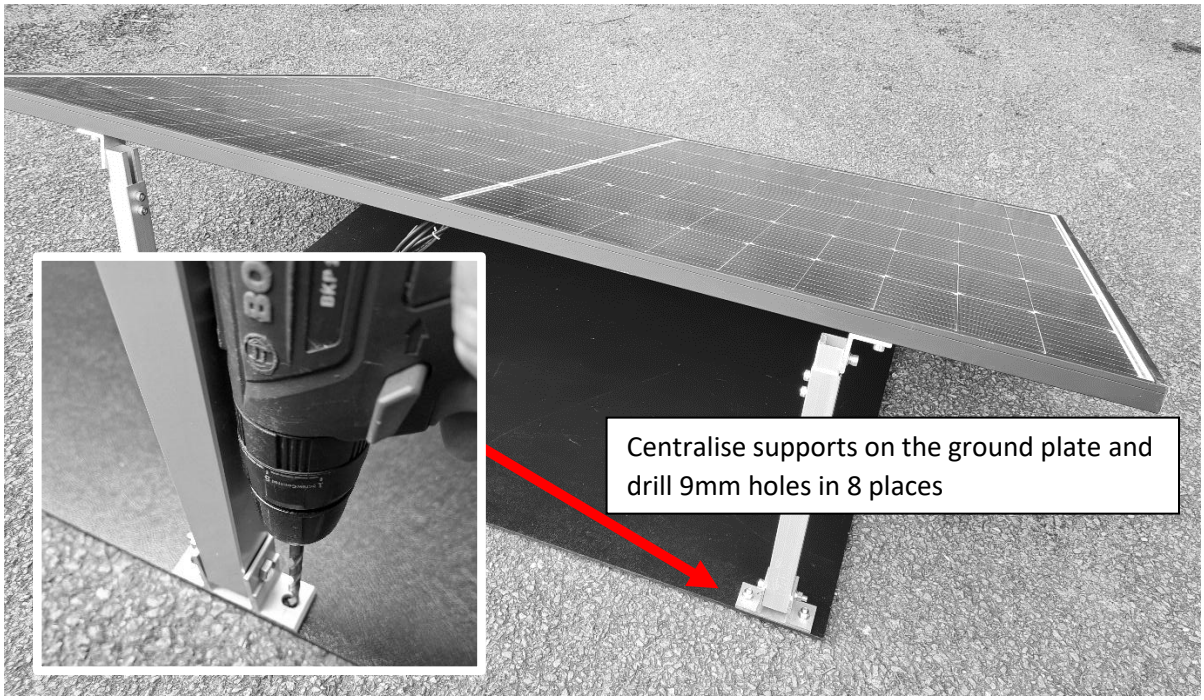
# ASSEMBLY INSTRUCTIONS – Rev 3.4

**SOLAR AERATION SYSTEMS**

For float kit please see Appendix ‘A’ first

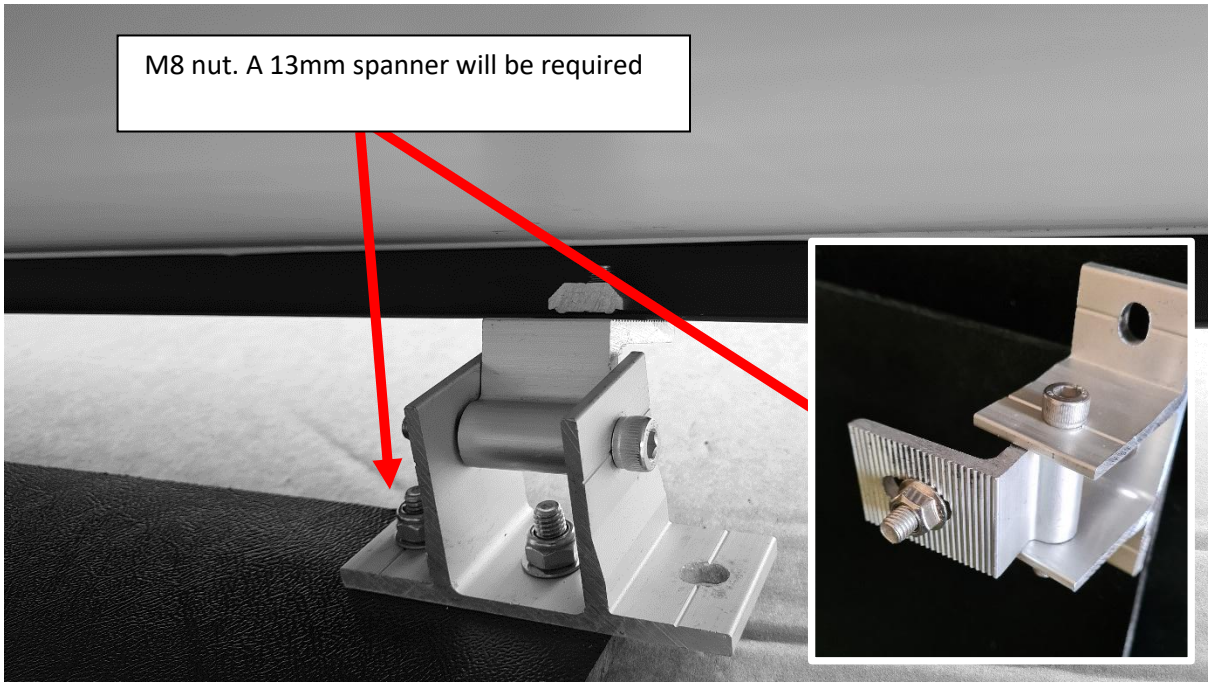
## 1. Panel support

The two aluminium support posts and brackets are supplied to fit on a Polypropylene ground plate or with self tapping screws to a deck or frame.




## 2. Attaching the brackets

On the 4 brackets, there are M8 nuts that sit on the inside of the solar panel rails.



View showing fixing towards the top of the supports, use a No.6 Allen key.

## 3. Battery positioning

For the Oxybox SII, the batteries can sit underneath the solar panel on the ground plate.

( NOTE: Battery positions are different for floating units as shown in Appendix A


IMPORTANT: Always connect batteries before solar panels and vice versa.

Sit the Oxybox on the ground plate and connect the battery. **Red to +VE** & **Black to -VE**, then tighten up the battery bolts using 13mm spanner. It's good idead to put grease or Vaseline around them. If multiple batteries are used, connect them all in parrallel.

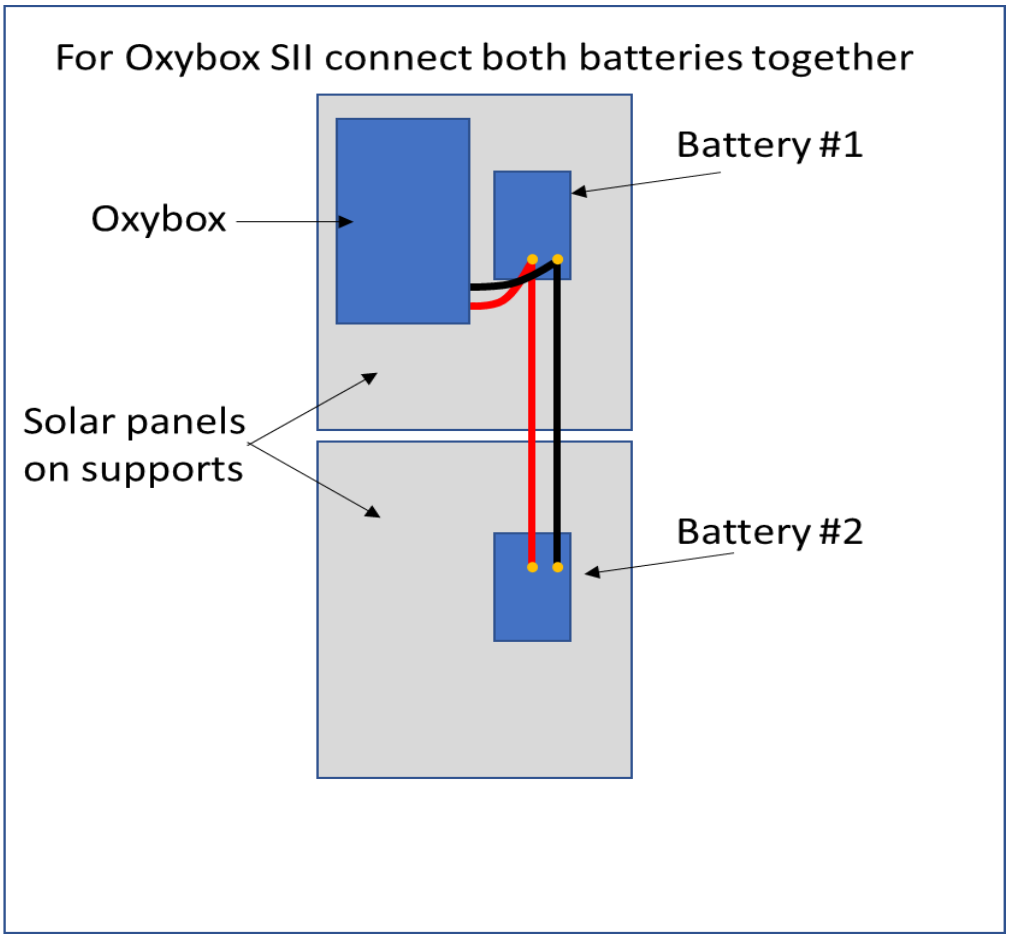
E.g Red-Red, Black-Black.


For the Oxybox SIII, the batteries also sit underneath the panels, the box can sit in front and connected as the SII.

On the Oxybox SIII, the pressure ports are on the side of the unit.


For the revised Oxybox SII, two panels and supports will be supplied. The pair of Oxybox batteries can be configured as the sketch below. Alternatively if shorter battery links are supplied, the batteries can sit together on one ground plate.

The solar connections can also be linked across with the black solar link cables supplied.



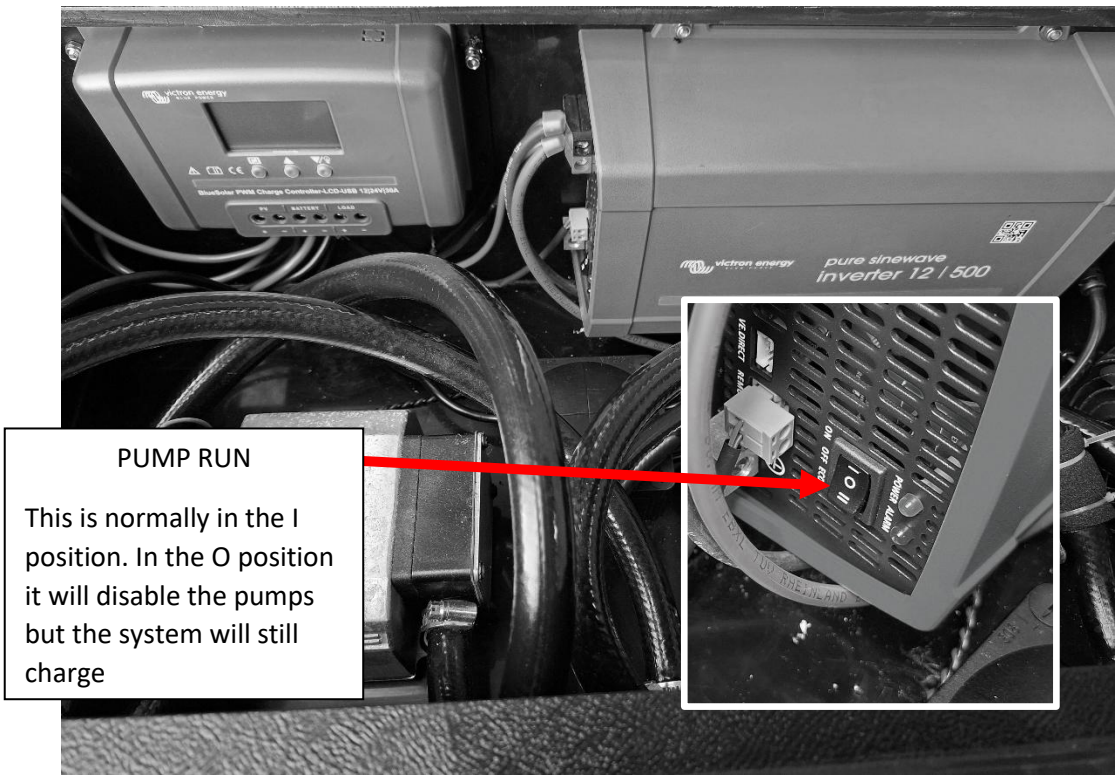
4. After battery connection, check that 12V power is on the front panel

(Note – The battery meter may be different to the one shown below)


*During charge, the LED meter may go into the green band to 13.8V. When the pumps are running this may drop to 11.5 – 12.5V. If the battery drops to 11 volts the system will shut down and await a sunny day*.

## 5. Inverter control box

The inverter control box has an internal overload system that protects the pump(s) This will be in a different positon dependant on the Oxybox type.




PUMP RUN

This is normally in the I position. In the O position it will disable the pumps but the system will still charge

## 6. Setting the timer and run times.

Lift the timer off it's Velcro pad to aid setting.


A popular setting is 6 hrs from 2:00-8:00 am then 2 hours 17:00 to 19:00

Alternatively, the run times can be staggered across a whole day  e.g 20 mins on each hour.

Times will need to be changed to suit the amount of sunlight the panels obtain thoughout the year. The system can be left to run through winter for a few hours and is usefull if ice forms to release entrained gases.

## Setting the Digital Timer:

Timer button functionality:

| | | |
|---|---|---|
| **1-** | **Ⓟ** | **Timer control** |
| **2-** | **D+** | **Day Adjust** |
| **3-** | **H+** | **Hour Adjust** |
| **4-** | **M+** | **Minutes Adjust** |
| **5-** | **🕒** | **Clock adjustment** |
| **6-** | **C** | **Reset** |
| **7-** | **Man** | **Manual override** |
| **8-** | **C/R** | **Cancel** |

## Setting the current Day & Time -

Press and hold the CLOCK button. Whilst depressed, press the D+, H+ and M+ button in turn to set to the correct day & time.

Either holding down or pressing repeatedly can advance the day, hours or minutes.

## Setting the On/Off times -

The time switch has 17 on/off programmable segments that can be set.

You can select individual days or blocks of days already set in the timer memory

For each ON and OFF time, the days, hours and minutes must be set.

There are 17 or 20 programmable segments that can be changed according to the Oxybox system type.

The number of hours run time will depend on Geographical locations. For example, run times in South of France will be considerably longer than those for an Oxybox installation in Wales. See section 7 for typical run times.

Press the **P** button once to set the ON time – You will see ‘on’ and the number ‘1’ appear on the LCD display.

Press the **D+** button to select an individual day or block of days, then set the hours and minutes using the **H+** and **M+** buttons.

When set, press the **P** button to validate and move to the OFF time. You will see 'OFF' and the number '1' segment appear.

Press the **D+** button to select days, hours and minutes and adjust using the **H+** and **M+** buttons as above.

When complete, press the **P** button to validate then press the clock button to quit.

You can then repeat for the next remaining 16 ON/OFF segments as required for summer or winter settings.

When complete, press the CLOCK button to return to the main clock display.

Ensure the programmer is in **AUTO** mode as indicated on the LCD display. Use the top right button to press from 'on-auto-off' as viewed on the bottom line of the display.

## OPTION: Remote Override/Enable

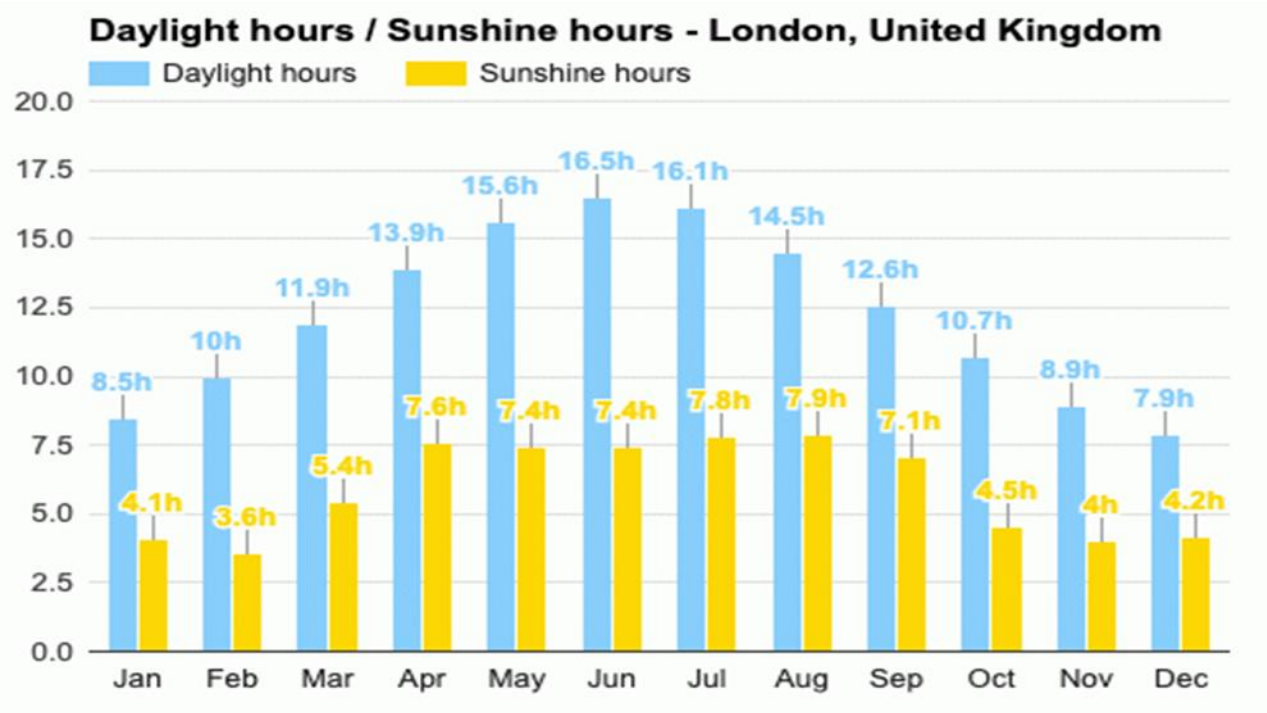
To normally override the system, use the remote control provided. When this is enabled by pressing the **A** button on the keyfob, the Oxybox will run for 60 minutes. Pressing the **B** button again will reset the 60 minute override.


This timing is factory configured and cannot be adjusted by the user.

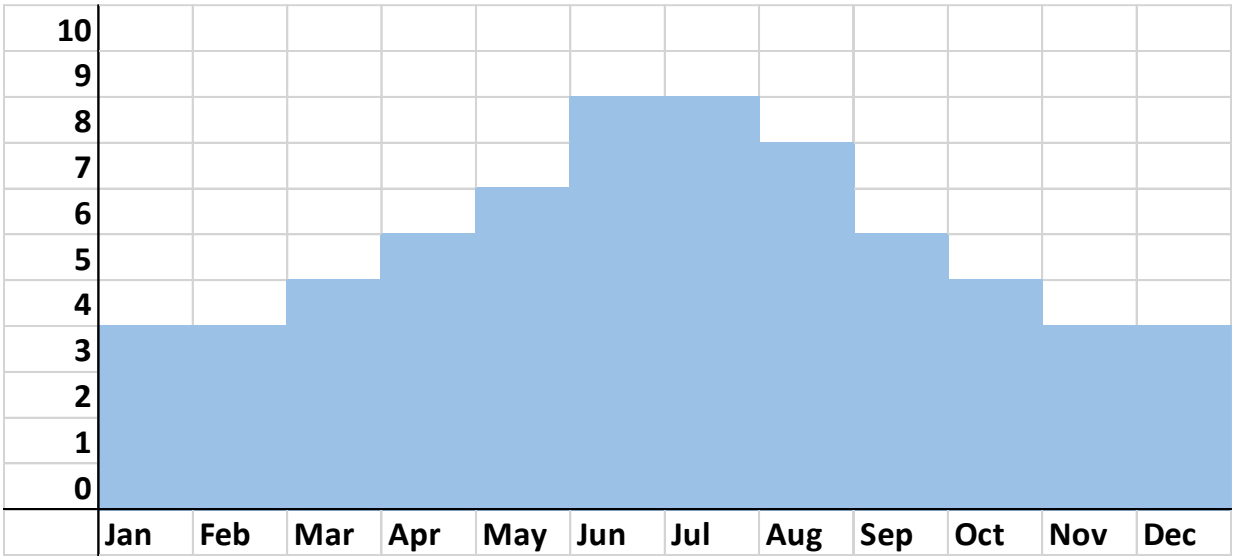
## 7. Typical run time settings

Although the Oxyboxes are designed to run >8 typical per day* based on average sunlight conditions. Throughout the year the elevation of the sun changes and the run times will have to be adjusted.

**Higher run times achievable if more panels & battery combination have been supplied*




Adjust the Oxybox run times to suit the season:



8. Connect the solar panel wires to the Oxybox inputs. If two panels are used, plug straight into the Oxybox Solar connection not from the 2 to 1 splitter.

   **(Note on newer boxes the splitter is not used and connection can be direct to Oxybox)**

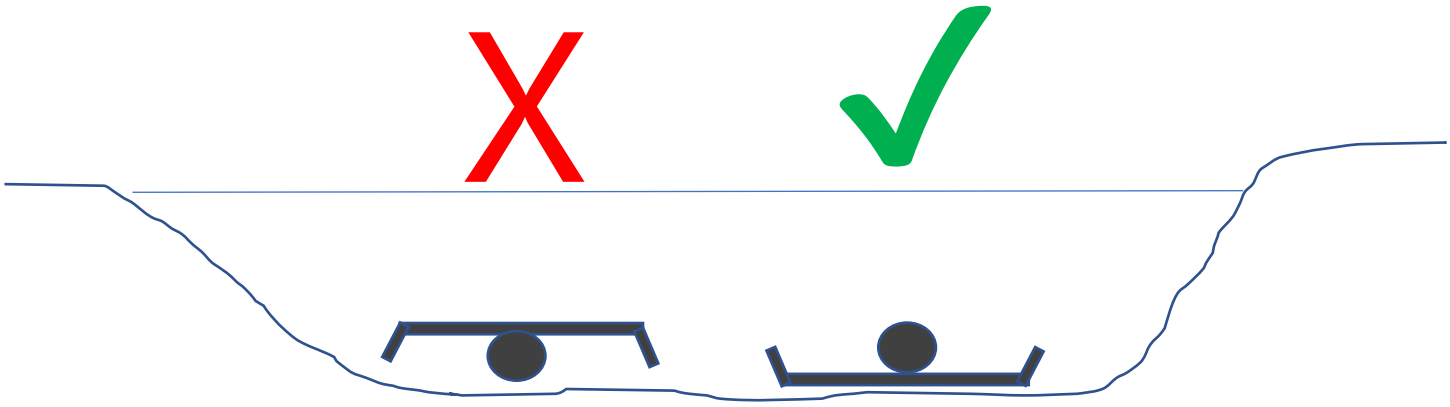
Connect hoses to the Oxybox ½" pipe fittings with pipe clips to suit. To aid fitment, the self sink hose can be softened by holding in a flask of boiled water

Fill the supplied diffusers with pea gravel or similar and knock home the end caps supplied.

Ensure the diffusers are ‘tie-wrapped’ around the diffuser and associated holes.

If support trays are used, ensure the diffusers are sitting the correct way around when it is sited in the water as the diffused action will not occur.

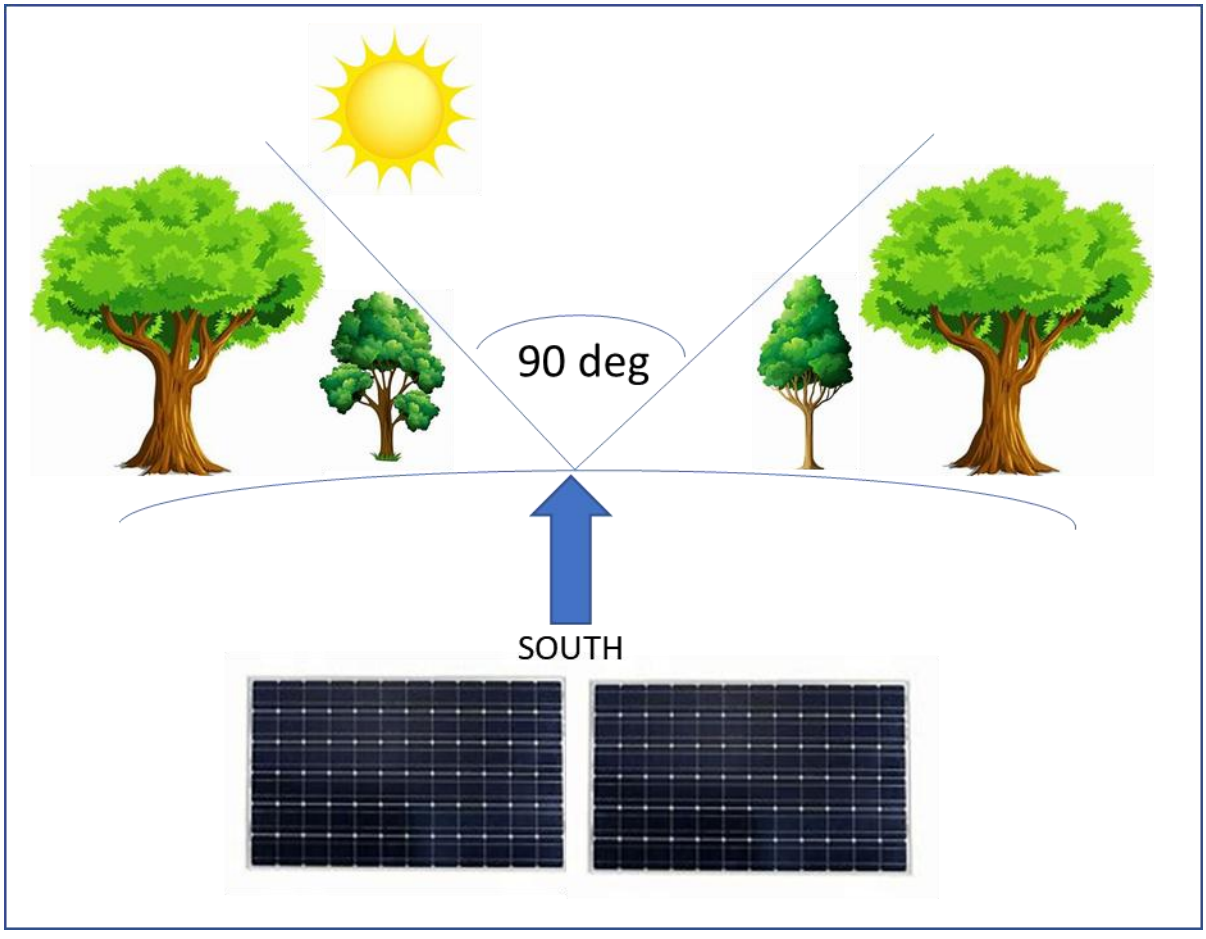
If it is placed incorrectly large bubbles will be seen.



Positioning of the solar panels is critical to get maximum run times. Ensure the panels have at least a 90deg clear line of sight to the South as shown below.

Ensure any foliage is regularly cleared from around the panels and branches are cropped to stop shadows being cast.

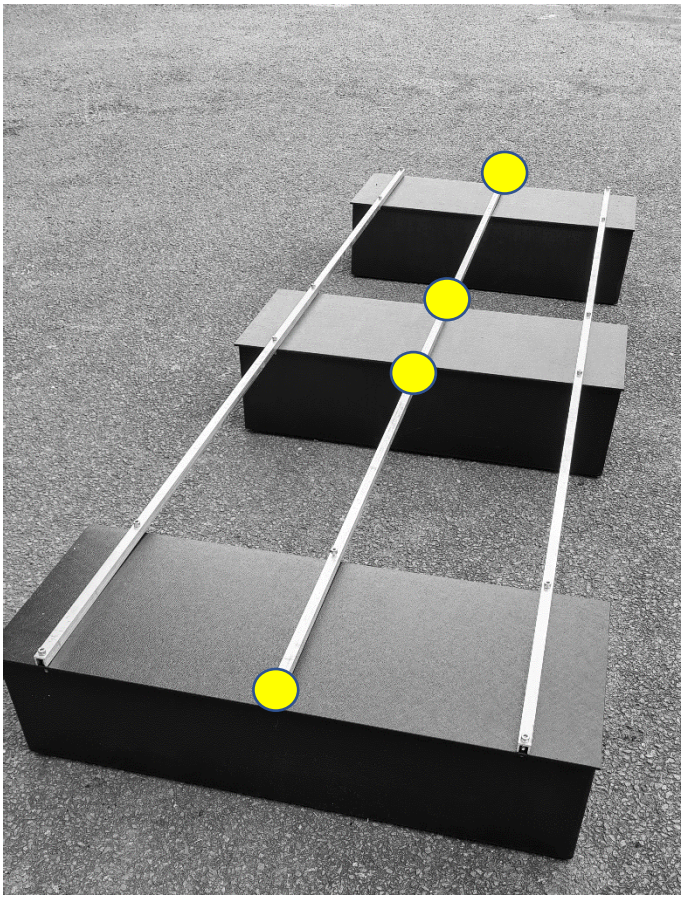
The panels should be cleaned every 3-4 months as they tend to gather dust being close to the ground and to remove bird dropping etc. Use soapy water and a squeegee.



# Appendix A

## Float kit dual panel

Layout 3 floats and rails as shown.

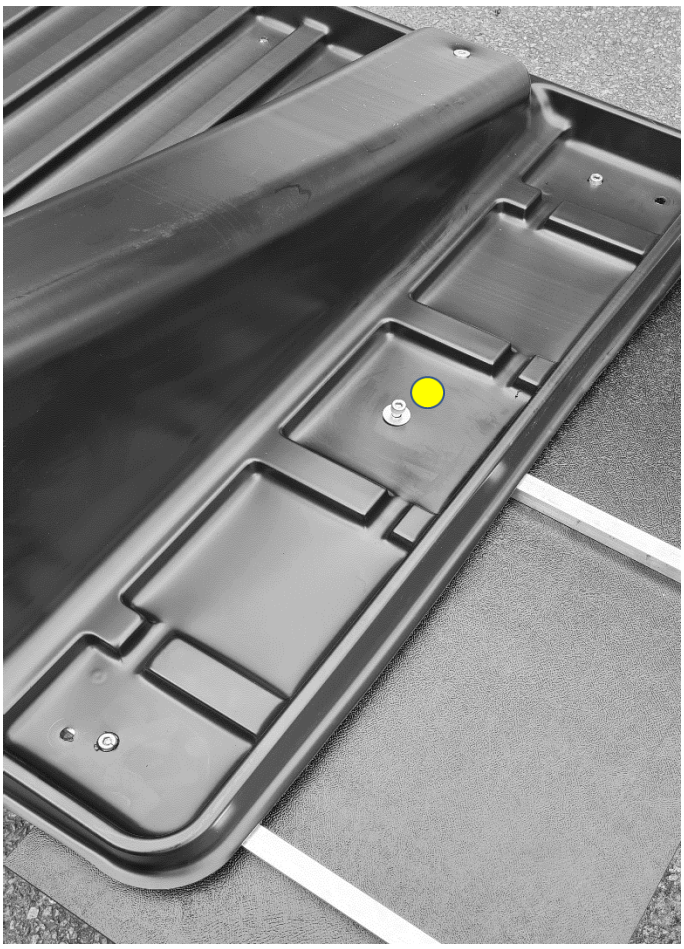


Secure the rails to the floats with the M8 HEX bolts and nuts provided, 14 positions.

**DO not** install them at points marked ● at this stage.

Ensure **U** channel sits this way:

Sit the consoles on the supports. Each console is secure with the M8 bolt, penny washer and nut.



Use these to fasten at the two points shown for each console.

Image of completed float + consoles.

Please note location of the batteries. These are connected by the link cable proved.

As these have no fluid inside they normally lie on their side.

The pump box can sit on either console.

Now follow the guide from section 2 onwards to complete assembly.

For any more advice or troubleshooting required, call us as below

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