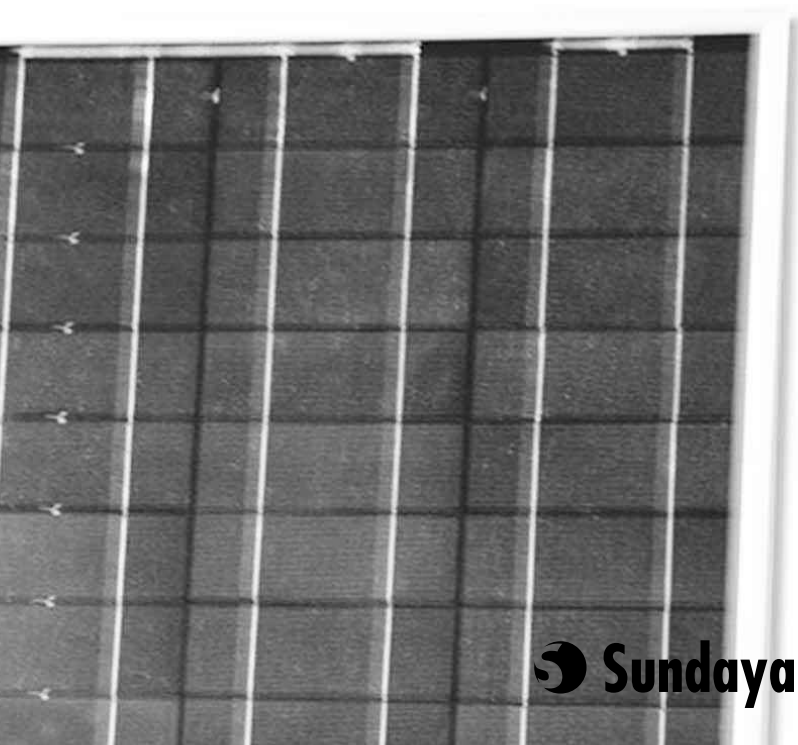


# Fixed PV Module Installation Manual



 **Sundaya**

# Introduction

Congratulations. You are now the proud owner of a fine Sundaya product. May you enjoy its usefulness for many years to come.

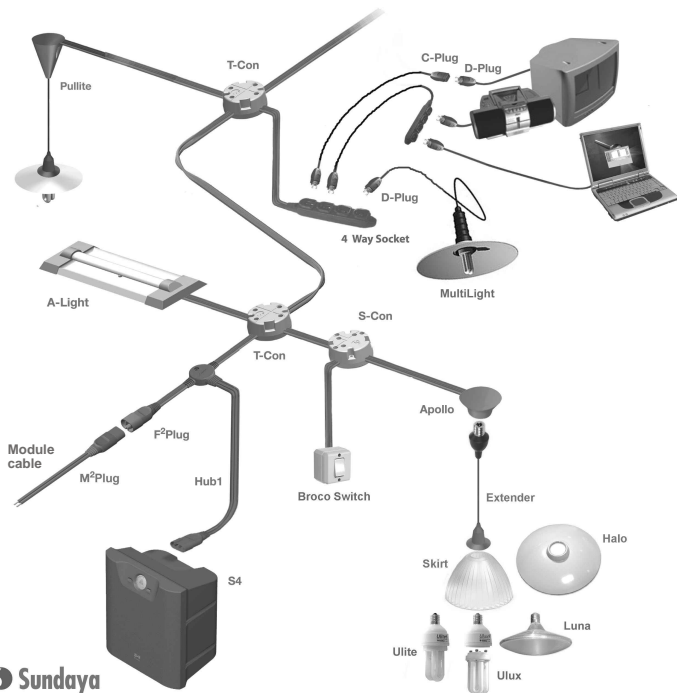
This manual will show you how to install the Photovoltaic Module to use with your Sundaya system.

Please read carefully this manual thoroughly before starting the installation. Familiarize yourself with all the parts supplied. Then, follow each step of the instructions carefully and correctly. Any Sundaya product is designed to be easily installed without the use of sophisticated tools, other than those provided in your package.

**Sundaya**

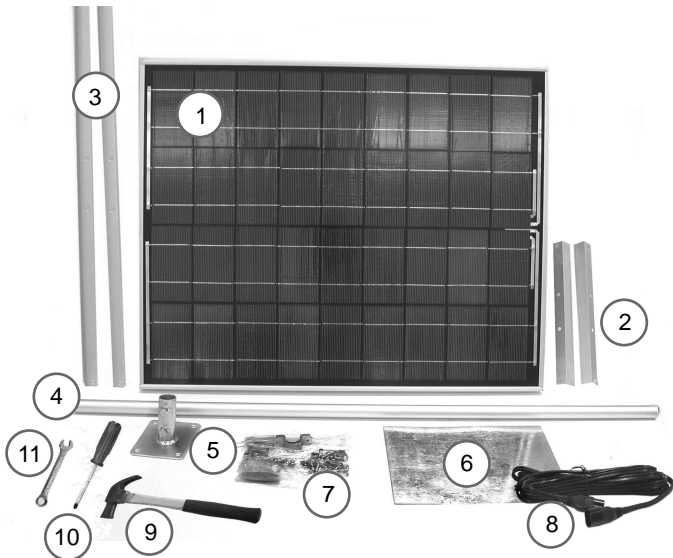
# The Sundaya System overview

A sample installation showing the Plug & Play concept:



# Fixed PV Module Set

The fixed-position Sundaya PV Module set consists of:

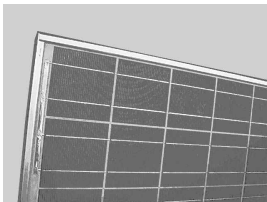


1. PV Module
2. Support angles
3. Module support
4. Support pole
5. Base plate
6. Zinc plate

7. Installation material (clamp, nails, Neogum, washers, nuts and bolts).
8. Module cable
9. Hammer
10. Phillips screwdriver
11. Wrench No. 11

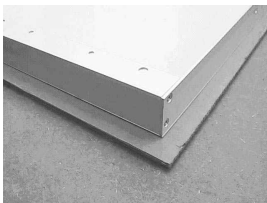
# Installing the PV Module

1



Unpack the module and check that the module's glass surface is in good condition (not scratched nor cracked).

2



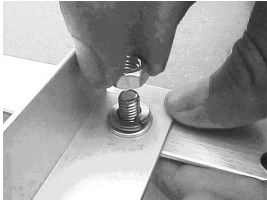
Lay a soft cloth or mat on a flat surface, and place the module over it, facing downwards.

3



Place the two support angles such that they each join the two opposite sides of the module frame. The bent angle should be facing each other. Align them over the holes on the side of the frame. Prepare for each hole a set of bolt, two washers, spring washer and nut.

4



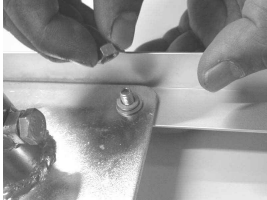
Mount the two supporting angles to the module frame by inserting bolt and washer from below the module frame, and then from above attach to the bolt in the following order: the other washer, spring washer and nut. Do not fasten yet.

5



Insert module cable into the hole in the middle of the base plate.

6



Attach the base plate to the two support angles using bolts, washers and nuts in the same order as before.

7



Tighten the four bolts on the base plate. Then tighten also the four bolts on the support angles.

8



Open the junction box on the module.

9



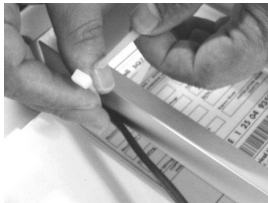
Insert the module cable through the rubber washer into the box.

10



Connect the red cable to the positive terminal (+) and the black cable to the negative terminal (-), making sure the metal connectors are clamped under the washers. Tighten the screws.

11



Tie the module cable to the module support. Allow some slack to the cable. Then close the junction box.

12



The PV Module is now ready to mount on the support pole.



13



Choose the spot on your rooftop where the support pole will be installed. Consider a spot that allows maximum sunlight exposure. Open a few roof tiles around the selected place.

14



Make sure the support pole can later be attached upright on the roof beams.

15



Make sure you have about 50cm of the pole protruding above the roof tiles.

16



Nail the first clamp to the pole's lower end, and hammer firmly a strong nail into the roof beam, right under this end, such that the nail can later support the pole's entire weight.

17



Nail the other clamps at middle of the pole's length, to strengthen the installation on the roof beam. Make sure the pole is still upright.

18



Take a roof tile and the zinc plate provided.

19



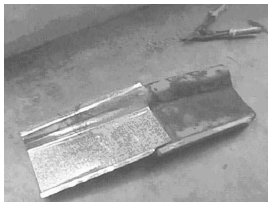
Bend the zinc plate along one edge, imitating the bend on the roof tile.

20



Align the zinc plate over the roof tile, and push down firmly on its surface to copy the roof tile's form.

21



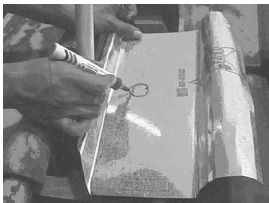
You may use steel shears to cut down the zinc plate to the same size as roof tile.

22



Position the zinc plate on the roof, below the pole, so that you can determine where along the plate's width the pole will poke through the plate.

23



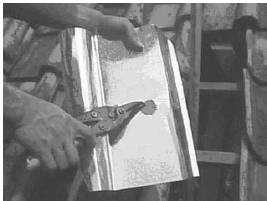
Then place the plate beside the pole to determine that position along the length of the plate. Draw a circle the size of the pole's diameter, at the point where the two measurements intersect.

24



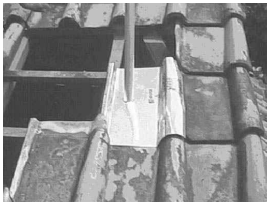
Puncture the plate, then cut out the circle to make a hole for the pole.

25



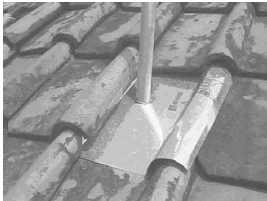
Use steel shears to cut larger the circle such that the pole will fit through the hole.

26



Inserting the pole through the hole, push the plate down the pole until the plate fits snugly among the other roof tiles.

27



Put the other roof tiles back in place.

28



To prevent leakage where the support pole meets the zinc plate, completely seal this area using the Neogum sealer provided, making sure there are no gaps or cracks.

29



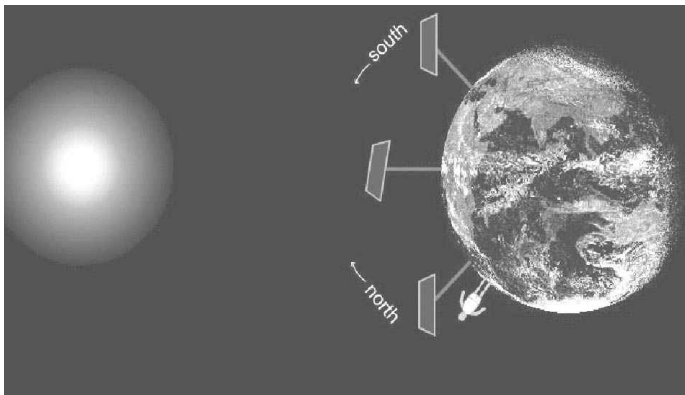
Take the module and insert module cable into the pole, making sure the cable comes out at the other end.

30



Mount the module support on the pole, making sure the module cable goes all the way in the pole and not get caught in between.

# Determining orientation & inclination



The installation of a PV Module is determined by your location with respect to the Equator. If you are located North of the Equator, orient the PV Module facing South. If you are located South of the Equator, orient the PV Module facing North. In addition, the amount of inclination you should give to the PV Module is charted below:

<i>Latitude Position</i>	<i>Inclination angle of the PV Module</i>
0-15°	15°
15-25°	25°
25-30°	30°
30-35°	40°
35-40°	45°
40-90°	65°

31



After finding the correct orientation and inclination of the module, fasten the module support to the pole.

32



Nail the module cable neatly to the roof beams, making sure there is enough slack to the cable. Plug the other end of the module cable to the Hub1.

33



The PV module installation is now complete.



# Troubleshooting

Symptoms

Diagnosis

Remedy

PV Module does not produce power

*Module cable not yet connected*

Check and plug in cable.

*PV Module may be damaged*

Check PV Module's output with a multimeter, if no current nor voltage is detected, the panel may be damaged. Contact your service center or authorized dealer.

*Module cable faulty*

Check the module cable. Contact your service center or authorized dealer, for a replacement cable.

*Note:*

The products and materials depicted in the photos are for the Manual's illustration purposes only. As product design is subject to constant improvement, actual product may vary.

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