DUAL-AXIS SOLAR TRACKER
Manual

Contents

Safety Caution

PLEASE READ CAREFULLY BEFORE PROCEEDING

The user should read and follow the manufacturer's instructions for each component of the system. These instructions should be provided to the user of this equipment. The user should understand these instructions before using this equipment. The manufacturer's instructions should be followed for the proper use and maintenance of this equipment.

• Make sure that the surface has the strength to handle the weight of both solar panels and this bracket.

• Use bolts, nuts, and gasket to make the solar panels and brackets firmly connected

• Always loosen the corresponding screw before adjusting the angle or direction of solar panels. Never force this adjustment when the screw is still tightened.

• Some components may deteriorate over extended periods of time due to wear or corrosion. For safety, the system should be checked regularly

Product Overview

Eco-$mart's dual-axis solar tracker is perfect for mount of 4-6 pieces solar panels, it can make the panels face to the sunlight for more irradiance absorption and electricity generation. With the attached controller, you can manually change the angel anytime.

The package includes:

Main pole	White rods
Mounting rods	Drive rods
Controller	Sunshine sensor
Air speed sensor	Nuts and bolts

Components Description

Image	Model	Quantity
	Main pole A	1
	White rod B	1
	White rod C	1
	White rod D	1
	White rod E	2
	Long u-type connector	2
	Mounting rod G	8
	Short u-type connector	8
	M14*90 Latch	1
	M10*50 Latch	2

	M10*20 Screw	8
	M8*90 Screw	3
	M10*100 Screw	4
	M8*20 Screw	8
	M10*60 Screw	16
	M10*40 Screw	1
	M6*12 Screw	2
	M4*16 Screw	4
	Expanding screw M10*8	8
	Drive rods base	4
	Middle clamp	6

	Side clamp	12
	Short drive rod set	1
	Short drive rod set	1
	Controller	1
	Sunshine sensor	1
	Sunshine sensor base	1
	Air speed sensor	1

Installation Guide

Overview
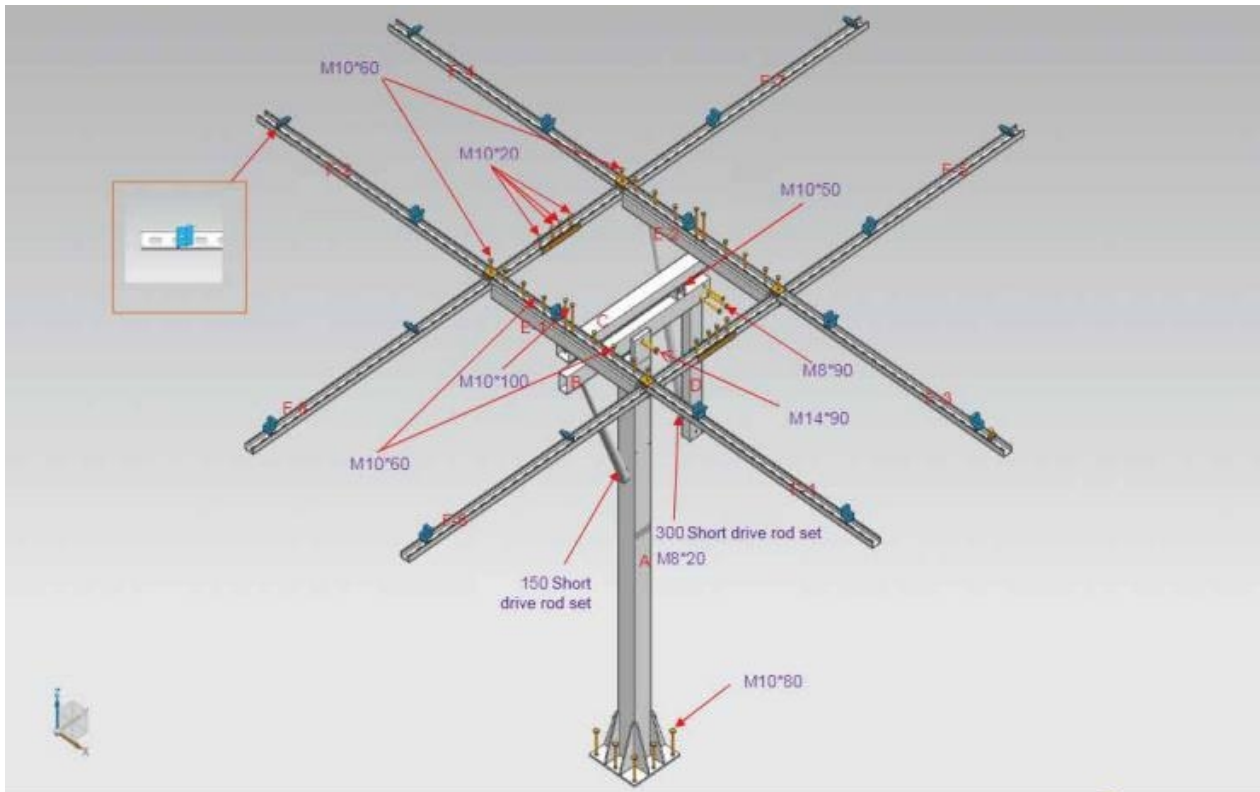
1.Place the main pole

There are four marks (S,N,W,E) on the pole's each side. When place the main pole, the marks should face the exact directions of your house or yard.

After choosing a position for it, drill the pole into ground or some surface, remember the surface should strong enough to hold the weight of tracker and panels.Use an impact drill to drill a hole with a diameter of 12mm and a depth of 55mm in the marked position. After drilling the hole on surface, use the M10x60 expansion screw to firmly fix the pole.

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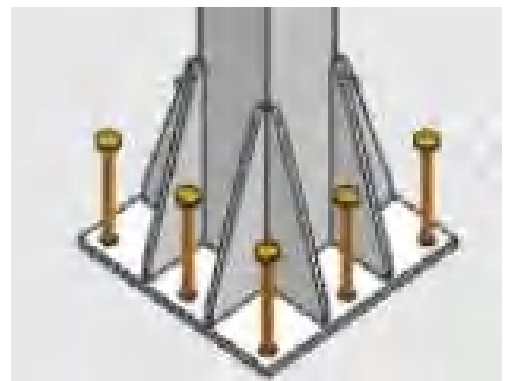
2.Put on the white rods

First, use the M14*90 latch in package to fix the B rod onto the main pole

Put the C rod on B rod with M10*50 latches

Use 3 of M8*90 screws to fix D rod on B rod side, the angle between D and B rods should be 90°

Use M10*100 screws to fix the E-1, E-2 rods on C rod

3.Install the drive rods

Use M8*20 screws to fix one small base onto the "S" side of main rod. Do the same to the downside of B rod

Put the short drive rod on the two bases, the head on the main rod one. Use the latches inside drive rod package to fix them.

Same way to fix the long drive rod on between E-2 rod and D rod

4.Put on the mounting rods

Put on the cross rods G-3 and G-4 on E-2 rod with M10*60 screws(for firmly holding the panels, the screw should be put into the second hole of G-1, G-2 rod). Same way to fix G-1, G-2 rods on E-1 rod

Use M10*60 screw to fix F-1 rod vertically on C rod. Do the same to F-2 rod

Fix the 2 of left G-8 rods with long u-type connector, this will use 4 of M10*20 screws, same way to fix the other 2 G-8 rods on the right side.

As for the four connecting sections of other rods, use the short u-type connector and M10*60 screws to fix them.

5.Wire connection

Use screwdriver to loose and open controller's cover. Inside, there is one circuit board

Connect the drive rods cable to its ports. Short drive rod cable to the third port, red cable to the left terminal, black cable to the right terminal. Long drive rod cable to the fifth port, same way to connect the terminals. The second port is for air speed sensor, there is marks on the cable, wire "G" cable into "G" terminal, and "IN" cable into the "IN" terminal. To operate the whole tracker, the controller should be connected with one 12V battery. Wire the battery cable into the fourth port, so that all connections get accomplished

Put on the cover again by screwing those four sides screws.
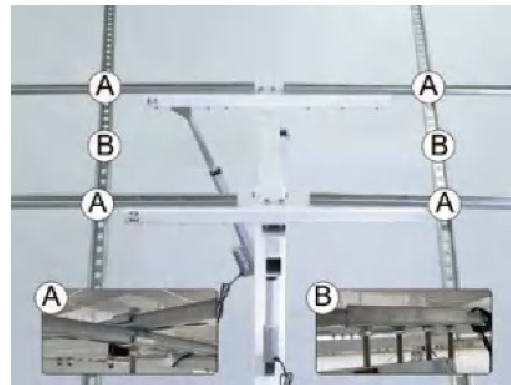
6.Install controller&sensors

The controller should be put on the "E" side on the main pole, use suitable screw to fix it.

The sunshine sensor needs to be put on the mounting rod. To make it sense the sunlight when sunrise, it should be fixed on the top right corner of the brackets. There is one clamp set for putting it on, just use screwdriver to tied it

The air speed sensor needs to be put on somewhere with good ventilation, to sense the wind without any block

7.Mount the solar panels
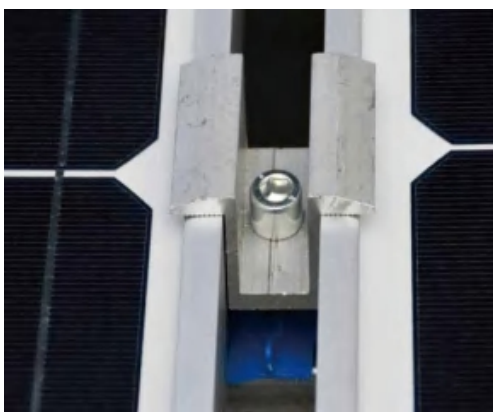
Use the clamps in package to set panels on the whole bracket, double-head middle clamp to put in the middle of two panels, the one side clamp to fix one panel's side. Use the hexagonal screwdriver to make them tightened

The cross rods could hold maximum of 4*200w panels

The vertical rods could hold 2 panels, one on the upside, the other on the downside. Each panel should be put on its side when installation

Cross rod length: 114.2in(2900mm) width:29.4in(1000mm)

Vertical rod length(each side): 45.6in(1160mm) width:30.3in(770mm)
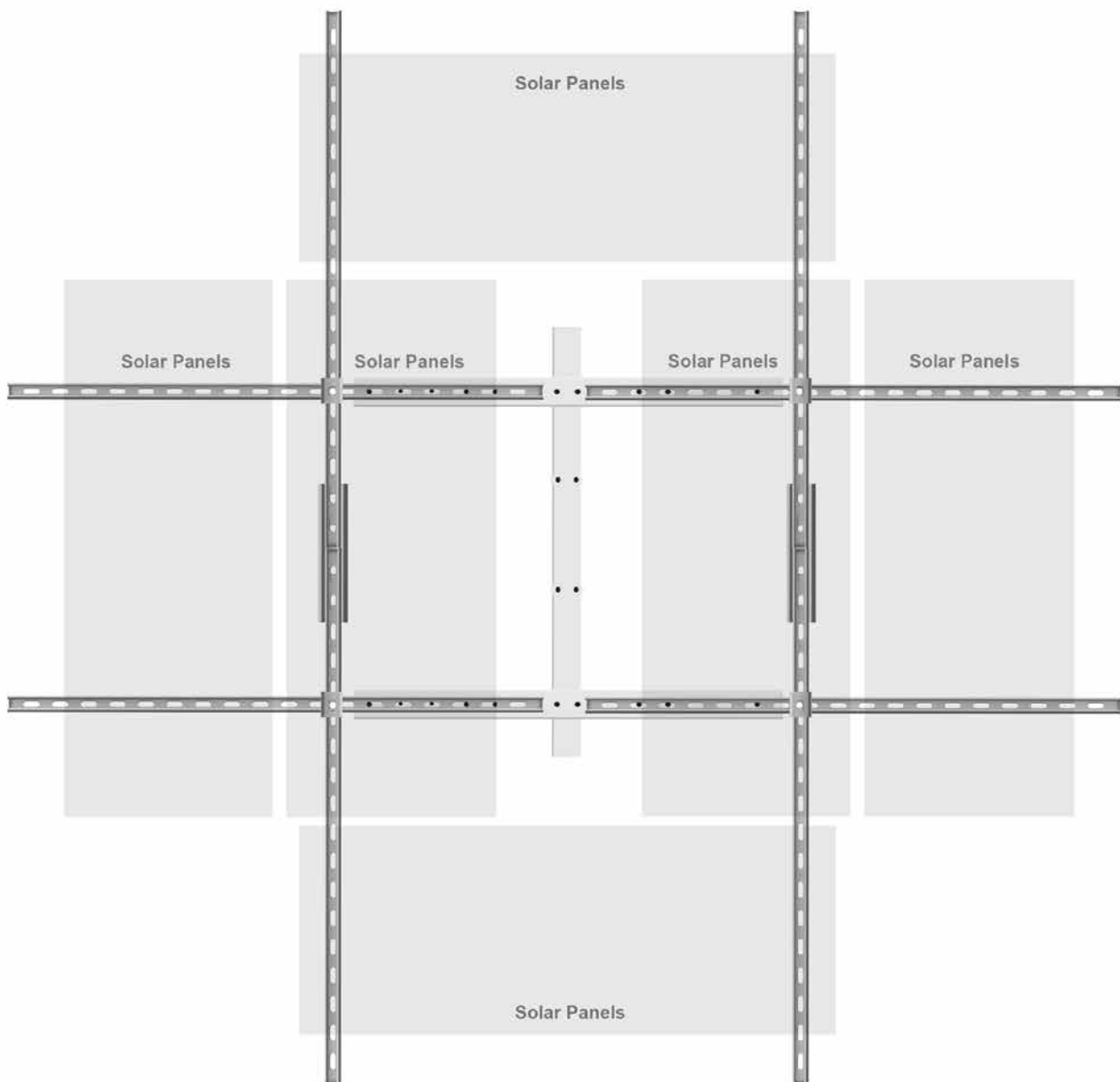
Support

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If you are experiencing technical problems and cannot find a solution in this manual, please contact Eco-$mart for further assistance.

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