

H180 H-H Motor



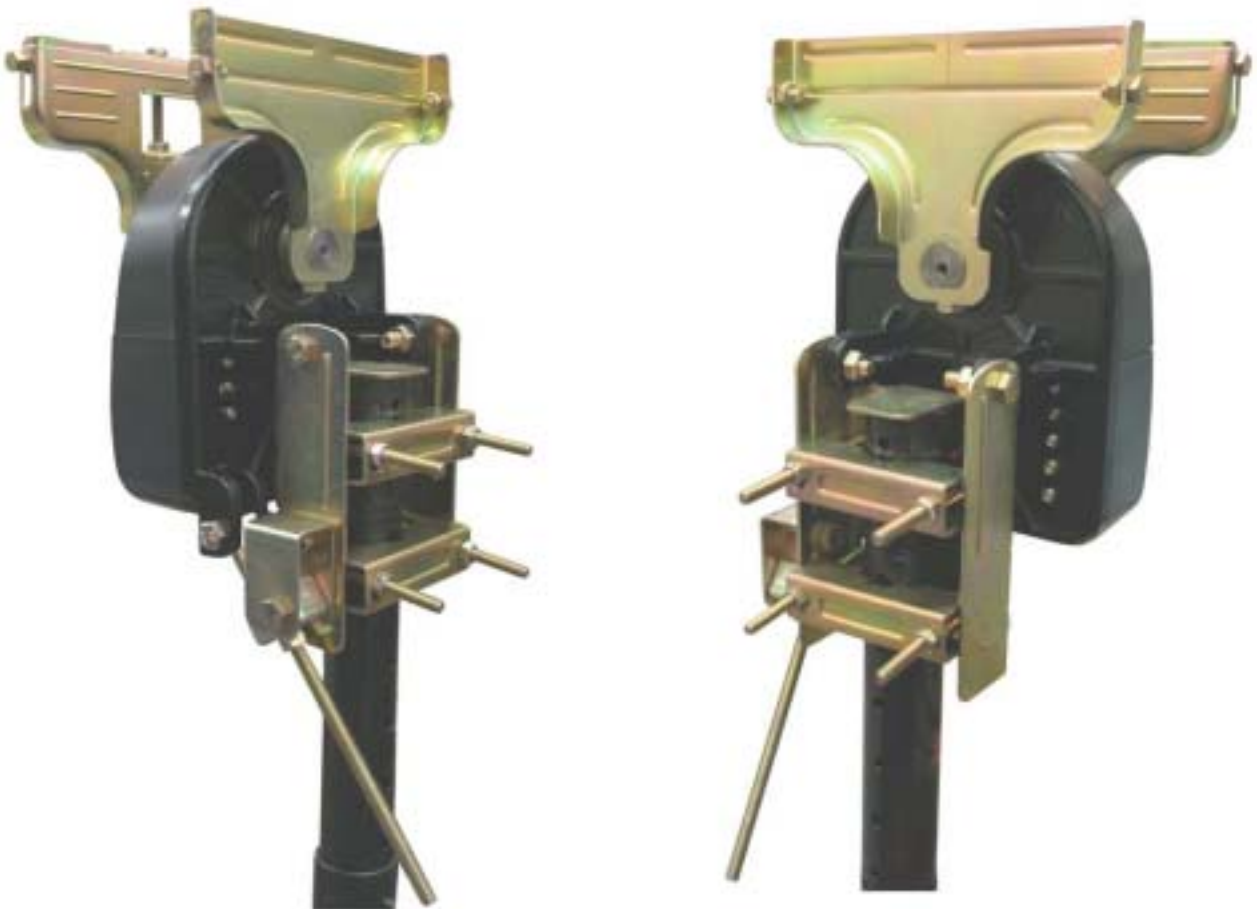
☆ Specification

Model	: H180
Dish Size	: 180 cm Max.
Dish Weight	: 27KG Max.
Speed	: 1.8° / sec w/180cm dish
Azimuth Angle	: 80°East ~ 80°West (160°)
Elevation Angle	: 0 ~90°
Declination Angle	: 0~8°
Diameter of Mounting pole	: Ø 55~72 mm
Input Voltage	: 36VDC
Power Consumption	: 350mA (Normal) / 750mA (Max.)
Positioning Sensor	: Reed switch
Limit Protection	Hardware Limit Switches Software Limits by positioner

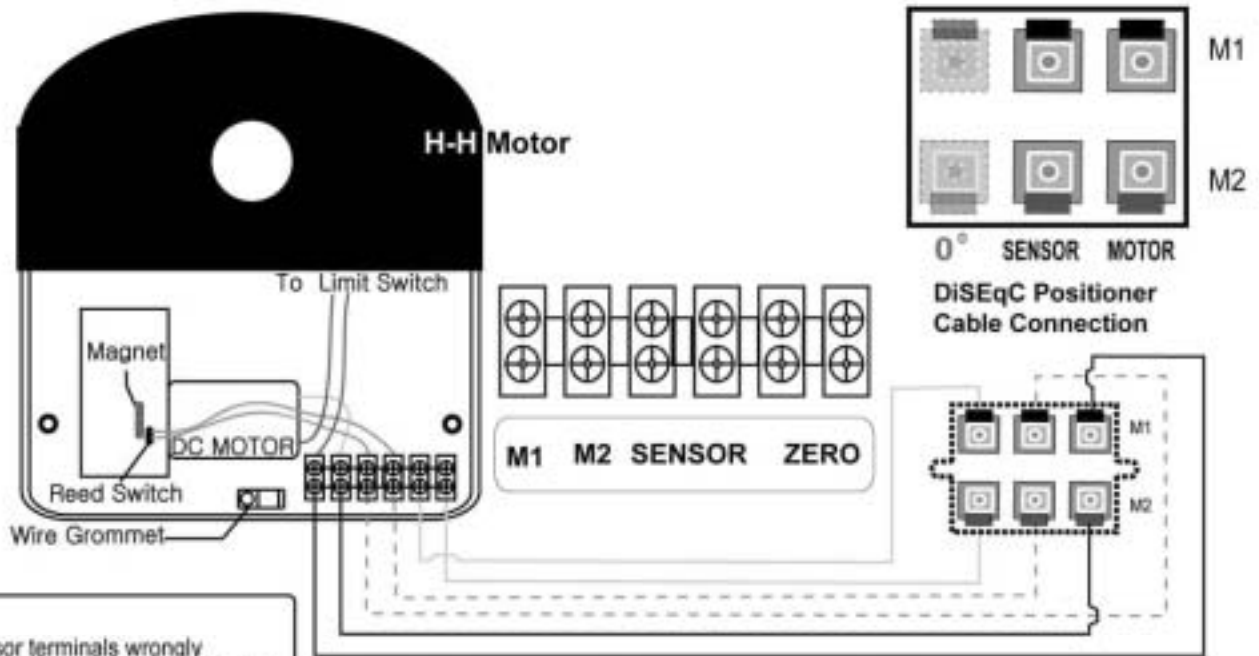
☆ H-H Motor Parts List



☆ After Assembly



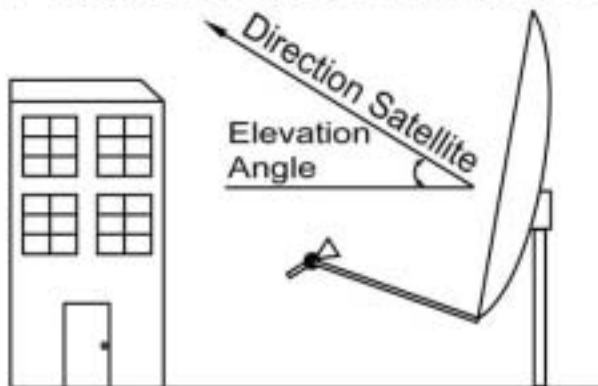
☆ Cable Connection



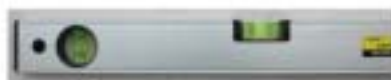
Caution:

If the motor sensor terminals wrongly connected with positioner's "motor" terminals, the reed switch will be damaged immediately.

☆ Traditional Installation



1. Find a proper location to install the H-H motor. Make sure no obstacle is higher than the Elevation angle on the southern sky.

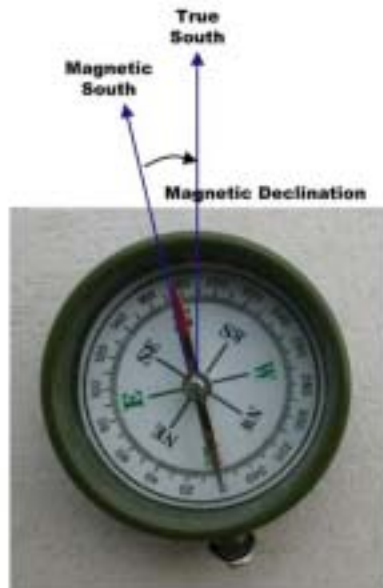


Level

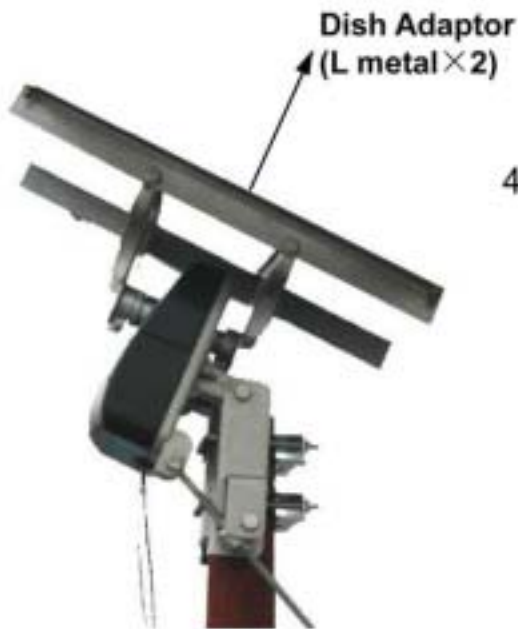


Plumb

2. Make sure the pole / stand is vertical to ground via a plumb or a level. Right pole / stand alignment is the first and the most essential step for installation.



3. Mount the H-H motor onto the pole / stand.
Align the H-H motor to the True South.
To get the true South, use a compass to determine the Magnetic South and deduct the Magnetic declination. The Magnetic Declination can be found via http://www.geolab.nrcan.gc.ca/geomag/mirp_e.shtml.



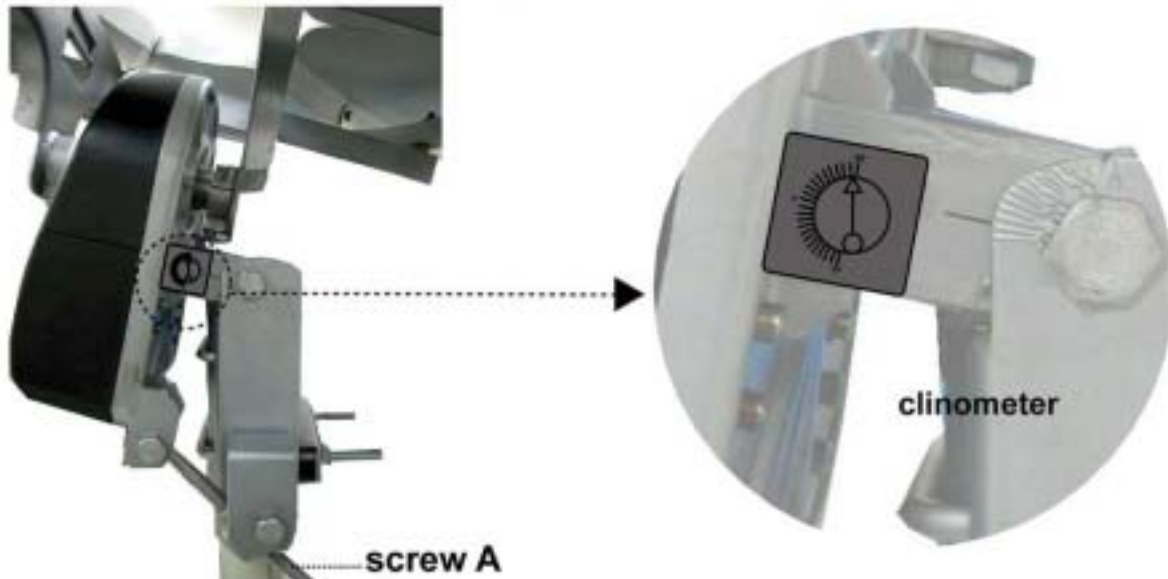
4. Assemble the dish bracket (from the dish supplier) onto the both Mounting Plates of the H-H Motor. (refer to Page 7)



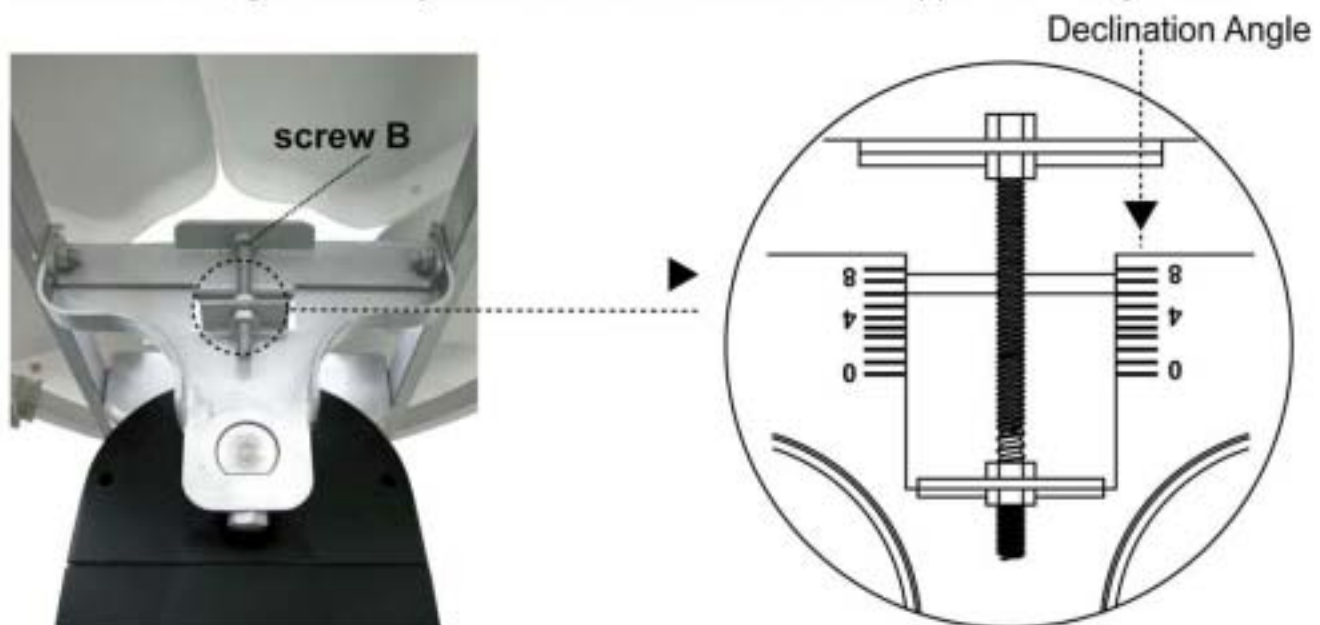
Attach the Dish onto the H-H Motor

5. Set the Elevation and Declination angles according to the latitude and longitude of your location and the attached Angle Table in the last page.

Elevation Angle: The scale on the motor bracket is for easy setting.
A clinometer is recommended for precise Elevation angle setting.



Declination Angle: Set it by screw B and the scale on the Upper Mounting Plate.



6. Connect the H-H motor to the Positioner according to the "Cable Connection".
Well connect the LNB to the Receiver
7. Drive the H-H motor East / West by positioner to find the signal of Satellites.
Adjust the Elevation, Declination Angles and rotate the whole H-H motor slightly
to find the best reception setting.
(These steps will take some time, a professional installer can help to save the time.)

☆ Quick Installation (with the help of GAAPS)

1. Do the same as in Step 1 to Step 6 of "Traditional Installation".
One thing different it that you don't have to find the exact True South.
Just use a Compass to make sure the H-H motor is aiming South roughly.
2. GAAPS (Global Automatic Antenna Positioning System),
which is a useful tool for installation. The GAAPS is located at <http://www.gaaps.com.tw>

Please key in the Latitude and Longitude of your location.

Then key in one Satellite, which has the strongest signal or is most popular in your area.
Click the "Calculate" button then you can get the Azimuth angle of the H-H motor.

example:

GAAPS
(Global Automatic Antenna Positioning System)

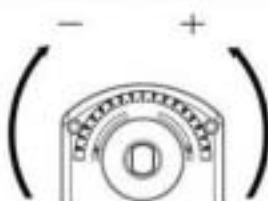
GAAPS is also called Goto X Calculator, which can calculate the exact angle to your aimed satellite according to your location (longitude and latitude).
It is very useful installation and trouble shooting.

p.s. Goto X function is a standard DSEyC 1.2 command, which could drive the DSEyC Motor to any wanted angle.

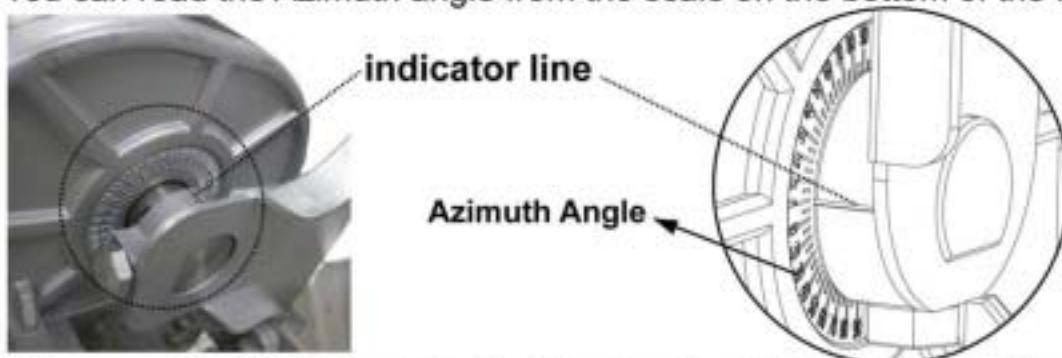
Your Longitude:	37.1	E	Location of Moscow
Your Latitude:	58	N	
Longitude of the aimed satellite:	13.5	E	A3TRA 3A

Azimuth angle on motor:

note: "+" or "-" indicates different direction as below:

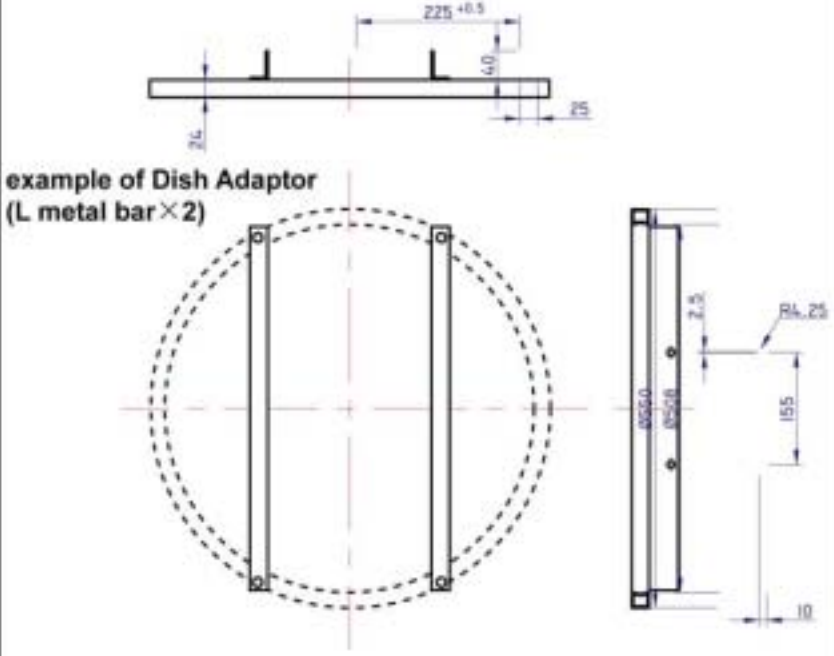


3. Drive the H-H motor to the Azimuth angle from step 2 via a positioner.
You can read the Azimuth angle from the scale on the bottom of the H-H motor.



4. Make sure the Cable from LNB to Receiver is well connected and the Receiver Setting is correct according to the Satellite you choose.
Slightly Rotate the whole H-H motor together with the Dish east / west to find the strongest signal.
5. Drive the H-H motor to other angles to find other Satellites.
In order to find the best reception arc for all Satellites, slightly adjusting the Elevation, Declination, and Azimuth angle is sometimes necessary

★ Troubleshooting

Symptoms	Check points
Can't be driven by positioner but the H-H Motor runs for about only 1 second	It means the Positioner does not receive the sensor signal. Please check the following 1. Is the motor cable well connected? 2. Is the reed sensor on the H-H Motor broken? 3. Is the Positioner good?
Can't be driven by Positioner and the motor doesn't run at all.	Check the following: 1. Is the motor cable well connected? 2. Is the H-H Motor blocked by anything? 3. Make sure there is a 36VDC output from the Positioner.
The H-H Motor goes to the wrong direction.	Just exchange the motor cable M1 and M2.
Can't install the Dish onto the H-H Motor.	<p>The adaptor should goes with the Dish. The adaptor for JONSA Dish is available. The other adaptors will be available later. Please inform your dealer which Dish you want to use on the H-H motor.</p>  <p>example of Dish Adaptor (L metal bar × 2)</p>
What is the function of 0° terminals?	It is a reserved function for the future Positioner with goto X function.
The H-H motor can't drive the Dish	The Dish can't be larger than 1.8m.

☆ Elevation & Declination Angle Table

Your Site Latitude	Elevation Angle	Declination Angle
0	90	0.0
1	89	0.2
2	88	0.4
3	87	0.5
4	86	0.7
5	85	0.9
6	84	1.1
7	83	1.2
8	82	1.4
9	81	1.6
10	80	1.8
11	79	1.9
12	78	2.1
13	77	2.3
14	76	2.4
15	75	2.6
16	74	2.8
17	73	3.0
18	72	3.1
19	71	3.3
20	70	3.4
21	69	3.6
22	68	3.8
23	67	3.9
24	66	4.1
25	65	4.2
26	64	4.4
27	63	4.5
28	62	4.7
29	61	4.8
30	60	5.0
31	59	5.1
32	58	5.2
33	57	5.4

Your Site Latitude	Elevation Angle	Declination Angle
34	56	5.5
35	55	5.6
36	54	5.8
37	53	5.9
38	52	6.0
39	51	6.1
40	50	6.3
41	49	6.4
42	48	6.5
43	47	6.6
44	46	6.7
45	45	6.8
46	44	6.8
47	43	7.0
48	42	7.1
49	41	7.2
50	40	7.3
51	39	7.4
52	38	7.5
53	37	7.6
54	36	7.6
56	34	7.8
58	32	7.8
60	30	8.0
62	28	8.2
64	26	8.3
66	24	8.4
68	22	8.4
70	20	8.5
72	18	8.6
74	16	8.6
76	14	8.6
78	12	8.7
80	10	8.7