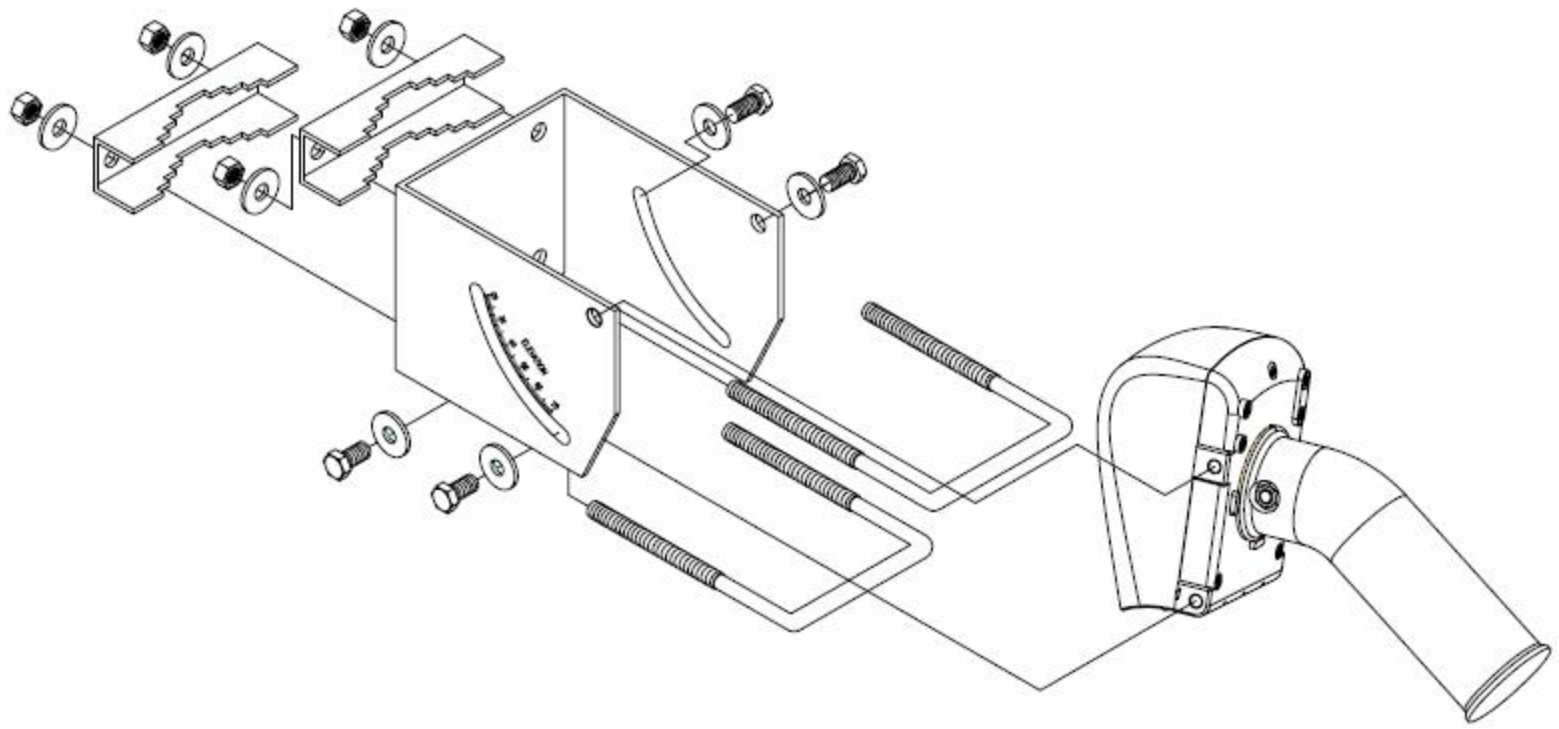
INSTALLING THE MOUNT

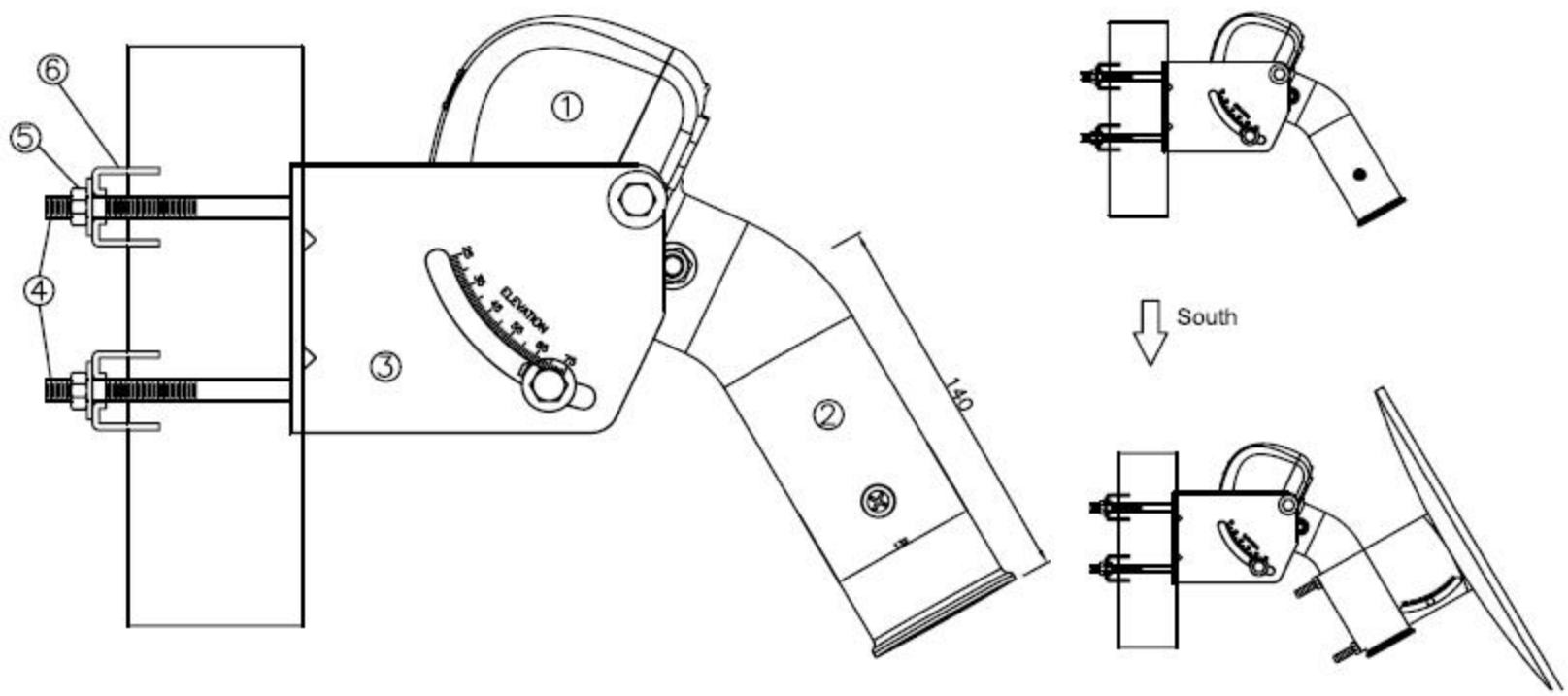
1. Assemble the H-H Mount as the following diagram.



2. Ensure the mounting tube indicates 0°. If not, sit it to exactly 0° using the manual buttons on the bottom of the mount. The cable must be connected to the receiver which must be switched on.

3. Make sure the mounting pole is exactly **vertical** before installation.

4. Fix the H-H Mount onto the Mounting pole or stand and tighten the two U-bolts **evenly**. Make sure there is no obstacle facing the southern sky, such as a tree or building.



ALIGNMENT OF THE MOUNT

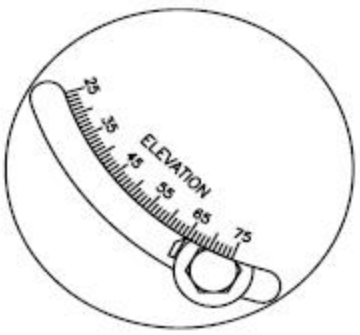
1. **Finding TRUE SOUTH.**
   Attaching the Antenna Dish to the Mount. Make sure the dish is at the center of the mounting tube. Rotate the mount together with the antenna toward TRUE SOUTH. You can find the TRUE SOUTH using the magnetic variation table and a compass that indicates the MAGNETIC SOUTH.

2. **Setting Elevation Angle.(A)**
   Adjust the motor elevation angle using an inclinoneter or the Latitude scale on one sides of the Motor according to the Latitude of your position.

3. **Setting Declination Angle.(B)**
   - Find the Declination Angle on the attached **ANGLE TABLE.**
   - Set the Declination Angle by the scale on the antenna dish. The reading on the antenna scale should be: **35°-DECLINATION ANGLE**

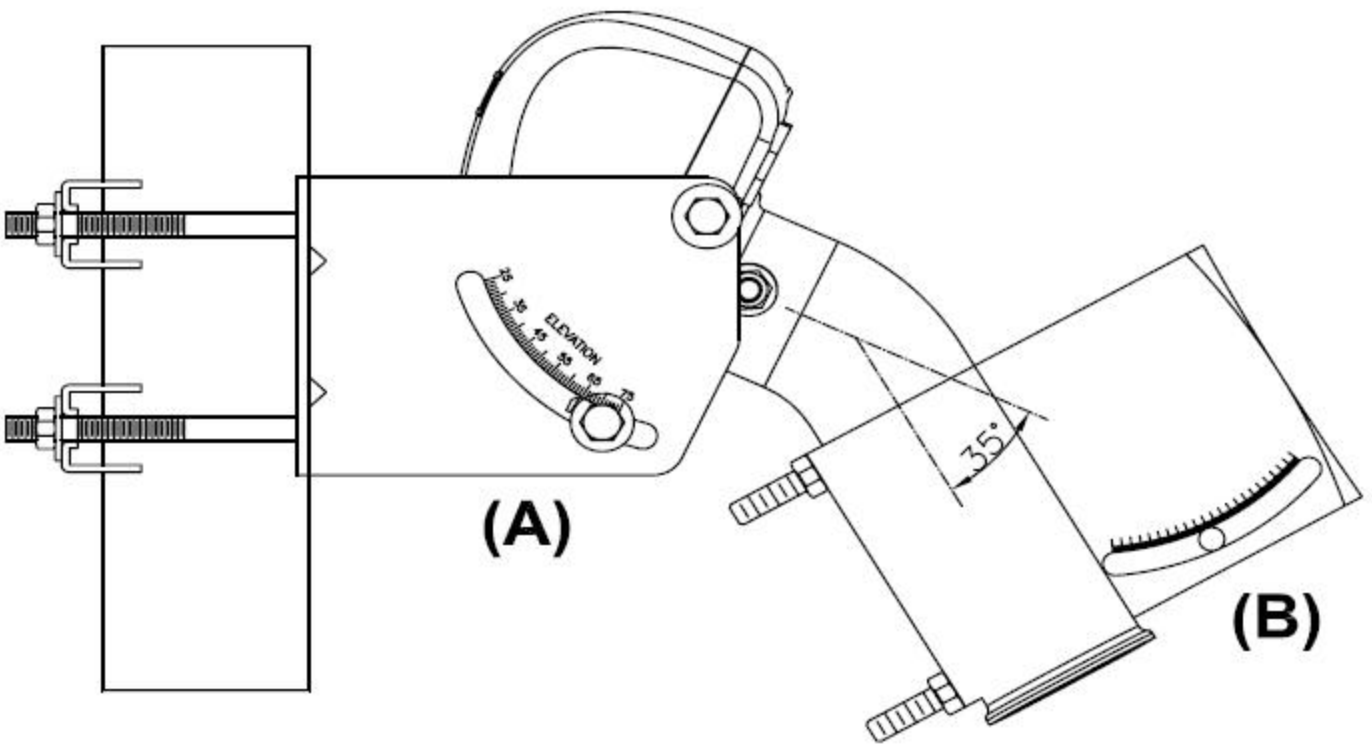
4. Drive the antenna east and west via the manual buttons on the bottom of the Mount to check if the reception arc is correct. If not, adjust the direction, elevation, and declination angle to find the best reception.

P.S. To ensure power to drive the antenna, first connect the Mount to the receiver or interface box via coaxial cable.



(A)

(B)



(A)

(B)

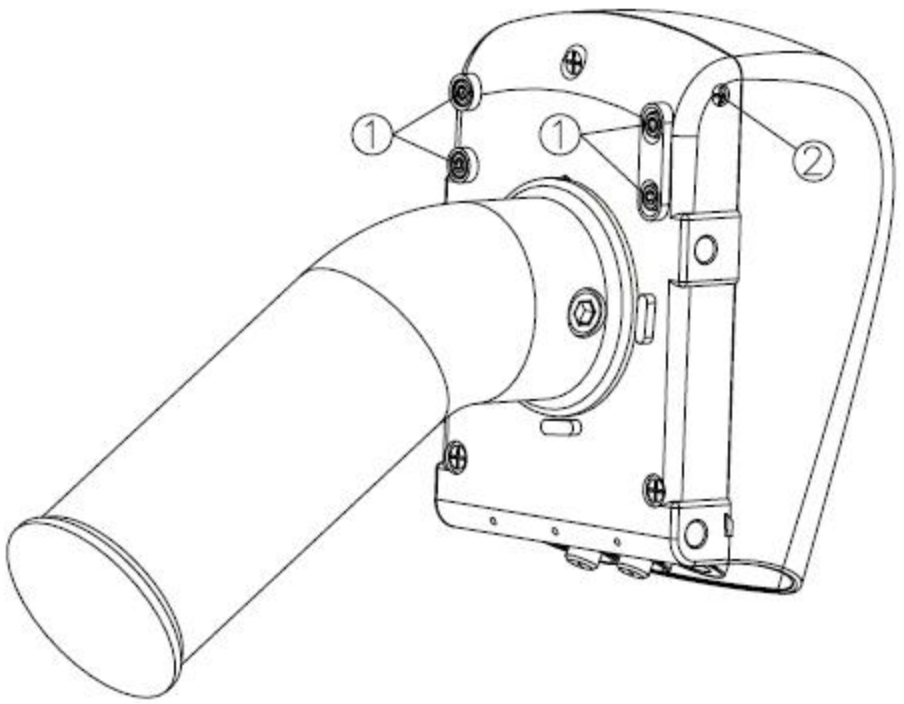
ADJUST THE TUBE LOOSE

If you incur the problem of loose tube, follow the procedure to solve it:

1.Loosen the 4 screws (#1 on the picture) a little

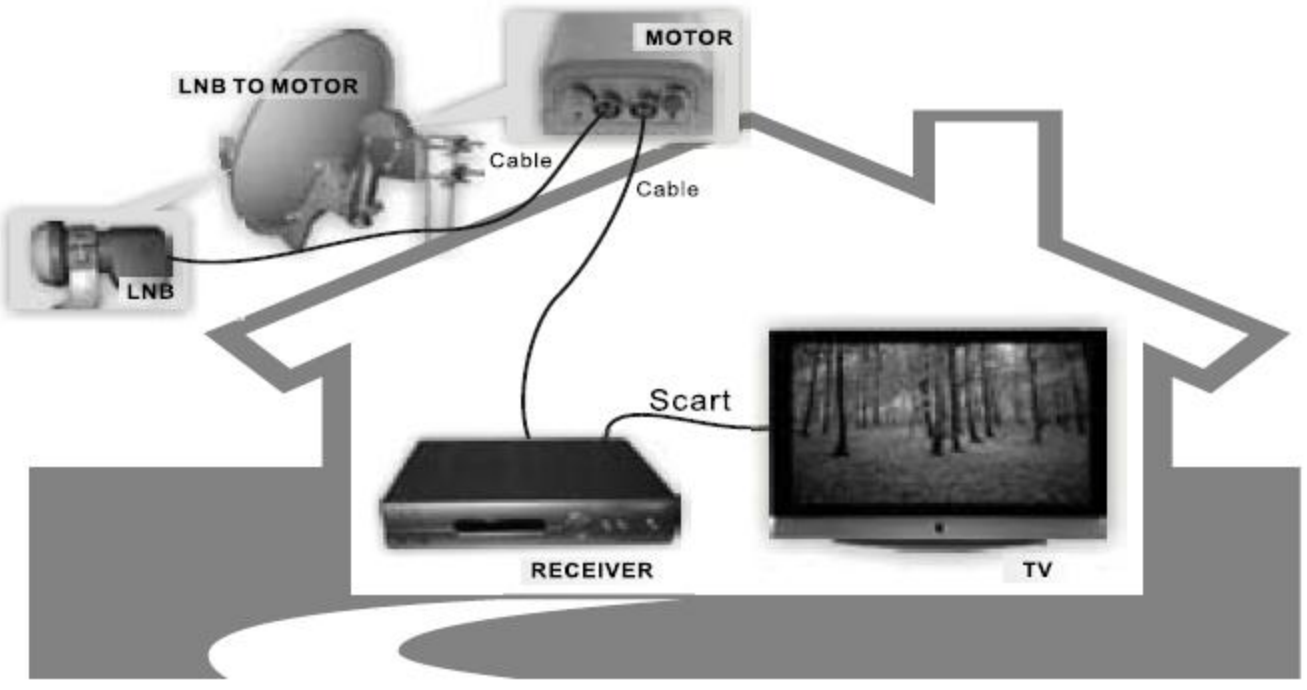
2.Tighten the screw (#2 on the picture) a little.

3.Tighten the 4 screws (#1 on the picture) securely



CABLE CONNECTION

Connect the DiSEqC Mount and the coaxial cable **(RG-6/U)** per the following diagram.



DiSEqC 1.2 OPERATION

The DISEqC Motor is designed for DiSEqC 1.2 Receiver. The commands of the receivers might be different, but similar. Please refer to the manual of the DiSEqC 1.2 receiver.

1.Go East / West: Rotates the antenna to East / West.

2.Fine Tune East / West: Rotates the antenna East / West for one step.

3.Store nn: Store Satellites Position nn (01~60).

4.Goto nn: Rotates Motor to Satellite Position nn (01~60).

5.Goto 0°: Rotates the Motor to 0° as a reference point.

6.Re-synchronize / Shift:
(a)Rotate the motor to a position by Goto command.
(b)Rotate the motor East / West to a better position.
(c)Send Re-synchronize commands to the motor. The original position will be shifted to the new position. All the other Satellite positions are also changed.

Goto X Function

1.See your receiver manual and select the type of installation in **Goto X** mode.

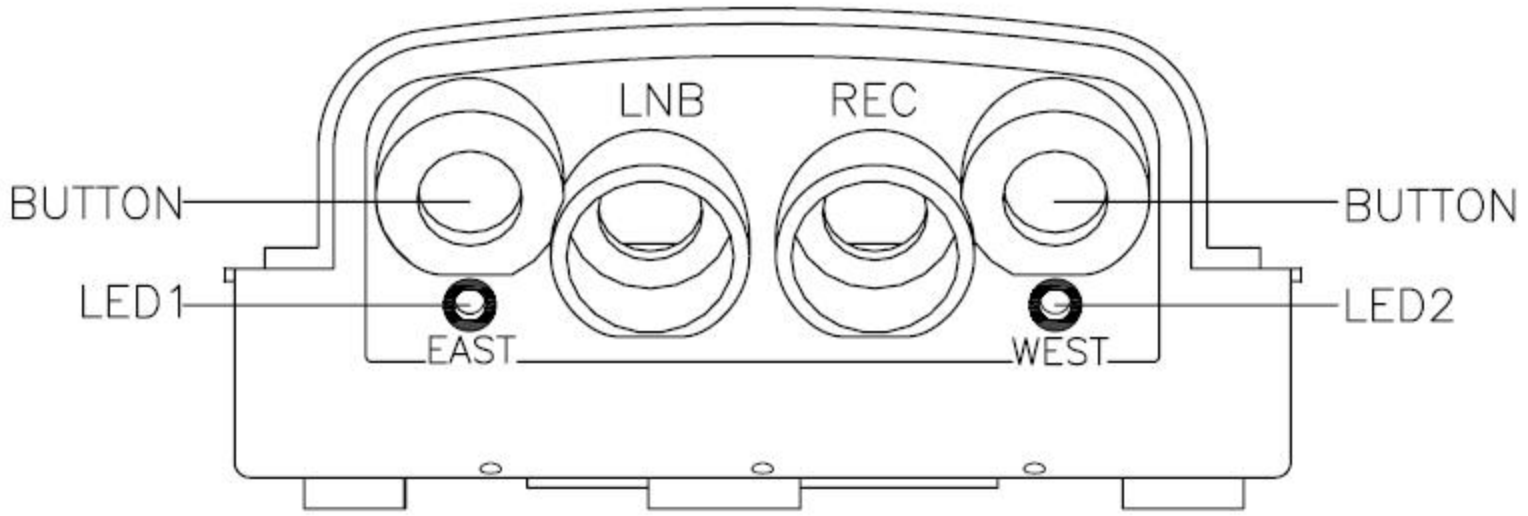
2.Fill in the empty spaces in the receiver's menu with the **Latitude** and **Longitude values**. When the values have been correctly received, the receiver drives the Motor to the calculated position.

3.Rotate the locked together antenna and motor slightly clockwise or anticlockwise until you find an image on the TV-screen connected to the receiver or the signal and quality, and then tighten the fixing screws.

LED INDICATOR

The 2 LED indicators on the bottom of the motor can show the following information:

Function	Status
Power on	LED1 & LED2 Blink every 2 Seconds
Drive East	LED1 Blinks once
Drive West	LED2 Blinks once
Halt	LED1 & LED2 Blink once
Store	LED1 Blinks Twice
Call	LED2 Blinks Twice
East Limit	LED1 Blinks 3 times
West Limit	LED2 Blinks 3 times
Limit off	LED1 & LED2 Blink 3 times
Goto X	LED1 & LED2 Blink 4 times
Stop East Limit	LED1 Keeps Blinking
Stop West Limit	LED2 Keeps Blinking



HARDWARE RESET BY RECEIVER

1. Execute the command: Go To Reference (Go To “0”).
2. Cut off the power by disconnecting the coaxial cable.
3. Reconnect the coaxial cable.
4. Execute the command: Shift “0”.
5. Then, its memory erased, the receiver rewrites the satellite table to initial one and corrects the “0”

HARDWARE RESET BY DiSEqC MOTOR

1. Cut off the power by disconnecting the coaxial cable.
2. Press and hold both EAST / WEST buttons for 5 seconds.
3. Reconnect the coaxial cable.
4. LED1 and LED2 blink for 5 seconds.
5. Then, its memory erased, the receiver rewrites the satellite table to initial one and corrects the “0”

BUILT-IN SATELLITE TABLE RESET

1. Press and hold both EAST / WEST buttons for 5 seconds.
2. LED1 and LED2 blink for 5 seconds.
3. Then, its memory erased and rewrites the built-in Satellite table to initial one.

Troubleshooting the H-H Mount

Symptoms	Check points
The manual buttons don't work	1. Connect the Motor to the receiver via coaxial cable first and make sure the receiver power is on.
The Mount doesn't work	1. Ensure all cables and power are connected well. 2. Check if the receiver is DiSEqC 1.2. If not, try to use our interface box. 3. Check whether the dish is too heavy.
The Mount stops at some positions and can't go farther	1. Disable the software limits and move the motor again. 2. Make sure the Mount or antenna are not interfered with any other item.
The Mount runs intermittently	1. Make sure the antenna is not too heavy or too large. 2. Check if the cable quality is good enough. Try a better RG-6U cable. 3. Check whether the output power of the receiver is higher than 350mA.
The Mount sometimes runs fast and sometimes runs slowly	1. The speed of the Mount varies with receiver output voltage (13/18Vdc)
All satellite positions are not correct.	1. Correct this problem via the "Goto 0"Function, the Mount will go to 0 degree as a reference point. **OR** 2. Goto a satellite position via receiver or interface box. Wait for about 30 seconds until the motor stops. 3. Drive the antenna East or West until the reception of this satellite is clear. 4. Use "Re-calculate" or "Shift" Function to correct position.

SPECIFICATION

- H-H Mount

Protocol	DiSEqC 1.2 & Goto “X”
Compatible Receiver	Receiver with DiSEqC 1.2 or Interface Box
Antenna Size	120 cm Max.
Speed	1.9° / sec (at 13V) ; 2.5° / sec (at 18V)
Azimuth Angle	80° East ~ 80° West (160°)
Elevation Angle	25~75°
Input Voltage	13 / 18Vdc
Output Voltage	13 / 18Vdc
Power Consumption	50 mA (Standby) 200mA (Normal) 350mA (Max.)
Satellite Positions	60 positions
Calibration Function	Yes (Go to 0°)
Manual East/West Buttons	Yes (Build-in on the bottom of the Mount)
Limit Protection	1.Fixed type with microswitches 2.Programmable Software Limit 3.Current Limit
Positioning Sensor	High Resolution Hall Effect Sensor
Connector	F-Type
Weight (Mount)	3.1 Kg (Net) / 3.5 Kg (Gross) (~ 8 lbs)
Dimension (Mount)	345 x 168 x 110 mm3 (Gross)

ELEVATION AND DECLINATION ANGLE TABLE

Your Site Latitude	Elevation Angle	Declination Angle	Dish Bracket Angle	Your Site Latitude	Elevation Angle	Declination Angle	Dish Bracket Angle
0	90	0.0	35.0	34	56	5.5	29.5
1	89	0.2	34.8	35	55	5.6	29.4
2	88	0.4	34.6	36	54	5.8	29.2
3	87	0.5	34.5	37	53	5.9	29.1
4	86	0.7	34.3	38	52	6.0	29.0
5	85	0.9	34.1	39	51	6.1	28.9
6	84	1.1	33.9	40	50	6.3	28.7
7	83	1.2	33.8	41	49	6.4	28.6
8	82	1.4	33.6	42	48	6.5	28.5
9	81	1.6	33.4	43	47	6.6	28.4
10	80	1.8	33.2	44	46	6.7	28.3
11	79	1.9	33.1	45	45	6.8	28.2
12	78	2.1	32.9	46	44	6.8	28.2
13	77	2.3	32.7	47	43	7.0	28.0
14	76	2.4	32.6	48	42	7.1	27.9
15	75	2.6	32.4	49	41	7.2	27.8
16	74	2.8	32.2	50	40	7.3	27.7
17	73	3.0	32.0	51	39	7.4	27.6
18	72	3.1	31.9	52	38	7.5	27.5
19	71	3.3	31.7	53	37	7.6	27.4
20	70	3.4	31.6	54	36	7.6	27.4
21	69	3.6	31.4	56	34	7.8	27.2
22	68	3.8	31.2	58	32	7.8	27.2
23	67	3.9	31.1	60	30	8.0	27.0
24	66	4.1	30.9	62	28	8.2	26.8
25	65	4.2	30.8	64	26	8.3	26.7
26	64	4.4	30.6	66	24	8.4	26.6
27	63	4.5	30.5	68	22	8.4	26.6
28	62	4.7	30.3	70	20	8.5	26.5
29	61	4.8	30.2	72	18	8.6	26.4
30	60	5.0	30.0	74	16	8.6	26.4
31	59	5.1	29.9	76	14	8.6	26.4
32	58	5.2	29.8	78	12	8.7	26.3
33	57	5.4	29.6	80	10	8.7	26.3

Pre-Stored Satellites Table

15.0°W	Telstar 12	70.0°W	Brasilsat B4	103.0°W	AMC 1
20.0°W	Intelsat 603	72.0°W	Nahuel 1	105.0°W	AMC 15
22.0°W	NSS 7	72.5°W	DirecTV 1	107.3°W	Anik F1
24.5°W	Intelsat 905	73.5°W	Brasilsat B1	110.0°W	DirecTV 5
27.5°W	Intelsat 907	74.0°W	SBS 6	111.1°W	Anik F2
30.0°W	Hispasat 1C	76.8°W	Galaxy 4R	113.0°W	SatMex 6
31.5°W	Intelsat 801	79.0°W	AMC 5	114.9°W	Solidaridad 2
34.5°W	Intelsat 903	82.0°W	Nimiq 2	116.8°W	SatMex 5
34.5°W	Telstar 11	83.0°W	AMC 9	119.0°W	AMC 16
40.5°W	NSS 806	84.0°W	Brasilsat B3	121.0°W	EchoStar 9
43.0°W	Intelsat 6B	85.0°W	AMC 2	123.0°W	Galaxy 10R
45.0°W	Intelsat 1R	87.0°W	AMC 3	125.0°W	Galaxy 14
50.0°W	Intelsat 705	89.0°W	Galaxy 28	127.0°W	Galaxy 13
53.0°W	Intelsat 707	91.0°W	Galaxy 11	129.0°W	EchoStar 5
55.5°W	Intelsat 805	93.0°W	Galaxy 26	131.0°W	AMC 11
58.0°W	Intelsat 9	95.0°W	Galaxy 3C	133.0°W	Galaxy 15
61.0°W	Amazonas	97.0°W	Galaxy 25	135.0°W	AMC 10
61.5°W	EchoStar 3	99.0°W	Galaxy 16	137.0°W	AMC 7
63.0°W	Estrela do Sul 1	101.0°W	DirecTV	139.0°W	AMC 8
65.0°W	Brasilsat B2	102.8°W	Spaceway 1	148.0°W	EchoStar 1