

Guide to Installing a KU Horizon to Horizon motor - Strong 4653X screenshots

Before you start, you should be aware of the satellites that are available using a KU band dish and motor. When we talk of KU band dishes, we are referring to dishes generally between 0.65m and 1.2m in diameter. In most areas of Australia, you will be able to receive NSS6, Asiasat4, Optus D2, Optus C1, Optus D1, Intelsat8 and Intelsat2 and in Eastern Australia, INTELSAT701.

Most of these satellites carry either pay TV or free to air, foreign language programs. For a list of the most common programs on these satellites, click [here](#) .

First, choose a location on your property that will allow the dish to 'see' the satellites from West to East keeping in mind that as the dish rotates, the elevation angle decreases so make sure there are no trees or buildings in the way.

Install your pole mount using a spirit level to ensure that the pole is vertically plumb level. **This is important.**

Now attach the satellite dish to the motor and ensure that the dish is aligned to the centre line of the motor pole. Tighten up the dish U bolts firmly. Lift the entire assembly onto your mast and tighten the motor U bolts up (not too tight as you'll need to adjust this)

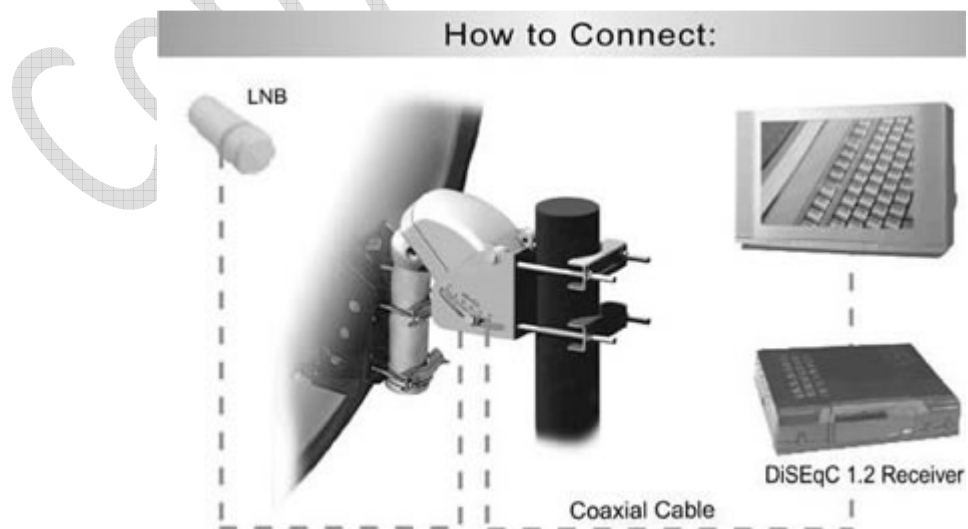


Set the elevation on the motor bracket to match your latitude. This conversion has already been calculated by the motor manufacturer so setting the elevation is easy. You can get your latitude from [this](#) website. The picture above shows the setting for Brisbane but this setting will vary depending on your geographic location.

You'll now need to set the declination angle. This angle is set by adjusting the dish elevation assembly. Using the chart below, find your declination angle and deduct this from 40. The answer will equal your declination angle. See the picture on the right above.

Latitude	Declination Angle	Latitude	Declination Angle	Latitude	Declination Angle	Latitude	Declination Angle
1	0.18	24	4.07	46	6.92	69	8.47
2	0.36	25	4.23	47	7.01	70	8.51
3	0.53	26	4.38	48	7.11	71	8.54
4	0.71	27	4.53	49	7.21	72	8.56
5	0.89	28	4.67	50	7.30	73	8.59
6	1.06	29	4.82	51	7.38	74	8.61
7	1.24	30	4.96	52	7.47	75	8.63
8	1.41	31	5.10	53	7.55	76	8.64
9	1.59	32	5.24	54	7.63	77	8.66
10	1.76	33	5.38	55	7.71	78	8.67
11	1.94	34	5.51	56	7.78	79	8.67
12	2.11	35	5.64	57	7.85	80	8.68
13	2.28	36	5.77	58	7.92	81	8.68
14	2.45	37	5.90	59	7.99	82	8.68
15	2.62	38	6.02	60	8.05	83	8.68
16	2.79	39	6.14	61	8.11	84	8.67
17	2.95	40	6.26	62	8.16	85	8.66
18	3.12	41	6.38	63	8.22	86	8.65
19	3.28	42	6.49	64	8.27	87	8.64
20	3.44	43	6.60	65	8.31	88	8.62
21	3.60	44	6.71	66	8.36	89	8.60
22	3.76	45	6.81	67	8.40	90	8.58
23	3.92	68	8.44				

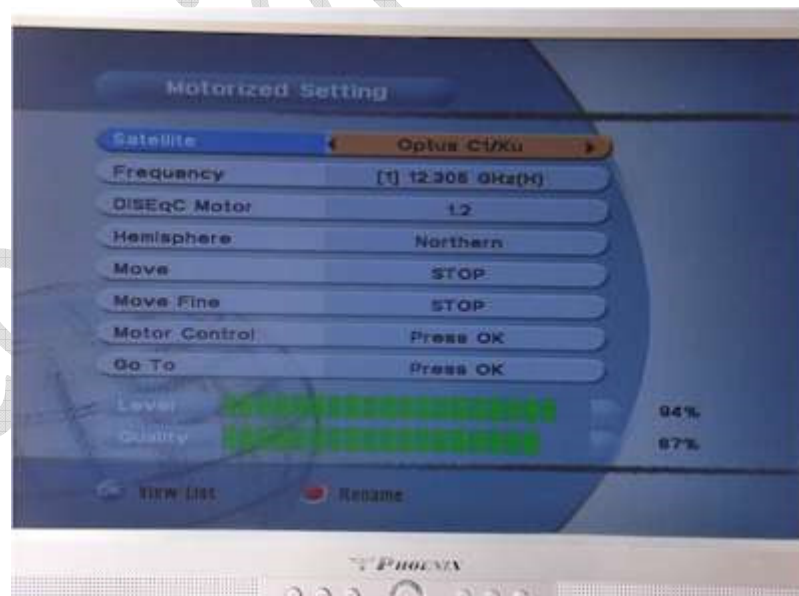
Switch off your decoder and connect a coaxial cable from the 'DISH IN' or 'LNB IN' on the back of the decoder and run this up to the motor marked 'REC'. Now connect a short cable from 'LNB' on the motor to the LNB on the end of your dish. Make sure the cables will not foul on the dish as it rotates.



Switch on your decoder. This will send the power up the coaxial cable to the motor and LNB. Click [here](#) to find your latitude and longitude. Now that you have your lat/long, visit this [link](#) and enter 156° into the satellite orbit field, enter your latitude (remember to enter it as a minus figure) and longitude into the site lat and long fields and click to calculate results. The picture should look like the one below except your lat and long may be different:

Satellite orbit (deg E)	Site latitude (degN+, S-)	Site longitude (deg E)
156	-27	153
Click to calculate results		Click to default values
Dish azimuth (deg E relative to true north)		Dish azimuth (deg E relative to magnetic north)
6.58		-4.4
Dish elevation (deg)	Slant range (km)	Polarisation tilt (deg)
58.29	36604.89	5.86
Polar mount main axis angle (deg)		Polar mount dish offset tilt (deg)
27.6		3.94

Note the dish azimuth relative to true north (X°) field. Pressing the manual East button on the motor, rotate the dish until the directional degree indicator on the top of the motor is pointing to X°. Go into the decoder's motorised settings screen (assuming you've already set up the LNB settings) and enter the information from the screen below:



Moving the entire assembly, find signal on Optus C1. You may have to vary your elevation and/or declination angle slightly to fine tune. Once maximum signal is acquired, tighten the whole assembly. You should now be able to track most satellites using the motorized option within the receiver menu storing each position as you go. Be sure to use frequencies that are broadcast into Australia on each satellite. See www.lyngsat.com for more info on this.