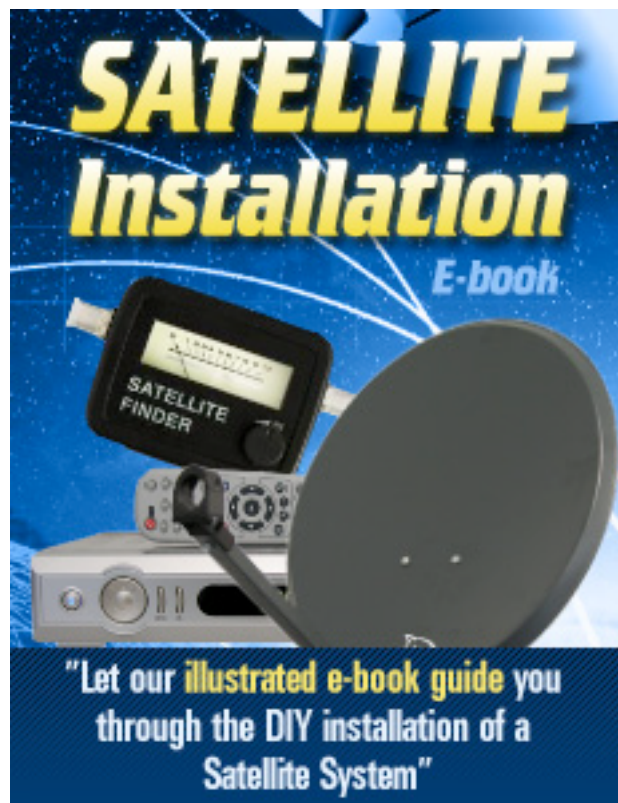




<http://www.satalogue.com>

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HOW TO INSTALL A MOTORISED SYSTEM



**Our Free illustrated e-book guides you through the
DIY installation of a Motorised Satellite System**

DISCLAIMER

The following information is offered by Satalogue in good faith, Use it at your own risk. By your use of the information supplied within this e book Satalogue will accept no legal responsibility for injury etc.

Your satellite receiver must support DiSEqC.

The Vantage X201S pictured below is an example of such a receiver.



Basic Equipment you will need.

- 1) Electric Hammer Drill
- 2) A 10mm Carbide Tip Drill Bit (100mm Long)
- 3) A 10mm Carbide Tip Drill Bit (380mm Long)
- 4) A Sharp Knife (Stanley Knife)
- 5) Wire Cutters
- 6) Spanners/Socket Set
- 7) Screwdriver
- 8) Hammer
- 9) Dish Alignment Meter. <http://www.satalogue.com/section10/page1.htm>
- 10) Spirit Level
- 11) Inclonometer

Remember!

- * The dish must have no obstructions between it and the satellite (Trees Etc)
- * The dish does not need to be high up off the ground
- * The dish does not need to be near the satellite receiver

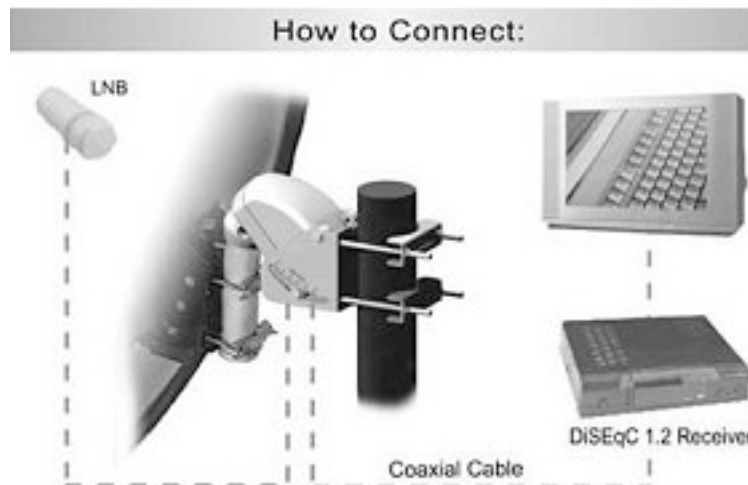
ASSEMBLING THE DISH

Be very careful assembling the offset dish, ensure that you don't bend the feed arm, assemble it correctly as per the instructions supplied.

Ensure that ALL Nuts and Bolts are fully tightened.



Connect the dish to the motor and the satellite receiver as shown below.



INSTALLING THE DiSEqC MOTOR

- 1) Select your installation site carefully!!!
- 2) There must be a clear line of sight between the required satellites and the entire surface of the dish. The line of sight must be free from obstructions, such as trees, roof tiles etc.
- 3) It is very important to make sure the mount is fixed to a perfectly vertical mast. Time spent measuring this accurately will save you hours later on.

4) Set the DiSEqC mount back to zero degrees by connecting the receiver to the mount. The receiver must be on for the mount to move. It is easier to do this before fixing the H-H mount onto the mast.

5) Once you have done this, the mount should then be disconnected from the receiver.

6. Fit the H-H mount onto the mast and do the nuts up finger tight.

7. Use an inclinometer to set the H-H mount angle. See picture on the right.



8) This angle should be calculated from the latitude of the installation location. See the chart below for details.

JOHN O GROATS 58.39°

ABERDEEN 57.08°

EDINBURGH 55.57°

MANCHESTER 53.30°

BIRMINGHAM 52.30°

LONDON 51.32°

EXETER 50.43°

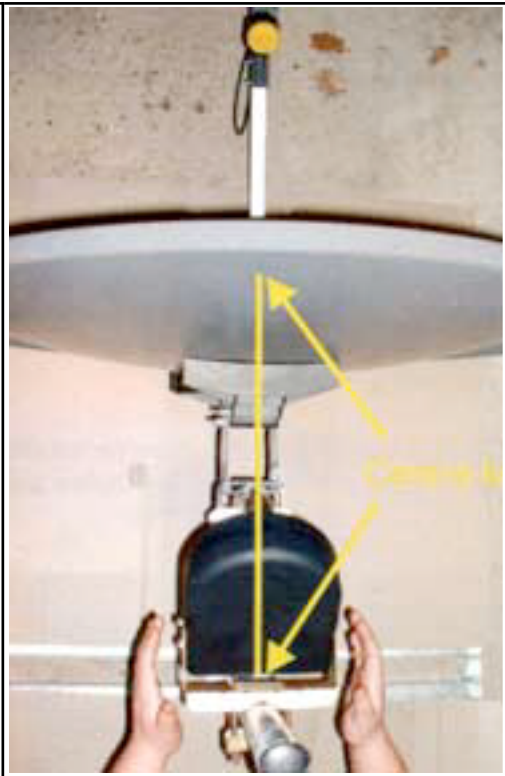
LANDS END 50.03°

9) Fit the dish on to the front of the H-H mount arm and tighten the nuts. The middle of the dish clamp must be lined up with the centre line on the H-H mount arm. See the picture on the right

10) Connect the LNB and a good quality meter to the dish.

Firstly you will need to find Intelsat 707 at 1° west.

See below for other suggested meter settings.



ORDER	SATELLITE	L/O	FREQ	POL	22 kHz	S/RATE	FEC
1	ASTRA 28.2E	9750	10.862	H 18V	OFF	22000	5 / 6
2	ASTRA 19.2E	9750	10.788	V 13V	OFF	22000	5 / 6
3	HOTBIRD 13E	10600	11804	V 13V	ON	27500	2 / 3
4	INTELSAT 707 1W	9750	11540	V 13V	OFF	26000	3 / 4
5	HISPASAT 30W	10600	12012	V 13V	ON	27500	3 / 4

11) Move the dish back and forth by moving the H-H mount clamp attached to the vertical mast. Make sure the dish remains on the centre line displayed on the H-H mount arm.

12) You will also have to adjust the elevation to the dish to peak the signal. See picture on the right.



13) When adjusting these two movements, use the meter to measure the signal. Once the signal has peaked, tighten the dish elevation.

14) Next, move the dish back by 1° by moving the H-H mount clamp attached to the vertical mast. This will give you the south position required. See picture on the right

15) This is a small movement and with experience, can be guessed fairly accurately. Take note of the signal loss on the meter, which occurs when this small movement is achieved.

16) Tighten the nuts on the H-H mount clamp attached to mast.

17) By following these instructions accurately, you should now have installed your dish on the arc.



18) To test your installation, re-connect the receiver to the H-H mount.

19) With the satellite meter still connected, select Astra 28.2 E.

20) Move the dish east by pressing the small east button underneath the H-H mount.

21) Peak the signal on the meter for Astra 28.2 E until you believe it is as good as you can get by moving both east and west.

22) If you cannot improve the signal by leaning the dish back and forth then you have probably correctly found one side of the arc for the dish.

23) With the satellite meter still connected select Hispasat 30 W.

24) Move the dish west by pressing the small west button underneath the H-H mount.

25) Peak the signal on the meter for Hispasat 30 W until you believe it is as good as you can get by moving both east and west.

26) If you cannot improve the signal by leaning the dish back and forth then you have correctly found the arc for the dish.

INSTALLING THE DISH CABLE

Now you can proceed to install the satellite dish cable.

It is best to have a continuous cable run without any joints in it. Unfortunately, this is not always possible so you can join the cables together but please do it properly by using Two F connectors and a Back to Back joint. (As Shown Below)



If your cable joint is outside You **MUST** waterproof it using self amalgamating tape.

Always avoid any kinks or tight bends in your cable run.

Where the cable enters your Home always use a 'Drip Loop' method. The aim of this is to have the cable positioned in such a way that it looks like the letter

J

The water will then run down the outside of the cable and when it reaches the middle of the curve it will drip down to the ground and not run inside.

Now you **MUST** waterproof the LNB and DiSEqC motor connections using self amalgamating tape. Water will find its way anywhere, If you let it.

Remember that your equipment cost a lot of money. Protect your investment.

WHAT DO I DO WITH THE DISH METER NOW?

You might think it wasteful to spend money on a meter that you'll use only once but remember that an occasional gale might blow your dish off line; indeed it might also blow your neighbours' dishes off line, so you could earn yourself a few fivers by realigning them!.

You could even offer a service by helping your friends to install their dishes.
Or you could recover your money by selling the meter on eBay.

RELATED READING

Satellite Receivers: <http://www.satalogue.com/section1/index.htm>

Satellite Systems: <http://www.satalogue.com/section2/index.htm>

Technical Advice: <http://www.satalogue.com/tech/index.htm>

Dish Alignment Meters: <http://www.satalogue.com/section10/page1.htm>

DiSEqC Motors: <http://www.satalogue.com/section10/page5.htm>

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