How to Install a DiSEqC Motor, Pictorial Guide
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1: Tools and parts required for a DiSEqC motorised dish

DiseqC motor (we are using a Moteck 2100 motor here)
Satellite dish with AZEL mount (illustrated dishes are 80cm, my weapon of choice is now a Fracarro Penta 85 dish)
Universal LNB (buy the best you can afford)
T&K brackets of appropriate size (use two sets for heavy or long mast installations)
2" steel mast, a scaffold pole is good for this purpose
2 x Large U bolts
10mm Sleeve anchors or heavy duty plugs and 80mm coach screws (depends on mounting surface)
Good quality satellite grade cable (WF100 is a good example)
4 x "F" connectors (again good quality advised, try the Cablecon self install compression tool-less connectors)

Hammer drill
suitable drill bit
socket/ring spanners, 15mm, 13mm and 10mm (sizes will vary depending on type of dish and motor)
Spirit level or fence post level (bought my fence post level for a couple of pounds on ebay)
Felt tip pen or some type of marker
Meter of some sort, can also use the signal strength meter of your receiver
Hacksaw to trim off excess mast
Box of appropriate cable clips
Plumbline if available
Hammer (also useful for tapping in wall plugs and mast when achieving a vertical mast
Compass (not essential as can use dishpointer.com for approximate directions)

Important note on using Dishpointer.com
This is an excellent aid for establishing roughly where to point your dish, it is not an exact tool and to align your dish accurately, you will require a satellite meter, or use the signal meter on your satellite receiver.

Positioning and Mounting the bracket and mast

Mounting location
This is where web tools like dishpointer come in really useful, as you can locate your property, pick your due South satellite and position the sight line in various locations

to avoid obstacles, also then check sight lines to the other satellites in the arc you wish to receive. Be aware that the closer you get to the extremities of your arc, the lower on the horizon the satellite will be, so extra care needs to be taken on height of installation.

If you have an open aspect to the South of your property, then it can be possible to mount the dish on a ground stand or at low level on a wall (great for future servicing)

Should the Southerly aspect not be unobstructed, or it is to the front of your property, then you will need to place the dish in a higher location, or on a mast above the gutter line to look over the roof.

Installation

First thing to do is put the brackets on the wall, so using a spirit level and marker, find a suitable position for the top bracket (do not mount too close to the top of the wall, leave sufficient brick courses above and drill into the brick, not the mortar)

Mark the position through the slots, drill the holes, insert the plugs or sleeve anchors and bolt up the bracket.

There are two ways of positioning the lower bracket, easiest in my opinion is to use a plumbline hanging from between the mast mounting hles at the tip of the bracket, but you can also use the method below.

Clamp the mast onto the top bracket using one of the U bolts and strap the post level to the mast near where the lower bracket is going to be fixed, offer up the lower bracket and mark the position on the wall when the mast is vertical, there should be enough adjustment on both brackets to account for irregularities in wall surface to achieve a perfectly plumb mast.

In the above image, you will see that the top bracket is quite close to the top of the wall, but in this case there are three other bracket below it so it only provides lateral stabilisation and is not load bearing.

Setting the Motor Elevation/Latitude and testing the motor

Before mounting the motor onto the dish, it is best to make the relevant elevation adjustments, you'll find these in the motor manual, or on the Moteck and Technomate models there is a scale for latitude, making life very easy. Just use Google Earth, dishpointer to ascertain your latitude.

Set this and tighten up the locking bolts, then connecting the motor to your receiver, send it in both directions and then to zero/reference.
You will need to make up a short test cable for this, if you make it long enough to go from motor to LNB once fitted, it will serve both purposes.

If your nearest southerly satellite is not directly to your due South, then at this stage using your receiver and USALS/GoToX, you can add your location coordinates and send the motor to that satellite position. This makes life easier when doing final alignment, as you simply align to that satellite. You can also do this at a later stage if you like.

Assembling dish and motor

Assemble the dish according to the assembly instructions and lock the LNB into the LNB holder with no skew (rotation, there is a small scale on the top or side of most LNBs. (beware some fortecstar and icecrypt LNBs, which have an odd basic skew setting) (LNB of choice at the moment is the Inverto Black Ultra)

As per the image above, lock the AZEL bracket on the dish around the motor arm, this needs to be perfectly in line with the centre line of the arm and fit the LNB to motor cable, I find it less trouble to run the cable up over the motor, which avoids snagging.

You will notice on the above image that the dish mounting bracket has long U bolts, you need to make sure that these will not foul the motor connections, cutting off if necessary (make sure that the nuts are on the thread prior to cutting).
Now the whole assembly can be lifted onto the mast.

Fixing dish and motor assembly to mast

Marry up the whole assembly to the mast and slip brackets over the top, this is one of those jobs where a second pair of hands is useful, but if not then it just requires a little fiddling. A good tip is to have a large jubilee clip clamped around the mast which will stop the motor clamps sliding down the mast during adjustment.

Setting the Declination (elevation setting on the dish bracket)
This setting will vary depending on the motor in use,as the calculation can be different and dish elevation bracket scales are notoriously inaccurate, but if you are using a meter to align the dish, then just set the dish so that the face is just off the vertical pointing upwards, it'll make a good starting point for the alignment
Procedure

Connecting up
Once you have the motor onto the mast, (your LNB should already be connected to the motor whilst on the ground) you will either need to connect your receiver to the motor output and position a portable TV so that you can see the signal strength display, or connect your meter to the motor using the fly lead.

Aligning
Having roughly pointed the motor/dish assembly in the direction of your nearest due South satellite (see dishpointer), watch the TV display, or your meter reading, whilst very slowly moving the whole assembly around the mast and adjusting the dish elevation. When you hit a satellite the signal should rise, nip up the bolts slightly and then fine tune by gently holding the dish edges and tipping east and west and up and down to see if there is any improvement to be gained.

Check the satellite by doing a transponder scan on your receiver, use a known transponder frequency to see if you've found the correct satellite.

If you've found the correct satellite, then tighten the bolts and clamps, now you can test the arc using the receiver.

Testing the arc

My normal procedure in the UK with a USALS/GotoX enabled receiver is to scan my reference satellite for channels and save, then select a satellite at either end of the visible arc, say 42East and 30 west, if the reception is good on these, then you are ready to go, no more adjustment is necessary.

If the outer satellites are weak, then recheck the motor elevation or latitude settings are correct and the plumbness of the mast.