

Installing A Dish

What you need...

If you are installing a dish outside, this is what you will need:

1 satellite dish with suitable LNB	http://www.dastv.co.uk/Satellite_Dishes_LNB.php
1 wall mounting & support pole for the dish	http://www.dastv.co.uk/Brackets_Masts.php
Wall bolts	http://www.dastv.co.uk/Installation_Equipment.php
Satellite grade coax cable	http://www.dastv.co.uk/Cables_Leads.php
1 box of coax clips	http://www.dastv.co.uk/Installation_Equipment.php
1 suitable masonry drill bit for the expander bolts.	
1 drill for getting through your window frame / walls etc.	
1 electric drill	
1 hammer	
Assorted spanners	
Ladders	http://www.dastv.co.uk/Ladders.php
1 extension power cable (for the drill)	
2 f-connectors	http://www.dastv.co.uk/F_Type_Connectors.php
1 short length of self amalgam tape	

Before you start - some safety points...

- You are going to need at least a couple of hours if this is your first attempt - more if the coax cable run is difficult. Don't try rushing it.
- Don't try installing a dish if it is at all windy. It really isn't worth the risk to your health.
- An 80cm dish is about the biggest that one person can safely handle alone. If you are installing a dish bigger than 80cm, you need a helper.
- Don't operate power tools outside on a wet day! You should be using a Residual Current Breaker on power tools anyway
- If you are working on ladders, make sure you have someone to steady them.
- Be careful if you are installing on a chimney. I have heard cases of chimney collapse due to the wind loading on the dish causing failure of the mortar during storm conditions....
- The wind loading on dishes, especially those on a long pole, should not be underestimated.



This story came off the Digital Spy forums, and is used with the permission of the contributor:

Be VERY careful, - if you are installing a dish on a wall, and need to use a long pole for the dish, the safest size you can comfortably get away with is 80cm, 90cm at a push. With the long mount, you're putting additional stress on the wall.

Go above the roof line and you need to add extra for wind load - just stick your hand at the roof line to see what I mean, even on a calm day the wind load can be considerable.

On older houses, it's possible to pull bricks out the wall, or if you are putting it at the end of the house, say at a gable end, it's possible to tear a whole section of wall down. On newer homes, breeze blocks are connected to exterior bricks using ties which are best described as metal coathangers straightened out. Stress on these will snap the ties and bang goes a section of wall - quite a big section. I don't mean to frighten you, but it can and does happen.

Even a 60cm dish can do it if they have enough wind load - over in the West Country, I once knew a man who had a solid 60cm dish (before mesh ones were popular).

Being security conscious, EVERYTHING, including the dish, got postmarked. The dish was mounted on a pole above the roof line, and one day the winds picked up. Off went the dish, taking several bricks with it.

Couple of weeks later, after the wall was repaired, he got a knock at the door from an angry man wanting to know if he'd lost a satellite dish. Replying yes to this, the man said 'here's the bill for the greenhouse it flattened - 4 miles away.....' If you stick up a dodgy installation, and it falls down and injures someone (or even a fatality) - if the insurance company finds out it is a dodgy installation, they are well within their rights not to pay out. Personal compensation claims can amount to thousands of pounds.



Siting the dish

Your dish needs to be able to see the satellite when it is permanently installed.. Now is the time to find out if you have a tree in the way - not after you have been sweating for 2 hours!

Try these sites...

<http://www.dishpointer.com/>

http://www.planningportal.gov.uk/uploads/ant/antenna_guide.html

This guide assumes your dish is going to be pointing at Astra 1 19.2E (If not, line up on this orbital slot first, then nudge it round to its final location later. The only thing to double check if you are going a long way round from 19.2E is that the dish will physically swing round that far without fouling the wall, roofline, or anything else).

The easiest way to check your signal is to take an old portable TV outside, hook the coax up to the dish and the decoder, and wave the dish around until you find the German channel ZDF. This is one of the strongest channels on Astra 1 so is easy to find. Then if so required, move round to your chosen satellite location. But you could always spend money on a tool to make your life easier...

http://www.dastv.co.uk/Satellite_Alignment_Meters.php

You will probably get some very strange looks from the neighbours but who cares? You are going to have lots of lovely free TV channels to look at by the end of the day.

If there is a problem with vandalism in your area, you might want to consider bolting everything high enough off the ground to avoid the local trouble makers.



Mounting the dish on the wall / getting a signal.

Assuming you have got all the tools and equipment you need, you're not going to be interrupted for a couple of hours, and the day is warm and sunny, the first job is to drill the wall for the dish mounting plates. Mark the wall carefully, and drill the holes into the wall. Insert the expander bolts into the holes, put the mount in place and carefully screw up the nuts on the expander bolts nice and tight. Ensure you drill into brickwork and don't use the mortar layers as an easy route in. Mortar doesn't have sufficient strength to keep the dish safely on the wall.

Next you need to put the support pole in place. It is often easiest to attach the dish (without the LNB) to the support pole first, and then bolt the pole in place. This is where you need to be careful, as a gust of wind here could be very dangerous, especially if you are up a ladder. Do up the nuts on the u-bolts sufficiently to stop everything moving - it doesn't matter where the dish is pointing at the moment, adjustments will come later. Just get it in place and secure.

Next, attach your coax cable to the LNB, bolt the LNB into place, and hook up everything to your decoder and portable TV. Slacken off the u-bolts holding the dish onto the pole, and the u-bolts holding the support pole to the bracket slightly. You want to be able to just move things around. Move the dish around until you find ZDF, and find the strongest signal. (If you are looking for one of the other satellites, go and find them from here). If you are staying with Astra 1, drape a damp tea towel over the LNB to weaken the signal slightly, and peak up the signal again. Adjust the skew (twist) of the LNB for best signal - no more than 10 degrees either way will be sufficient.

Once you have tested the channels, and have got rid of all the sparklies, carefully do up all the nuts on the u-bolts, and check the signal again. (You might find the support pole moves a little as you tighten up the bolts). If so run through the fine tuning procedures again.

Now is the time to triple check you have tightened up every bolt properly. (You want to find out NOW if a bolt is still loose. Not when the wind is howling round the roofline in the winter storms!)

Routing the coax cable

Decide on a sensible route for your coax cable before you start tacking it into place. It may be easier to disconnect the cable at the dish, and start from the TV end of the cable, although it doesn't really matter. Drill a suitable hole through the window frame or the walls of the house, and feed a nice long length of coax through the hole from outside. Come inside, trim down the cable, attach the f-connector, and then carefully clip the cable to the skirting boards or something similar to keep everything neat.

Put a loop of cable outside and below the entry hole. This will stop rain water running down the cable into your house. If you have drilled through the window frame, then when you finish you might want to slap some paint over the cable to help seal the hole. If you have gone through a wall, then put some silicone sealant round the cable entry, or use some hole tidies http://www.dastv.co.uk/Hole_Tidies.php.

Run the coax cable round the outside of your house, nailing the cable in place with coax clips every couple of feet or so. When you reach the dish, tape the cable to the LNB support arm to stop it blowing around. Attach the second f-connector to the end of the cable, and put a loop into the cable to ensure rain runs off it and not into your LNB.

Screw the f-connector up tight, then wrap the self amalgam tape tightly round the cable and f-connector to seal it from water. (Self amalgam tape is a rubbery tape which welds to itself when stretched and wound tightly round a cable join. I have also used "Duck Tape" successfully here).

Dont use 'sellotape' or electricians tape. It isn't waterproof, and if water gets down the inside of the coax into your receiver, something is going to go bang....

Check your signals, and if everything is ok - settle down in front of the TV, and crack open a cold beer :-)