



Hook Technologies

WWW.HOOKTECH.CO.NZ

## Step by step guide to installing your own Ku Band satellite dish

If you don't feel comfortable installing your own system, your local TV Aerial or Handyman can easily follow these helpful guidelines for you.

**Please note:** The steps outlined here are a guide only. Some dishes, LNBs and mounts may look slightly different. You may need council or landlord permission to install a dish. No responsibility is taken for mistakes, but we would appreciate your feedback - [feedback@hooktech.co.nz](mailto:feedback@hooktech.co.nz)

### Package Check

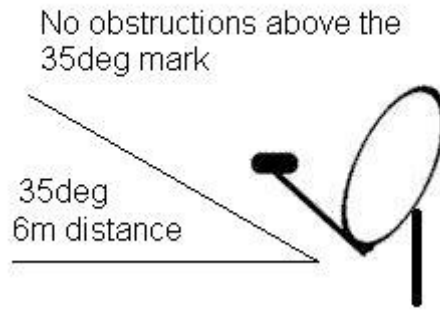
The very first thing to do is to check that all of your products have arrived. If not immediately email or ring us and we will put it right.

### The Mount

After making sure you have all of your products, the next step is fixing the satellite dish mount to your house or other firm structure. It is very important that your satellite dish doesn't move at all, because even a very small movement in the wind will cause the digital signal to be lost momentarily.

In deciding where to install the mount, you need to keep in mind that where you will need to face the dish - use <http://www.lyngsat.com/asia.html> and find your satellite. Then click on 'sat tracker' at the top middle of the page. This lets you select your area in NZ to see your alignment details. The other option is to use the guide on our website - [www.hooktech.co.nz](http://www.hooktech.co.nz).

You need to keep any large trees, buildings or anything else that might block the signal, at least 6m away from the front of the dish. However **above 35 degrees from the base of the dish** you need to have a **clear line of sight to the sky**.



Full instructions are provided with each mount along with all the bolts, nuts and tech screws for attaching it. The instructions are very simple and straight forward, with diagrams to assist you. **Anyone who has screwed a picture frame to the wall and can climb a ladder can put up a satellite dish mount.**

#### **Tools needed:**

- [1] Cordless drill with a 10mm and 8mm socket fitted. [this is to drive the tech screws]
- [2] Silicon sealer. [to stop water leaking in under the screws]
- [3] Hammer. [sometimes a small tap on the top of the tech screw is needed to start it in the metal or wood]
- [4] Small level. [this is to make sure the main mounting pipe is perfectly vertical]
- [5] 6" Adjustable spanner and pliers.

#### **Check List on Completion:**

- [1] Is the mount solid?
- [2] Is the main mounting pole perfectly vertical?
- [3] Can the dish face the need direction? Will the dish hit anything when it is mounted?
- [4] Is the area in front of the dish clear of obstructions?



When installed a Roof Mount should look like this.



When installed a Wall Mount should look like this,

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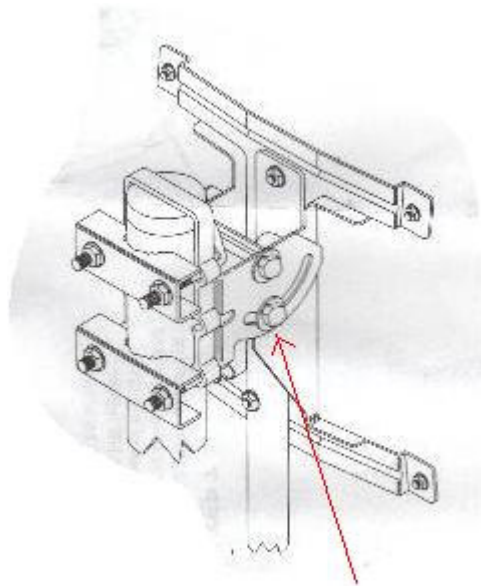
## Dish Assembly

The dish must be assembled following the instructions provided. They are very easy to follow and are set out in a step by step format.

### Tools needed:

[1] Screwdrivers, pliers and 6" Adjustable spanner

Once the dish has been assembled, you need to set the elevation adjustment.



The elevation adjustment is located here. It will vary with dish types. We have different types in stock at all times. This is a guide only.

A different elevation is needed for each satellite. You pick your satellite and then move the





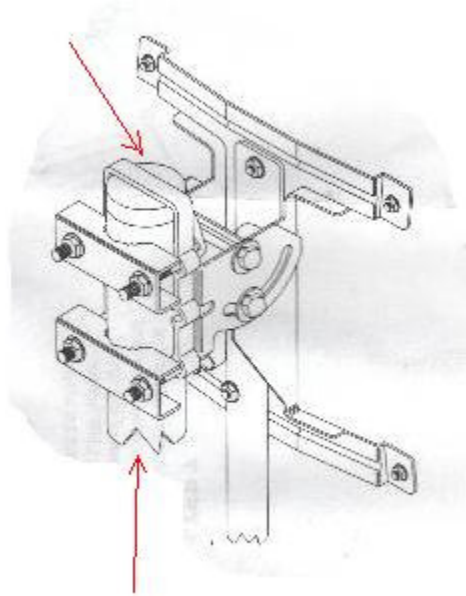
The LNB is set at approximately 8 o'clock position as viewed looking into front of dish, note red markings in picture above. This is for Optus B1 satellite. Consider the arm of the LNB, with the F connector on it, as the hour hand of the clock. Point this arm in the approximate direction of 8 o'clock when looking into the front of the dish/the back of the LNB. This will vary for other satellites. Start with this position and **then when you have your satellite** (i.e. when all the alignment and mounting is done), vary the position to find the strongest signal for the satellite you are aiming for.

Tighten LNB mount when alignment is finished.

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## Mounting the Dish

Once the dish has been assembled and the LNB fitted, you are ready to mount the dish. This is very simple. All you need to do is carry the dish to the mount and hang it on the 50mm diameter pipe as in the picture below.



The red arrows point to the 50mm pipe which is part of the roof mount.

That is it! You are ready for the next step.

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## Running the Coax Cable

There is nothing major about running the coax cable. Just keep these following points in mind.

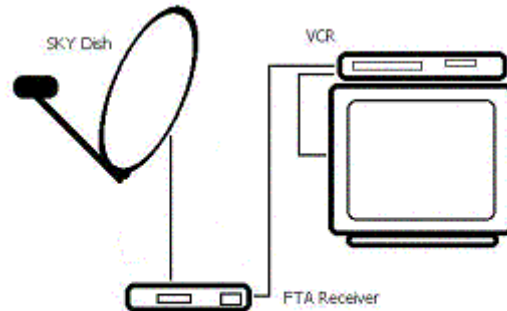
- Never use metal clips or staples to hold the coax cable. Use proper plastic coax cable clips from a hardware store or use plastic cable ties to fix it to the back of downpipes. Be careful not to pull the cable ties too tight. Don't distort the shape of the cable.
- Never bend the cable in a tighter curve than 100mm in diameter.
- Think carefully about where to have drip loops. These are loops that turn and go up at points where water may run on the cable and you need to make it drip off before the cable runs into the house.
- Don't leave any cable hanging loosely where it could be blown in the wind (on the roof) or chewed by a dog (under the house).

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## Setting up the Receiver

Make sure the receiver is **unplugged** from the power point. The receiver has two threaded connections on the rear panel. The top connection is labeled LNB IN, gently screw the 'F' connector from the end of your coax cable to this socket.

1] Connect a TV lead, from the "RF out" plug on the rear of the receiver to the "aerial in" socket on the rear of your TV or VCR. If you also have an ordinary aerial, plug that into the RF in at the rear of the receiver.



2] Plug the receiver into the power, turn power on and wait for 10 seconds. Make sure the light on the front panel is green. Press 'on/off' on remote if necessary. Press 'menu' once on the remote.

3] Tune your TV or VCR into the desired channel so you can view the receiver menu on the TV. Note: Receiver output is in UHF frequency.

The receiver can also be connected via AV inputs with the correct cable (connect A/V out from the receiver to the A/V in on your TV).

The receiver comes pre-programmed. For further programming see our help section on your left.

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## Aligning the Dish

To align the dish you will need a satellite meter. You can purchase one [here](#).

Make sure the receiver is **turned off** and connected to your coax cable properly via the LNB IN socket on the rear panel. Go to the dish and connect the SF95 meter to the LNB via the short coax cable supplied, making sure you connect the meter using the socket labelled LNB or DISH (depending on the meter you have). Then connect your main coax cable that runs down to your receiver to the other socket on the meter.



You can see the SF95 satellite finder meter in the picture above, connected via short white coax cable.

**Now you are ready to begin alignment:**

- 1] Turn on the receiver. The green light should be glowing on the front panel.
- 2] Use the gain control on the front of the SF95 meter to adjust the meter to read halfway on the scale.
- 3] Whilst staying behind or to one side of the dish, gently and slowly move it from side to side until you find maximum signal on your meter.

During the dish assembly step, you set the elevation of your dish to the satellite you wish to receive. Now in order to easily align the dish you need to use a compass to point it to the correct compass bearing for the satellite. The compass points for the different satellites are taken from the same website as noted in the mount position section.

4] Before continuing with the adjustments, go check the receiver to be sure you have the correct satellite. You should be able to see some picture if you select the different channels. Also you can press the 'INFO' button on the remote and the satellite name will be displayed. You will also find that the 'quality' indicator in the 'installation' menu section will be up if you have the correct satellite.

If you have no signal or somehow manage to have the wrong satellite, recheck you elevation (details in Dish Setup back up the top of this page) and then start at step one of this section again. If you continue to have trouble, try slowly adjusting the elevation (up and down) of the dish once you have the correct compass point. It is easy to accidentally align your dish to one of the other satellite in the area so you may need to try a few times before you get it right.

Once you have the correct satellite, continue with step 5 to get the best signal.

5] Now that you have found the satellite you may need to use the gain control knob on the front of the SF95 meter to adjust the meter to read halfway on the scale again. The trick is not to get the meter to read full scale (as the measurements on the meter mean very little) but rather to find the peak, the highest signal strength. This will mean you have correctly aligned the dish.

To find the peak, you will need to gently pull on one edge of the dish while you push on the other edge. Do this from behind or from one side. If when you move it to the right the signal goes down, and when you move it to the left it goes up, adjust the dish to the left a little. Keep adjusting it until the signal goes down when you move the dish to the right or to the

left. This means you have found the peak, the centre of highest signal.

Now do the same thing up and down. Even though you set the elevation during dish setup it will very rarely be perfect. So adjust it a little until it is in the peak spot, using the same technique as outlined above.

Then check the side to side peak again to make sure it didn't move.

Now tighten up all the bolts very tight. It is important these are tight as the dish will move in the wind if they are not tight enough. They are designed to be tightened so go for it, just be careful not to swing on the dish as you do it or it will move and your alignment will be lost.

**6]** Just before you leave and relax to watch your new FTA satellite TV and Radio system - you need to do a few more fine adjustments:

Loosen the LNB fitting a little and adjust the 'focus' by sliding the LNB in or out for maximum signal strength.

Set the 'polarity' of the LNB by rotating the LNB for maximum signal strength. Even though you set this by putting the LNB at the 8 o'clock position, it often may need a very small adjustment from there. This adjustment will often be very small or nothing at all for some satellites or a complete change for others.

Now lock the LNB in place by tightening the screws or bolts. Do not tighten these too much as the LNB mount is plastic and the wind will have little effect on the LNB.

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## The Finish

Now all you need to do is check that the signal at the receiver is still good. Flick through all the channels and make sure they work.

Turn off the receiver and go back to the dish. Disconnect the SF95 meter and connect the main coax cable to the LNB gently, seal around and over connection with amalgamating tape or silicon sealer.

Recheck everything is tight and go enjoy your perfect picture, on the dish you installed yourself.

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This page will continue to be added to, and we would really appreciate your comments on it thus far at [feedback@hooktech.co.nz](mailto:feedback@hooktech.co.nz) If you are wanting more information regarding doing your own install, email your questions to us.