



INSTALLATION INSTRUCTIONS & APPLICATION INFORMATION FOR DIRECT BROADCAST SATELLITE DIPLEXERS

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PURPOSE & APPLICATION OF DBS SATELLITE DIPLEXERS

Direct broadcast i.e; DBS, provides entertainment via multiKU band satellites positioned in GEO-STABLE orbits directly above the earth's equator. These satellites are "parked" 22,500 miles above the surface of our planet. This altitude & position provides an orbital position that EXACTLY rotates with the turning of the earth.

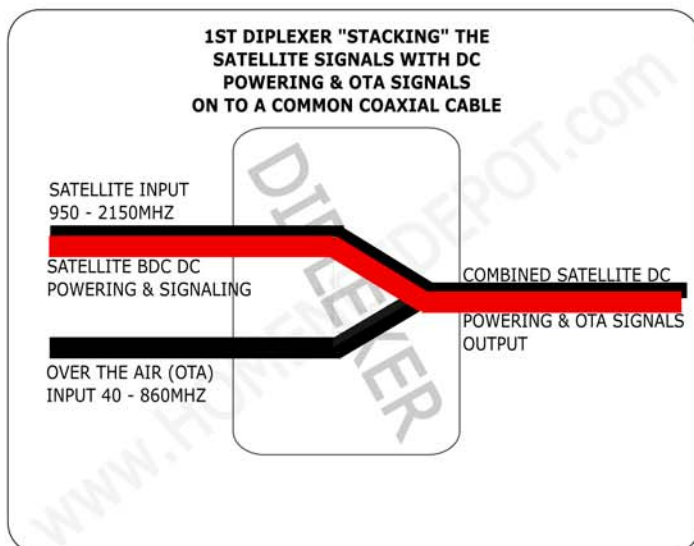
These satellite downlink or transmit on 24 transponder at KU band frequencies of 18.3 - 18.8 GHz. These downlinked transponders to small aperture antennas called, TVRO i.e; Television Receive Only. at the TVRO the KU band transponder frequencies are block converted, in 500MHz blocks by a BDC, i.e; Block Down Converter to a more propagated 950 - 2150MHz.

Satellite programming providers may utilize up to 3 KU satellites for there video offerings, the will result in TVRO's having 3 block converted TVRO outputs to allow subscribers to access the entire programming offering.

OVER THE AIR, i.e; OTA, digital & the few remaining analog broadcast channels are maintained in the 52 - 860MHz frequency spector.

Because satellite programming occupies the 950 - 2150MHz spectrum and the OTA signals are located at the lower frequency of 50 - 860MHz it is technically possible for the two frequencies to be combined or "DIPLEXED" on to a common coaxial cable.

The common coaxial cable propagating the DIPLEXED OTA & DBS signals has one addition requirement to fulfill. The TVRO's BDC requires powering to complete its function & control voltagers need to be transmitted to the TVRO's multiswitches, allowing switching between the different satellites feeds. So DC voltages are superimposed on the common coax for use by the TVRO's electronics.



WHAT IS THE DIFFERENCE BETWEEN A SATELLITE DIPLEXER & SPLITTER

WHAT IS A DIPLEXER?

A diplexer is a device designed to take two signals from two different cables and stacks them on to a common coaxial cable. A diplexer is the right thing to use when trying to add an antenna signal to an existing cable. There are many different kinds of diplexers. Passive diplexers are little more than combiners. They take two signals that are of different frequencies, and therefore will not interfere with each other and put them on a common cable.

WHAT IS A SPLITTER?

A splitter and a diplexer can look very much alike. They both will have multiple connections on one end and one connection on the other. However, A splitter takes one signal in and makes two, three four, six or eight outputs.

The most common use of a splitter is to add an additional television to an existing cable. If you have an antenna, you can use a splitter to make that antenna serve more than one television. If you have a cable or satellite system, you might be able to use a splitter to add TV to another room. Most modern systems are designed to use a splitter in this way, but older systems make you run a separate line to each TV from a central switch.

Splitting seems like an easy way to add extra outlets, but remember that each time you split a signal you cut its strength in half.

IN SUMMARY

A diplexer combines and/or separates signals of different non-interfering frequencies to a common coaxial cable or separates non-interfering signals to two or more coaxial cables.

A splitter divides the entire signal as presented to it's input into two, three, four, six, eight or more outputs.

