

**Satellite Antenna:**

**C-Band, 3.8m (12 foot) 2 degree rated, solid professional grade.**

The Westwood One supplied receiver is designed to operate from a professional quality solid 3.8 meter antenna.

The following specifications are considered to be the minimum level for acceptable performance:

<b>Size:</b>	<b>3.8 meter (approx. 12 foot diameter)</b>
<b>Gain:</b>	<b>41.0 db at mid C-band frequencies</b>
<b>3db beam width:</b>	<b>1.5 degrees</b>
<b>First side lobe:</b>	<b>-20 db</b>
<b>Cross Polarization Isolation:</b>	<b>&gt;30 db on axis</b>
<b>Reflector:</b>	<b>Solid material, fiberglass or metal.</b>

The antenna must be solidly mounted. Please see the manufacturer’s requirements and recommendations.

Satellite: SES-11 at orbital location of 105 degrees. Polarization is **Vertical**.

Some Antenna recommendations mentioned for their consistently good performance:

- Comtech 3.8m**
- Prodelin 3.8m**
- Patriot 3.8m.**

Generally, antennas larger in size (such as 4.5m) will exceed the recommended specifications, those smaller will not.

**LNB - C-band type PLL**

The modulation technique used is QPSK and requires the LNB to be a Phase Locked Loop type, not to be confused with lesser quality "digital ready" units. The "digital ready" LNBs do not have the required LO frequency stability required for audio reception. This generally manifests itself as either a failure to lock to the signal or if the lock is achieved, audio dropouts from the excessively high bit errors that result.

Recommended Specifications:

<b>Frequency Stability:</b>	<b>+/- 10 Khz</b>	
<b>Gain:</b>	<b>55-70 db</b>	
<b>Phase Noise SSB:</b>	<b>Offset</b>	<b>dBc/Hz</b>
	<b>1 Khz</b>	<b>-73 dBc/Hz</b>
	<b>10 Khz</b>	<b>-83 dBc/Hz</b>
	<b>100 Khz</b>	<b>-93 dBc/Hz</b>
<b>DC Power:</b>	<b>+15 to +24 VDC @ 300-400 ma</b>	
<b>Noise Temp:</b>	<b>15k to 45k</b>	

Our experience with the **Norsat 3100, 3200 and 3800 series** has been excellent. These units are reasonably priced and readily available. Please remember to weather proof the connection. Placing the LNB under a rain "bucket" is not necessary, and really does not eliminate the need for weather proofing the connections.

### **Cable and Connectors**

The Westwood One Wegener receivers are designed to operate with up to 250ft of satellite grade RG-6 coaxial cable. Longer cable runs are possible, however additional cable loss will need to be allowed for and can still meet the requirements by substituting lower loss cables and/or adding some gain. It is important to use quality cable and properly installed connectors. And finally, the most important step is the weather proofing of the connectors.

An excellent RG-6 coax is the Belden #9248, which has been on the market for 25+ years. Features excellent shielding and also low resistance for the DC power to the LNB. For assistance regarding longer cable runs contact Westwood One Affiliate Support for additional suggestions.