



## Application Note

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# How to install a Universal LNB system using the XR-3 Satellite Meter

A “Universal” LNB is a generic type of LNB designed to cover most of the Ku band. It is used widely in Europe and more infrequently in North America. It uses a 22 kHz tone to select between two local oscillators (LOs) and bands inside the LNB:

22 kHz	LO freq	Ku Freq range
OFF	9.75 GHz	10.7 to 11.7 GHz
ON	10.6 GHz	11.7 to 12.75 GHz

13 or 18 volts on the cable selects vertical (VT) or horizontal (HZ) polarization. The XR-3 *automatically* supplies the 22 kHz tone if necessary, thereby selecting the correct LO frequency for each transponder.

**Connections:** Coax cable connected from LNB output port to XR-3 satellite meter module’s ODU / LNB port

### Meter Setup:

Push the **SYST** System soft-key to select the following:

- REGION                      select your geographic region
- SERVICE                    **Generic Ku Band**
- SYSTEM                    **H/V Dual Pol LNB**
- LNB MODEL                **Universal**
- SWITCH TYPE              **none**

To make selections, arrow up or down to the item to change and press **Enter**, then arrow up or down to the desired option and press **Enter**.

Press **EXIT** or **DONE** to return to Run Mode

### Dish Setup:

Press the **AZ/EL** soft-key to bring up the zip or postal code lookup screen.

- Use the numeric keypad to type your zip code and then press the Enter button. If in the U.S.A., enter the zip code for your location. In Canada, enter the postal code. If located outside of North America, type in the latitude and longitude of your location and then press the Enter button. Press EXIT to return to the main Run screen.
- Use the left/right arrow keys to select the desired satellite (i.e. 97°W Galaxy 19)
- Note the magnetic (compass heading), elevation and polarization offset numbers displayed.
- Pre-set the dish’s elevation to the given elevation angle.
- Pre-set the LNB polarization offset (polar off) to the given offset.

### Run Mode:

- Press the LNB power soft-key (middle right side of LCD screen) to power the LNB.
- Use the left/right arrow keys to select the desired satellite (i.e. 97°W Galaxy 19)
- Align the antenna, adjust the azimuth, elevation, and polarization offset to obtain the strongest possible signal level (left bar graph), LOCK and best signal quality (right bar graph) value.
- Press the **ID** soft-key to verify the satellite. "ID VERIFIED" means you are pointed correctly.
- If ID fails, press **SCAN** soft-key and XR-3 will find which satellite you are aimed at.
- Use Up/Down arrow keys to scroll through other transponders to check for proper level and quality.

As you scroll through satellites or transponders, the LNB soft-key may change from “LNB ON” to “LNB 22K”. This indicates whether the 22 kHz tone is being used or not and hence which LO and which

frequency band is selected. You do not need to be concerned about this display change since the XR-3 will select whichever one is needed to pull in the selected transponder.