APPLIED INSTRUMENTS

Application Note

06/22/2009

How to install Xplornet / Telesat / Netkaster with a Super Buddy™ Satellite Meter

The Xplornet / Telesat / Netkaster antenna system is powered by 29 volts DC on the TX port of the antenna module (TRIA). There are three different configurations that may be used to power the TRIA:

1. Powering the TRIA from the modem

This configuration works with all styles of Super Buddy meters.

Connect the TX port on the TRIA to the TX port of the modem.
Connect the RX port on the TRIA to the Super Buddy meter's Signal In port (top).
Turn the modem on. Note: you shouldn't have anything connected to the bottom (IRD) port of the Super Buddy meter in this configuration.


Tx   Rx

Xplornet / Telesat /
Netkaster Modem
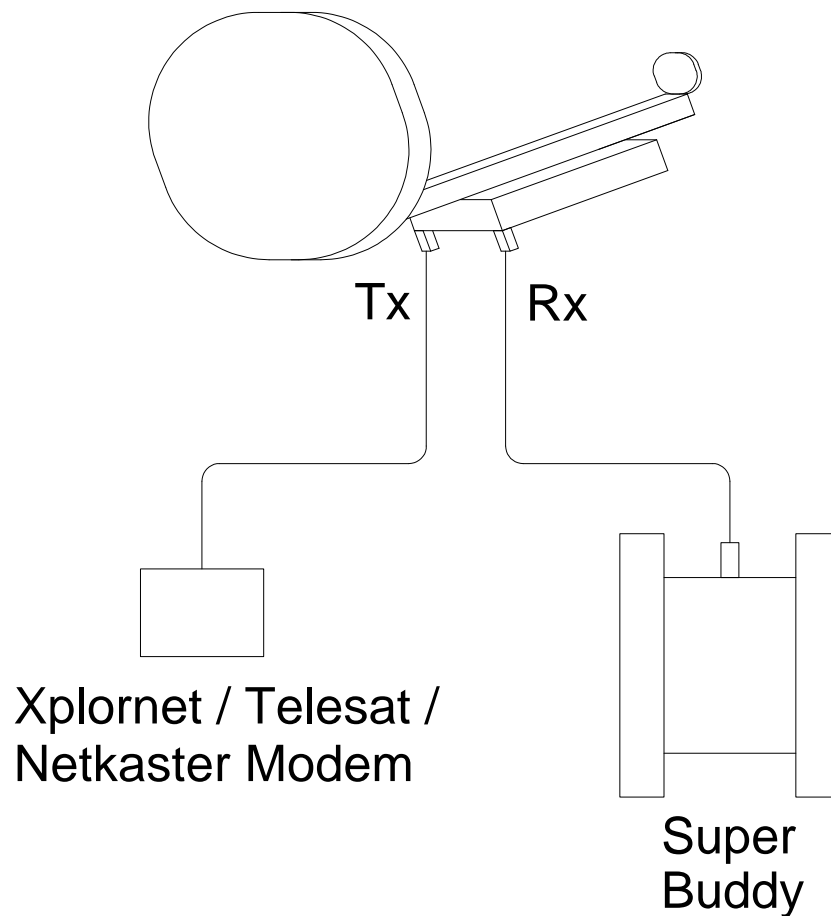
Super
Buddy

2. With The Applied Instruments Super Buddy 29
Connect the power passing side of a splitter to the TX port on the TRIA.
Connect the DC block side of a splitter to the RX port on the TRIA.
Connect the remaining port on the splitter to the Super Buddy meter's top (Signal In) port.

To prevent sparking and to protect components, connect all cables before turning the LNB power on.
Turn off the LNB power before disconnecting the cables.

Tx   Rx

Power
Pass Side   Power Pass 950-2150MHz Splitter

Super
Buddy 29
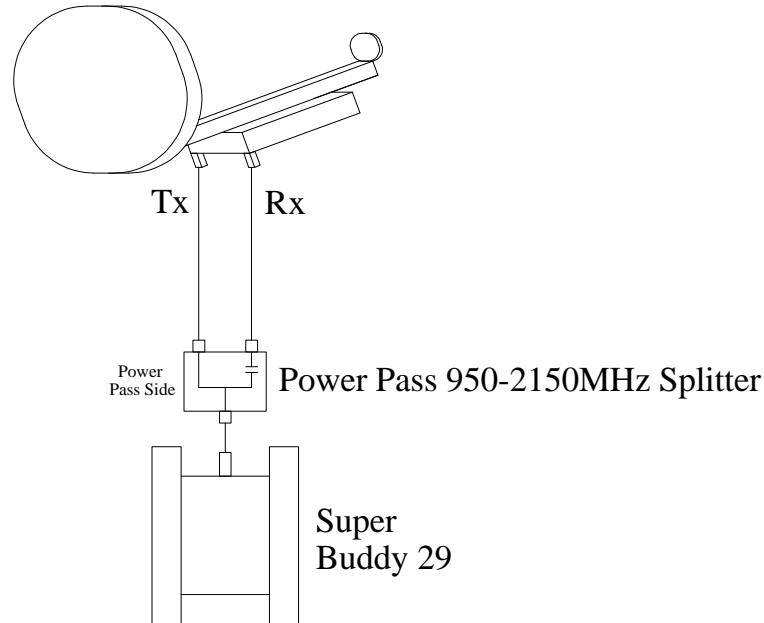
3. With The Applied Instruments Blue Bunny™ Voltage Converter Box

Connect the TX side of the Blue Bunny converter box to the TX port on the TRIA.
Connect the RX side of the Blue Bunny converter box to the RX port on the TRIA.
Connect the remaining port on the converter box to the Super Buddy meter's top (Signal In) port.
To prevent sparking and to protect components, connect all cables before turning the LNB power on.
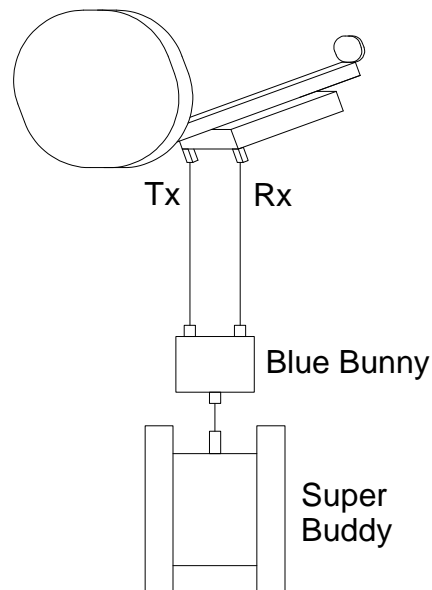Turn off the LNB power before disconnecting the cables.

Tx   Rx

Blue Bunny

Super
Buddy

Xplornet / Telesat / Netkaster Satellites

Xplornet / Telesat / Netkaster provides service from two satellites. Anik F2 (111.1W) uses left-hand circularly polarized signals. The Anik F3 satellite (118.7W) uses right-hand circularly polarized signals. The LNB assemblies (TRIAs) for these systems are designed for either right or left-handed polarization. You must use the correct LNB assembly (TRIA) for the system you are installing.

Xplornet / Telesat / Netkaster Spot Beams

The Xplornet / Telesat / Netkaster system uses spot beams for different areas. The spot beam numbers are NOT the same as the pointing aid (APA) settings, although they are related.

Meter Setup

Push the **SYST** System soft-key to select the following:
- REGION   your geographic region
- SERVICE   **Other Providers**
- SYSTEM   **XPLORNET**
- LNB MODEL   XPLORNET F2 – if you are installing for the Anik F2 satellite (111.1W), OR
                               XPLORNET F3 – if you are installing for the Anik F3 satellite (118.7W)
- 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

Zip Code Lookup

Push the **ZIP** soft-key and enter the postal code where you are installing the system and then press the Enter key. *The Super Buddy will look up the zip code.*

```
                  Anik F2
 111.1W              ◀E   W▶

              Postal  L6S6B5
          Latitude   43.8
         Longitude  -79.8
          Azimuth   221.3
          Magnetic  231.5
         Elevation   30.6
         Polar off   28.4
         SPOT BEAM          ┌─────┐
              Beam    0      │EXIT │
        Arm angle   13.0     └─────┘
             Skew   61.6
              APA    0
```

The arm angle, skew setting and APA number are also calculated and displayed at the bottom of the screen.

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

Run Mode

When you return to the Run screen, satellite Anik F2 (111.1W) or Anik F3 (118.7W) will automatically be selected. The up and down arrows all you to scroll through the different spot beam carriers. You will see the beam frequency changing in the top right corner of the LCD screen. If you're not sure of your region's corresponding beam frequency, we recommend connecting your satellite meter to a dish that you know is already correctly aligned and peaked. Then use your UP/DOWN arrow keys to scroll through all of the different spot beams. Make a note of which spot beam choice resulted in the strongest signal level (shown in dBm on your left bar graph) and signal quality (shown as IRD or C/N value on your right bar graph). Now you can use that as your baseline and always tune to that transponder frequency / beam number when doing Telesat/Xplornet/Netkaster installs in that geographic area.

- Press the LNB button to power up the LNB (not needed if using power from the modem)
- Align the antenna to obtain a strong signal level, a lock, and the best quality (C/N)
- Disconnect the Super Buddy from the system before using the Xplornet / Telesat / Netkaster modem software to obtain an accurate reporting of the down stream channel power.

Note: the ID function does not work with Xplornet / Telesat / Netkaster as it does for other installations. If you receive a LOCK status, you can be sure you are pointed correctly.

Modem Provisioning
After the dish is peaked using the Super Buddy, you should remove the Super Buddy. Then connect the modem and allow the modem to find and lock onto the correct beam.

Follow Xplornet / Telesat / Netkaster's instructions for provisioning and final testing.

NOTE: None of the meters in the Super Buddy line (Super Buddy, Super Buddy 21, and Super Buddy 29) or Sat Buddy line (Sat Buddy, Sat Buddy 2, and Dual Buddy) can be used, alone or with a Blue Buddy Voltage Step Up, to power the Xplornet / Telesat / Netkaster TRIAs manufactured by Ko Space in Korea. This is due to the extremely high current level required. For the Ko Space applications, use power from the modem during dish alignment. Refer to the section on page 1 of this application note titled "Powering the TRIA from the modem" for detailed instructions.

The Super Buddy 29 and the Blue Bunny Voltage Step Up used with the Super Buddy, Super Buddy 21 and Sat Buddy line (Sat Buddy, Sat Buddy 2, and Dual Buddy) can power the more popular Xplornet / Telesat / Netkaster TRIA manufactured by UMA in Taiwan. Please refer to the manufacturer tag on the TRIA. If it says "Made in Taiwan by UMA", then it is compatible. If it says "Made in Korea by Ko Space", then it is NOT compatible.

Updates
Applied Instruments will make changes as we learn of them and post them on our web site in our Field Guide updates. (http://www.appliedin.com/www/products/SuperBuddy_SoftwareUpdates.html)