

Initial Link Setup

The following procedure provides the basic steps to align the antenna with the satellite and adjust the Transceiver and Modems for correct operation. AnaCom's Windows-based Supervisor 7.7 M& Software, which is provided with the Protection Switch, is required.

It is assumed that:

1. The link calculations have been done by, or approved by, the satellite provider.
2. The system installer knows the satellite coordinates.
3. The TX and RX frequencies have been assigned by the satellite provider.
4. The system installer is in contact with the satellite provider.
5. The Hub site is providing a signal to the site being installed.

Note: Do *NOT* turn on TX RF Power until instructed to do so.

Finding RX Satellite signal:

1. Install the Transceiver on the antenna and properly connect the Transceiver interfaces to the Antenna Feed and the Modem.
2. Install the AnaCom Supervisor software in the computer to be used and connect the M&C Cable to the Transceiver. The Transceiver 6 Pin M&C connector is used for RS232 serial interface and the 18 Pin M&C connector is used for RS485 serial interface.
3. Apply AC power to the Transceiver.
4. Using the M&C Supervisor software, adjust TX gain to minimum and select TX RF OFF. Note: The AnaCom Transceiver has a factory setting of maximum gain.
5. Ensure the Modem gain is set to minimum.
6. Using the Supervisor software set the RX frequency into the Transceiver by entering the RX frequency, or by entering the correct Channel Number (Provided in Appendix E at the back of the Operation Manual).
7. Using the supervisor software adjust the Transceiver RX Gain mid-range (approximately 95 dB).

Note: The AnaCom Transceiver is shipped from the factory with a maximum RX gain of 100 dB.

8. Connect a Spectrum Analyzer to the Transceiver RXIF OUT port.
9. Adjust the antenna to the calculated azimuth, elevation and polarization coordinates to locate the satellite.
10. While monitoring the spectrum analyzer, slowly adjust the antenna in azimuth until the RX signal from the satellite is found and peaked on the spectrum analyzer.
11. After the RX signal has been peaked in azimuth, peak the signal by adjusting the antenna in elevation.
12. Ensure all mounting hardware and the antenna is secured and cannot be adjusted.

13. Connect the Transceiver RXIF Cable to the Modem and ensure that RX LOCK on the Modem has been obtained.

Adjusting Transceiver TX RF Output signal

1. Using the Supervisor software set the TX frequency into the Transceiver by entering the TX frequency, or by entering the correct Channel Number (Provided in Appendix E at the back of the Operation Manual).
2. Using the Supervisor software, Select TX ON on the Transceiver and adjust the TX GAIN to mid-range.
3. While in contact with the satellite provider, slowly increase the gain of the Modem. The satellite provider will inform you when you have reached the optimum RF Output power.
Note: When making the final adjustments for optimum RF Out put the Modem and the Transceiver should be adjust as close as possible to mid-range. This will allow more adjustment range if future adjustments are required.
4. The satellite provider will also want to verify the polarization angle of the feed horn. Follow their instructions to verify cross polarization separation.