

SurfBeam Modem Lock Job Aid

Summary

This Job Aid covers:

[Preparing for Modem Lock](#)

[Obtain Modem Lock](#)

This Job Aid supports all audiences. This Job Aid applies to both new installations and service calls where a modem is replaced.

Preparing for Modem Lock

After pointing and peaking a SurfBeam modem for a 2005/2009 ODU, the Technician needs to make a few changes in the configuration of his pointing tools. During the Point and Peak process, the tools were placed close to the TRIA, and included:

- Satellite Signal Level Meter (SSLM)
- WildBlue APA
- 10dB and 20dB attenuators, placed on the RX port of the SurfBeam modem

It is very important that the APA and the attenuators remain in line with the RX cable feed during Initial Modem Lock. There are two important reasons for this:

- Since the modem can communicate with every beam frequency offered by the satellite, the APA and attenuators force the modem to ignore all frequencies outside the beam where the customer site is located.
- Because the Network Multi-rate Frequency Management software allows sets of modems to communicate on different frequencies within the beam, the APA and

attenuators force the modem to use the correct frequency for the local area within the beam.

Follow these steps to make the configuration changes and prepare for obtaining Modem Lock

Inside the building: Power off modem at the wall.

Outside the building: Disconnect the short COAX test cables from the RX port on the TRIA, and the LNB port on the SSLM. Remove the short COAX test cable from the To Meter port on the APA. Set these aside for the moment.

Disconnect the RX feed cable from the Sat RX port on the SSLM, and reconnect it to the RX port on the TRIA. Set the SSLM aside.

Inside the building: Disconnect the RX feed cable from the building penetration, and attach it to the To Meter port on the APA. Attach the From TRIA short test COAX cable to the building penetration site.

Do not connect the modem to the Customer's computer equipment (router or PC).

Obtain Modem Lock

Follow these steps, and observe the modem activity as it obtains Modem Lock

After completing the configuration changes described above, power up the modem at the wall

LED Activity

Boot up

Power LED on, RX 1 flash/sec

Link Acquisition

Power LED on, RX 2 flash/sec, TX flashes occasionally

Registration

Power LED on, RX 3 flash/sec, TX 1/sec

Note: if the modem's software requires updating, the RX LED shows 4/flashes/sec, and then the modem resets and begins the Modem Lock process again.

This may occur several times; do not stop the process

Modem Lock

Power LED on, RX solid, TX flashes as activity dictates

Proceed to the Provisioning Process