



4. INSTALLATION PROCEDURE

4.1 Fiber Optic Link Assembly:(both FBDA and FBIU)

4.1.1 Insert main optical fiber through the **Fiber In/out** hole on the FBDA panel and connect it to the **Optical In/out** connector on the Fiberoptic transceiver. On the FBIU connect the optical fiber to the **Optical In/out** connector on the Fiberoptic transceiver.

4.1.2 Insert diversity optical fiber through the Fiber in/out hole on the FBDA panel and connect it to the Optical out connector on the Fiberoptic transmitter. On the FBIU connect the diversity optical fiber to the Optical In connector on the Fiberoptic receiver.

4.2 Downlink calibration:

4.2.1 Connect Spectrum analyzer through High Power Attenuator of 40 dB to the Antenna port of the FBDA.

4.2.2 Inject (+20) dBm TX band signal from the FBIU Tx antenna through the optical link.

4.2.3 Adjust Gain on the Fiberoptic transceiver front panel in the FBDA so that RF power at the output is +30dBm.

4.3 Uplink calibration:(both main and diversity path)

4.3.1 Connect Spectrum analyzer to the Rx port of the FBIU.

4.3.2 Inject (-60) dBm RX band signal from the antenna port on the FBDA side through the optical link.

4.3.3 Adjust Gain on the Fiberoptic transceiver in the FBIU so that RF power at the output is -44 dBm.

4.3.4 Repeat the above with the diversity path.



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4.4 System assembly:

4.4.1 Connect BTS Tx to Tx antenna port on FBIU. (Another 10dB attenuator can be connected to the RF IN port of the Fiberoptic transceiver in the FBIU and the Rotary Attenuator on the FBIU front panel adjusted slightly for system performance optimization).

4.4.2 Connect Spectrum analyzer or Power Meter through High Power Attenuator of 40 dB to the Antenna port of the FBDA.

4.4.3 Turn the system ON, make sure that output power of BTS is no more than +30dBm. In case of higher power, higher attenuation is needed between BASE and FBIU.

4.4.4 Adjust Gain on the Fiberoptic transceiver front panel in the FBDA so that RF power at the output is $+40\pm 1$ dBm.

4.4.5 Connect diversity RX port on FBIU to the diversity receiver in the BTS. Connect RX port on FBIU to the Rx port in the BTS

4.4.6 Turn power off. Disconnect Spectrum analyzer and attenuator from Antenna port on the FBDA and connect Mobile Antenna and Diversity to the FBDA.

4.4.7 Turn power on.