

## **BTS Tune-up Procedure/Bay Level Offset Calibration**

**Overview:** The BTS Tune-up procedure, also known as the Bay Level Offset Calibration, is to be performed upon installation of the BTS, once a year after installation, and whenever certain components in the TX path are replaced.

*Reference:* Pages 3-59 and 3-60 of the "SC4812T CDMA BTS Optimization/ATP" manual gives a more detailed description of the Bay Level Offset Calibration Procedure and when it should be performed.

**Required Test Equipment and Software:** The Bay Level Offset Calibration Procedure requires using a computer which has LMF (Local Maintenance Facility) software, developed by Motorola in order to communicate with the BTS. Additionally, an RS-232 / GPIB interface box is required so that the computer may control the test equipment. The test equipment needed is a communication test set, which can only be from certain vendors defined by Motorola. There is additional cabling, couplers, and attenuators that are required. *Reference:* Pages 3-39 through 3-58 of the "SC4812T CDMA BTS Optimization/ATP" manual give a detailed description of the required test equipment, cabling, couplers, and attenuators, as well as how to calibrate the entire test system.

**Description of Procedure:** The Bay Level Offset Calibration can be performed at whichever CDMA channels are to be used at the particular cell site, at the desired output power for that cell site. Using the test equipment and LMF terminal, a calibration program, developed by Motorola, determines the required output power from the BBX2 modules in order to get the desired output power at the TX antenna terminal. The calibration program will thus determine the proper Bay Level Offset, which is basically the difference between the BBX2 and TX antenna output powers, for each CDMA channel. These Bay Level Offsets are subsequently downloaded from the LMF terminal to the BBX2 modules, thus guaranteeing that the proper output power is being obtained at each TX antenna. *Reference:* Pages 3-60 through 3-66 of the "SC4812T CDMA BTS Optimization/ATP" manual give the details for the Bay Level Offset Calibration procedure.

**Audit Procedure:** The Bay Level Offset Calibration can be audited whenever chosen by the customer. Motorola supplies the customer with an audit procedure, which is a software program developed by Motorola, that can be performed at the customer's discretion to verify proper output power is being obtained. *Reference:* Pages 3-66 through 3-70 of the "SC4812T CDMA BTS Optimization/ATP" manual give the details for the Audit Procedure.