

EQUIPMENT: EAC 2100

PROJECT NO.: 0L0551RUS1

Description of Operation

The EAC-2100 booster is available in either a two-channel or a four-channel configuration. Each RF channel is capable of handling three full-rate TDMA channels. Therefore, a four-channel EAC-2100 can provide one DCCH channel and 11 DTC DTC channels.

Also, two EAC-2100 boosters may be operated together to provide up to eight RF-channel operation (1 DCCH plus 23 DTC DTC channels). A digital control cable connects the two cabinets together to allow one cabinet to handle the DCCH duties.

A block diagram of the EAC-2100 is shown in figure 1-2. Up to four 800 MHz TDMA modules are used. These modules are similar to those used in the EAC-2000, with the main difference being that they have a lower output power level in the reverse direction. Like the EAC-2000, these modules provide the frequency translation feature necessary to allow high-gain repeater operation.

Block converters are used to convert the PCS band to the 800 MHz band, and likewise the 800 MHz band to the PCS band. A Forward Block Converter and a Reverse Block Converter is used. Each block converter has its own synthesizer and local-oscillator control for performing the block conversion process.

The Forward Block Converter converts the 1930-1990 MHz signals from the donor cell site to the 870-890 MHz band. The 870-890 MHz block is fed to the 800 MHz TDMA RF modules for signal processing. The outputs of the 800 MHz modules are individually converted back to the 1930-1990 MHz band for subsequent transmission to the repeater coverage area. Since the PCS band is wider than the 800 MHz tuning range of the 800 MHz RF modules, the Block Converters

System Diagram

