

A181T OPERATIONAL DESCRIPTION

Please refer to the block diagram exhibit (A181TBD) provided.

The unit is composed of two SMR band diplexers, two identical independent amplifiers, alarm circuitry, and voltage regulation circuitry.

The downlink signal enters the unit via J2 (the common port of diplexer U2). The signal passes through to U2's high band output port to drive amplifier AMP 2. The output of amplifier AMP 2 is fed into the high band input of diplexer U1 and then is output at J1.

The diplexers U1 and U2 provide isolation between the downlink and uplink amplifiers. The unit's operation in the uplink band is similar to the downlink band discussed earlier.

The amplifier uses four identical transistors which are biased to operate in a Class A mode. Total current drawn for all four devices is approximately 250 mA. The output stage transistors draw 60 mA at 12 V.

Additional circuitry on the board is concerned with providing local LED fault indication in the event of RF device failure and is not involved with the RF operation.

The main board connects to an alarm board mounted to the main board. This board generates a low frequency (approximately 2 KHz) encoded alarm signal which is sent to the system headend unit to indicate an alarm remotely. This circuitry is not involved with the unit RF operation.

Further detailed information about the unit and its operation is contained in the Operator's Manual TM0018AE exhibit.