

Equipment Description

Radio Frequency Systems 48750/48751 Repeater

The 48750 series band specific Cellular Repeaters are designed to enhance radio communications in buildings, basements, tunnels and other RF shielded environments. The 48750 is tuned for A band only operation, the 48751 is tuned for B band only.

These units work by receiving and amplifying the Base TX signals via a donor antenna directed at the desired base site. This RF path is called the ‘downlink’. The amplified base TX signal is re-radiated via antenna(s) or radiating cable into the “Service Area”. Subscriber mobile RF signals are received by the same service area radiating elements, amplified in the “uplink” RF path to be radiated back to the base via the donor antenna.

Duplexing band pass filters direct the RF signal to the proper gain path. Band selective down conversion filtering is used to provide exceptional band edge rejection of the competitive spectrum. Amplification consist of independent amplifiers in the Down and Up links respectively, as shown in the block diagram. Both links have AGC to prevent overdrive. Manual gain adjustment is provided. The composite output power is set at the factory and limited by the AGC circuitry so that intermodulation signals will not exceed -13 dBm as specified by the FCC.

LED indicators provide visual diagnostics for the 48750 series. DC and TTL Test points provide more indepth information for set up and troubleshooting. Together with the diagnostics section of this manual, these features make field set up and repair fast and easy.

