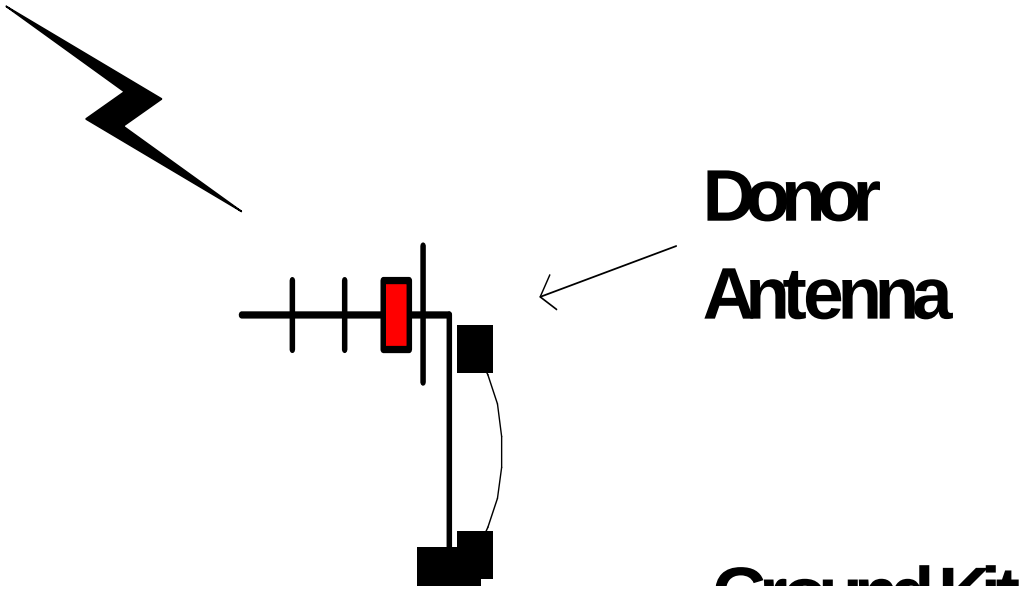
RADIO FREQUENCY SYSTEMS

Operational Description:
IWD48960

The 48900 bi-directional amplifiers/ repeaters/signal boosters are designed and optimized for low cost, high reliability, and ease of use. They are designed to enhance radio communication in buildings, basements, tunnels and other RF shielded environments. The 48960 is tuned for 800 Mhz SMR band and the 900 Mhz SMR band.

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 and amplified in the uplink RF path to be radiated back to the base via the donor antenna.



The uplink and downlink amplifiers are broadband to accommodate all the channels in the passband. Differentiation is provided by the duplexing filters. These determine the basic pass band and prevent oscillation between the uplink and downlink by attenuating the opposing link frequencies.

Both the downlink and uplink gain paths have Manual and Automatic Gain Control (AGC) to prevent an overdrive condition. The AGC set point is factory set so that the output of the link will not exceed FCC limits for spurious emissions (-13 dBm).

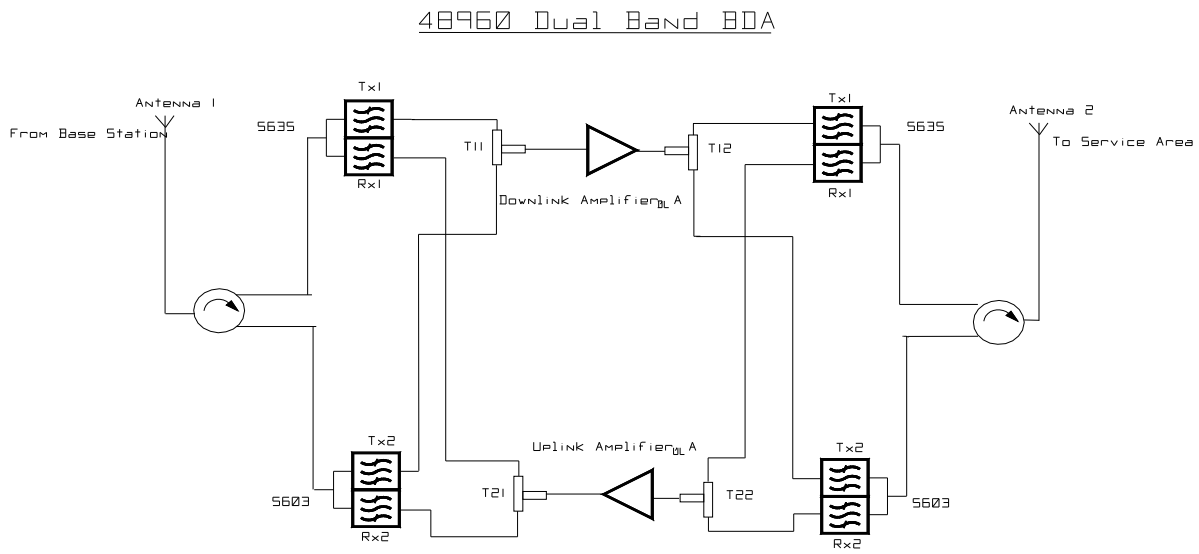
The control board distributes DC power to the amplifier modules and monitors each module for any fault conditions. LED indicators provide visual diagnostics; two Green LEDs indicate AC power (one each for the uplink and downlink RF board), a single Red LED for summary fault indication, yellow AGC LEDs indicate overdrive in the

Main Tel: (203) 630-3311
Eng Fax: (203) 634-2211
Sales Fax: (203) 821-3852
www.rfsworld.com

Radio Frequency Systems
29 Research Parkway
Wallingford, CT 06492

respectively link. A relay terminal provides connection to a NC / NO relay for remote notification for any fault condition and a remote shut down feature.

Block Diagram



Tel: (203) 630-3311
Fax: (203) 821-3850
Sales Fax: (203) 821-3852
www.rfsworld.com

Radio Frequency Systems
200 Pondview Drive
Meriden, CT 06450