Principle of Operation

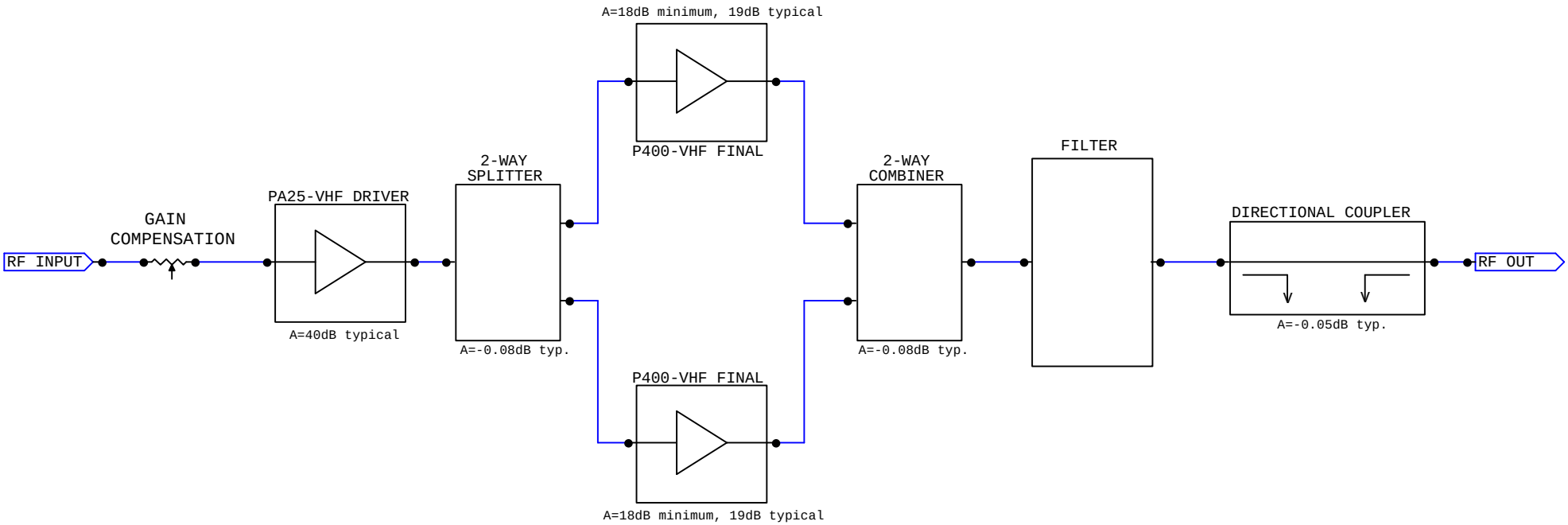
The TAV-500 power amplifier supplies a 500-watt peak video signal with an aural carrier level 10 to 13 dB below visual carrier (dBc) on any of the VHF television channels 2 through 13. Please note that channel selection must be made at time of order, as the transmitter or translator is calibrated and tested to the channel requested and is not field tuneable. The TAV-500 power amplifier is a modular solid-state 500-watt broadcast amplifier utilizing readily available RF components wherever possible, thus enhancing the serviceability of the equipment.

The TAV-500 is comprised of a PA25-VHF driver pallet in addition to (2) P400-VHF final pallets that are combined to create 500 watts of peak visual power in addition to the aural carrier power.

The TAV-500 features ultra linear amplification and individual channel RF output bandpass filtering. The amplifier modules are stable for high reliability and long service life.

Block Diagram

The RF signal enters through the RF Input connector on the power amplifier enclosure from the modulator or processor. It then passes through an RF attenuator to limit the output power level of the power amplifier and to help buffer any transients that may come into the power amplifier. After attenuation, the signal gets preamplified by a driver pallet before the signal gets split into (2) signals for final amplification. The output of the (2) final amplifier pallets are combined. Finally, the signal gets filtered with a Bandpass filter and monitored with a dual directional coupler before heading out to an antenna for broadcast.



TAV-500 Block Diagram	
Rev	ID
Date: May 24, 2005	Page: 1 of 1