

Requirements 4G: Description of circuits suppressing spurious and harmonic emissions.

RF Signal Path

The antenna jack is a UHF female SO-239 mounted to the rear panel. Signal enters the board at E24 and passes to relay K1. In receive mode or bypass mode, this relay is not energized and signal passes directly to or from the transceiver. In normal transmit mode, signal passes from the transceiver to connector J7, then through the relay to attenuator ATTN1 and to the RF amplifier module U16. This is a 2-stage hybrid unit matched to 50 ohm at input and output. The gain and power output of the unit are controlled by the dc voltage at pin 2, which is the bias to the input stage. The final stage is biased to the switched dc power voltage. Following the PA is a 7-pole harmonic filter, which includes two elliptic zeroes (C98 and C88) in its response, for harmonic cancellation. Power routes back through the relay and to the antenna connector.