

Circuit Description:

The Wireless Audio Adapter will be referred to as the equipment under test (EUT) in this report. The EUT is a wireless audio transmitter designed to be a high quality, low cost, audio transmission system for automobile use. This system will wirelessly transmit a hi-fidelity analog stereo audio signal from any audio music source to the chosen channel on a FM band radio. The frequency band chosen for this product is the 88 to 108 MHz FM Broadcast band.

The transmitter operates with a 200kHz channel spacing.

Transmitter Device Operation

The Left and Right audio signals are FM stereo multiplexed through a FM multiplexer IC (BH1417). The multiplexed audio signal is coupled directly into a FM modulator and summed with a 19 kHz stereo pilot tone also generated by the FM multiplexer IC. The FM modulator consists of a crystal controlled PLL oscillator tuned to the desired RF frequency. The oscillator/modulator is coupled through a final gain stage and the output is matched to the external antenna.