

CIRCUIT DESCRIPTION (EVF-625)

TRANSMITTER UNIT

RF Frequency Oscillator

TR3,C7,C8,XT1(or XT2 and VC1 functions as a crystal oscillator. The frequency is adjusted T3. The RF output of the oscillator is fed to the triplex frequency circuit. SWA1 is used to select the crystal XT1(16.630Mhz) for channel A or XT2 (16.620Mhz) for channelB

Triplex Frequency and Power Amplifier

TR3,TR2 and T2,functions as a triplex frequency circuit to make the operating frequencies are 49.890Mhz(CHA) and 49.860Mhz. The output is fed to the input of power amplifier TR1 through a capacitor C5. TR1 and T1 function as the power amplifier.

Circuit for Suppression of Spurious Radiation

The output of power amplifier is coupled to the antenna through triple 'LC' and 'PI' network (C1,C2,C29, L1 and L2) which serves both to match and reduce harmonic to adequate level.

Modulation and Response

U1 is MIC amplifier. The amplified audio signal fromTR9 output is fed to VC1 for making F3E type modulation. TR4 is selected in alignment to ensure the deviation C34 and R1 used to determine the transmit response.

Circuit for limiting Modulation

TR7 and TR8 give the auto MIC control circuit. When the modulating voltage is excessive, the collector of TR6 will obtain DC voltage, which turns on TR9. This feedback system keeps the maximum modulation deviation.

Power Supply

AC adapter output 9V DC fed to DC jack as the power supply. SW1 is the power supply swith. LED1 uses to indicator power supply ON/OFF. Zener ZD1 gives the stable power voltage to RF oscillator and mic amplifier to make the stable working status.