

Theory of Operation

The transmitter is made up of two parts: Audio & Video unit and RF unit. The audio signal from MIC1 is amplified, then modulates the audio carry frequency oscillator (6.5MHz), the modulated carry frequency is added in the VT of voltage controlled oscillator VCO2 (2.4GHz, D1, Q1). The video signal from DVD passes through the sharp network (R21, R14, C1, C11), also is added in the VT of VCO2, another signal is added in the VT of VCO by CPU (U3), the channel data is decided by the encode switch (SW1) of CPU's peripherals. The feed back signal (R32 is the error voltage output of loop filter (R1, R24~R26, C17, C19, C25) of PLL (U1) which is programmed, C29) from voltage controlled oscillator VCO2 is compared with reference crystal oscillator, the error frequency of oscillator VCO2 can be corrected. The carry frequency to be modulated by audio & video has been power amplified by Q2, filtered through the band pass filter (C20, C18, C23, micro strip), which the higher harmonics of signal reduced to lower level. The purer signal is emitted by antenna (RFOUT).