

CIRCUIT DESCRIPTION

RECEIVER

The RF signal received by the antenna passes through the band pass filter and is amplified by RF AMPLIFIER (2SC3356), The amplified RF signal input to IC(MC3361), MC3361 contains local output, mixer, limiter amplifier, FM detector, and low-frequency amplifier.

The signal from the RF amplifier goes to the mixer of IC(MC3361) and mixed with the local signal ($27.145\text{MHz} - 26.690\text{MHz} = 455\text{KHz}$), the IF signal is 455KHz and through the ceramic filter goes to limiter amplifier, FM detector, the data signal is modulated by FM detector and amplified and output from the 9 pin of IC(MC3361), the data signal is filtered by low pass filter and voltage comparator in IC(TA75S393F), finally, the data goes to IC(CY7C63772) and connected usb flash disk board into hub IC(AUG9254A21).....

TRANSMITTER

The remote data signal from MCU IC(EM78P156AM) is added to the varactor diode, the value of the varactor diode can be changed when the data is added, the data signal passes through the varactor and inductor can be made frequency modulated signal to the base crystal(13.5725MHz), the double frequency is selected from the oscillator and passes through the high pass filter and RF AMPLIFIER, the amplified RF signal through the band pass filter and the match inductor to the antenna.