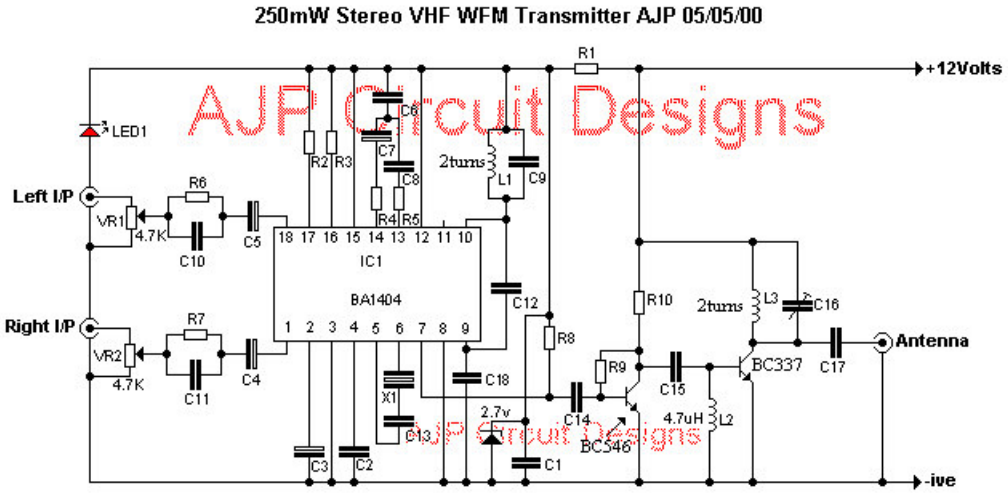
AJP's Circuits

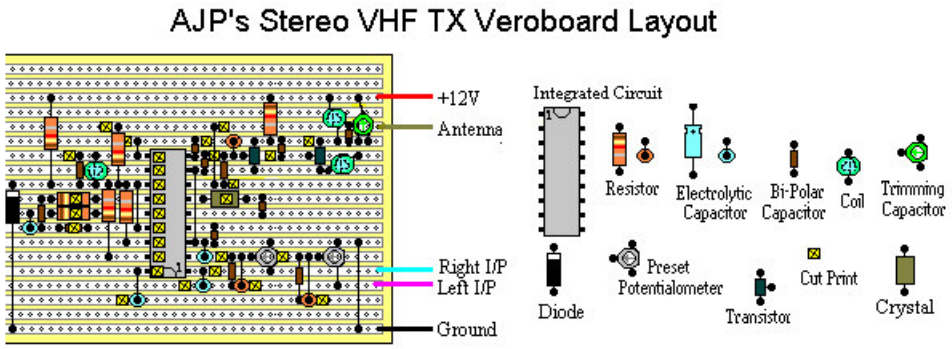
FM VHF Stereo Transmitter

A work collegue back in 1993, Warwick Jones brought a BA1404 back from his Austrialian trip for me to experiment with, and this is where it led me. This FM VHF Stereo Transmitter operates from a 12Volt supply and outputs a true stereo signal any where between 88 and 108MHz. The output is approximately 250mW and when using a tuned 1/4 wave dipole antenna ranges of over 5miles was acheived. Crystal X1 is 38KHz. L1 and L2 are 2turns of 22SWG enambled coper wire wound over an adjustable 10mm ferrite core. L1/C2 make up the tuned circuit and adusting L1 determines the O/P frequency. All resistor values are 1/4 watt and capacitors are rated at 16Volts. VR1 and VR2 are 4.7K Presets. All Bi-polar capacitors are ceramic. C16 is a Trimmer Cap and should be trimmed for maximun output into a 50ohm load antenna. The 2nd and 3rd harmonic contents are minimal. If an amplifier is to be used then incorporate a Low Pass filter network in its' output to reduce spurious emmissions.
The circuit diagram takes a while to load...PLEASE WAIT!!!!Due to demand I have draughted up a Veroboard layout of the circuit which you will find beneath the circuit diagram. Use the circuit diagram to identify the components. It is Ideal to tune up this circuit using a wave detector meter placed a few inches away from the transmitter. I have a circuit on this site.



Components

R1 = 470R	R6 = 75K	C1 = 1nF	C6 = 1nF	C11 = 1nF	C16 = 12pF
R2 = 22K	R7 = 75K	C2 = 1nF	C7 = 10uF	C12 = 10pF	C17 = 47pF
R3 = 22K	R8 = 270R	C3 = 10uF	C8 = 220pF	C13 = 12pF	C18 = 10pF
R4 = 2.7K	R9 = 10K	C4 = 10uF	C9 = 27pF	C14 = 1nF	
R5 = 100K	R10 = 270R	C5 = 10uF	C10 = 1nF	C15 = 47pF	



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