CHAPTER VIII

CONCLUSION

In this thesis, the circuits are studied for shifting the frequency between the input signals and output signals of an audio system, this frequency shifting method has been suggested by M.R. Schroeder that it can improve the stability of the system . The input signals sin $2\pi ft$ pass a 90 degrees phase shift network, the output will be cos $2\pi ft$. Because in our application the input signals are in the band of audio frequency, so the phase shift network must be a band pass constant 90 degrees phase shift network. This mean that the phase difference must be indepedent of input signal frequencies, then a phase angle which varies as the logarithm of the frequency is required. When two such networks are in parallel their phase difference will be independent of frequency . The - quadrature signal generator will generate shifting frequency signals sin $2\pi \Delta ft$, cos $2\pi \Delta ft$. The signals are multiplied by signal multiplier and added by summing signal circuit to form (sin$2\pi ft$. cos$2\pi \Delta ft$ + cos$2\pi ft$. sin$2\pi \Delta ft$) . The Δf frequency shifting is achieved. After testing the circuit , it can be concluded that the frequency are shifted quite accurately and the stability of the audio system is improved.