MUSICAL ELECTRONICS LIMITED

BU80/MK1800
Circuit Description:

Transmitter Section:

Frequency Determining and Stabilizing Circuit:
U601 is Phase Lock Loop control circuit, X601 function as Main Reference oscillator of Phase Lock Loop circuit,
Q401, 402, 403, and D401 is Voltage Control Oscillator of Phase Lock Loop circuit for transmitter and receiver.

RF Amplification Circuit:
Q101,102 and 103, is output amplifier of transmitter and output is fed to antenna. Such signal is taken from D103..
It is RF switch for VCO output from Phase Lock Loop circuit.

Circuits for Suppression of Spurious Radiation:
In addition to inter-stage filtering, the RF output of Q101,102 and 103 is coupled to antenna through a Low Pass
Filter network (L1,L2,L102,C3,C4,C5,C6,C7,C101,C102,C103,C104,C105) which serves both match and reduce harmonics to adequate level.

Modulation and circuit for Limiting modulation:
Q302,Q303 is microphone amplifier, it drive the modulation limiter Q304, Q305 and Q306. The limited modulation signal is output to drive the modulator (Voltage Control Oscillator of Phase Lock Loop circuit).

Receiver Section:
The receiver is a conventional double conversion super heterodyne with 1st local oscillation signal from Voltage Control Oscillator of Phase Lock Loop circuit (operating at frequency 10.7MHz below the receiving frequency) and 2nd local oscillation signal from Main Reference oscillator of Phase Lock Loop circuit.
The 1st IF frequency is 10.7MHz and the 2nd IF frequency is 450KHz.
Q201 and 202 is RF amplifier, Q204 is 1st Mixer, Q203 is buffer for 1st local oscillator, Q205 is 1st IF amplifier, U201 is 2nd Mixer, 2nd IF, Discriminator and Squelch circuit.