APPLICANT: RANGER ELECTRONIC (SHANGHAI) INC.

FCC ID: MEE-DX-979

OPERATIONAL DESCRIPTION:

The Ranger Electronic Model DX-979 is a Single Sideband/Amplitude Modulated transmitter/receiver combination intended for mabile operation in the citizens radio service. The transmitter has 40-channel capability in the 26.965 – 27.405 MHz band using phase locked loop (PPL) technology. The PPL provides multiple frequencies from the VCO (Voltage Controlled Oscillator) with quartz crystal accuracy and stability locked to the crystal oscillator reference frequency. The reference crystal oscillator, Q25, frequency is 10.240 MHz. Each channel is capable of operating in the AM/USB/LSB mode. Frequency tolerance is maintained within a frequency tolerance of 0.005%.

Audio from the microphone is fed to a microphone amplifier, IC7. The audio is mixed at IC9, the transmitter mixer, with a signal from the Synthesizer. The mixed signal is routed though a low pass filter consisting of L28, 29, and 30. The 27 MHz signal is then fed to a transmit/receive relay circuitry to the antenna.

Q46 is an oscillator operating at 10.697 MHz. Q25 is an oscillator with a frequency of 10.240 MHz. The mixer oscillator is Q27 and has a frequency oscillating at 15.36 MHz.

The final amplifier is a 27 MHz High Frequency Power Amplifier consisting of a NPN Epitaxial Planar Silicon Transistor. The collector dissipation, Pc is specified at 1.2 Watts and 10 Watts at Tc=50ºC.

See the attached DX-979 Block Diagram for additional circuit information.