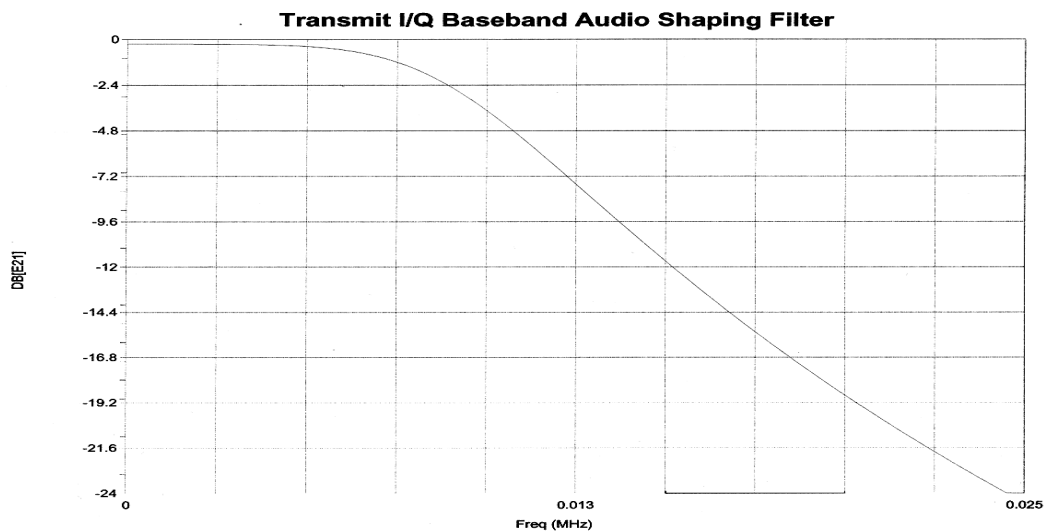RESPONSE TO FCC (CORRESPONDENCE #22061)

1.   Photographs will be submitted under separate cover.

2 and 3.   This equipment implements a digital data stream through software GFSK modulation which shapes and constrains the Necessary Bandwidth. This is described in more detail in the "P-801T Detail Theory of Operation" submission, Section 7.3 (Page 8 of 22) Modulation Limiting:

> "The P-801T supports the OpenSky Trunked Protocol (OTP). OTP supports the transfer of voice and data over a single channel. The information is transmitted through a 4 level Gaussian frequency shift keyed (GFSK) signal. The signal's symbol rate is 9600 baud that corresponds to a 19.2Kbps data rate. The symbols are Gaussian filtered with a BBT = 0.7 and then frequency modulated with a modulation index of 1/3."

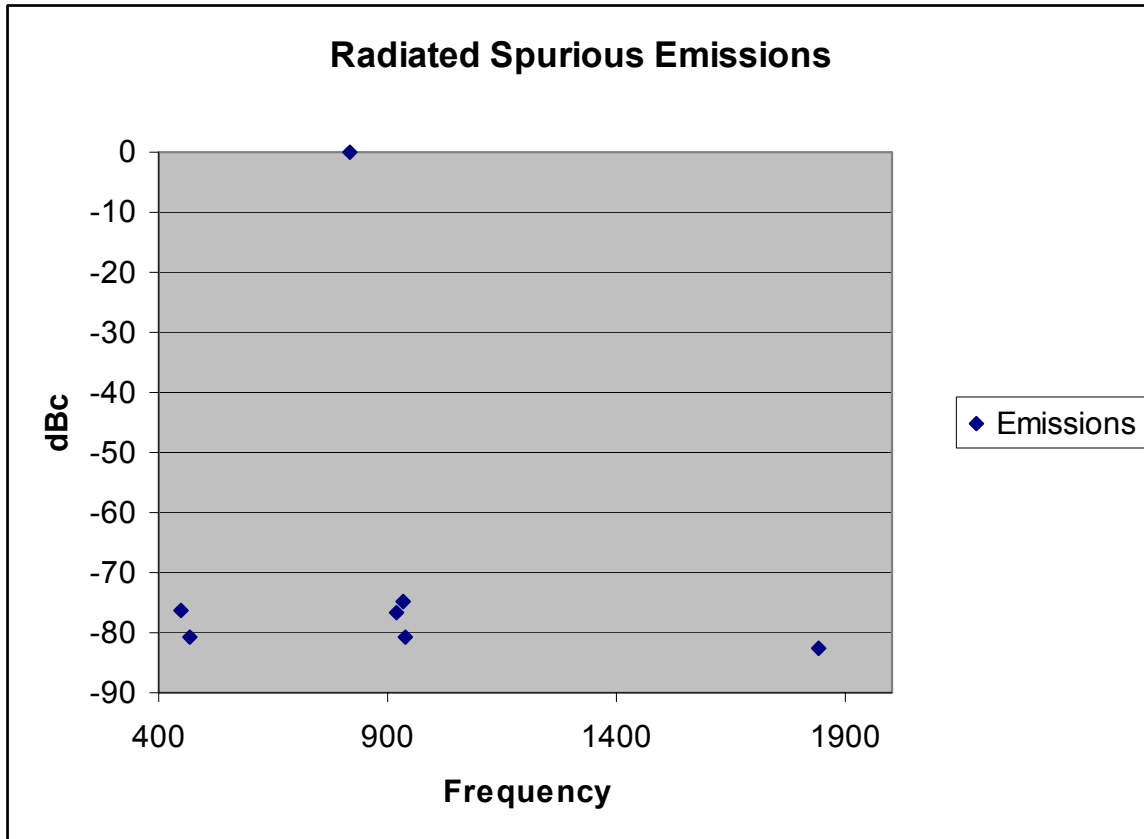## Audio Filter Used For FM Transmission

The Opensky P-801T Portable Radio transmitter includes lowpass filtering before and after FM modulation. The lowpass filter before modulation is shown below.
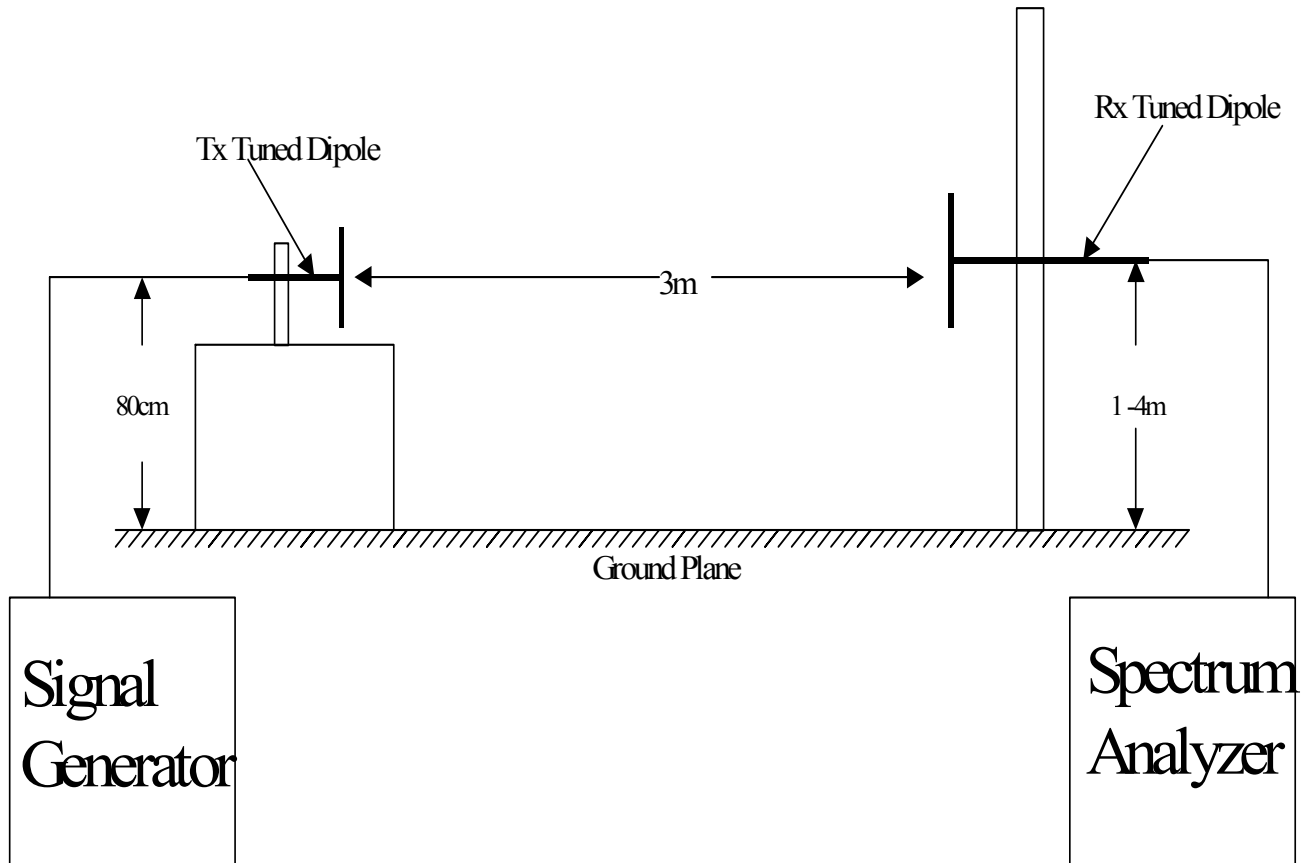

Transmit I/Q Baseband Audio Shaping Filter

4.   Radiated Spurius Emissions (dBc)

Radiated Spurious Emissions

Frequency MHz	450.5	466.9	816.3	921.03	931.3	938.9	1842
dBc	-76.3	-80.8	0	-76.8	-74.8	-80.8	-82.7
dBm	-41.5	-46	34.8	-42	-40	-46	-47.9

All measurements were made per TIA/EIA 603 1992.

Radiated Spurious Test Setup

Tx Tuned Dipole

Rx Tuned Dipole

3m

80cm

1 -4m

Ground Plane

Signal Generator

Spectrum Analyzer

5.   With regard to question 5, Chomerics made Occupied Bandwidth Measurements (pp. 25 - 27 of your 18 January 2002 EMC Evaluation report). These were done at the 99.5% power levels and indicated the highest value as 13.3 kHz.

We therefore feel that we can use 13K5F1D and 13K5F1E as the emission designators.

Please note, that as a consequence of the software modulation limiting employed by this equipment, the equations for Necessary Bandwidth are not appropriate. We are defining the emission designators as 13.5