03 Nov 1998

To: Joe Dichoso
(oetech@fccsun07w.fcc.gov)
From: Ken Bass
(Kbass@metlabs.com)

Re: FCC ID: HOLCL980 (correspondence ID: 4310)

Dear Joe:

The following items are in response to your inquires as provided in your e-mail (correspondence ID: 4310) in reference to the above listed application:

1) The frequency range of the base unit and handset unit from the center frequency of the lowest channel to the center frequency of the highest channel

A1) The frequency range for **both** the handset and the base unit are from 903.6 to 926.4 MHz. The handset and base operate on any of 20 channels in this frequency band. The Tx and Rx channels for the handset and base are the same across the frequency band.

4) Verification of compliance with 15.203 (antenna requirements)

4A) The EUT (both Handset and Base inclusive) have non-detachable antenna elements. Disassembly of the units would be necessary, for antenna replacement. Therefore, by virtue of the design, the EUT complies with the requirements of 15.203.

6) Calculation of the power output for the base unit and the handset using the worst case field strength using Po= (E*d)squared/30.

6A) from page 9 of the submitted test report, the Power output levels when covered to a field strength as recommended above gives:

Handset Po = ((1.26V/m * 3m)) squared/30 = 476 mW
Base = (0.35 V/m * 3m)) squared/30 = 37.8 mW

7) Indicate compliance with the RF safety requirements.

7A) Compliance with the RF safety requirements is based on CFR47, 2.1093 paragraph (c), which states: *"All other portable transmitting devices are categorically excluded from routine environmental evaluation for RF exposure except as specified in 1.1307© and (d)"* . Since the EUT does not fall into any described categories of these Rule parts, it is considered "other", and thus is found to be exempt from the requirements.

8) At what distance were the radiated power density measurements made? From the worst case field strength calculate the power density using $Po=(E*d)^2 / 30$.

8A) The Power Spectral Density measurements were made at 1m. Similarly, the Po calculation at the worst case field strength for the handset and base (from pg 23 of the report) are given by:

Handset $Po = ((0.072)(1))^2 / 30 = 174$ uW = -8.5dBm
Base $Po = ((0.106)(1))^2 / 30 = 375$ uW = -4.0dBm

10) What is the theoretical processing gain? Whats the spread rate? What is the data rate?

10A) The theoretical Processing gain is given by:

$$G_p = (S/N)_o + M_j + L_{sys}$$
$$= 8dB_{BPSK} + J/S + 2dB_{max}$$
$$G_p > 10 \text{ dB}$$

From DS SS chip manufacturer Jamming Test description file: "Procga1.jpg"

Spreading rate = 960 kbps and Data rate = 1000 bps