

Exhibit 1
FCC Form 442, Question 7

A: The complete program of research and experimentation proposed including description of equipment and theory of operation.

This request is for a Part 5 experimental license to operate a transmitting station in the 2200 meter band, 135.700 to 137.800 kHz. The proposed operation of this station is to investigate the effect of small antennas and propagation variances on the transmission of low speed digital data streams. Presently there is enough interest in low frequency and operators of low frequency receiving equipment to make the proposed tests more productive. This station will only be operated in attended mode. In addition, two way communications will be attempted with other Part 5 licensee as time permits.

The antenna will be an existing 160 meter balanced fed dipole fed as a "T as shown in the submitted Antenna sketch No. 1.

The transmitting exciter that will be used will be either commercial, lab quality, synthesized generators or built by licensee. All will be crystal controlled or phased locked to highly accurate frequency references. Power amplifiers will be constructed by licensee or commercially made for audio applications.

B: The specific objectives sought to be accomplished.

The objective of this proposed experimental station is to investigate the performance of small antennas, propagation variances and to determine usefulness of new digital modes for the low frequency spectrum.

C: How the program of experimentation has a reasonable promise of contribution to the development, extension, expansion or utilization of the radio art, or is along line not already investigated.

European operators have used this spectrum for a few years and have made remarkable progress in understanding and predicting low frequency propagation. The expansion of digital modes and the availability of digital signal processing technology have open up many new possibilities for the use of this spectrum. The results of my experimentation, signal reports received, and operating schedules will be published in the public domain.

Signed: Leonard Jacobs, KC0TPW