

Exhibit 1
American Radio Relay League, Incorporated
Experimental License Application

The purpose of this experimental license is twofold: (1) to demonstrate, preparatory to a request for an additional spectrum allocation for the Amateur Service near 5 MHz, the propagation differences between the existing amateur allocations at 3.5-4.0 MHz and 7.0-7.3 MHz on the one hand, and those of the 5 MHz band on the other; and (2) to demonstrate that amateur operation in the 5 MHz band can be conducted without interference to incumbent users. The band 5100-5450 kHz is allocated worldwide to the Fixed and Mobile services. The experiments are conducted in the segment of this band which is determined to have the least number of active stations at the time of the transmissions. Monitoring studies have revealed that this band offers the greatest potential for amateur operation on a non-interference basis to incumbent users relative to other frequency bands in the vicinity of 5 MHz.

This experimental authorization was sought as the result of two NTIA studies, Special Publication 94-31, *U.S. National Spectrum Requirements, Projections and Trends*, U.S. Department of Commerce, March, 1995; and Special Publication 96-332, *High Frequency (3-30 MHz) Spectrum Planning Options*, U.S. Department of Commerce, November, 1996, which included future spectrum needs for the Amateur Service.

The experimentation is being conducted by 15 specific Part 97 licensees, listed on Exhibit 2.

Biweekly operations have utilized RTTY and data emission modes authorized pursuant to Section 97.309(a) of the Commission's rules governing the Amateur Service, and single-sideband voice, under the same technical limitations applied to such operation in Section 97.307 of the Commission's rules. Power has been limited to 100 watts TPO. Antennas are similar at each of the 15 locations: multiband trap wire dipole or similar antennas for each participant. The antennas are in horizontal or inverted-vee configuration at heights of up to 50 feet AGL. All participants also have capability on the amateur 40 and 80-meter bands for comparative studies.

To date, no incidents of interference to the incumbent users of the band have been noted by the participants or reported to ARRL. As the stations are largely scattered throughout the country, most of the operations have been over long distances at night. ARRL wishes to continue nighttime data collection and expand experimentation into daylight hours over shorter distances in order to evaluate the 5 MHz segment as a possible alternative to the 40 and 80 meter bands for local and regional daytime use.

Operation by the participants will continue to consist of short duration transmissions to determine propagation characteristics. Any interference to or from another service on a

given frequency will cause immediate termination of operation on that frequency, and the contact will move to a predetermined alternative frequency, or to an amateur frequency or Internet IRC location. Monthly reports of propagation findings and any instances of interference will continue to be assembled by each participant during the test period and forwarded to ARRL; such reports will be available to the Commission upon request at any time.