



ERS INTERNATIONAL
239 Littleton Road, Suite 2B
Westford, MA 01886
(508) 392-4600 Fax: (508) 392-4609

To: Federal Communication Commision
Experimental Radio Service
P.O. Box 358320
Pittsburgh, Pa. 15251-5320
From: David Masucci
Subject: Experimental Radio License Application
Date: October 22, 1996

EXHIBIT 1:

Frequency in Ghz	RF Power at Transmitter Terminals	Max. EIRP	Emission	Modulating Signals	Necessary Bandwidth *
2.401	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.402	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.403	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.404	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.405	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.406	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.407	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.408	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.409	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.410	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.411	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.412	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.413	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.414	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.415	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.416	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.417	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.418	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.419	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.420	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.421	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.422	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.423	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K

2.424	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.426	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.428	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.430	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.432	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.434	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.436	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.438	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.440	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.442	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.444	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.446	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.448	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.450	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.452	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.454	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.456	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.458	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.460	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.461	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.462	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.463	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.464	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.465	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.466	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.467	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.468	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.469	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.470	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.471	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.472	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.473	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.474	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.475	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.476	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.477	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.478	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.479	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.480	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.481	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K
2.482	28 dBm	35 dBm	898KW7D	OOK@ 8.192 Khz / BPSK @ 449.002 Khz DSSS	898K

* Necessary Bandwidth is that which is required to achieve the specified spreading gain of 17 dB, and was derived pursuant to section 2.202 of FCC rules.

The transmitted signal is a 2.4xx Ghz carrier OOK modulated by a 8.192 Khz data rate. The spreading is accomplished by BPSK modulating the above signal with a psuedo randome sequence at a chip rate of 449.002 Khz. The resultant main lobe occuppies 898.004 Khz. This signal can be centered at any one of the above defined frequencies.

Location of Stations

ERS International, Inc. ("ERS"), requests authority herein to operate the Part 5 experimental device that is the subject of this application at any location within the continental United States. As is explained in Exhibit 4, ERS proposes to operate the subject device in a retail environment. In order to gain the experience and knowledge that can only come from field trials, ERS will need to deploy the device at various types of retail outlets in many different geographic locations. For example, it will be necessary to test the device in both a stand-alone grocery store and in relatively more difficult RF environment found in shopping malls. ERS also plans to demonstrate its device at industry trade shows and similar functions. Finally, ERS will need to deploy the device within its company facility in Westford, Massachusetts. In every case, the device will be located within the confines of the retail establishment, trade show site, or ERS facility, and the antenna will thus be less than 6.1 meters above ground level or above an existing building.