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FCC Experimental License application

EXHIBIT 1

(Pertinent to Sect 4F of FCC Form 442)

Modulating Signal - Details

The transmitter is a pulsed radar. It has three possible pulse lengths:

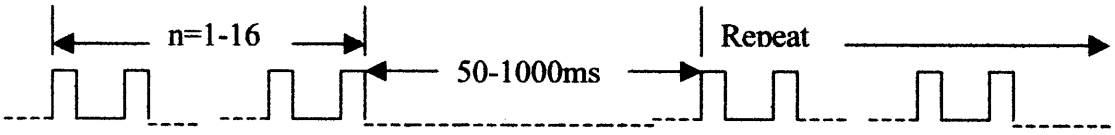
Pulse length ns	*Max PRF pulses/sec*	*Consequent minimum pulse interval μs*
60	3600	278
500	1800	556
1000	900	1111

The system can be set to one of the above pulse durations. Once set it operates at that value until re-set; the pulse length does not vary dynamically.

The maximum PRFs (Pulse Repetition Frequency) given above are the maximum ratings given by the manufacturer (Raytheon) in the transmitter specifications. The development will employ three modes of pulse interval modulation:

1. Constant pulse intervals, where interval is defined above under "minimum pulse interval."

2. Pulse groups:- groups of 1-16 pulses are transmitted; successive pulses are separated by 280 - 1111μs (dependent on pulse length as in table above). Groups of pulses are separated by between 50ms to 1 sec.



3. Pulse Position modulation:- transmission of a group of indeterminate number of pulses (minimum of 5), where the pulse intervals varying from 1.25mS – 2.25mS