

Date: July 20, 2015

To Whom It May Concern

Subject: Part 90 Spectral Efficiency for UHF Transceiver

Applicant: Summation Research, Inc.

Product: UHF Mobile Transceiver

Model: STR-1820

FCC ID: OQW-STR1820

Dear Sir/Madam

“Applications for part 90 certification of transmitters designed to operate on frequencies in the 150.8-162.0125 MHz, 173.2-173.4 MHz, and/or 421-512 MHz bands, received on or after February 14, 1997 must include a certification that the equipment meets a spectrum efficiency standard of one voice channel per 12.5 kHz of channel bandwidth. Additionally, if the equipment is capable of transmitting data, has transmitter output power greater than 500 mW, and has a channel bandwidth of more than 6.25 kHz, the equipment must be capable of supporting a minimum data rate of 4800 bits per second per 6.25 kHz of channel bandwidth.”

The Summation Research, Inc. STR-1820 data transceiver can operate with channel bandwidths of 6.25 and 12.5 kHz using SOQPSK modulation.

Bandwidth (kHz)	Modem OTA (bps)	Maximum Output Power	Comments / Restrictions
6.25	4800	30 Watts	none
12.5	9600	30 Watts	none
25.0	19200	30 Watts	none

This letter serves as attestation supporting evidence for spectral efficiency.

If you have any questions please do not hesitate to contact me at (321) 254-2580.

Sincerely,

Summation Research, Inc.



Thomas Drago
Vice President, Engineering