



14 April 2000

ISO 9001 Certified

Federal Communications Commission
 C/O Mellon Bank
 Three Mellon Bank Center
 525 William Penn Way
 27th Floor, Room 153-2713
 Pittsburgh, PA 15259-0001

Attn: Wholesale Lockbox Shift Supervisor

We are filing for a special temporary authorization (STA) to permit operation and the radiating of two "Threat Simulators" radar systems at our facilities at 485 Cayuga Road, Buffalo NY 14225. The purpose of operating this equipment at our facility is to prove that equipment hardware and software performance meets our customers specifications prior to delivery and installation in a very remote training range in Canada. Our contract is with the Canadian Department of National Defense (DND) under contract #W8475-7-CL01/001/QF.

We expect to be operating this equipment during the months of May thru July, 2000 on a very intermittent basis. Most radiating tests would be conducted between the hours of 8AM to 5PM DST. The equipment would be setup on a fixed platform in our hanger bay for this test period with a directional antenna pointed out the open hanger door towards the North and elevated approximately +45°. The geographical location of our facility and equipment is at Lat. 43.93434° North and Long. 78.74490° with our facility located adjacent to and just North West of the Greater Buffalo-Niagara International Airport in Cheektowaga, NY.

The one system operates in the C/X band, Sierra model number 9808-2000-1 and is made up of an A and B transmitter, which are combined thru a diplexer into a single antenna. System characteristics are as follows:

Item	"A" Klystron Transmitter	"B" Klystron Transmitter
Frequency Range	7.7 to 8.3 GHz	6.9 to 7.1 GHz
Duty Cycle	9% max	CW
Pulse width range:	0.1 to 100 µsec	N/A
PRF	0 - 100 KHz	N/A
Peak/ave power (transmitter)	27 KWP/2430 watts	2.5KW CW
Harmonics	-30dbc	-30dbc
Spurious Outputs	-60dbc	-60dbc
ERP(system)	80 dbw	70 dbw
Emission Designator	5M52PON, 1M03PON	1M63PON
Antenna HPBW:	1.3°	1.4°
Antenna Sidelobes:	-24db	-24 db
Antenna polarization	Vertical	Vertical

For this test, the antenna will be approximately 10 feet above floor level.

an Integrated Defense Technologies company

485 Cayuga Road • P.O. Box 222 • Buffalo, New York 14225-0222 • (716) 631-6200 • Fax (716) 631-7849 • www.stisierra.com

The second system operates in X-band, Sierra model 9808-4000-1 and is made up of an "A" and "B" transmitter which are individually connected to a common antenna with an electrically switched polarizer. Characteristics are as follows:

Item	"A" Klystron Transmitter	"B" Klystron Transmitter
Frequency Range	9.8 to 10.5 GHz	9.95 to 10.05 GHz
Duty Cycle	8% max	Mode 1 7% max Mode 2 5% max
Pulse Width Range	0.1 to 6.0 μ sec	Mode 1 10 μ sec to 1ms Mode 2 10 μ sec to 200 ms
PRF	2.0 to 73 μ sec	Mode 1 14 μ sec to 1 sec Mode 2 4 sec to 10 sec
Peak/Ave. Power (XMTR)	60 KWP/4800 watt	Mode 1 5KW ave Mode 2 0.5KW ave
Harmonics	-30dbc	-30dbc
Spurious Outputs	-60dbc	-60dbc
ERP(system)	92 dbw	80 dbw
Emission Designator	32M7PON, 4M22PON	330KPON
Antenna HPBW:	0.74°	0.75°
Antenna Sidelobes:	-20.7db	-21.0 db
Antenna polarization (switchable)	RHC/LHC	LHC/RHC

For this test, the antenna will be approximately 10 feet above floor level.

Please contact me if there are any questions:

Richard W. Brennan, RF Engineer
Sierra Research, An Integrated Defense Technologies, Co.
485 Cayuga Rd
Buffalo, NY 14225-1309
Email: rbrennan@stisierra.com
Phone: 716-631-7965
Fax: 716-631-6677

Regards,

Richard W. Brennan

R.W. Brennan