



communications

BAI Aerosystems
9040 Glebe Park Drive
Easton, MD 21601
Tel: (410) 820-7500 Fax: (410) 820-8500
www.bai.aero

TO: *Theresa Simpson, FAA Eastern Regional Spectrum Office*

SUBJECT: *Request for Non-Government Temporary Assignment*

DATE: *19 MARCH 2009*

ATTACHED: *1) FAA Operating Limitations, Experimental: Research and Development, Market survey, and/or Crew Training (11 Pages)*
2) FCC: Special Temporary Authorization (3 Pages)

REFERENCE: *FCC Experimental License Application Form 442, File # 0108-EX-PL-2009*

Ms. Simpson,

L-3 BAI Aerosystems is applying to the FCC for an Experimental license to continue operation of a Unmanned Aerial Vehicle (UAV) Viking 100 and Ground Control Station (GCS) in the National Airspace under the restrictions of Attachment 1, "FAA Operating Limitations, Experimental: Research and Development, Market survey, and/or Crew Training." L-3 BAI Aerosystems has currently been operating frequencies under the FCC Special Temporary Authorization which expires 2 April 2009, Attachment 2.

In order to continue operations, we are required to apply with the FCC for a Experimental License. After submitting application Form 442 (Referenced), we received notice from the FCC that we need to coordinate usage of frequency band 1370-1390 MHz with the FAA Eastern Regional Office and to obtain a Non-Government Temporary Assignment number (NGT). Your name was given as a POC to request this NGT number.

The UAV and GCS is capable of transmitting and receiving 1350-1390 MHz. For purposes of the STA we limit transmission to 1370-1390 MHz per request of NTIA. The FCC has requested that we give you the following parameters for each antenna capable of transmitting 1370-1390 MHz.

Please review the below technical parameters and the Attachments 1 and 2.



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If possible, please provide authorization for use of this frequency range and an NGA number.

Please contact me if you need additional information.

Regards,

Adam Grant

A handwritten signature in black ink, appearing to read 'Adam Grant', with a long horizontal flourish extending to the right.

Contracts Manager



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Technical Parameters for 1370-1390 Antennas and Transmitters:

GCS: (located Ridgely Airpark, Ridgely, MD NL: 38-58-16; WL 75-52-16)

- Peak envelope power (PEP): **1W Programmed**
- Type of antenna: **2 Total: A) Parabolic Dish and B) Straight Dipole Antenna**
- Transmit antenna gain: **A) 20.5 dBi and B) 0 dBi**
- Elevation above sea level of the antenna site; **58' MSL**
- Height above ground of the focal point of the antenna: **8' AGL**
- Antenna polarization: **Vertical**
- The azimuth that the antenna is pointed or appropriate designator to indicate whether the antenna is rotating, non-directional, etc.; **A) 360 Degrees Horizontal, 45 Degrees Vertical B) non-directional**
- Pulse repetition rate (PRR) that the equipment is capable of operating on to include PRR stagger sequences if appropriate, whether the PRR is adjustable and what PRR's the equipment can accept, and any other information that would be helpful in understanding the pulse characteristics of the equipment; **N/A**
- Pulse width; **N/A**
- Equipment nomenclatures; **SP-1.535**
- Whether the equipment is capable of blanking transmissions in certain azimuths and any limitations with respect to blanking; **NO**
- Radius of operations if appropriate; **N/A**
- Detailed description of the proposed operation to include any technical parameters that will be altered during operations. **UAV operations per Attachment 1, "FAA Operating Limitations, Experimental: Research and Development, Market survey, and/or Crew Training."**



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UAV: (Mobile operation within the vicinity of Ridgely Airpark, Ridgely, MD NL: 38-58-16;
WL 75-52-16, 2 KM Radius, 1000 Ft ceiling)

- Peak envelope power (PEP): **1W Programmed**
- Type of antenna: **Blade-type Omni**
- Transmit antenna gain: **0 dBi**
- Elevation above sea level of the antenna site; **<1000' MSL**
- Height above ground of the focal point of the antenna: **N/A**
- Antenna polarization: **Linear and Vertical**
- The azimuth that the antenna is pointed or appropriate designator to indicate whether the antenna is rotating, non-directional, etc.; **360 Degrees Horizontal, 180 Degrees Vertical**
- Pulse repetition rate (PRR) that the equipment is capable of operating on to include PRR stagger sequences if appropriate, whether the PRR is adjustable and what PRR's the equipment can accept, and any other information that would be helpful in understanding the pulse characteristics of the equipment; **N/A**
- Pulse width; **N/A**
- Equipment nomenclatures; **AO13501390**
- Whether the equipment is capable of blanking transmissions in certain azimuths and any limitations with respect to blanking; **NO**
- Radius of operations if appropriate; **2 KM**
- Detailed description of the proposed operation to include any technical parameters that will be altered during operations. **UAV operations per Attachment 1, "FAA Operating Limitations, Experimental: Research and Development, Market survey, and/or Crew Training."**

Grant, Adam @ BAI

From: Grant, Adam @ BAI
Sent: Thursday, March 19, 2009 4:51 PM
To: 'Theresa.Simpson@faa.gov'
Cc: Ensor, Mark @ BAI; Cass, Ken @ BAI; Chiu, Tien-Seng @ BAI
Subject: L-3 BAI: Request for NGT
Attachments: L-3 BAI - Request for NGT 09-03-19.pdf; Attachment 2 08-10-21 FCC STA.pdf; Attachment 1 Operating Limitations Viking 100 N721UA 09-2-18.pdf

Ms. Simpson,

Attached is a letter requesting a Non-Government Temporary Assignment for operations of an Unmanned Aerial Vehicle utilizing the frequency range 1370-1390 MHz in the National Airspace. We are in the process of applying for an FCC Experimental License for operations of our required frequencies and the FCC requires authorization from the FAA for usage of the 1370-1390 MHz range. We currently have an STA authorizing 1370-1390 frequencies (attached) which expires 2 April 2009. Please contact me if you require any additional information. We greatly appreciate your assistance.

Adam Grant
Contracts/ECC
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