

Unmanned Aerial Vehicle (UAV) BAT System

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by

**Chuck Zappala
FCC Licensing Specialist
The Boeing Company
Frequency Management Services
South Park Complex Bldg 15-01.1
Seattle, WA
P.O. Box 3707 MC: 2T-22
Seattle, WA 98124-2207
206-544-6580 Office
206-544-6592 Fax
866-248-1493 Toll Free**

Purpose of the system:

The purpose of the system is to test various concepts for UAV (Unmanned Aerial Vehicle) system for flight testing and demonstrations of aircraft. It will not be used for production, manufacturing or sale. The UAV is strictly for research, development, proof of concept and demonstrations.

A completed description of the UAV can be found on:

<http://www.spyplanes.com/bat3.html>

This project is not part of a military contract.
This project is not classified.

Purpose for obtaining a Special Temporary Authority:

The purpose of this application is to license the 216-220 MHz micro-transmitter operating at 1 mW that is used to help locate the UAV by radio location especially on the ground after a flight. Our calculations show that this device exceeds the 200 micro-volts/meter, at three meters per Part 15. Boeing believes this transmitter requires a license as noted by its FCC Part 5 device Type ID registration and not a Part 15 device.

There are currently two full systems ready to use and the unique radio channels in this band have been established. Boeing anticipates placing two more systems into service. Each one requires a unique radio channel in this band. The two additional channels are included below.

Boeing will apply for a full 2-year license at a later date.

Transmitter Information:

Full description and photograph located on:

http://www.texastimers.com/helpful_hints/walston/wal_trans.htm

MODA 2438 MVS-F transmitter, quantity 4 units

219.025 MHz, 1 mW ERP, Frequency Tolerance 0.004%, 1K00A1D

219.065 MHz, 1 mW ERP, Frequency Tolerance 0.004%, 1K00A1D

219.105 MHz, 1 mW ERP, Frequency Tolerance 0.004%, 1K00A1D

219.145 MHz, 1 mW ERP, Frequency Tolerance 0.004%, 1K00A1D

FCC Type ID: GZ38TA, Part 5 device

A short wire antenna is used.

Transmitter is turned on at take off and turned off after recovery on the ground.

Location for use:

Location 1:

Most of the flying is done at this location

Baldwin Airport - M039 (Private) at Silex, MO

39-06-48.2 LAT

091-02-30.5 LONG

NAD83

Elevation is 505 feet / 154 meters

Radii of operation 25 miles / 40.23 kilometers at a maximum of 1,200 and 5,000 feet altitude areas

FAA Certificate of Authorization (COA) authorization for UAV operations with conditions; see separate attachment. Renewal for COA is scheduled.

Flight time typically 1 hour, with maximum of 3 hours

Nearest city 1 mile SE of Silex (Lincoln County), MO

There are no ground aircraft communications or navigation electronic systems at this location

The owner of the private airfield is:

Frank Baldwin

226 Aero Drive

Troy, MO 63379

314-528-4886

Location 2:

Future location where authorization is being requested

Waynesville Regional Airport at Forney Field (KTBN)

Ft. Leonard Wood (Pulaski County), MO

37-44-29.8 LAT

092-08-26.7 LONG

NAD83

Elevation is 1159 feet. / 353.3 meters

Radii of operation 6 miles / 9.67 kilometers at a maximum of 5,000 feet altitude

Pending authorization to use military airspace

Flight time typically 1 hour, with maximum of 3 hours

There are ground aircraft communications and navigation electronic systems at this location

Local contact is Major Scott Porter

May be reached through Post Operator (573)596-0131

Location 3:

Taxi and ground testing only at this location

Smartt Field (KSET)

St. Charles (St. Charles County), MO

38-55-46.9 LAT

090-25-47.9 LONG

NAD83

Elevation is 436 feet / 132.9 meters

Radii of operation 1 miles / 1.61 kilometers at ground level only

FAA COA Not required

There are ground aircraft communications and navigation electronic systems at this location