

FAA Grants Spectrum Use for APG Demo.txt

From: rodney.murphy@faa.gov  
Sent: Thursday, September 29, 2016 11:06 AM  
To: Davis, Marque  
Cc: Thomas.Ahn@faa.gov; alan.m.fish.civ@mail.mil; donald.nellis@faa.gov; Charles.Thornton@faa.gov; phalla.keo@faa.gov; Stephanie.Thomas@faa.gov; timothy.j.pawlowitz@faa.gov; Lorena.Carvajal@faa.gov; Porco, Ron; Lenzini, Raymond; Anderson, Nick; Bartley, Jennifer  
Subject: RE: Spectrum Support

Granted, however, you will need a NG T coordination for your request. We are simply trying to determine your needs around the three frequency bands you are requesting.

Rodney Murphy  
Federal Aviation Administration  
Spectrum Engineering and Policy  
Fixed/Land Mobile,UAS, Satellite, Experimentals  
FAA FAS Representative  
202-267-9501

From: Davis, Marque [mailto:Marque.Davis@elbitsystems-us.com]  
Sent: Thursday, September 29, 2016 11:57 AM  
To: Murphy, Rodney (FAA)  
Cc: Ahn, Thomas (FAA); alan.m.fish.civ@mail.mil; Nellis, Donald (FAA); Thornton, Charles (FAA); Keo, Phalla (FAA); Thomas, Stephanie (FAA); Pawlowitz, Timothy J (FAA); Carvajal, Lorena (FAA); Porco, Ron; Lenzini, Raymond; Anderson, Nick; Bartley, Jennifer  
Subject: Re: Spectrum Support

Mr. Murphy,

Thank you for your response. As I told Tom the FCC mandated that I get a "Pre-Coordination" Document from the FAA for the 225-512 and 1350-2690 Bands. I spoke with Tom this morning explaining that our systems can operate well with your restrictions to ensure no EMI issue occur.

All other spectrum support requirements along with the above have been submitted to the FCC.

FAA Grants Spectrum Use for APG Demo.txt

Sent from my iPhone

Regards,  
Marque H. Davis P.E.S/P.E.M  
Elbit Systems of America  
PH: (817) 231-4473  
ML: (817) 301-7093

On Sep 29, 2016, at 10:51, "rodney.murphy@faa.gov" <rodney.murphy@faa.gov> wrote:  
The FAA can only comment on usage impacting our Aeronautical  
Assignment Group (AAG) bands and aeronautical radionavigation bands.  
All other parts of your request must be reviewed thru the FCC process.

30 – 512 MHz Range: 3 (See Note Below Table)

FAA comment: If actual operating range is limited to 30-88 MHz,  
then FAA pre-coordination is not required. However, notch out 74.6-75.4  
MHz.

FAA will not support use of AAG bands (107-137 MHz and 328.6-  
335.4 MHz) for this request. Also, proponent must coordinate with DOD  
sponsor and/or MAG for use of 30-50 MHz, 138-144 MHz, 225-328.6 MHz  
and 335.4-399.9 MHz.

225 – 512 MHz Range:

Coordinate 225-328.6 MHz and 335.4-399.9 MHz with MAG thru  
FCC. Frequencies in those MAG bands must avoid Air Traffic Control  
channels. The FAA non-concurs with usage in the 328.6-335.4 MHz band.

1350 – 2690 MHz Range:

Avoid 1350-1370 MHz and 1550-1610 MHz. If required, if feasible  
and requested, FAA will provide a NG T coordination for a frequency in  
the 1370-1390 MHz band. Otherwise, FAA has no comment on this range.

Rodney Murphy  
Federal Aviation Administration

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Spectrum Engineering and Policy  
Fixed/Land Mobile,UAS, Satellite, Experimentals  
FAA FAS Representative  
202-267-9501

From: Davis, Marque [mailto:Marque.Davis@elbitsystems-us.com]  
Sent: Wednesday, September 28, 2016 7:55 AM  
To: Ahn, Thomas (FAA); APG-FMO Alan Fish  
Cc: Nellis, Donald (FAA); Murphy, Rodney (FAA); Thornton, Charles (FAA); Keo, Phalla (FAA); Thomas, Stephanie (FAA); Pawlowitz, Timothy J (FAA); Carvajal, Lorena (FAA); Keo, Phalla (FAA); Thornton, Charles (FAA); Porco, Ron; Lenzini, Raymond; Anderson, Nick; Bartley, Jennifer  
Subject: RE: Spectrum Support

Thomas,

Per your request the below data is provided:

Purpose of Request: An STA is submitted to the FCC to operate a Non JF-12 (DD-1494) Certified Communications Systems at Aberdeen Proving Ground (APG), MD in support of an operational communications demonstration.

Description of Operation: U.S. Army C4i Division at APG has requested Elbit Systems of America provide a demonstration of communications capabilities via a live operational demonstration at Aberdeen Proving Ground during the period of 14 – 18 November 2016.

Location of Transmitters: Aberdeen Proving Grounds, Maryland,  
Latitude: 39, 28, 42N 76, 09, 51W

Radius of Mobile Operations: 50KM

Operations Band for MCTR-7200 Radio: Band I

Operations Band for PNR-1000 Radio: Band II

Operational Band for HC-LOS System: Band III

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Number of Frequencies required Per System:

30 – 512 MHz Range: 3 (See Note Below Table)

225 – 512 MHz Range: 2

1350 – 2690 MHz Range: 2

Technical Data: (See Table)

Frequency Ranges 30 – 512 MHz and 1350 – 2690 MHz:

Radio  
Actio  
n  
Frequency  
Statio  
n  
Class  
Output  
Power/ERP  
Mean/  
Peak  
Frequency  
Tolerance  
(+/-)  
Emission  
Designator  
Modulating Signal  
Data Rate (Max)  
MCTR-7200  
New  
30.000-512.000 MHz  
MO  
5.0 W  
4.999990 W  
M

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50 %  
25K0F9W  
DPSK/GMSK/BFSK  
NBWF: up to 115.2 Kbps over  
a 25KHz Channel  
WBWF: Up to 500 Kbps over  
a Single Channel  
MCTR-7200

New  
30.000-512.000 MHz

MO  
5.0 W  
4.999990 W

M  
50 %  
25K0F9W  
DPSK/GMSK/BFSK  
NBWF: up to 115.2 Kbps over  
a 25KHz Channel  
WBWF: Up to 500 Kbps over  
a Single Channel  
MCTR-7200

New  
30.000-512.000 MHz

MO  
5.0 W  
4.999990 W

M  
50 %  
25K0F9W  
DPSK/GMSK/BFSK  
NBWF: up to 115.2 Kbps over  
a 25KHz Channel  
WBWF: Up to 500 Kbps over  
a Single Channel  
PNR-1000

New  
225.000-512.000 MHz

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MO  
50.0 W  
49.9990 W  
M  
50 %  
200KF9W  
BFSK/DPSK/QPSK  
UP to 320 Kbps gross data,  
19.2 Kbps per Link  
PNR-1000  
New  
225.000-512.000 MHz  
MO  
50.0 W  
49.9990 W  
M  
50 %  
1M00F9F  
BFSK/DPSK/QPSK  
UP to 320 Kbps gross data,  
19.2 Kbps per Link  
HC-LOS  
GRX-4000  
New  
1350.000-2690.000 MHz  
FX  
20.0 W  
19.990W  
M  
50 %  
125KF9W  
16 QAM  
100Mbps for PtP, 200Mbps  
AU+SU  
HC-LOS  
GRX-4000  
New  
1350.000-2690.000 MHz

FAA Grants Spectrum Use for APG Demo.txt

FX

20.0 W

19.990 W

M

50 %

125KF9W

16 QAM

100Mbps for PtP, 200Mbps

AU+SU

Notes: Highlighted systems will operate in the 30 – 88 MHz Range but included because they can operate up to 512 MHz

Additional technical data can be provided upon request.

Regards

Marqué H. Davis Sr., 1SG Ret.

Elbit Systems of America -

Fort Worth Operations (ESA-FWO)

Lead Systems Engineer FireCon

Email: Marque.Davis@elbitsystems-us.com

marque.davis@us.army.mil

Phone: (817) 231-4473 (Office)

(940) 387-4389 (SIV LAB, ESA-Denton)

(817) 301-7093 (Mobile)

(817) 306-6873 (Fax)

A veteran is someone who, at one point in their life,  
wrote a blank check made payable to  
The United States of America for any amount,  
up to and including their life.

o7o

-----Original Message-----

FAA Grants Spectrum Use for APG Demo.txt

From: Thomas.Ahn@faa.gov [mailto:Thomas.Ahn@faa.gov]

Sent: Tuesday, September 27, 2016 2:32 PM

To: Davis, Marque <Marque.Davis@elbitsystems-us.com>

Cc: donald.nellis@faa.gov; rodney.murphy@faa.gov; Charles.Thornton@faa.gov; phalla.keo@faa.gov; Stephanie.Thomas@faa.gov; timothy.j.pawlowitz@faa.gov;

Lorena.Carvajal@faa.gov; phalla.keo@faa.gov; Charles.Thornton@faa.gov

Subject: RE: Spectrum Support

Marque

Based on conversation, you have indicated there is a draft DD1494 showing spectrum characteristics of the equipment.

I would appreciate if you can send me a copy of the draft of DD1494. Also appreciate if you provide the following information.

1. Intent of demonstration.
2. Number of frequency for the each band of 225-512 MHz and 1350-2690 MHz.
3. Geographical latitude and longitude if the transmission is fixed location.
4. Modulation technique for the each band, and data rate.
5. EIRP power

Sincerely

Thomas Ahn (AJW-1C2)

FAA Spectrum Assignment and Engineering

202-267-4909

-----Original Message-----

From: Thomas, Stephanie (FAA)

Sent: Tuesday, September 27, 2016 1:52 PM

To: Pawlowitz, Timothy J (FAA); Carvajal, Lorena (FAA); Ahn, Thomas (FAA)

Cc: Nellis, Donald (FAA); Murphy, Rodney (FAA); Thornton, Charles (FAA); Keo, Phalla (FAA)

Subject: RE: Spectrum Support

Please work with Phalla and Charles on the response.

FAA Grants Spectrum Use for APG Demo.txt

Stephanie L. Thomas  
Manager, Spectrum Engineering Services - ESA  
(404) 305-6674 (office)  
(404) 558-7060 (cell)

-----Original Message-----

From: Pawlowitz, Timothy J (FAA)  
Sent: Tuesday, September 27, 2016 12:41 PM  
To: Thomas, Stephanie (FAA); Carvajal, Lorena (FAA); Ahn, Thomas (FAA)  
Cc: Nellis, Donald (FAA); Murphy, Rodney (FAA)  
Subject: Re: Spectrum Support

Lorena, Tom,

Please work with Stephanie and/or Marque Davis to coordinate these requirements.

Let me know if there are any questions. Please provide one, consolidated FAA response.

Thank you!  
Tim

Sent from my iPhone

> On Sep 16, 2016, at 1:45 PM, Thomas, Stephanie (FAA) <Stephanie.Thomas@faa.gov>  
> wrote:

>

> Tim and Don

>

> Do you have any input see message below.

>

> Thanks,

>

>

> Stephanie L. Thomas

> Manager, Spectrum Engineering Services - ESA

FAA Grants Spectrum Use for APG Demo.txt

- > (404) 305-6674 (office)
- > (404) 558-7060 (cell)
- >
- > -----Original Message-----
- > From: Davis, Marque [mailto:Marque.Davis@elbitsystems-us.com]
- > Sent: Friday, September 16, 2016 1:37 PM
- > To: Thomas, Stephanie (FAA)
- > Subject: Spectrum Support
- >
- > Ms. Thomas,
- >
- > Timothy Bogan FAA-FMO Fort Worth recommended I contact you for possible help with the below. Please contact me when you have an opportunity.
- >
- > My company is planning a communications demo at Aberdeen Proving Ground, MD, 13-18 Nov 16, operating time 0800-1600 each day. Because the systems are not DD1494 (JF-12) certified the assignments must come from the FCC vs. APG-FMO. I submitted my application to the FCC this morning and because I've requested assignments in 225-512 & 1350-2690 MHz ranges I received a message from the FCC stating that I needed to provide them Pre-Coordination documentation from the FAA.
- >
- > The below is provided:
- >
- > Freq: 225-512 MHz
- > Qty: 4ea Narrowband / 1ea Wideband
- > B/W: 25KHz (NB) / 1MHz (WB)
- > Pwr: 5W / 50W
- > Use: ML
- >
- > Freq: 225-512 MHz
- > Qty: 1ea
- > B/W: 200 KHz
- > Pwr: 20W
- > Use: ML
- >
- > Freq: 1350-2690 MHz
- > Qty: 2ea (TX/RX)
- > B/W: 1 MHz

FAA Grants Spectrum Use for APG Demo.txt

- > Pwr: 20W
- > Use: FX
- >
- > The mobile systems will operate up to a 50KM radius around APG and will be ground based only. The 1350-2690 MHz will be used for a high capacity LOS system.
- >
- > Additional information is available as needed. Please feel free to contact me at the below ML Number.
- >
- > Sent from my iPhone
- >
- > Regards,
- > Marque H. Davis P.E.S/P.E.M
- > Elbit Systems of America
- > PH: (817) 231-4473
- > ML: (817) 301-7093
- >
- >
- > \_\_\_\_\_
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