

**United States of America
FEDERAL COMMUNICATIONS COMMISSION
EXPERIMENTAL
SPECIAL TEMPORARY AUTHORIZATION**

EXPERIMENTAL

(Nature of Service)

XT FX

(Class of Station)

WH9XML

(Call Sign)

1001-EX-ST-2014

(File Number)

NAME Battelle Memorial Institute

This Special Temporary Authorization is granted upon the express condition that it may be terminated by the Commission at any time without advance notice or hearing if in its discretion the need for such action arises. Nothing contained herein shall be construed as a finding by the Commission that the authority herein granted is or will be in the public interest beyond the express terms hereof.

This Special Temporary Authorization shall not vest in the grantee any right to operate the station nor any right in the use of the frequencies designated in the authorization beyond the term hereof, nor in any other manner than authorized herein. Neither the authorization nor the right granted hereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934. This authorization is subject to the right of use of control the Government of the United States conferred by Section 706 of the Communications Act of 1934.

Special Temporary Authority is hereby granted to operate the apparatus described below:

Purpose Of Operation:

To assess capability to receive and characterize collected waveforms from transmitted channels in order to design efficient data communication modulations for skywave channel.

Station Locations

- (1) Columbus (FRANKLIN), OH - NL 39-59-22; WL 83-01-11
- (2) Aberdeen (HARFORD), MD - NL 39-31-31; WL 76-12-00

Frequency Information

Columbus (FRANKLIN), OH - NL 39-59-22; WL 83-01-11

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
5005-5060 kHz	FX	4K00J3D	4400 W (ERP)	0.00001 %
10150-11175 kHz	FX	4K00J3D	4400 W (ERP)	0.00001 %
13870-14000 kHz	FX	4K00J3D	4400 W (ERP)	0.00001 %

This authorization effective December 02, 2014 and
will expire 3:00 A.M. EST May 03, 2015

**FEDERAL
COMMUNICATIONS
COMMISSION**



Frequency Information

Columbus (FRANKLIN), OH - NL 39-59-22; WL 83-01-11

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
13870-14000 kHz	FX	4K00J3D	4400 W (ERP)	0.00001 %
15800-15860 kHz	FX	4K00J3D 4K00J3D 4K00J3D	4400 W (ERP)	0.00001 %
15960-16060 kHz	FX	4K00J3D 4K00J3D	4400 W (ERP)	0.00001 %
16160-16360 kHz	FX	4K00J3D	4400 W (ERP)	0.00001 %
18040-18068 kHz	FX	4K00J3D	4400 W (ERP)	0.00001 %
19460-19680 kHz	FX	4K00J3D	4400 W (ERP)	0.00001 %

Aberdeen (HARFORD), MD - NL 39-31-31; WL 76-12-00

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
5005-5060 kHz	FX	4K00J3D	4400 W (ERP)	
6765-7000 kHz	FX	4K00J3D	4400 W (ERP)	

Frequency Information

Aberdeen (HARFORD), MD - NL 39-31-31; WL 76-12-00

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
10150-11175 kHz	FX	4K00J3D	4400 W (ERP)	
13870-14000 kHz	FX	4K00J3D	4400 W (ERP)	
15800-15860 kHz	FX	4K00J3D	4400 W (ERP)	
15960-16060 kHz	FX	4K00J3D	4400 W (ERP)	
16160-16360 kHz	FX	4K00J3D	4400 W (ERP)	
18040-18068 kHz	FX	4K00J3D	4400 W (ERP)	
19460-19680 kHz	FX	4K00J3D	4400 W (ERP)	

Special Conditions:

- (1) In lieu of frequency tolerance, the occupied bandwidth of the emission shall not extend beyond the band limits set forth above.
- (2) Licensee should be aware that other stations may be licensed on these frequencies and if any interference occurs, the licensee of this authorization will be subject to immediate shut down.
- (3) Licensee must ensure that the test is fixed to fixed between Columbus, Ohio and Aberdeen, Maryland.

Special Conditions:

(4) Licensee must notch out the following:

a. Coast Guard Weather Broadcast +/- 2 kHz

1. 6961.0 kHz
2. 10297.5 kHz
3. 10338.5 kHz
4. 10354.5 kHz
5. 10378.0 kHz
6. 10675.0 kHz
7. 10759.0 kHz
8. 10788.0 kHz
9. 10929.5 kHz
10. 10935.5 kHz
11. 11024.0 kHz
12. 11045.0 kHz
13. 11157.5 kHz
14. 13950.0 kHz
15. 19680 kHz

b. Coast Guard Air/Ground/Air Operations +/- 1.4 kHz

1. 10540.0 kHz
2. 10810.0 kHz
3. 10891.0 kHz
4. 10918.0 kHz
5. 11029.5 kHz
6. 16027.5 kHz

c. Additional Frequencies +/- 0.5 kHz

1. 10642.5 kHz
2. 11105.0 kHz
3. 11106.0 kHz
4. 11190.0 kHz
5. 15804.0 kHz
6. 16025.0 kHz
7. 16043.0 kHz
8. 16306.0 kHz
9. 18055.0 kHz

d. Additional Frequencies +/- 1 kHz

1. 11166.0 kHz
2. 16255.0 kHz

e. Additional Frequencies +/- 1.4 kHz

1. 6790.0 kHz
2. 6860.0 kHz
3. 6907.4 kHz
4. 6992.0 kHz
5. 10927.0 kHz

f. Additional Frequencies +/- 1.5 kHz

1. 6928.0 kHz
2. 10640.0 kHz

Specie

3. 11075.0 kHz

g. Additional Frequencies +/- 2 kHz

1. 6904.0 kHz

2. 10735.0 kHz

3. 10922.5 kHz

4. 11170.0 kHz

5. 11190.0 kHz

6. 15995.0 kHz

7. 16242.0 kHz

8. 16275.0 kHz

9. 16285.0 kHz