FEDERAL COMMUNICATIONS COMMISSION
APPLICATION FOR SPECIAL TEMPORARY AUTHORITY
This request for Special Temporary Authority (STA) is for a Existing STA

Applicant Name

Name of Applicant: EMBRAER - Empresa Brasileira de Aeronautica S.A.

Address

Attention: Henoch Santos Costa
Street Address: Brigadeiro Faria Lima Avenue, 2170, Putim
P.O. Box:
City: Sao Jose dos Campos, Sao Paulo
State:
Zip Code: 12227-901
Country: Brazil
E-Mail Address: henoch.santos@embraer.com.br

Best Contact

Give the following information of person who can best handle inquiries pertaining to this application:

Last Name: Santos Costa
First Name: Henoch
Title: Product Development Engineer
Phone Number: 011 +55 12 3927-6824

Explanation

Please explain in the area below why an STA is necessary:
This request for Special temporary Authority (STA) is submitted pursuant to 47 CFR 5.61 to request authorization to perform High Intensity Radiated Field (HIRF) testing on an EMBRAER aircraft. The proposed operation is expected to be completed within a period of approximately one month and is not expected to be repeated. STA is required because the aircraft and its systems will be subjected to HIRF susceptibility tests including the use of frequencies from 10 MHz to 18 GHz.

Purpose of Operation

Please explain the purpose of operation:

The operation to be performed includes the execution of low level coupling HIRF tests comprised of low level swept current (LLSC) and low level swept field (LLSF) tests. The LLSC test will involve illuminating the aircraft with low-level external HIRF field to measure the transfer function between the external field and the aircraft and equipment wire bundle currents. By calculating the ratio between the induced wire bundle current and the illuminating antenna field strength and normalizing this ratio to 1 V/m, EMBRAER will obtain the transfer function in terms of induced current per unit of external field strength. The current induced by the applicable external HIRF environment can then be calculated by multiplying the transfer function by the external HIRF field strength. The LLSF test will be performed on the aircraft from 100 MHz to 18 GHz. The internal RF fields in the vicinity of the equipment will be measured instead of the wire bundle currents. The relation between the internal and external fields provides the attenuation of the structure for each tested location.

Information

Callsign:
Class of Station: FX
Nature of Service: Experimental

Location of proposed operation

Operation Start Date: 03/23/2009
Operation End Date: 04/23/2009

Manufacturer

List below transmitting equipment to be installed (if experimental, so state) if additional rows are required, please submit equipment list as an exhibit:

Manufacturer	Model Number	No. Of Units	Experimental
ERA Technology	HF Dipole	1	Yes
Teseq	CBL 6111	1	Yes
AH Systems	SAS-571	1	Yes
Rohde and Schwarz	SMR20	1	Yes
Rohde and Schwarz	FSP30	1	Yes
ENI	5100L	1	Yes
Lucix	S001200L3205	1	Yes

Certification

Neither the applicant nor any other party to the application is subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. The applicant hereby waives any claim to the use of any particular frequency or electromagnetic spectrum as against the regulatory power of the United States because of the prvious use of the same, whether by license or otherwise, and requests authorization in accordance with this application. (See Section 304 of the Communications Act of 1934, as amended.) The applicant acknowledges that all statements made in this application and attached exhibits are considered material representations, and that all the exhibits part hereof and are incorporated herein as if set out in full in this application; undersigned certifies that all statements in this application are true, complete and correct to the best of his/her knowledge and belief and are made in good faith. Applicant certifies that construction of the station would NOT be an action which is likely to have a significant environmental effect. See the Commission's Rules, 47 CFR1.1301-1.1319.

Signature of Applicant (Authorized person filing form): Henoch Santos Costa

Title of Applicant (if any): Product Development Engineer

Date: 2009-01-07 00:00:00.0

Station Location

City	State	Latitude	Longitude	Mobile	Radius of Operation
Fort Lauderdale	Florida	North 26 4 21	West 80 9 10	100 meter radius of aircraft test site	0.10

Datum: NAD 83

Is a directional antenna (other than radar) used? No

Exhibit submitted: No

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane:

(c) Orientation in vertical plane:

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? Yes

(a) Overall height above ground to tip of antenna in meters: 7.40

(b) Elevation of ground at antenna site above mean sea level in meters: 3.00

(c) Distance to nearest aircraft landing area in kilometers:

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft: As detailed in the attached Comprehensive Exhibit, Embraer has consulted with FAA representative Jose Rodriguez at the Fort Lauderdale-Hollywood International Airport regarding the proposed operation. Mr. Rodriguez has confirmed that the proposed structure will not present a hazard to aviation. A formal request for determination of no hazard has also been submitted to the FAA on Form 7460-1 (File Number 2009-ASO-13-NRA)

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal

New	0.50000000-25.50000000 MHz	FX	N/A 100.000000 W	P		N0N

	City	State	Latitude	Longitude	Mobile	Radius of Operation
	For Lauderdale	Florida	North 26 4 21	West 80 9 10	100 meter radius around aircraft test site	0.10

Datum: NAD 83

Is a directional antenna (other than radar) used? No

Exhibit submitted: No

(a) Width of beam in degrees at the half-power point:

(b) Orientation in horizontal plane:

(c) Orientation in vertical plane:

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? No

(a) Overall height above ground to tip of antenna in meters:

(b) Elevation of ground at antenna site above mean sea level in meters:

(c) Distance to nearest aircraft landing area in kilometers:

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	25.00000000-130.00000000 MHz	FX	N/A 100.000000 W	P		N0N	

	City	State	Latitude	Longitude	Mobile	Radius of Operation
	Fort Lauderdale	Florida	North 26 4 21	West 80 9 10	100 meter radius around aircraft test site	0.10

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: Yes

(a) Width of beam in degrees at the half-power point: 90.00

(b) Orientation in horizontal plane:

(c) Orientation in vertical plane:

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? No

(a) Overall height above ground to tip of antenna in meters:

(b) Elevation of ground at antenna site above mean sea level in meters:

(c) Distance to nearest aircraft landing area in kilometers:

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	130.00000000-1200.00000000 MHz	FX	N/A 0.100000 W	P		N0N	

	City	State	Latitude	Longitude	Mobile	Radius of Operation
	Fort Lauderdale	Florida	North 26 4 21	West 80 9 10	100 meter radius around aircraft test site	0.10

Datum: NAD 83

Is a directional antenna (other than radar) used? Yes

Exhibit submitted: Yes

(a) Width of beam in degrees at the half-power point: 30.00

(b) Orientation in horizontal plane:

(c) Orientation in vertical plane:

Will the antenna extend more than 6 meters above the ground, or if mounted on an existing building, will it extend more than 6 meters above the building, or will the proposed antenna be mounted on an existing structure other than a building? No

(a) Overall height above ground to tip of antenna in meters:

(b) Elevation of ground at antenna site above mean sea level in meters:

(c) Distance to nearest aircraft landing area in kilometers:

(d) List any natural formations of existing man-made structures (hills, trees, water tanks, towers, etc.) which, in the opinion of the applicant, would tend to shield the antenna from aircraft:

Action	Frequency	Station Class	Output Power/ERP	Mean Peak	Frequency Tolerance (+/-)	Emission Designator	Modulating Signal
New	1.00000000-18.00000000 GHz	FX	N/A 0.400000 W	P		N0N	