

ANNEX B

PARAMETERS THAT NEED TO BE SUBMITTED BY AES NETWORK OPERATORS TO THE OFFICE

An AES network operator is required to submit to Office the following parameters and declaration.

1. A declaration that their system complies with the requirements of the Decision, including those specified in Annex A and as specified in the Office AES webpage.

Gogo LLC hereby submits its notification of Aircraft Earth Stations pursuant to ECC Decision (05)11 and declares that its AES system complies with the requirements listed in that Decision.

2. The AES network operator is required to submit to the Office the following information:

- **Points of Contacts**

- Network Operator's designated point of contact

Title of contact	Greg Oliveau Gogo LLC
Postal address	111 North Canal Street, Suite 1500 Chicago, IL 60606 USA
Telephone and fax numbers	Tel: +34 620 877 757
email address	GOliveau@gogoair.com

- Network Control Facility (NCF) designated point of contact

Title of contact	Network Operation Center Gogo LLC
Postal address	111 North Canal Street, Suite 1500 Chicago, IL 60606 USA
Telephone and fax numbers	+1 866 943 4662
email address	NOC@gogoair.com

- **Technical Specification(s) of AES equipment type(s) used in the network**

- AES Antenna 1

Antenna type	Flat panel phased array
Antenna size	32.5 inches x 7.5 inches
Transmit peak gain	33.3 dBi
Max e.i.r.p. per carrier	42.5 dBW
Transmit frequency bands	14 – 14.5 GHz
Min. operating elevation	10° when on the ground¹ and otherwise conformant to the requirements of EN 302 186
Antenna pointing accuracy	Error <0.4° RMS (EL) & <0.2° RMS (AZ)

- AES Antenna 2

Antenna type	Flat panel phased array
Antenna size	74 inches x 35 inches x 4.0 inches
Transmit peak gain	36.7 dBi
Max e.i.r.p. per carrier	44.7 dBW
Transmit frequency bands	14 – 14.5 GHz
Min. operating elevation	10° when on the ground and otherwise conformant to the requirements of EN 302 186
Antenna pointing accuracy	Error <0.2° RMS (EL) & <0.2° RMS (AZ)

¹ Gogo is aware of the fact that in some countries operation of AES when the aircraft is on the ground, is subject to prior agreement with administrations and/or airport authorities and/or Civil Aviation Authorities

Waveform characteristics

Number(s) of carriers per AES	3
Occupied bandwidth(s) per carrier (as defined in Harmonised Standard EN 302 186)	2.66 MHz
Carrier centre frequency(-ies)	14076.332 MHz, 14078.998 MHz, 14081.663 MHz
Modulation	QPSK
Multiple access scheme	TDM

- **Operating details of the satellite**

Astra 4A

ITU BR Filing Information

ITU BR filing satellite network name	LUX-G3-2
ITU BR circular reference number	IFIC 2758
Satellite operator(s) (commercial) name	Astra 4A
GSO longitude (East or West from Greenwich)	5° E (4.8° E)
Satellite service area (text description and/or a figure of the area)	



Forward Channel details (Satellite to AES)

Transponder(s) downlink centre frequency	12547 MHz
Transponder(s) downlink bandwidth	72 MHz

Return Channel details (AES to satellite)

Transponder(s) uplink centre frequency	14047 MHz
Transponder(s) uplink bandwidth	72 MHz

- **Other details**

In addition the AES network operators need to notify the Office of the name of the airlines which will be using their network system. Alternatively, operators could provide to the Office a link to their webpage containing this information.

See <http://www.gogoair.com/gogo/cms/airlines.do>