

APPLICATION FOR EARTH STATION SPECIAL TEMPORARY AUTHORITY

APPLICANT INFORMATION Enter a description of this application to identify it on the main menu:
60-day STA to permit operation of technically identical Ku-band ESAA terminals

1. Applicant

Name:	Panasonic Avionics Corporation	Phone Number:	949-672-2364
DBA Name:		Fax Number:	
Street:	26200 Enterprise Way	E-Mail:	Mark.Defazio@panasonic.aero
City:	Lake Forest	State:	CA
Country:	USA	Zipcode:	92630 -
Attention:	Mark DeFazio		


60 days "with conditions"

File # SES-STA-20160218-00142

Call Sign E100089 **Grant Date** 02/25/2016
(or other identifier)

From 02/29/2016 **Term Dates** **To:** 04/28/2016

Approved: Paul E. Blaes



Applicant: Panasonic Avionics Corporation
 Call Sign: E100089
 File No.: SES-STA-20160218-00142
 Special Temporary Authority (STA)

Panasonic Avionics Corporation (Panasonic) is granted special temporary authority for 60 days, beginning on February 29, 2016, to operate up to twenty-five (25) Panasonic Single-Panel Antenna (SPA) terminals, onboard Canadian-based WestJet Airlines. The SPA terminals are technically identical to the currently authorized Panasonic model AURA LE 0.89 meter antennas (PPA).¹ Operations are authorized with the AMC-16 (Call Sign S2181) at 85° W.L, Galaxy 16 (Call Sign S2687) at 99° W.L, Galaxy 17 (Call Sign S2175) at 91° W.L., and Eutelsat 172A (Call Sign S2610) at 172° E.L. satellites serving U.S. territory in the 14.0-14.5 GHz (Earth-to-space) frequency band and in the downlink (space-to-Earth) frequency bands identified in the table below:

Satellite Orbital	Location	Downlink Frequencies	ITU Region	Service To U.S.
AMC-16	85° W	11.7-12.2 GHz	2	Yes
Galaxy 16	99° W	11.7-12.2 GHz	2	Yes
Galaxy 17	91° W	11.7-12.2 GHz	2	Yes
Eutelsat 172A	172° E	10.95-11.2 GHz; 11.45-11.7 GHz	2	Yes

Panasonic is also granted special temporary authority to operate the Panasonic model PPA terminals with the Telstar 12 Vantage (S2933) satellite operating at the 15° W.L. orbital location in the 14.0-14.5 GHz (Earth-to-space) and the 10.95-12.2 GHz (space-to-Earth) frequency bands in Region 1.

All operations must comply with the following conditions.

1. The Panasonic Mission control point for E100089 located at 26200 Enterprise Way, Lake Forest, CA 92630. Panasonic must maintain a U.S. point of contact available 24 hours per day, seven days per week, with the authority and ability to terminate operations authorized herein.

Primary: Mr. Hector Torres: 1-949-672-2578; or (Mobile) 1-949-421-7354;
 Secondary: MCC Supervisors: Mr. Mike Juffer: (Mobile) +1 (949) 300-9615
 Mr. Ray Hashmani: (Mobile) (949) 562-9741,
 Manny Barela: (Mobile): (949) 466-8583,
 Chris Maldonado: (Mobile): (949) 276-1983,
 MCC direct line: 1-425-415-9800.

2. Operations remain subject to the conditions in IBFS File No. SES-MFS-20130930-

¹ IBFS File No. SES-MFS-20130930-00845, grant stamp, April 9, 2014. *Satellite Communications Service Information: Actions Taken*, Public Notice, Report No. SES-01687 (rel. Oct. 1, 2014) (IBFS File No. SES-MFS-20130930-00845).

00845.²

3. Operation under this grant of special temporary authority must be on an unprotected and non-harmful interference basis, *i.e.*, while operating under this temporary authority Panasonic must not cause harmful interference to, and must not claim protection from interference caused to it by, any other lawfully operating radiocommunication system. Panasonic must cease operations immediately upon notification of such interference and must immediately inform the Commission, in writing, of such an event.

4. Operation pursuant to this authorization must be in compliance with of Panasonic's coordination agreements with the National Aeronautics and Space Administration and National Science Foundation pertaining to the operation of aircraft earth stations in the Ku-band. (*See e.g.*, "Coordination Agreement for the Joint Usage of the Band 14.0 - 14.5 GHz between the National Science Foundation and Panasonic Avionics Corporation," Version 1.1, signed on December 18, 2009).

5. Operation pursuant to this authorization outside the United States in the 14.0-14.5 GHz band must be in compliance with the provisions of Annex 1, Part C of Recommendation ITU-R M.1643, with respect to any radio astronomy station performing observations in the 14.47-14.5 GHz band.

6. When operating in international airspace within line-of-sight of the territory of a foreign administration where Fixed Service networks have a primary allocation in the 14.0-14.5 GHz band, an aircraft earth station must not operate in a manner that would produce predicted ground-level power flux density (pfd) in such territory in excess of the following values unless the foreign administration has imposed other conditions for protecting its FS stations: $-132 + 0.5 \times \text{THETA}$ dB(W/(m² MHz)) for $\text{THETA} \leq 40^\circ$; -112 dB(W/(m² MHz)) for $40^\circ < \text{THETA} \leq 90^\circ$. Where: THETA is the angle of arrival of the radio-frequency wave in degrees above the horizontal, and the aforementioned limits relate to the pfd and angles of arrival that would be obtained under free space propagation conditions.

7. Aircraft earth stations authorized herein must employ a tracking algorithm that is resistant to capturing and tracking adjacent satellite signals, and each station must be capable of inhibiting its own transmission in the event it detects unintended satellite tracking.

8. Aircraft earth stations authorized herein must be monitored and controlled by a ground-based network control and monitoring center. Such stations must be able to receive "enable transmission" and "disable transmission" commands from the network control center and must cease transmission immediately after receiving a "parameter change" command until receiving an "enable transmission" command from the network control center. The network control center must monitor operation of each aircraft earth station to determine if it is malfunctioning, and each aircraft earth station must self-monitor and automatically cease transmission on detecting an operational fault that could cause harmful interference to a fixed satellite service network.

9. Stations authorized herein must not be used to provide air traffic control communications.

10. For each ESAA transmitter Panasonic shall maintain records of the following data for each operating aircraft earth station (AES), a record of the aircraft location (*i.e.*, latitude/longitude/altitude), transmit frequency, channel bandwidth and satellite used shall be time annotated and maintained for a period of not less than one year. Records shall be recorded at

² *Id.*

time intervals no greater than one (1) minute while the AES is transmitting. The ESAA operator shall make this data available, in the form of a comma delimited electronic spreadsheet, within 24 hours of a request from the Commission, NTIA, or a frequency coordinator for purposes of resolving harmful interference events. A description of the units (*i.e.*, degrees, minutes, MHz . . .) in which the records values are recorded will be supplied along with the records.

11. Panasonic must take all necessary measures to ensure that the operation authorized does not create potential exposure of humans to radiofrequency radiation in excess of the FCC exposure limits defined in 47 CFR 1.1307(b) and 1.1310. Measures must be taken to ensure compliance with limits for both occupational/controlled exposure and for general population/uncontrolled exposure, as defined in these rule sections. Requirements for restrictions can be determined by predictions based on calculations, modeling or by field measurements. The FCC's OET Bulletin 65 (available on-line at www.fcc.gov/oet/rfsafety) provides information on predicting exposure levels and on methods for ensuring compliance, including the use of warning and alerting signs and protective equipment for workers.

12. Antenna elevation for all operations must be at least 5 degrees above the geographic horizon while the aircraft is on the ground.

13. Panasonic shall comply with any pertinent limits established by the International Telecommunication Union to protect other services allocated internationally.

14. In connection with the provision of service in any particular country, Panasonic is obliged to comply with the applicable laws, regulations, rules, and licensing procedures of that country.


15. Grant of this authorization is without prejudice to any determination that the Commission may make regarding any pending or future applications.

16. Any action taken or expense incurred as a result of operations pursuant to this special temporary authority is solely at Panasonic's risk.

17. Panasonic is afforded thirty days from the date of action to decline this temporary authorization as conditioned. Failure to respond within this period will constitute formal acceptance of the authorization as conditioned.

18. This action is issued pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 C.F.R. § 0.261, and is effective immediately.

60 days "with conditions"

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