

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 Request to Communicate with EUTELSAT 172B

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: Mr. Mark DeFazio



File # SES-STA-20171003-01104  
E100089  
Call Sign Grant Date 11-17-17  
(or other identifier)  
Term Dates  
From: 11-17-17 To: 1-16-18  
Approved: *[Signature]*

Applicant: Panasonic Avionics Corporation  
Call Sign: E100089  
File No.: SES-STA-20171003-01104  
Special Temporary Authority



File # SES-STA-20171003-01104  
E100089  
Call Sign E100089 Grant Date 11-17-17  
(or other identifier)  
Term Dates  
From: 11-17-17 To: 1-16-18  
Approved: [Signature]

Panasonic Avionics Corporation (“Panasonic”) is granted special temporary authority for 60 days beginning November 17, 2017 to operate earth station aboard aircraft (ESAA) antennas pursuant to Section 25.227(a)(2) of the Commission’s rules, 47 C.F.R. § 25.227(a)(2), to communicate with the Eutelsat 172B satellite (Call Sign S3021) at the 172° E orbital location in the: (1) 14.0-14.5 GHz (Earth-to-space) frequency band; (2) 10.95-11.2 GHz and 11.45-11.7 GHz and 12.2-12.75 GHz (space-to-Earth) in ITU regions 1,2 and 3; (3) in the 11.2-11.45 GHz (space-to-Earth) in ITU regions 1 and 3, subject to the following conditions:

1. Operations are on an unprotected and non-harmful interference basis. Panasonic must cease operations immediately upon notification of such interference and must immediately inform the Commission, in writing, of such an event.
2. Operation pursuant to this authorization must be in compliance with the terms of Panasonic coordination agreements with the National Science Foundation and the National Aeronautics and Space Administration pertaining to operation of ESAA in the Ku-Band.
3. 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.
4. The use of the frequency bands 10.95 – 11.2 GHz and 11.45 – 11.70 GHz in the fixed satellite service is limited to international service.
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 ESAA 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/(m<sup>2</sup> MHz)) for  $\text{THETA} \leq 40^\circ$ ;  $-112$  dB(W/(m<sup>2</sup> 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. Operation pursuant to this authorization must conform to the terms of coordination agreements between the operator of Eutelsat 172B and other Ku-band geostationary satellites within six angular degrees of Eutelsat 172B. In the event that another GSO Fixed-Satellite Service (FSS) space station commences operation in the 14.0-14.5 GHz band at a location within

six degrees of any of these space stations, ESAA operating pursuant to this temporary authority shall cease transmitting to that space station unless and until such operation has been coordinated with the new space station's operator or Panasonic demonstrates that such operation will not cause harmful interference to the new co-frequency space station.

8. Panasonic must operate in accordance with the off-axis eirp spectral densities supplied to Eutelsat in obtaining the satellite operator certifications for Eutelsat 172B. Panasonic shall automatically cease emissions within 100 milliseconds if the ESAA transmitter exceeds the off-axis eirp spectral densities supplied to the target satellite operator and transmission shall not resume until Panasonic conforms to the off-axis eirp spectral densities supplied to the target satellite operator.

9. 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 [ww.fcc.gov/oet/rfsafety](http://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.

10. 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. Panasonic must submit a letter to be included in its license file with the name and telephone number of the point of contact prior to commencing operation.

11. ESAA 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.

12. ESAA 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 ESAA to determine if it is malfunctioning, and each ESAA must self-monitor and automatically cease transmission on detecting an operational fault that could cause harmful interference to a fixed satellite service network.

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

14. For each ESAA transmitter, Panasonic shall maintain records of the following data for each operating ESAA, a record of the ESAA 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 time intervals no greater than one

(1) minute while the ESAA 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.

15. ESAA on the ground must not transmit at elevation angles less than three degrees. There is no minimum angle of antenna elevation angle for ESAAs while airborne, 47C.F.R. § 25.205(b).

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

17. 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.

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

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

20. 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. Petitions for reconsideration under Section 1.106 or applications for review under Sections 1.115 of the Commission's rules, 47 C.F.R. §§ 1.106, 1.115, may be filed within thirty days of the date of the public notice indicating that this action was taken.

<b>2. Contact</b>	
<b>Name:</b> Carlos Nalda	<b>Phone Number:</b> 5713325626
<b>Company:</b> LMI Advisors	<b>Fax Number:</b>
<b>Street:</b> 2550 M Street NW Suite 345	<b>E-Mail:</b> cnalda@lmiadvisors.com
<b>City:</b> Washington	<b>State:</b> DC
<b>Country:</b> USA	<b>Zipcode:</b> 20037 -
<b>Attention:</b>	<b>Relationship:</b> Other
(If your application is related to an application filed with the Commission, enter either the file number or the IB Submission ID of the related application. Please enter only one.)	
3. Reference File Number or Submission ID	
4a. Is a fee submitted with this application?	
<input checked="" type="radio"/> If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114).	
<input type="radio"/> Governmental Entity <input type="radio"/> Noncommercial educational licensee	
<input type="radio"/> Other (please explain):	
4b. Fee Classification CGB – Mobile Satellite Earth Stations	
5. Type Request	
<input checked="" type="radio"/> Use Prior to Grant	<input type="radio"/> Change Station Location <input type="radio"/> Other
6. Requested Use Prior Date 11/15/2017	
7. City N/A	8. Latitude (dd mm ss.s h) 0 0 0.0

9. State	10. Longitude (dd mm ss.s h) 0 0 0.0
11. Please supply any need attachments. Attachment 1: Narrative Attachment 2: Technical Appendix Attachment 3:	
12. Description. (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.) Panasonic requests 60-day STA to operate its previously authorized ESAA terminals with the EUTELSAT 172B satellite, which is designed to replace the EUTELSAT 172A satellite located at 172 E.L.	
13. By checking Yes, the undersigned certifies that neither 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 Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. See 47 CFR 1.2002(b) for the meaning of "party to the application"; for these purposes. <input checked="" type="radio"/> Yes <input type="radio"/> No	
14. Name of Person Signing Mark DeFazio	15. Title of Person Signing Sr. Manager
WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND / OR IMPRISONMENT (U.S. Code, Title 18, Section 1001), AND/OR REVOCATION OF ANY STATION AUTHORIZATION (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).	

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**THE FOREGOING NOTICE IS REQUIRED BY THE PAPERWORK REDUCTION ACT OF 1995, PUBLIC LAW 104-13, OCTOBER 1, 1995, 44 U.S.C. SECTION 3507.**

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

In the Matter of

Application of Panasonic Avionics Corporation for 60-Day Special Temporary Authorization (“STA”) to Communicate with the EUTELSAT 172B Satellite for Earth Stations Aboard Aircraft (“ESAA”) Operations	)	Call Sign E100089
	)	File No. _____
	)	
	)	
	)	

**APPLICATION FOR SPECIAL TEMPORARY AUTHORIZATION**

Panasonic Avionics Corporation (“Panasonic”), pursuant to Section 25.120 of the Commission’s rules, 47 C.F.R. § 25.120, respectfully requests 60-day special temporary authorization (“STA”) to operate its previously authorized earth station aboard aircraft (“ESAA”) terminals with the EUTELSAT 172B satellite, which is designed to replace the EUTELSAT 172A satellite located at the 172° E.L. orbital location. Panasonic seeks this STA to facilitate the provision of enhanced in-flight connectivity services to its customer airlines operating in the Asia-Pacific region and to ensure uninterrupted service in connection with the impending transfer of traffic from EUTELSAT 172A to EUTELSAT 172B.

Panasonic seeks this STA for a period of 60 days commencing on or about November 15, 2017, which Panasonic understands to be the approximate target date for EUTELSAT 172B’s commencement of service (subject to appropriate Commission authority). In addition, Panasonic will soon file an application to modify its ESAA Blanket License<sup>1</sup> to add EUTELSAT 172B as an authorized point of communications and provides the attached draft FCC Form 312 Schedule B and Technical Appendix as an overview of its proposed temporary operations.

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<sup>1</sup> See Panasonic Avionics Corporation, File No. SES-MFS-20170312-00255, Call Sign E100089 (“ESAA Blanket License”).



## **I. DISCUSSION**

The EUTELSAT 172B satellite will be a critical element of Panasonic's global eXConnect in-flight entertainment and connectivity ("IFEC") system. In particular, the availability of Ku-band high-throughput satellite ("HTS") spot beams on EUTELSAT 172B will enhance the capacity and efficiency of eXConnect services provided in the Asia-Pacific region to U.S. airlines and U.S. consumers. Given its significant operational advancements offered by EUTELSAT 172B (as compared to the aging EUTELSAT 172A satellite), it is important that Panasonic's ESAA terminals be permitted to communicate with EUTELSAT 172B at the earliest practicable time.

This limited STA seeks interim authority to communicate with the EUTELSAT 172B satellite during the preparation and pendency of the underlying application to add the satellite as an authorized point of communications. The ESAA operations proposed herein are consistent with the Commission's rules and policies governing ESAA operations<sup>2</sup> and, for the reasons described herein, grant of the requested STA would serve the public interest.

### **A. Proposed Operation with EUTELSAT 172B**

Under its ESAA Blanket License, Panasonic is presently authorized to operate several ESAA terminal types – the Single Panel Antenna ("SPA"), Panasonic Phased Array ("PPA") and TECOM Ku-Stream 1000 ("TECOM") terminals – with the EUTELSAT 172A satellite. That satellite is licensed by the Commission at 172° E.L. to provide traditional fixed-satellite service

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<sup>2</sup> See 47 C.F.R. § 25.227; see also *Revisions to Parts 2 and 25 of the Commission's Rules to Govern the Use of Earth Stations Aboard Aircraft Communicating with Fixed-Satellite Service Geostationary-Orbit Space Stations Operating in the 10.95-11.2 GHz, 11.45-11.7 GHz, 11.7-12.2 GHz and 14.0-14.5 GHz Frequency Bands; Service Rules and Procedures to Govern the Use of Aeronautical Mobile Satellite Service Earth Stations in Frequency Bands Allocated to the Fixed-Satellite Service*, IB Docket Nos. 12-376 & 05-20, Notice of Proposed Rulemaking and Report and Order, FCC 12- 161 (rel. Dec. 28, 2012) ("*ESAA Order*").

(“FSS”) and satellite mobility applications.<sup>3</sup> The EUTELSAT 172B satellite is designed to replace and enhance the broadband satellite services offered by EUTELSAT 172A.

**1. Request to Communicate with EUTELSAT 172B**

Panasonic understands that the EUTELSAT 172B satellite was launched and will operate certain communications payloads under authority issued by France. In addition, ES 172 LLC (whose ultimate parent corporation is Eutelsat S.A., referred to collectively herein as “Eutelsat”) has filed an application with the Commission to operate other communications payloads of EUTELSAT 172B to replace the U.S.-licensed EUTELSAT 172A satellite.<sup>4</sup> Panasonic seeks to conduct Ku-band ESAA operations with both U.S.-licensed and French-licensed payloads on EUTELSAT 172B. The ESAAs will transmit in the 14.0-14.5 GHz band; the table below provides an overview of Panasonic’s proposed ESAA receive operations.

**Table 1. Overview of Eutelsat 172B Operations**

Satellite	Licensing Admin.	Orbital Location	Downlink Freq. (GHz)	ITU Satellite Network <sup>5</sup>	ITU Region <sup>6</sup>
Eutelsat 172B	U.S.	172° E	10.95-11.2; 11.45-11.7; 12.2-12.75	USASAT-60A, USASAT-60Y	1, 2, 3
Eutelsat 172B	France	172° E	11.2-11.45	F-SAT-E-30B-172E	1, 3

<sup>3</sup> See, e.g., ES 172 LLC, File No. SAT-LOA-20031218-00358, Call Sign S2610.

<sup>4</sup> See File No. SAT-RPL-20170927-00136, Call Sign S3021 (“EUTELSAT 172B Application”). The application includes information regarding all EUTELSAT 172B satellite service operations, including frequencies for which Commission authority is sought and those which will operate pursuant to French licensing authority.

<sup>5</sup> Panasonic understands that Eutelsat has provide updated operational parameters for EUTELSAT 172B in an ITU satellite network filing designated as USASAT-60Y.

<sup>6</sup> For bands not identified for ESAA receive operations in the Commission’s rules, Panasonic proposes to operate in Region 2 only outside the United States on a non-conforming (unprotected, non-interference) basis.

In the EUTELSAT 172B Application, Eutelsat provides the information required by Section 25.114 of the Commission's rules, 47 C.F.R. § 25.114, including substantial technical showings and Schedule S data. Panasonic hereby incorporates by reference the satellite operational parameters and other information set forth in the EUTELSAT 172B Application associated with the temporary Ku-band ESAA operations proposed herein. The attached Technical Appendix and draft Form 312 Schedule B provide information regarding the operational characteristics of the ESAA terminals with the EUTELSAT 172B satellite.

With respect to the 11.2-11.45 GHz band, this STA application constitutes a request to communicate with a foreign-licensed satellite under the Commission's rules.<sup>7</sup> EUTELSAT 172B was launched and will operate non-U.S. payloads pursuant to authority granted to Eutelsat by France, which is a member of the World Trade Organization for services covered under the World Trade Organization Basic Telecommunications Agreement. Thus, there is a presumption in favor of U.S. market access for the EUTELSAT 172B satellite.<sup>8</sup> Further, to the extent the Commission has not granted ES 172 LLC operating authority for the Ku-band replacement payloads onboard EUTELSAT 172B, Panasonic respectfully requests the Commission treat this STA application as a request to communicate with EUTELSAT 172B in all of the above-referenced Ku-band frequencies under the satellite's existing French authority so that Panasonic can operate on an interim basis until such time as the Commission is able to grant ES 172 LLC appropriate operating authority.

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<sup>7</sup> See 47 CFR § 25.137. In the interest of administrative convenient and efficiency, Panasonic respectfully requests that incorporation by reference of the EUTELSAT 172B Application be deemed to satisfy the technical information requirements of Section 25.137(b) and (d). See 47 CFR § 25.137(b), (d).

<sup>8</sup> See generally 47 CFR § 25.137(a)(2).

## 2. Higher Power Operations with EUTELSAT 172B

Panasonic seeks to operate its ESAA terminals with EUTELSAT 172B at off-axis EIRP spectral density (“ESD”) levels higher than those set forth in Section 25.227(a)(1) of the Commission’s rules and included in its current license for communication with EUTELSAT 172A. Thus, Panasonic will operate the ESAA terminals pursuant to Section 25.227(a)(2) of the Commission’s rules and incorporates by reference the antenna performance information and off-axis ESD data previously submitted for the SPA, PPA and TECOM ESAA terminals.<sup>9</sup> Of course, the antenna performance characteristics of these previously licensed ESAA terminals are well-understood and will not change.

Eutelsat has reviewed the technical characteristics of Panasonic’s proposed ESAA operations at the identified off-axis ESD levels and such operations are consistent with relevant coordination agreements and will not result in unacceptable interference to other satellites within +/- 6 degrees of EUTELSAT 172B. Attached hereto is a letter confirming that the power levels associated with Panasonic’s ESAA terminal operations are consistent with the coordinated parameters of the satellite.<sup>10</sup>

### B. Ground Segment

The gateway earth station for EUTELSAT 172B is located in Kapolei, HI, will operate in Ka-band frequencies and will be operated by Hawaii Pacific Teleport, L.P. (“HPT”). HPT has filed an earth station application to communicate with the satellite in Ka-band uplink and

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<sup>9</sup> See Panasonic Avionics Corporation, File No. SES-MFS-20120913-00818, Call Sign E100089 at Technical Appendix (providing off-axis ESD plots for the PPA terminal) and File No. SES-MFS-20160819-00730, Call Sign E100089 at Technical Appendix (providing off-axis ESD plots for the SPA terminal); *see also* Row44 Inc., File No. SES-MFS-20150928-00635, Call Sign E080100 (providing off-axis ESD plots for the TECOM terminal).

<sup>10</sup> See Technical Appendix.

downlink frequencies that remains pending with the Commission.<sup>11</sup> As the Commission is aware, the gateway earth station is essential to enabling the ESAA operations proposed herein.

Network control and monitoring of Panasonic's ESAA's and the eXConnect network will continue to be provided by a Panasonic Mission Control Center ("MCC") in Lake Forest, California on a 24/7 basis. The contact details for the MCC are on file with the Commission.

### **C. Non-Conforming, Non-Interference Operations**

The FCC's Table of Allocations permits use of the 10.95-11.2 GHz and 11.45-11.7 GHz (space-to-Earth) bands on an unprotected basis, and the 11.7-12.2 GHz (space-to-Earth) and 14.0-14.5 GHz (Earth-to-space) bands on a primary basis for ESAA operations.<sup>12</sup> EUTELSAT 172B supports operations in all of the ESAA bands except 11.7-12.2 GHz, and also supports ESAA downlink operations in the 11.2-11.45 GHz and 12.2-12.75 GHz (space-to-Earth) bands. Panasonic seeks to utilize this additional EUTELSAT 172B downlink capacity on an unprotected, non-harmful interference basis outside the United States.

Panasonic previously was granted a waiver of Section 2.106 of the Commission's rules, 47 C.F.R. § 2.106, to operate ESAA terminals in the 11.2-11.45 GHz and 12.2-12.75 GHz downlink bands. Panasonic understands, however, that current Commission practice is to allow such ESAA receive operations (outside of the United States only) on a non-conforming, non-interference basis through license conditions.

In light of the Commission's current practice, and given that its ESAA receive operations present a negligible risk of interference to other spectrum users and the temporary nature of this STA request, Panasonic requests that the Commission permit ESAA operations in the 11.2-11.45

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<sup>11</sup> See File No. SES-MFS-20170721-00787, Call Sign E150010.

<sup>12</sup> See 47 C.F.R. § 2.106 and n. NG52 and NG55; 47 C.F.R. § 25.227.

GHz and 12.2-12.75 GHz bands consistent with its current approach of granting authority to operate ESAA terminals outside the United States on a non-conforming, non-interference basis.

#### **D. Public Internet Considerations**

Section 25.120(a) of the Commission's rules provides that short-term STA requests should be filed at least three business days prior to commence of proposed operations. Here, Panasonic has timely filed this 60-day STA request so that the Commission may permit operations immediately upon the grant of authority to Eutelsat to operate the E172B satellite. Moreover, consistent with Section 25.120(b)(3) of the Commission's rules, Panasonic plans to file an application for regular authority for the identical operations proposed herein.

Grant of this STA request will strongly serve the public interest by ensuring uninterrupted service and expanded network capabilities in the context of transition traffic from the aging EUTELSAT 172A satellite to the next-generation EUTELSAT 172B satellite, which includes vital HTS beam to support growing traffic requirements in the Asia-Pacific region. Grant of this request would further serve the public interest by extending U.S. leadership in mobile broadband services.

## **II. CONCLUSION**

In view of the foregoing, the public interest would be served by a grant of this 60-day STA to allow Panasonic to conduct ESAA operations with the EUTELSAT 172B satellite on or about November 15, 2017, or such earlier time as it may grant operating authority for the EUTELSAT 172B satellite.

**Panasonic Avionics Corporation  
60-Day Special Temporary Authorization**

**Technical Appendix**

- I. Satellite Operator Certification Letter
- II. Geographical Coverage Maps
- III. Draft FCC Form 312 Schedule B

## I. Satellite Operator Certification Letter



September 25<sup>th</sup>, 2017

Federal Communications Commission  
International Bureau  
445 12th Street, SW  
Washington, D.C. 20554

### **Re: Engineering Certification of Eutelsat S.A.**

To Whom It May Concern:

This letter certifies that Eutelsat S.A. ("Eutelsat") is aware that Panasonic Avionics Corporation ("Panasonic") is planning to seek a modification to its blanket authorization from the Federal Communications Commission ("FCC") to operate technically identical Ku-band transmit/receive earth stations aboard aircraft ("ESAAs"), Call Sign E100089, with the EUTELSAT 70B satellite at 70.5° E.L. and the EUTELSAT 172B satellite to be located at 172° E.L.

Eutelsat understands that Panasonic will file the modification application pursuant to FCC rules governing ESAA operations to increase the maximum EIRP spectral density associated with ESAA transmissions to the EUTELSAT 70B satellite, and to operate at higher maximum EIRP spectral density with the EUTELSAT 172B than with the existing EUTELSAT 172A satellite at 172° E.L. Eutelsat understands that this modification is related to a change in Panasonic's approach to ESAA uplink power limits that will enhance throughput and efficiency by considering ESAA skew angle and location in the beam to set maximum power levels for ESAA terminal uplink transmissions.

Eutelsat confirms and hereby certifies the following with respect to the terminal operations proposed by Panasonic:

- a) The proposed Ku-band operation of Panasonic's ESAA terminal has the potential to create harmful interference to adjacent satellite networks that may be unacceptable;
- b) The proposed operation of the transmit/receive terminals at the power density levels defined in the agreement between Panasonic and Eutelsat is consistent with existing satellite coordination agreements with all adjacent satellite operators within +/- 6 degrees of orbital separation from Eutelsat 70B and Eutelsat 172B satellites.

If the FCC authorizes the operation proposed by Panasonic, Eutelsat will include the power density levels specified by Panasonic, defined within the satellite coordination agreements, in all future satellite network coordination with operators of satellite that are adjacent to those satellites addressed by this letter.

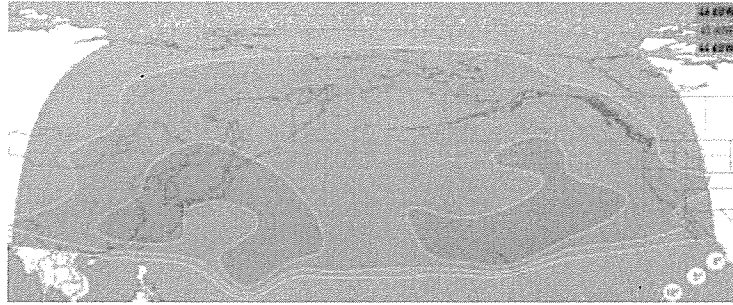
Sincerely,

For Eutelsat  
Filipe De Oliveira  
Director of Resources Engineering

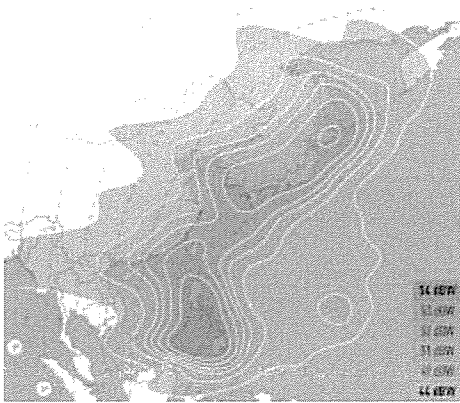
[www.eutelsat.com](http://www.eutelsat.com)



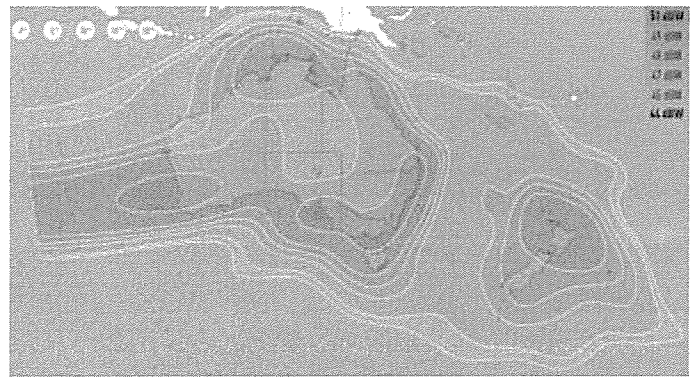
## II. Coverage Maps (EUTELSAT 172B)



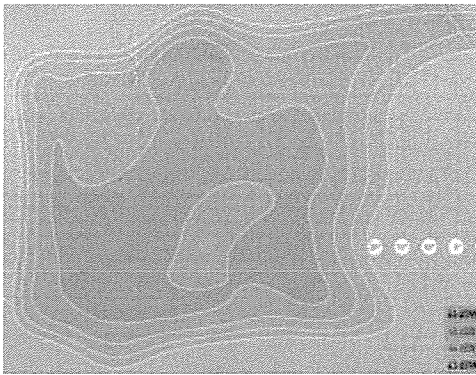
North Pacific (NP) Beam



North East Asia (NEA) Beam



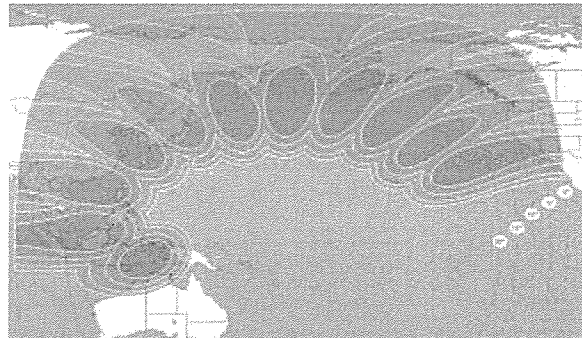
South Pacific (SP) Beam



South East Pacific (SEP) Beam



South West Pacific (SWP) Beam



High-throughput Satellite (HTS) Beams

Approved by OMB  
3060-0678

**III. EUTELSAT 172B Draft FCC Form 312 Schedule B**

Date & Time Filed:  
File Number: ---  
Callsign/Satellite ID:

<b>APPLICATION FOR EARTH STATION AUTHORIZATIONS</b>	<b>FCC Use Only</b>
<b>FCC 312 MAIN FORM FOR OFFICIAL USE ONLY</b>	

**APPLICANT INFORMATION**

Enter a description of this application to identify it on the main menu:  
DRAFT Form 312 Schedule B (EUTELSAT 172B)

<b>1-8. Legal Name of Applicant</b>	
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: Mr. Mark DeFazio	

<b>9-16. Name of Contact Representative</b>	
Name: Carlos Nalda	Phone Number: 5713325626
Company: LMI Advisors	Fax Number:
Street: 2550 M Street NW Suite 345	E-Mail: cnalda@lmiadvisors.com
City: Washington	State: DC
Country: USA	Zipcode: 20037-
Attention: Mr. Carlos Nalda	Relationship: Other

**CLASSIFICATION OF FILING**

<p>17. Choose the button next to the classification that applies to this filing for both questions a. and b. Choose only one for 17a and only one for 17b.</p> <p>a.</p> <p><input checked="" type="radio"/> a1. Earth Station (N/A) a2. Space Station</p>	<p>b.</p> <p><input checked="" type="radio"/> b1. Application for License of New Station</p> <p><input checked="" type="radio"/> b2. Application for Registration of New Domestic Receive-Only Station (N/A) b3. Amendment to a Pending Application (N/A) b4. Modification of License or Registration (N/A) b5. Assignment of License or Registration (N/A) b6. Transfer of Control of License or Registration (N/A) b7. Notification of Minor Modification (N/A) b8. Application for License of New Receive-Only Station Using Non-U.S. Licensed Satellite (N/A) b9. Letter of Intent to Use Non-U.S. Licensed Satellite to Provide Service in the United States</p> <p><input checked="" type="radio"/> b10. Other (Please specify)</p> <p><input type="radio"/> b11. Application for Earth Station to Access a Non-U.S. satellite Not Currently Authorized to Provide the Proposed Service in the Proposed Frequencies in the United States.</p>
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17c. Is a fee submitted with this application?

If Yes, complete and attach FCC Form 159.

If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114).

Governmental Entity  Noncommercial educational licensee

Other (please explain): DRAFT FORM

17d. Fee Classification

18. If this filing is in reference to an	19. If this filing is an amendment to a pending application enter:
------------------------------------------	--------------------------------------------------------------------

existing station, enter: (a) Call sign of station: Not Applicable	(a) Date pending application was filed: Not Applicable	(b) File number of pending application: Not Applicable
-------------------------------------------------------------------------	-----------------------------------------------------------	-----------------------------------------------------------

**TYPE OF SERVICE**

20. NATURE OF SERVICE: This filing is for an authorization to provide or use the following type(s) of service(s): Select all that apply:

a. Fixed Satellite  
 b. Mobile Satellite  
 c. Radiodetermination Satellite  
 d. Earth Exploration Satellite  
 e. Direct to Home Fixed Satellite  
 f. Digital Audio Radio Service  
 g. Other (please specify)  
 ESAA

21. STATUS: Choose the button next to the applicable status. Choose only one.  
 Common Carrier  Non-Common Carrier

22. If earth station applicant, check all that apply.  
 Using U.S. licensed satellites  
 Using Non-U.S. licensed satellites

23. If applicant is providing INTERNATIONAL COMMON CARRIER service, see instructions regarding Sec. 214 filings. Choose one. Are these facilities:  
 Connected to a Public Switched Network  Not connected to a Public Switched Network  N/A

24. FREQUENCY BAND(S): Place an "X" in the box(es) next to all applicable frequency band(s).  
 a. C-Band (4/6 GHz)  b. Ku-Band (12/14 GHz)  
 c. Other (Please specify upper and lower frequencies in MHz.)  
 Frequency Lower: Frequency Upper:

**TYPE OF STATION**

25. CLASS OF STATION: Choose the button next to the class of station that applies. Choose only one.  
 a. Fixed Earth Station  
 b. Temporary-Fixed Earth Station  
 c. 12/14 GHz VSAT Network  
 d. Mobile Earth Station  
 (N/A) e. Geostationary Space Station  
 (N/A) f. Non-Geostationary Space Station  
 g. Other (please specify) ESAA

26. TYPE OF EARTH STATION FACILITY: Choose only one.  
 Transmit/Receive  Transmit-Only  Receive-Only  N/A

**PURPOSE OF MODIFICATION**

27. The purpose of this proposed modification is to: (Place an 'X' in the box(es) next to all that apply.)  
 Not Applicable

**ENVIRONMENTAL POLICY**

28. Would a Commission grant of any proposal in this application or amendment have a significant environmental impact as defined by 47 CFR 1.1307? If YES, submit the statement as required by Sections 1.1308 and 1.1311 of the Commission's rules, 47 C.F.R. §§ 1.1308 and 1.1311, as an exhibit to this application. A Radiation Hazard Study must accompany all applications for new transmitting facilities, major modifications, or major amendments.  Yes  No

**ALIEN OWNERSHIP** Earth station applicants not proposing to provide broadcast, common carrier, aeronautical en route or aeronautical fixed radio station services are not required to respond to Items 30-34.

29. Is the applicant a foreign government or the representative of any foreign government?  Yes  No

30. Is the applicant an alien or the representative of an alien?  Yes  No  N/A

31. Is the applicant a corporation organized under the laws of any foreign government?  Yes  No  N/A

32. Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?  Yes  No  N/A

33. Is the applicant a corporation directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a

foreign government or representative thereof or by any corporation organized under the laws of a foreign country?

34. If any answer to questions 29, 30, 31, 32 and/or 33 is Yes, attach as an exhibit an identification of the aliens or foreign entities, their nationality, their relationship to the applicant, and the percentage of stock they own or vote.

### BASIC QUALIFICATIONS

35. Does the Applicant request any waivers or exemptions from any of the Commission's Rules?  Yes  No  
If Yes, attach as an exhibit, copies of the requests for waivers or exceptions with supporting documents.

36. Has the applicant or any party to this application or amendment had any FCC station authorization or license revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construction permit denied by the Commission? If Yes, attach as an exhibit, an explanation of circumstances.  Yes  No

37. Has the applicant, or any party to this application or amendment, or any party directly or indirectly controlling the applicant ever been convicted of a felony by any state or federal court? If Yes, attach as an exhibit, an explanation of circumstances.  Yes  No

38. Has any court finally adjudged the applicant, or any person directly or indirectly controlling the applicant, guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement or any other means or unfair methods of competition? If Yes, attach as an exhibit, an explanation of circumstances.  Yes  No

39. Is the applicant, or any person directly or indirectly controlling the applicant, currently a party in any pending matter referred to in the preceding two items? If yes, attach as an exhibit, an explanation of the circumstances.  Yes  No

40. If the applicant is a corporation and is applying for a space station license, attach as an exhibit the names, address, and citizenship of those stockholders owning a record and/or voting 10 percent or more of the Filer's voting stock and the percentages so held. In the case of fiduciary control, indicate the beneficiary(ies) or class of beneficiaries. Also list the names and addresses of the officers and directors of the Filer.

41. By checking Yes, the undersigned certifies, that neither 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 Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. *See 47 CFR 1.2002(b) for the meaning of "party to the application" for these purposes.*  Yes  No

42a. Does the applicant intend to use a non-U.S. licensed satellite to provide service in the United States? If Yes, answer 42b and attach an exhibit providing the information specified in 47 C.F.R. 25.137, as appropriate. If No, proceed to question 43.  Yes  No

42b. What administration has licensed or is in the process of licensing the space station? If no license will be issued, what administration has coordinated or is in the process of coordinating the space station? France

43. Description. (Summarize the nature of the application and the services to be provided). 60-day STA to communicate with the EUTELSAT 172B, a replacement satellite for EUTELSAT 172A.

43a. Geographic Service Rule Certification  
By selecting A, the undersigned certifies that the applicant is not subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25.  A

By selecting B, the undersigned certifies that the applicant is subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25 and will comply with such requirements.  B

By selecting C, the undersigned certifies that the applicant is subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25 and will not comply with such requirements because it is not feasible as a technical matter to do so, or that, while technically feasible, such services would require so many compromises in satellite design and operation as to make it economically unreasonable. A narrative description and technical analysis demonstrating this claim are attached.  C

### CERTIFICATION

The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. The applicant certifies that grant of this application would not cause the applicant to be in violation of the spectrum aggregation limit in 47 CFR Part 20. All statements made in exhibits are a material part hereof and are incorporated herein as if set out in full in this application. The undersigned, individually and for the applicant, hereby certifies that all statements made in this application and in all attached exhibits are true, complete and correct to the best of his or her knowledge and belief, and are made in good faith.

44. Applicant is a (an): (Choose the button next to applicable response.)

- Individual
- Unincorporated Association
- Partnership
- Corporation
- Governmental Entity
- Other (please specify)

45. Name of Person Signing Mark DeFazio	46. Title of Person Signing Sr. Manager
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47. Please supply any need attachments.

Attachment 1:	Attachment 2:	Attachment 3:
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**WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND / OR IMPRISONMENT (U.S. Code, Title 18, Section 1001), AND/OR REVOCATION OF ANY STATION AUTHORIZATION (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).**

### SATELLITE EARTH STATION AUTHORIZATIONS FCC Form 312 - Schedule B:(Technical and Operational Description)

**FOR OFFICIAL USE ONLY**

**Location of Earth Station Site**

E1. Site Identifier: PPA Remotes	E5. Call Sign: E100089
E2. Contact Name MCC	E6. Phone Number: 1-425-415-9800
E3. Street: U.S. & international airspace	E7. City:
E4. State	E8. County:
E10. Area of Operation:	E9. Zip Code
E11. Latitude: 0° 0' 0.0"	U.S. and international airspace
E12. Longitude: 0° 0' 0.0"	
E13. Lat/Lon Coordinates are:	<input type="radio"/> NAD-27 <input type="radio"/> NAD-83 <input checked="" type="radio"/> N/A
E14. Site Elevation (AMSL):	0.0 meters

E15. If the proposed antenna(s) operate in the Fixed Satellite Service (FSS) with geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a) and (b) as demonstrated by the manufacturer's qualification measurement? If NO, provide a technical analysis showing compliance with two-degree spacing policy.	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> N/A
E16. If the proposed antenna(s) do not operate in the Fixed Satellite Service (FSS), or if they operate in the Fixed Satellite Service (FSS) with non-geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a2) and (b) as demonstrated by the manufacturer's qualification measurements?	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> N/A
E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.	<input checked="" type="radio"/> Yes <input type="radio"/> No
E18. Is frequency coordination required? If YES, attach a frequency coordination report as	<input type="radio"/> Yes <input checked="" type="radio"/> No
E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as	<input type="radio"/> Yes <input checked="" type="radio"/> No
<b>E20. FAA Notification - (See 47 CFR Part 17 and 47 CFR part 25.113(c)) Where FAA notification is required, have you attached a copy of a completed FCC Form 854 and or the FAA's study regarding the potential hazard of the structure to aviation?</b> <b>FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL RESULT IN THE RETURN OF THIS APPLICATION.</b>	<input type="radio"/> Yes <input checked="" type="radio"/> No

**POINTS OF COMMUNICATION**

Satellite Name:OTHER   OTHER   If you selected OTHER, please enter the following:	
E21. Common Name: EUTELSAT 172B	E22. ITU Name: F-SAT-E-30B-172E
E23. Orbit Location: 172 E.L.	E24. Country: France

Satellite Name:OTHER   OTHER   If you selected OTHER, please enter the following:	
E21. Common Name: EUTELSAT 172B	E22. ITU Name:
E23. Orbit Location: 172 E.L.	E24. Country: USA

**POINTS OF COMMUNICATION (Destination Points)**

E25. Site Identifier: PPA Remotes	
E26. Common Name:	E27. Country:USA

**POINTS OF COMMUNICATION (Destination Points)**

E25. Site Identifier: PPA Remotes	
E26. Common Name:	E27. Country:USA

**ANTENNA**

Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer	E31. Model	E32. Antenna Size	E41/42. Antenna GainTransmint and/or Recieve(____dBi at ____GHz)
PPA Remotes	PPA	2000	Panasonic	AURALE	0.89	35.7 dBi at 11.250
						37.0 dBi at 14.250

E28. Antenna Id	E33/34. Diameter Minor/Major(meters)	E35. Above Ground Level (meters)	E36. Above Sea Level (meters)	E37. Building Height Above Ground Level (meters)	E38. Total Input Power at antenna flange (Watts)	E39. Maximum Antenna Height Above Rooftop (meters)	E40. Total EIRP for al carriers (dBW)
PPA	0.0/0.0	0.0	0.0	0.0	16.0	0.0	48.0

**FREQUENCY**

E28. Antenna Id	E43/44. Frequency Bands(MHz)	E45. T/R Mode	E46. Antenna Polarization(H,V,L,R)	E47. Emission Designator	E48. Maximum EIRP per Carrier(dBW)	E49. Maximum ERIP Density per Carrier(dBW/4kHz)
PPA	10950 11200	R	Horizontal and Vertical	139MG7D	0.0	0.0
E50. Modulation and Services QPSK, 16APSK						
PPA	10950 11200	R	Horizontal and Vertical	1M05G7D	0.0	0.0
E50. Modulation and Services QPSK, 16APSK						
PPA	11200 11450	R	Horizontal and Vertical	139MG7D	0.0	0.0
E50. Modulation and Services QPSK, 16APSK						
PPA	11200 11450	R	Horizontal and Vertical	1M05G7D	0.0	0.0
E50. Modulation and Services QPSK, 16APSK						
PPA	11200 11450	R	Horizontal and Vertical	54M0G7D	0.0	0.0
E50. Modulation and Services QPSK, 16APSK						
PPA	11450 11700	R	Horizontal and Vertical	139MG7D	0.0	0.0
E50. Modulation and Services QPSK, 16APSK						
PPA	11450 11700	R	Horizontal and Vertical	1M05G7D	0.0	0.0
E50. Modulation and Services QPSK, 16APSK						
PPA	11450 11700	R	Horizontal and Vertical	54M0G7D	0.0	0.0
E50. Modulation and Services QPSK, 16APSK						
PPA	12200 12750	R	Horizontal and Vertical	139MG7D	0.0	0.0
E50. Modulation and Services QPSK, 16APSK						
PPA	12200 12750	R	Horizontal and Vertical	1M05G7D	0.0	0.0

E50. Modulation and Services QPSK, 16APSK						
PPA	12200 12750	R	Horizontal and Vertical	54M0G7D	0.0	0.0
E50. Modulation and Services QPSK, 16APSK						
PPA	14000 14500	T	Horizontal and Vertical	21M0G7D	48.0	11.59
E50. Modulation and Services QPSK						
PPA	14000 14500	T	Horizontal and Vertical	32K0G7D	48.0	30.22
E50. Modulation and Services QPSK						

**FREQUENCY COORDINATION**

E28. Antenna Id	E51. Satellite Orbit Type	E52/53. Frequency Limits(MHz)	E54/55. Range of Satellite Arc E/W Limit	E56. Earth Station Azimuth Angle Eastern Limit	E57. Antenna Elevation Angle Eastern Limit	E58. Earth Station Azimuth Angle Western Limit	E59. Antenna Elevation Angle Western Limit	E60. Maximum EIRP Density toward the Horizon(dBW/4kHz)
PPA	Geostationary	10950 11200	172.0/172.0	0.0	5.0	360.0	5.0	0.0
	Geostationary	11200 11450	172.0/172.0	0.0	5.0	360.0	5.0	0.0
	Geostationary	11450 11700	172.0/172.0	0.0	5.0	360.0	5.0	0.0
	Geostationary	12200 12750	172.0/172.0	0.0	5.0	360.0	5.0	0.0
	Geostationary	14000 14500	172.0/172.0	0.0	5.0	360.0	5.0	7.97

**REMOTE CONTROL POINT LOCATION**

**REMOTE CONTROL POINT LOCATION**

E61. Call Sign			E65. Phone Number	
NOTE: Please enter the callsign of the controlling station, not the callsign for which this application is being filed.			1-425-415-9800	
E62. Street Address				
MCC				
26200 Enterprise Way				
E63. City		E67. County		E64/68. State/Country
Lake Forest		Orange		CA/ USA
				E66. Zip Code
				92630

**SATELLITE EARTH STATION AUTHORIZATIONS  
FCC Form 312 - Schedule B:(Technical and Operational Description)**

**FOR OFFICIAL USE ONLY**

Location of Earth Station Site			
E1: Site Identifier:	SPA Remotes	E5. Call Sign:	E100089
E2: Contact Name	MCC	E6. Phone Number:	1-425-415-9800
E3. Street:	U.S. & international airspace	E7. City:	
E4. State		E8. County:	
E10. Area of Operation:		E9. Zip Code	
		U.S. and international airspace	
E11. Latitude:	0 ° 0 ' 0.0 "		
E12. Longitude:	0 ° 0 ' 0.0 "		

E13. Lat/Lon Coordinates are:	<input type="radio"/> NAD-27	<input checked="" type="radio"/> NAD-83	<input checked="" type="radio"/> N/A
E14. Site Elevation (AMSL):	0.0 meters		
E15. If the proposed antenna(s) operate in the Fixed Satellite Service (FSS) with geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a) and (b) as demonstrated by the manufacturer's qualification measurement? If NO, provide a technical analysis showing compliance with two-degree spacing policy.	<input type="radio"/> Yes	<input checked="" type="radio"/> No	<input type="radio"/> N/A
E16. If the proposed antenna(s) do not operate in the Fixed Satellite Service (FSS), or if they operate in the Fixed Satellite Service (FSS) with non-geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a2) and (b) as demonstrated by the manufacturer's qualification measurements?	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
E18. Is frequency coordination required? If YES, attach a frequency coordination report as	<input type="radio"/> Yes	<input checked="" type="radio"/> No	
E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as	<input type="radio"/> Yes	<input checked="" type="radio"/> No	
E20. FAA Notification - (See 47 CFR Part 17 and 47 CFR part 25.113(c)) Where FAA notification is required, have you attached a copy of a completed FCC Form 854 and or the FAA's study regarding the potential hazard of the structure to aviation? <b>FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL RESULT IN THE RETURN OF THIS APPLICATION.</b>	<input type="radio"/> Yes	<input checked="" type="radio"/> No	

**POINTS OF COMMUNICATION**

Satellite Name: OTHER   OTHER   If you selected OTHER, please enter the following:	
E21. Common Name: EUTELSAT 172B	E22. ITU Name:
E23. Orbit Location: 172 E.L.	E24. Country: USA
Satellite Name: OTHER   OTHER   If you selected OTHER, please enter the following:	
E21. Common Name: EUTELSAT 172B	E22. ITU Name: F-SAT-E-30B-172E
E23. Orbit Location: 172 E.L.	E24. Country: France

**POINTS OF COMMUNICATION (Destination Points)**

E25. Site Identifier: SPA Remotes	
E26. Common Name:	E27. Country: USA

**POINTS OF COMMUNICATION (Destination Points)**

E25. Site Identifier: SPA Remotes	
E26. Common Name:	E27. Country: USA

**ANTENNA**

Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer	E31. Model	E32. Antenna Size	E41/42. Antenna Gain Transmitt and/or Recieve(____dBi at ____GHz)		
SPA Remotes	SPA	1000	Panasonic	SPA	0.949	35.0 dBi at 14.250		
E28. Antenna Id	E33/34. Diameter Minor/Major(meters)	E35. Above Ground Level (meters)	E36. Above Sea Level (meters)	E37. Building Height Above Ground Level (meters)	E38. Total Input Power at antenna flange (Watts)	E39. Maximum Antenna Height Above Rooftop (meters)	E40. Total EIRP for al carriers (dBW)	
SPA	0.0/0.0	0.0	0.0	0.0	10.0	0.0	45.0	

**FREQUENCY**

E28. Antenna Id	E43/44. Frequency Bands(MHz)	E45. T/R Mode	E46. Antenna Polarization(H,V,L,R)	E47. Emission Designator	E48. Maximum EIRP per Carrier(dBW)	E49. Maximum ERIP Density per Carrier(dBW/4kHz)
SPA	10950 11200	R	Horizontal and Vertical	139MG7D	0.0	0.0

E50. Modulation and Services QPSK, 16APSK



SPA	10950 11200	R	Horizontal and Vertical	1M05G7D	0.0	0.0
E50. Modulation and Services QPSK, 16APSK						
SPA	11200 11450	R	Horizontal and Vertical	139MG7D	0.0	0.0
E50. Modulation and Services QPSK, 16APSK						
SPA	11200 11450	R	Horizontal and Vertical	1M05G7D	0.0	0.0
E50. Modulation and Services QPSK, 16APSK						
SPA	11200 11450	R	Horizontal and Vertical	54M0G7D	0.0	0.0
E50. Modulation and Services QPSK, 16APSK						
SPA	11450 11700	R	Horizontal and Vertical	139MG7D	0.0	0.0
E50. Modulation and Services QPSK, 16APSK						
SPA	11450 11700	R	Horizontal and Vertical	1M05G7D	0.0	0.0
E50. Modulation and Services QPSK, 16APSK						
SPA	12200 12750	R	Horizontal and Vertical	139MG7D	0.0	0.0
E50. Modulation and Services QPSK, 16APSK						
SPA	12200 12750	R	Horizontal and Vertical	1M05G7D	0.0	0.0
E50. Modulation and Services QPSK, 16APSK						
SPA	12200 12750	R	Horizontal and Vertical	54M0G7D	0.0	0.0
E50. Modulation and Services QPSK, 16APSK						
SPA	14000 14500	T	Horizontal and Vertical	21M0G7D	45.0	8.59
E50. Modulation and Services QPSK						
SPA	14000 14500	T	Horizontal and Vertical	32K0G7D	45.0	28.39
E50. Modulation and Services QPSK						

**FREQUENCY COORDINATION**

E28. Antenna Id	E51. Satellite Orbit Type	E52/53. Frequency Limits(MHz)	E54/55. Range of Satellite Arc E/W Limit	E56. Earth Station Azimuth Angle Eastern Limit	E57. Antenna Elevation Angle Eastern Limit	E58. Earth Station Azimuth Angle Western Limit	E59. Antenna Elevation Angle Western Limit	E60. Maximum EIRP Density toward the Horizon(dBW/4kHz)
SPA	Geostationary	10950 11200	172.0/172.0	0.0	5.0	360.0	5.0	0.0
	Geostationary	11200 11450	172.0/172.0	0.0	5.0	360.0	5.0	0.0
	Geostationary	11450 11700	172.0/172.0	0.0	5.0	360.0	5.0	0.0
	Geostationary	12200 12750	172.0/172.0	0.0	5.0	360.0	5.0	0.0
	Geostationary	14000 14500	172.0/172.0	0.0	5.0	360.0	5.0	3.29

**REMOTE CONTROL POINT LOCATION**

**REMOTE CONTROL POINT LOCATION**

E61. Call Sign		E65. Phone Number	
NOTE: Please enter the callsign of the controlling station, not the callsign for which this application is being filed.		1-425-415-9800	
E62. Street Address			
MCC			
26200 Enterprise Way			
E63. City		E67. County	
Lake Forest		Orange	
E64/68. State/Country		E66. Zip Code	
CA/ USA		92630	

## SATELLITE EARTH STATION AUTHORIZATIONS FCC Form 312 - Schedule B:(Technical and Operational Description)

### FOR OFFICIAL USE ONLY

Location of Earth Station Site			
E1. Site Identifier:	TECOM Remotes	E5. Call Sign:	E100089
E2. Contact Name	MCC	E6. Phone Number:	1-425-415-9800
E3. Street:	U.S. & international airspace	E7. City:	
E4. State		E8. County:	
E10. Area of Operation:		E9. Zip Code	U.S. and international airspace
E11. Latitude:	0 ° 0 ' 0.0 "		
E12. Longitude:	0 ° 0 ' 0.0 "		
E13. Lat/Lon Coordinates are:	<input type="radio"/> NAD-27	<input type="radio"/> NAD-83	<input checked="" type="radio"/> N/A
E14. Site Elevation (AMSL):	0.0 meters		

E15. If the proposed antenna(s) operate in the Fixed Satellite Service (FSS) with geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a) and (b) as demonstrated by the manufacturer's qualification measurement? If NO, provide a technical analysis showing compliance with two-degree spacing policy.	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> N/A
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------

E16. If the proposed antenna(s) do not operate in the Fixed Satellite Service (FSS), or if they operate in the Fixed Satellite Service (FSS) with non-geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a2) and (b) as demonstrated by the manufacturer's qualification measurements?	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> N/A
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------

E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.	<input checked="" type="radio"/> Yes <input type="radio"/> No
--------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------

E18. Is frequency coordination required? If YES, attach a frequency coordination report as	<input type="radio"/> Yes <input checked="" type="radio"/> No
--------------------------------------------------------------------------------------------	---------------------------------------------------------------

E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as	<input type="radio"/> Yes <input checked="" type="radio"/> No
--------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------

<b>E20. FAA Notification - (See 47 CFR Part 17 and 47 CFR part 25.113(c)) Where FAA notification is required, have you attached a copy of a completed FCC Form 854 and or the FAA's study regarding the potential hazard of the structure to aviation?</b> <b>FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL RESULT IN THE RETURN OF THIS APPLICATION.</b>	<input type="radio"/> Yes <input checked="" type="radio"/> No
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**POINTS OF COMMUNICATION**

Satellite Name: OTHER   OTHER   If you selected OTHER, please enter the following:	
E21. Common Name: EUTELSAT 172B	E22. ITU Name: F-SAT-E-30B-172E
E23. Orbit Location: 172 E.L.	E24. Country: France

Satellite Name: OTHER   OTHER   If you selected OTHER, please enter the following:	
E21. Common Name: EUTELSAT 172B	E22. ITU Name:
E23. Orbit Location: 172 E.L.	E24. Country: USA

**POINTS OF COMMUNICATION (Destination Points)**

E25. Site Identifier: TECOM Remotes	
E26. Common Name:	E27. Country: USA

**POINTS OF COMMUNICATION (Destination Points)**

E25. Site Identifier: TECOM Remotes	
E26. Common Name:	E27. Country: USA

**ANTENNA**

Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer	E31. Model	E32. Antenna Size	E41/42. Antenna Gain Transmint and/or Recieve(____dBi at ____GHz)
TECOM Remotes	TECOM	1000	TECOM	Ku-Stream 1000	0.62	28.8 dBi at 14.250
						31.1 dBi at 11.750

E28. Antenna Id	E33/34. Diameter Minor/Major(meters)	E35. Above Ground Level (meters)	E36. Above Sea Level (meters)	E37. Building Height Above Ground Level (meters)	E38. Total Input Power at antenna flange (Watts)	E39. Maximum Antenna Height Above Rooftop (meters)	E40. Total EIRP for al carriers (dBW)
TECOM	0.0/0.0	0.0	0.0	0.0	31.6	0.0	43.8

**FREQUENCY**

E28. Antenna Id	E43/44. Frequency Bands(MHz)	E45. T/R Mode	E46. Antenna Polarization(H,V,L,R)	E47. Emission Designator	E48. Maximum EIRP per Carrier(dBW)	E49. Maximum EIRP Density per Carrier(dBW/4kHz)
TECOM	10950 11200	R	Horizontal and Vertical	139MG7D	0.0	0.0
E50. Modulation and Services QPSK, 16APSK						
TECOM	10950 11200	R	Horizontal and Vertical	1M05G7D	0.0	0.0
E50. Modulation and Services QPSK, 16APSK						
TECOM	11200 11450	R	Horizontal and Vertical	139MG7D	0.0	0.0
E50. Modulation and Services QPSK, 16APSK						
TECOM	11200 11450	R	Horizontal and Vertical	1M05G7D	0.0	0.0
E50. Modulation and Services QPSK, 16APSK						
TECOM	11200 11450	R	Horizontal and Vertical	54M0G7D	0.0	0.0
E50. Modulation and Services QPSK, 16APSK						
TECOM	11450 11700	R	Horizontal and Vertical	139MG7D	0.0	0.0
E50. Modulation and Services QPSK, 16APSK						
TECOM	11450 11700	R	Horizontal and Vertical	1M05G7D	0.0	0.0
E50. Modulation and Services QPSK, 16APSK						
TECOM	12200 12750	R	Horizontal and Vertical	139MG7D	0.0	0.0
E50. Modulation and Services QPSK, 16APSK						
TECOM	12200 12750	R	Horizontal and Vertical	1M05G7D	0.0	0.0
E50. Modulation and Services QPSK, 16APSK						
TECOM	12200 12750	R	Horizontal and Vertical	54M0G7D	0.0	0.0
E50. Modulation and Services QPSK, 16APSK						
TECOM	14000 14500	T	Horizontal and Vertical	21M0G7D	43.8	7.39
E50. Modulation and Services QPSK						
TECOM	14000 14500	T	Horizontal and Vertical	32K0G7D	43.8	26.44
E50. Modulation and Services QPSK						

**FREQUENCY COORDINATION**

E28. Antenna Id	E51. Satellite Orbit Type	E52/53. Frequency Limits(MHz)	E54/55. Range of Satellite Arc E/W Limit	E56. Earth Station Azimuth Angle Eastern Limit	E57. Antenna Elevation Angle Eastern Limit	E58. Earth Station Azimuth Angle Western Limit	E59. Antenna Elevation Angle Western Limit	E60. Maximum EIRP Density toward the Horizon(dBW/4kHz)
TECOM	Geostationary	10950 11200	172.0/	0.0	5.0	360.0	5.0	0.0

			172.0					
	Geostationary	11200 11450	172.0/ 172.0	0.0	5.0	360.0	5.0	0.0
	Geostationary	11450 11700	172.0/ 172.0	0.0	5.0	360.0	5.0	0.0
	Geostationary	12200 12750	172.0/ 172.0	0.0	5.0	360.0	5.0	0.0
	Geostationary	14000 14500	172.0/ 172.0	0.0	5.0	360.0	5.0	-0.7

**REMOTE CONTROL POINT LOCATION  
REMOTE CONTROL POINT LOCATION**

E61. Call Sign  NOTE: Please enter the callsign of the controlling station, not the callsign for which this application is being filed.		E65. Phone Number 1-425-415-9800	
E62. Street Address MCC 26200 Enterprise Way			
E63. City Lake Forest	E67. County Orange	E64/68. State/Country CA/ USA	E66. Zip Code 92630

**FCC NOTICE REQUIRED BY THE PAPERWORK REDUCTION ACT**

The public reporting for this collection of information is estimated to average 0.25 - 24 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the required data, and completing and reviewing the collection of information. If you have any comments on this burden estimate, or how we can improve the collection and reduce the burden it causes you, please write to the Federal Communications Commission, AMD-PERM, Paperwork Reduction Project (3060-0678), Washington, DC 20554. We will also accept your comments regarding the Paperwork Reduction Act aspects of this collection via the Internet if you send them to PRA@fcc.gov. PLEASE DO NOT SEND COMPLETED FORMS TO THIS ADDRESS.

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THE FOREGOING NOTICE IS REQUIRED BY THE PAPERWORK REDUCTION ACT OF 1995, PUBLIC LAW 104-13, OCTOBER 1, 1995, 44 U.S.C. SECTION 3507.



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November 10, 2017

Ms. Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12th Street, SW  
Washington, DC 20554

**Re: Panasonic Avionics Corporation – Section 1.65 Submission,  
Update Information in Draft Form 312 Schedule B  
File No. SES-STA-20171003-01104, Call Sign E100089**

Dear Ms. Dortch:

After consultation with the Commission staff, Panasonic Avionics Corporation (“Panasonic Avionics”), pursuant to Section 1.65 of the Commission’s Rules, 47 C.F.R. § 1.65, updates certain information submitted in connection with the above-referenced request for special temporary authority (“STA”) to communicate with the EUTELSAT 172B satellite.

Panasonic Avionics hereby updates certain power level information provided in the Technical Appendix, Draft FCC Form 312 Schedule B. Specifically, Panasonic corrects the maximum EIRP Density Per Carrier values for each earth stations aboard aircraft (“ESAA”) terminal as follows:

Antenna ID (Item E28)	Emission Designator (Item E47)	Updated Max. EIRP Density Per Carrier (Item E49)
PPA	32K0G7D	38.96 dBW/4 kHz
SPA	32K0G7D	35.96 dBW/4 kHz
TECOM	32K0G7D	34.8 dBW/4 kHz

No other information in support of this request has changed. Please do not hesitate to contact me with any questions regarding this matter.

Respectfully submitted,

Carlos M. Nalda  
Principal  
LMI Advisors

Cc: Paul Blais  
Cindy Spiers  
Trang Nguyen