

RADIO STATION AUTHORIZATION

Name: SkyBitz, Inc.

Call Sign: E000725

Authorization Type: Renewal of License

File Number: SES-RWL-20160218-00144

Non Common Carrier

Grant date:

04/18/2016 **Expiration Date:** 03/13/2018

Nature of Service: Domestic Mobile-Satellite Service Nature of Service: International Mobile Satellite Service

Nature of Service: Mobile Satellite Service

Class of Station: Mobile Earth Station

A) Site Location(s)

Address

Latitude Longitude Elevation (Meters)

Special Provisions NAD (Refer to Section H)

Site ID 1) MOBILE

450,000 half-duplex METs CONUS, Alaska, HI & surrounding US water

NA

VARIOUS,

Subject to the provisions of the Communications Act of 1934, The Communications Satellite Act of 1962, subsequent acts and treaties, and all present and future regulations made by this Commission, and further subject to the conditions and requirements set forth in this license, the grantee is authorized to construct, use and operate the radio facilities described below for radio communications for the term beginning March 13, 2016 (3 AM Eastern Standard Time) and ending March 13, 2018 (3 AM Eastern Standard Time). The required date of completion of construction and commencement of operation is 00/00/0000. Grantee must file with the Commission a certification upon completion of construction and commencement of operation.

B) Particulars of Operations

The General Provision 1010 applies to all receiving frequency bands. The General Provision 1900 applies to all transmitting frequency bands.

For the text of these provisions, refer to Section H.

#	Frequency (MHz)	Polarizatio Code	on Emission	Tx/Rx Mode	Max EIRP /Carrier (dBW)	Max EIRP Density /Carrier (dBW/4kHz)	Associated Antenna	Special Provisions (Refer to Section H)	Modulation/ Services	
1) 1	626.5000-1660.5000	R	4K00F1D	Tx	4.00	4.00	MT1		MSK at 3600 bps; data	_digital;
2) 1	626.5000-1660.5000	R	4K70G1D	Tx	4.00	4.00	MT1		MSK at 3600 bps; data	digital;
3) 1!	574.4200-1576.4200	R	1M00G1D	Rx			MT1		Reception of GPS signal	L1 CA
4) 1	574.4200-1576.4200	R	1M00G1D	Rx			MT1		reception of GPS signal	S L1 CA
5) 1!	525.0000-1559.0000	R	4K00F1D	Rx			MT1		MSK at 3600 bps; data	digital;
6) 1	525.0000-1559.0000	R	4K70G1D	Rx			MT1		MSK at 3600 bps; data	digital;



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C) Frequency Coordination Limits

		Satellite Arc (Deg. Long.)	Elevation (Degrees)	Azimuth (Degrees)	Max EIRP Density toward
#	Frequency Limits (MHz)	East West Limit Limit	East West Limit Limit	East West Limit Limit	2201 2201
1)	1626.5000-1660.5000	106.5W-106.5W			MT1
2)	1525.0000-1559.0000	106.5W-106.5W			MT1
3)	1574.4200-1576.4200	106.5W-106.5W			MT1
4)	1626.5000-1660.5000	101.5W-101.5W			MT1
5)	1525.0000-1559.0000	101.5W-101.5W			MT1
6)	1574.4200-1576.4200	101.5W-101.5W			MT1

D) Points of Communications

The following stations located in the Satellite orbits consistent with Sections B and C of this Entry:

- 1) MOBILE to AMC-1 (S2445) @ 101.0 degrees W.L. (U.S.-Licensed)
- 2) MOBILE to MSAT-1 @ 106.5 degrees W.L. (Canadian Licensed) (Non-U.S.-licensed)
- 3) MOBILE to MSV-1 satellite name changed to SKYTERRA-1 on 01/09/2009
- 4) MOBILE to MSAT-2 satellite @ 100.95 degrees W.L. satellite(s) of the (U.S.-licensed)
- 5) MOBILE to All Inmarsat satellites on "ISAT List" authorized to access U.S. in the L-Band
- 6) MOBILE to INMARSAT 4F3 satellite(s) @ 97.65 degrees W.L. (United Kingdom-licensed)

E) Antenna Facilities

Site ID	Antenna ID	Units	Diameter (meters)	Manufacturer	Model number	Site Elevation (Meters)	Max Antenna Height (Meters)	Special Provisions (Refer to Section H)
MOBILE	MT1	450000	0.042	Eagle Eye, Inc. (ant size:4.2cm Square)	Ant. Type: Patch			
Ma	x Gains(s):	4.0	dBi @ 1	.550.0000 GHz 4.	0 dBi @ 1660.50	00 GHz		

1.00

4.00

G) Antenna Structure marking and lighting requirements:

Maximum total input power at antenna flange (Watts) =

Maximum aggregate output EIRP for all carriers (dBW) =

None unless otherwise specified under Special and General Provisions



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H) Special and General Provisions

- A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:
 - 1010 --- Applicable to all receiving frequency bands. Emission designator indicates the maximum bandwidth of received signal at associated station(s). Maximum EIRP and maximum EIRP density are not applicable to receive operations.
 - 1900 --- Applicable to all transmitting frequency bands. Authority is granted to transmit any number of RF carriers with the specified parameters on any discrete frequencies within associated band in accordance with the other terms and conditions of this authorization, subject to any additional limitations that may be required to avoid unacceptable levels of inter-satellite interference.
 - 2325 --- Antennas and all antenna supporting structures used under this authorization shall not exceed 20 feet in height.
 - 2916 --- Transmitter(s) must be turned off during antenna maintenance to ensure compliance with the FCC-specified safety guidelines for human exposure to radiofrequency radiation in the region between the antenna feed and the reflector. Appropriate measures must also be taken to restrict access to other regions in which the earth station's power flux density levels exceed the specified guidelines.
 - 3219 --- All existing transmitting facilities, operations and devices regulated by the Commission must be in compliance with the Commission's radiofrequency (RF) exposure guidelines, pursuant to Section 1.1307(b)(1) through (b)(3) of the Commission's rules, or if not in compliance, file an Environmental Assessment (EA) as specified in Section 1.1311. See 47 CFR § 1.1307 (b) (5).
 - 3465 --- This authorization is subject to the policies adopted in the Report and Order, "Amendment of the Commission's Regulatory Policies to allow Non-US-Licensed Space Stations to provide Domestic and International Satellite Services in the United States," IB Docket 96-111, FCC 97-399 (Released November 26, 1997). (DISCO II)
 - 3848 --- The authorized frequency band(s) has (have) been cleared with the National Telecommunications and Information Administration.
 - 5011 --- The Licensee(s) shall maintain on file with the Commission a current list or plan of the precise frequencies in use at the station, specifying for each frequency the RF center frequency, polarization, emission designator, nominal EIRP (in dBW) and maximum EIRP density (in dbW/4kHz). This list or plan may be submitted either on a station-by-station basis or on a system-wide basis and shall be updated within seven (7) days of any changes in frequency usage at this station. The Licensee(s) need not notify the Commission of temporary usage of frequencies for periods of less than seven (7) days. However, the Licensee(s) shall maintain accurate station records of the times and particulars of such temporary frequency usage.
 - 5012 --- The authority granted here is limited to the operation of the facilities described above and does not include any authority to install and operate channelizing equipment or any other authority under Section 214 of the Communications Act of 1934, as amended, to establish channels of communications.



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H) Special and General Provisions

- A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:
 - 5208 --- The licensee shall take all necessary measures to ensure that the antenna 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 wherever such exposures might occur. 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. Compliance can be accomplished in most cases by appropriate restrictions, such as fencing. 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.
 - 5216 --- All operations shall be on a non-common carrier basis.
 - 5747 --- Licensee's mobile earth station terminals operating on board aircraft shall comply with all applicable Federal Aviation Administration and International Civil Aviation Organization (ICAO) rules and regulations and all other international agreements in forces to which the United States is a party.
 - 5748 --- Licensee's mobile earth station terminals operating on board maritime vessels shall comply with all applicable U.S. Coast Guard and International Maritime Organization (IMO) rules and regulations and all other international agreements in force to which the United States is a party.
 - 5749 --- Licensee's mobile earth station terminals operating on board aircraft shall comply with the Section 87.147(d) of the Commission's Rules. See 47 C.F.R, Section 87.147(d).
 - 5779 --- Upon completion of construction each licensee must file with the Commission a certification including the following information: name of the licensee, file number of the application, call sign of the antenna, date of the license and certification that construction of the facility as authorized has been completed, and that the station is operational including the date of commencement of service, and will remain operational during the license period unless the license is submitted for cancellation.
 - 5847 --- Mobile earth station operations shall be limited to the portions of the 1525-1559 and 1626.5-1660.5 MHZ band coordinated for the satellite being accessed in the most recent annual L-band operator-to-operator agreement.
 - 5848 --- In the absence of a continuing annual L-band operator-to-operator coordination agreement, Licensee's operation in the 1525-1530 MHz, 1530-1544 MHz, 1626.5-1645.5 MHz frequency bands (lower L-bands) and the 1545-1559 MHz and 1646.5-1660.5 MHZ (upper L-band) frequency bands will be on a non-interference basis until a future operator-to-operator agreement is concluded. Licensee shall not cause harmful interference to any other lawfully operating satellite or radio facility and shall cease operations upon notification of such interference. Furthermore, Licensee must notify all other operators in these frequency bands that it will be operating on a non-interference basis. Licensee must notify its customers in the United States that its operations are on a non-harmfull interference basis.

(page 4 of 7) FCC Form 488



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H) Special and General Provisions

- A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:
 - 5849 --- The full-duplex mobile earth station terminals (METs) operating in the 1525-1530 MHz, 1530-1544 MHZ and 1626.5-1645.5 MHZ bands shall have the following minimum set of capabilities to ensure compliance with Footnote S5.353A and the priority and real-time preemption requirements imposed by Footnote 315: (1) All METs transmission shall have a priority assigned to them that preserves the priority and preemptive access given to maritime distress and safety communications sharing the band; (2) Each MET with a requirement to handle maritime distress and safety data communications shall be capable of either (a) recognizing message and call priority identification when transmitted from its associated Land Earth Station (LES) or (b) accepting message and call priority identification embedded in the message or call when transmitted from its associated LES and passing the identification to shipboard data message processing equipment; (3) Each MET shall be assigned access to a unique technical identification number that will be transmitted upon any attempt to gain access to a system; (4) After a MET has gained access to a system the mobile terminal shall be under the control of a LES and shall obtain all channel assignments from it; (5) All METs that do not continuously monitor a separate signaling channel or signaling within the communications channel shall monitor the signaling channel at the end of each transmission; (6) Each MET shall automatically inhibit its transmissions if it is not correctly receiving a separate signaling channel or signaling within the communications channel from its associated LES; (7) Each MET shall automatically inhibit its transmission on any or all channels upon receiving a channel-shut-off command on a signaling or communications channel it is receiving from its associated LES; (8) Each MET with a requirement to handle maritime distress and safety communications shall have the capability within the station to automatically preempt lower precedence traffic.
- 5850 --- All full-duplex mobile earth station terminals (METs) operating in the 1545-1559 MHz and 1646.5-1660.5 MHz frequency bands shall have the following minimum set of capabilities to ensure compliance with Footnotes S5.357A and US308 to Section 2.106 of the Commission's rules, 47 C.F.R. 2.106: (a) All METs transmissions shall have a priority assigned to them that preserves the priority and preemptive access given to aeronautical distress and safety-related communications sharing the band; (b) Each MET with a requirement to handle distress and safety-related communications shall be capable of recognizing message and call priority identification when transmitted from its associated LES; (c) Each MET shall be assigned access to a unique technical identification number that will be transmitted upon any attempt to gain access to a system; (d) After a MET has gained access to a system the mobile terminal shall be under the control of a LES and shall obtain all channel assignments from it; (e) All MESs that do not continuously monitor a separate signaling channel shall have provisions for signaling within the communications channel; (f) Each MET shall automatically inhibit its transmissions if it is not correctly receiving a separate signaling channel or signaling within the communications channel from its associated LES; (g) Each MET shall automatically inhibit its transmission on any or all channels upon receiving a channel-shut-off command on a signaling or communications channel it is receiving from its associated LES; and (h) Each MET with a requirement to handle distress and safety-related communications shall have the capability within the station to automatically preempt lower precedence traffic.
- 5851 --- In accordance with US Footnote 308, the operation of METs in the 1545-1558.5 and 1646.5-1660 MHz is on a secondary basis to U.S. AMS[R]S requirements of other U.S.-authorized MSS providers operating in the 1545-1559 and 1646.5-1660 MHz bands.
- 5852 --- The authorized mobile earth terminals (METs) shall comply with the out-of-band emission limits set forth in Sections 25.202(f) and 25.216 of the Commission's rules. See 47 C.F.R. §§ 25.202(f) and 25.216; Out-of-Band Emission Orders, FCC 02-34 (rel. May 14, 2002), as amended by FCC-03-0283 (rel. November 18, 2003).



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- A) This RADIO STATION AUTHORIZATION is granted subject to the following special provisions and general conditions:
 - 5853 --- The Licensee is not authorized to operate in the 1544-1545 MHz and 1645.5-1646.5 MHz bands that are limited in the United States exclusively for use for distress and safety communications. See 47 C.F.R. Section 2.106nn.S5.356, S5.375.
 - 5856 --- All half-duplex mobile earth stations terminals (METs) operating in the 1545-1559 MHz and 1646.5-1660.5 MHZ frequency bands shall have the following requirements: (a) all operating METs must be capable of ceasing transmission and inhibiting any further transmissions within three second of a command from the network LES, or by cessation of a command signal under all circumstances; (b) Each MET, as a minimum, must be capable of selectively operating on a number of discrete channels within the operating band in order to accommodate the need to possibly modify frequency use due to traffic growth and ongoing intersystem frequency coordination; and (c) The requirements for full duplex operation noted in the Provisions 5849 and 5850 shall apply to half-duplex METs.
 - 6564 --- All half-duplex mobile earth stations terminals (METs) operating in the 1525.0-1544.0 MHz, 1545.0-1559.0 MHz and 1626.5-1645.5 MHz, 1646.5-1660.5 MHZ frequency bands shall have the following requirements (a) all operating METs must be capable of ceasing transmission and inhibiting any further transmissions within three second of a command from the network LES, or by cessation of a command signal under all circumstances; (b) Each MET, as a minimum, must be capable of selectively operating on a number of discrete channels within the operating band in order to accommodate the need to possibly modify frequency use due to traffic growth and ongoing intersystem frequency coordination; and (c) The requirements for full duplex operation noted in the Provisions 5849 and 5850 shall apply to half-duplex METs.
 - 9984 --- The applicant requests renewal of its license for a two-year period to continue to operate its 450,000 half-duplex mobile earth terminals ("METs") operating in the frequency bands 1626.5-1660.5 and 1525-1559 MHz. The earth stations communicate with the AMC-1 @101.0 W.L., MSAT-1 @ 106.5 W.L., SKYTERRA 1 @101.3 W.L., MSAT-2 @100.95 WL, ISAT, and Inmarsat 4F3@97.65 WL. This license renewal is to a prior authorization (SES-RWL-20120202-00138). The applicant is willing to continue to comply with Condition 5856 as stated in its License Based on review of the application in which the applicant does not request any waivers and no policy issues were identified, the application is being coordinated through the L-Band informal process.



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B) This RADIO STATION AUTHORIZATION is granted subject to the additional conditions specified below:

This authorization is issued on the grantee's representation that the statements contained in the application are true and that the undertakings described will be carried out in good faith.

This authorization shall not be construed in any manner as a finding by the Commission on the question of marking or lighting of the antenna system should future conditions require. The grantee expressly agrees to install such marking or lighting as the Commission may require under the provisions of Section 303(q) of the Communications Act. 47 U.S.C. § 303(q).

Neither this authorization nor the right granted by this authorization shall be assigned or otherwise transferred to any person, firm, company or corporation without the written consent of the Commission. This authorization is subject to the right of use or control by the government of the United States conferred by Section 706 of the Communications Act. 47 U.S.C. § 706. Operation of this station is governed by Part 25 of the Commission's Rules. 47 C.F.R. Part 25.

This authorization shall not vest in the licensee any right to operate this station nor any right in the use of the designated frequencies beyond the term of this license, nor in any other manner than authorized herein.

This authorization is issued on the grantee's representation that the station is in compliance with environmental requirements set forth in Section 1.1307 of the Commission's Rules. 47 C.F.R. § 1.1307.

This authorization is issued on the grantee's representation that the station is in compliance with the Federal Aviation Administration (FAA) requirements as set forth in Section 17.4 of the Commission's Rules. 47 C.F.R.§ 17.4.

The following condition applies when this authorization permits construction of or modifies the construction permit of a radio station.

This authorization shall be automatically forfeited if the station is not ready for operation by the required date of completion of construction unless an application for modification of authorization to request additional time to complete construction is filed by that date, together with a showing that failure to complete construction by the required date was due to factors not under control of the grantee.

Licensees are required to pay annual regulatory fees related to this authorization. The requirement to collect annual regulatory fees from regulatees is contained in Public Law 103-66, "The Omnibus Budget Reconciliation Act of 1993." These regulatory fees, which are likely to change each fiscal year, are used to offset costs associated with the Commission's enforcement, public service, international and policy and rulemaking activities. The Commission issues a Report and Order each year, setting the new regulatory fee rates. Receive only earth stations are exempt from payment of regulatory fees.