



UNITED STATES OF AMERICA
FEDERAL COMMUNICATIONS COMMISSION
RADIO STATION AUTHORIZATION

Unofficial Copy

Name Norlight Telecommunications, Inc.
(d/b/a)

Callsign: E940151

File Number: SES-RWL-20040119-00060

Authorization Renewal of License

Non Common Carrier **Grant Date:** 01/22/2004 **Expiration Date:** 03/11/2019

Nature Of Service: Domestic Fixed Satellite Service

Class Of Station: Fixed Earth Stations

A) Site Location(s)

#	Site ID	Address	Latitud	Longitude	Elevation (Meters)	NAD	Special Provisions (Refer to Section H)
1)	1	3617 OAKTON DRIVE	42°1'28.0"N	87°43'8.0"W	179.8	83	
		SKOKIE, COOK, IL 60076					
		Licensee certifies antenna(s) comply with gain patterns specified in Section 25.209					

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 Thursday, March 11, 2004 (3 AM Eastern Standard Time) and ending Monday, March 11, 2019 (3 AM Eastern Standard Time). The required date of completion of construction and commencement of operation is 00/00/0000 (3 AM Eastern Standard Time). 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	Polarization	Emission	Tx/Rx Mode	Max EIRP /Carrier	Max EIRP Density	Associated Antenna	Special Provisions (Refer to Section H)	Modulation/ Services
1)	5925.0000 - 6425.0000	H,V	36M0F8W	T	88.50	61.50	1		
2)	5925.0000 - 6425.0000	H,V	36M0G9W	T	81.00	41.40	1		COMBINATION OF DIGITAL CARRIERS
3)	5925.0000 - 6425.0000	H,V	43K8G9W	T	61.70	51.30	1		COMBINATION OF DIGITAL CARRIERS
4)	5925.0000 - 6425.0000	H,V	36M0G9F	T	81.00	41.40	1		DIGITAL VIDEO
5)	5925.0000 - 6425.0000	H,V	43K8G9F	T	61.70	51.30	1		DIGITAL VIDEO



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6)	5925.0000 - 6425.0000	H,V	36M0G9E	T	81.00	41.40	1	DIGITAL TELEPHONY
7)	5925.0000 - 6425.0000	H,V	43K8G9E	T	61.70	51.30	1	DIGITAL TELEPHONY
8)	5925.0000 - 6425.0000	H,V	36M0G9D	T	81.00	41.40	1	DIGITAL DATA
9)	5925.0000 - 6425.0000	H,V	43K8G9D	T	61.70	51.30	1	DIGITAL TELEPHONY
10)	5925.0000 - 6425.0000	H,V	36M0G8W	T	81.00	41.40	1	COMBINATION OF CARRIERS
11)	5925.0000 - 6425.0000	H,V	43K8G8W	T	61.70	51.30	1	COMBINATION OF DIGITAL CARRIERS
12)	5925.0000 - 6425.0000	H,V	36M0G8F	T	81.00	41.40	1	DIGITAL VIDEO
13)	5925.0000 - 6425.0000	H,V	43K8G8F	T	61.70	51.30	1	DIGITAL VIDEO
14)	5925.0000 - 6425.0000	H,V	36M0G8E	T	81.00	41.40	1	DIGITAL TELEPHONY
15)	5925.0000 - 6425.0000	H,V	43K8G8E	T	61.70	51.30	1	DIGITAL TELEPHONY
16)	5925.0000 - 6425.0000	H,V	36M0G8D	T	81.00	41.40	1	DIGITAL DATA
17)	5925.0000 - 6425.0000	H,V	43K8G8D	T	61.70	51.30	1	DIGITAL DATA
18)	5925.0000 - 6425.0000	H,V	36M0G7W	T	81.00	41.40	1	COMBINATION OF DIGITAL CARRIERS
19)	5925.0000 - 6425.0000	H,V	43K8G7W	T	61.70	51.30	1	COMBINATION OF DIGITAL CARRERS
20)	5925.0000 - 6425.0000	H,V	36M0G7F	T	81.00	41.40	1	DIGITAL VIDEO
21)	5925.0000 - 6425.0000	H,V	43K8G7F	T	61.70	51.30	1	DIGITAL VIDEO



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22)	5925.0000 - 6425.0000	H,V	36M0G7E	T	81.00	41.40	1	DIGITAL TELEPHONY
23)	5925.0000 - 6425.0000	H,V	43K8G7E	T	61.70	51.30	1	DIGITAL TELEPHONY
24)	5925.0000 - 6425.0000	H,V	36M0G7D	T	81.00	41.40	1	DIGITAL DATA
25)	5925.0000 - 6425.0000	H,V	43K8G7D	T	61.70	51.30	1	DIGITAL DATA
26)	5925.0000 - 6425.0000	H,V	36M0G3W	T	81.00	41.40	1	COMBINATION OF DIGITAL CARRIERS
27)	5925.0000 - 6425.0000	H,V	43K8G3W	T	61.70	51.30	1	COMBINATION OF DIGITAL CARRIERS
28)	5925.0000 - 6425.0000	H,V	36M0G3F	T	81.00	41.30	1	DIGITAL VIDEO
29)	5925.0000 - 6425.0000	H,V	43K8G3F	T	61.70	51.30	1	DIGITAL VIDEO
30)	5925.0000 - 6425.0000	H,V	36M0G3E	T	81.00	41.40	1	DIGITAL TELEPHONY
31)	5925.0000 - 6425.0000	H,V	43K8G3E	T	61.70	51.30	1	DIGITAL TELEPHONY
32)	5925.0000 - 6425.0000	H,V	36M0G3D	T	81.00	41.40	1	COMBINATION OF DIGITAL CARRIERS
33)	5925.0000 - 6425.0000	H,V	43K8G3D	T	61.70	51.30	1	DIGITAL DATA
34)	5925.0000 - 6425.0000	H,V	36M0G2W	T	81.00	41.40	1	COMBINATION OF DIGITAL CARRIERS
35)	5925.0000 - 6425.0000	H,V	43K8G2W	T	61.70	51.30	1	COMBINATION OF DIGITAL CARRIERS
36)	5925.0000 - 6425.0000	H,V	36M0G2D	T	81.00	41.40	1	DIGITAL VIDEO
37)	5925.0000 - 6425.0000	H,V	43K8G2F	T	61.70	51.30	1	DIGITAL VIDEO



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38) 5925.0000 - 6425.0000	H,V	36M0G2E	T	81.00	41.40	1	DIGITAL TELEPHONY
39) 5925.0000 - 6425.0000	H,V	43K8G2E	T	61.70	51.30	1	DIGITAL TELEPHONY
40) 5925.0000 - 6425.0000	H,V	36M0G2D	T	81.00	41.40	1	DIGITAL DATA
41) 5925.0000 - 6425.0000	H,V	43K8G2D	T	61.70	51.30	1	DIGITAL DATA
42) 5925.0000 - 6425.0000	H,V	36M0G1W	T	81.00	41.40	1	COMBINATION OF DIGITAL CARRIERS
43) 5925.0000 - 6425.0000	H,V	43K8G1W	T	61.70	51.30	1	COMBINATION OF DIGITAL CARRIERS
44) 5925.0000 - 6425.0000	H,V	36M0G1F	T	81.00	41.40	1	DIGITAL VIDEO
45) 5925.0000 - 6425.0000	H,V	43K8G1F	T	61.70	51.30	1	DIGITAL VIDEO
46) 5925.0000 - 6425.0000	H,V	36M0G1E	T	81.00	41.40	1	DIGITAL TELEPHONY
47) 5925.0000 - 6425.0000	H,V	43K8G1E	T	61.70	51.30	1	DIGITAL TELEPHONY
48) 5925.0000 - 6425.0000	H,V	36M0G1D	T	81.00	41.40	1	DIGITAL DATA
49) 5925.0000 - 6425.0000	H,V	43K8G1D	T	61.70	51.30	1	DIGITAL DATA
50) 3700.0000 - 4200.0000	H,V	36M0F8W	R			1	
51) 3700.0000 - 4200.0000	H,V	36M0F8W	R			1	
52) 3700.0000 - 4200.0000	H,V	36M0G9W	R	0.00		1	COMBINATION OF DIGITAL CARRIERS
53) 3700.0000 - 4200.0000	H,V	43K8G9W	R			1	COMBINATION OF DIGITAL CARRIERS



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54)	3700.0000 - 4200.0000	H,V	36M0G9F	R	1	DIGITAL VIDEO
55)	3700.0000 - 4200.0000	H,V	43K8G9F	R	1	DIGITAL VIDEO
56)	3700.0000 - 4200.0000	H,V	36M0G9E	R	1	DIGITAL TELEPHONY
57)	3700.0000 - 4200.0000	H,V	43K8G9E	R	1	DIGITAL TELEPHONY
58)	3700.0000 - 4200.0000	H,V	36M0G9D	R	1	DIGITAL DATA
59)	3700.0000 - 4200.0000	H,V	43K8G9D	R	1	DIGITAL DATA
60)	3700.0000 - 4200.0000	H,V	36M0G8W	R	1	COMBINATION OF DIGITAL CARRIERS
61)	3700.0000 - 4200.0000	H,V	43K8G8W	R	1	COMBINATION OF DIGITAL CARRIERS
62)	3700.0000 - 4200.0000	H,V	36M0G8F	R	1	DIGITAL VIDEO
63)	3700.0000 - 4200.0000	H,V	43K8G8F	R	1	DIGITAL VIDEO
64)	3700.0000 - 4200.0000	H,V	36M0G8E	R	1	DIGITAL TELEPHONY
65)	3700.0000 - 4200.0000	H,V	43K8G8E	R	1	DIGITAL TELEPHONY
66)	3700.0000 - 4200.0000	H,V	36M0G8D	R	1	DIGITAL DATA
67)	3700.0000 - 4200.0000	H,V	43K8G8D	R	1	DIGITAL DATA
68)	3700.0000 - 4200.0000	H,V	36M0G7W	R	1	COMBINATION OF DIGITAL CARRIERS
69)	3700.0000 - 4200.0000	H,V	43K8G7W	R	1	COMBINATION OF DIGITAL CARRIERS



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70) 3700.0000 - 4200.0000	H,V	36M0G7F	R	1	DIGITAL VIDEO
71) 3700.0000 - 4200.0000	H,V	43K8G7F	R	1	DIGITAL VIDEO
72) 3700.0000 - 4200.0000	H,V	36M0G7E	R	1	DIGITAL TELEPHONY
73) 3700.0000 - 4200.0000	H,V	43K8G7E	R	1	DIGITAL TELEPHONY
74) 3700.0000 - 4200.0000	H,V	36M0G7D	R	1	DIGITAL DATA
75) 3700.0000 - 4200.0000	H,V	43K8G7D	R	1	DIGITAL DATA
76) 3700.0000 - 4200.0000	H,V	36M0G3W	R	1	COMBINATION OF DIGITAL CARRIERS
77) 3700.0000 - 4200.0000	H,V	43K8G3W	R	1	COMBINATION OF DIGITAL CARRIERS
78) 3700.0000 - 4200.0000	H,V	36M0G3F	R	1	DIGITAL VIDEO
79) 3700.0000 - 4200.0000	H,V	43K8G3F	R	1	DIGITAL VIDEO
80) 3700.0000 - 4200.0000	H,V	36M0G3E	R	1	DIGITAL TELEPHONY
81) 3700.0000 - 4200.0000	H,V	43K8G3E	R	1	DIGITAL TELEPHONY
82) 3700.0000 - 4200.0000	H,V	36M0G3D	R	1	DIGITAL CARRIERS
83) 3700.0000 - 4200.0000	H,V	43K8G3D	R	1	DIGITAL DATA
84) 3700.0000 - 4200.0000	H,V	36M0G2W	R	1	COMBINATION OF DIGITAL CARRIERS
85) 3700.0000 - 4200.0000	H,V	43K8G2W	R	1	COMBINATION OF DIGITAL CARRIERS



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86)	3700.0000 - 4200.0000	H,V	36M0G2F	R	1	DIGITAL VIDEO
87)	3700.0000 - 4200.0000	H,V	43K8G2F	R	1	DIGITAL VIDEO
88)	3700.0000 - 4200.0000	H,V	36M0G2E	R	1	DIGITAL TELEPHONY
89)	3700.0000 - 4200.0000	H,V	43K8G2E	R	1	DIGITAL TELEPHONY
90)	3700.0000 - 4200.0000	H,V	36M0G2D	R	1	DIGITAL DATA
91)	3700.0000 - 4200.0000	H,V	43K8G2D	R	1	DIGITAL DATA
92)	3700.0000 - 4200.0000	H,V	36M0G1W	R	1	COMBINATION OF DIGITAL CARRIERS
93)	3700.0000 - 4200.0000	H,V	43K8G1W	R	1	COMBINATION OF DIGITAL CARRIERS
94)	3700.0000 - 4200.0000	H,V	36M0G1F	R	1	DIGITAL VIDEO
95)	3700.0000 - 4200.0000	H,V	43K8G1F	R	1	DIGITAL VIDEO
96)	3700.0000 - 4200.0000	H,V	36M0G1E	R	1	DIGITAL TELEPHONY
97)	3700.0000 - 4200.0000	H,V	43K8G1E	R	1	DIGITAL TELEPHONY
98)	3700.0000 - 4200.0000	H,V	36M0G1D	R	1	DIGITAL DATA
99)	3700.0000 - 4200.0000	H,V	43K8G1D	R	1	DIGITAL DATA

C) Frequency Coordination

Page 7#	Frequency Limits (MHz)	Satellite Arc (Deg. Long.)		Elevation (Degrees)		Azimuth (Degrees)		Max EIRP Density toward Horizon (dBW/4kHz)	Associated Antenna(s)
		East Limit	West Limit	East Limit	West Limit	East Limit	West Limit		



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1)	5925.0000 - 6425.0000	60.0W - 145.0W	33.9 - 15.3	141.9 - 246.7	9.3	1
2)	3700.0000 - 4200.0000	60.0W - 145.0W	33.9 - 15.3	141.9 - 246.7		1

D) Point of Communications

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

- 1) 1 to All authorized U.S. Domestic (ALSAT) Satellites.

E) Antenna Facilities

Site/Elevation: 179.8 (Meters) AMSL

Site ID	Antenna ID	Units	Diameter (meters)	Manufacture	Model number	Max Antenna Height (Meters)	Special Provisions (Refer to Section H)
1	1	1	10	SCIENTIFIC ATLANTA	8113A	11 AGL/ 190.8 AMSL	

Max Gains(s): 51.0 dBi @ 4.0000 GHz 54.0 dBi @ 6.0000 GHz
Maximum total input power at antenna flange (Watts) = 500.00
Maximum aggregate output EIRP for all carriers (dBW) 81.00

F) Remote Control

1 **Callsign:** E5401

H) Special and General Provisions

A) This RADIO STATION AUTHORIZATION is granted subject to the following special

- 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.
- 2010 This authorization is issued pursuant to the Commission's Second Report and Order adopted June 16, 1972 (35 FCC 2d 844) and Memorandum, Opinion and Order adopted December 21, 1972 (38 FCC 2d 665) in Docket No. 16495 and is subject to the policies adopted in that proceeding.
- 2454 All satellite uplink transmissions carrying broadband video information shall comply with the Automatic Transmitter Identification System (ATIS) requirements of Section 25.281 of the Rules, as modified by FCC Report No. DS-1066, released on April 3, 1991.



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H) Special and General Provisions

- 2510 Waiver of Section 25.203 (e) of the Commission's Rules and Regulations is granted for the beam intersections listed in the application(s) for this facility.
- 2810 The grantee shall maintain on file with the Commission's current list or plan of the precise frequencies in actual use at this station, specifying for each such frequency: the r.f. center frequency, polarization, emission designator, EIRP (dBW), EIRP density (dBW/4kHz), and receiving earth station(s). 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 days of any changes in frequency usage at this station. Temporary usage of frequencies for periods of less than seven days need not be notified to the Commission if accurate station records are maintained of the times and particulars of such temporary frequency usage.
- 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.
- 2938 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 the facility as authorized has been completed, that each antenna facility has been tested and is within 2 dB of the pattern specified in Section 25.209 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.
- 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).
- 5208 The licensee shall take extraordinary measures to ensure that the antenna does not create a potential for harmful non-ionizing radiation to persons who may be within the immediate vicinity since this earth station exceeds the radiation hazard level of 5 mW/cm². This shall include but not be limited to roping off an area or establishing a physical barrier within a radius of at least 20 feet surrounding the antenna or the trailer on which it is mounted. During actual transmitting, warning signs shall be posted informing all persons to keep outside of the roped off area. The bottom of the satellite dish shall not be less than 6 feet above ground level.
- 5216 All operations shall be on a non-common carrier basis.



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H) Special and General Provisions

B) This RADIO STATION AUTHORIZATION is granted subject to the

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 construction permit for 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 regulates 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.