Dutch Authority for Digital Infrastructure
Ministry of Economic Affairs and Climate Policy

Application for / change to license frequency space

Satellite Earth Station

From
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1 Application or change

> *Are you applying for a new license or do you want to change the details of an existing license?*

1.1 Apply for license ☐

> *Answer fully all questions applicable to you, sign the form*

1.2 Change details ☐ change

> *Enter your name, client number, file number and required change and then sign the form.*

☐ revocation of license

> *Enter your client number, file number, the name of your organization/company and the contact person and then sign the form.*

1.3 Client number _____ > *See your license for these numbers.*

1.4 File number _____ > *See your license for these numbers.*

2 General details of applicant (organization/company)

2.1 Name _____

2.2 Business address _____

2.3 Postcode + City/Town _____

2.4 Country _____

2.5 Correspondence address _____

2.6 P.O. Box _____

2.7 Postcode + City/Town _____

2.8 Country _____

2.9 Telephone

2.10 Faxnumber

2.11 E-mail

2.12 Legal form of organization / company

- ☐ public limited company
- ☐ registered partnership
- ☐ private limited company
- ☐ one-man business
- ☐ cooperative association
- ☐ educational institution
- ☐ foundation
- ☐ limited partnership company
- ☐ civil law partnership
- ☐ association
- ☐ mutual society
- ☐ government
- ☐ other, namely

2.13 If your are registered with the Chamber of Commerce what is your registration number?

Registration No.

3 Earth Station (ES) site details

3.1 Earth station name (maximum 20 characters)

3.2 Address

3.3 Postcode / Town

3.4 Ground height above mean sea level

meters

3.5 Latitude/Longitude (according WGS 84)

° ' " N / ° ' " E

3.6 Operation start date

4 Antenna details

4.1 Antenna diameter

meters

4.2 Height of centre of antenna above ground level

meters

4.3 Elevation angle

4.4 Operating azimuthal angle

4.5 Thermal noise temperature of receiving system

Kelvin

	transmit	receive
4.6 Polarization		
4.7 If linear, provide angle		
4.8 Antenna gain	dBi	dBi
4.9 Antenna beam width - HPBW		

4.10 Antenna radiation pattern

> *tick one box for receiving and one for transmitting*

	transmit	receive
27-25*Log(Phi)	☐	☐
29-25*Log(Phi)	☐	☐
32-25*Log(Phi)	☐	☐
35-25*Log(Phi)	☐	☐
REC-465	☐	☐
REC-509	☐	☐
REC-580	☐	☐
REC-694	☐	☐
REC-1091	☐	☐
REC-1213	☐	☐

	REC-1295	☐	☐
> *Please provide antenna radiation pattern diagram*	REC-1295	☐	☐

> *tick as appropriate for transmitting and receiving*

4.11 Class of station		ES transmitting	ES receiving
	Space earth station in the amateur-satellite service (TA)	☐	☐
	Aeronautical earth station [TB]	☐	☐
	Earth station in the fixed-satellite service [TC]	☐	☐
	Space telecommand earth station [TD]	☐	☐
	Fixed earth station in the radiodetermination-satellite service [TF]	☐	☐
	Ship earth station [TG]	☐	☐
	Earth station in the space research service [TH]	☐	☐
	Coast earth station [TI]	☐	☐
	Aircraft earth station [TJ]	☐	☐
	Space tracking earth station [TK]	☐	☐
	Mobile earth station in the radiodetermination-satellite service [TL]	☐	☐
	Earth station in the meteorological-satellite service [TM]	☐	☐
	Fixed earth station in the radionavigation-satellite service [TN]	☐	☐
	Mobile ES in the aeronautical radionavigation-satellite service [TQ]	☐	☐
	Mobile ES in the maritime radionavigation-satellite service [TQ]	☐	☐
	Space telemetering earth station [TR]	☐	☐
	Earth station in the space operation service [TT]	☐	☐
	Land mobile earth station [TU]	☐	☐
	Earth station in the earth exploration-satellite service [TW]	☐	☐
	Fixed earth station in the maritime radionavigation-satellite service [TX]	☐	☐
	Base earth station [TY]	☐	☐
	Fixed ES in the aeronautical radionavigation-satellite service [TZ]	☐	☐
	Mobile earth station [UA]	☐	☐
	ES in the broadcasting-satellite service (sound broadcasting) [UB]	☐	☐
	Space telecommand mobile earth station [UD]	☐	☐
	Mobile earth station in the space research service [UH]	☐	☐
	Space tracking mobile earth station [UK]	☐	☐
	Mobile earth station in the meteorological-satellite service [UM]	☐	☐
	Mobile earth station in the radionavigation-satellite service [UN]	☐	☐
	Space telemetering mobile earth station [UR]	☐	☐
	Mobile earth station in the space operation service [UT]	☐	☐
	Earth station in the broadcasting-satellite service (television) [UV]	☐	☐
	Mobile earth station in the earth exploration-satellite service [UW]	☐	☐
	Land earth station [VA]	☐	☐

> *tick as appropriate for transmitting and receiving*

4.12 Nature of service		ES transmitting	ES receiving
	Station open to official correspondence exclusively [CO]	☐	☐
	Station open to public correspondence [CP]	☐	☐
	Station open to limited public correspondence [CR]	☐	☐
	Station open exclusively to correspondence of a private agency [CV]	☐	☐

	Land station established solely for the safety of life [FS]	☐	☐
	ES open exclusively to operational traffic of the service concerned [OT]	☐	☐

5 Satellite

5.1	Satellite name (as registered with the ITU (maximum 20 characters)		
5.2	Satellite orbital location		° E/W
		transmit beam	receive beam
5.3	Satellite beam details	Satellite transponder beam designation (as registered with the ITU)	
		Accessible transponder frequency bandwidth	kHz kHz

6 Earth station transmission details - Uplink

> *For information see ' Guide to Class of Emissions'*

> *Details Uplink 1*

6.1	Designation of emission		
6.2	Assigned frequency		GHz
6.3	Maximum peak power (Supplied to the input of the antenna)		+/- dBW
6.4	Maximum power density		+/- dBW/Hz
6.5	Minimum peak power (Supplied to the input of the antenna)		+/- dBW
6.6	Minimum power density		+/- dBW/Hz

> *Details Uplink 2*

6.7	Designation of emission		
6.8	Assigned frequency		GHz
6.9	Maximum peak power (Supplied to the input of the antenna)		+/- dBW
6.10	Maximum power density		+/- dBW/Hz
6.11	Minimum peak power (Supplied to the input of the antenna)		+/- dBW
6.12	Minimum power density		+/- dBW/Hz

> *Details Uplink 3*

6.13	Designation of emission		
6.14	Assigned frequency		GHz
6.15	Maximum peak power (Supplied to the input of the antenna)		+/- dBW
6.16	Maximum power density		+/- dBW/Hz
6.17	Minimum peak power (Supplied to the input of the antenna)		+/- dBW
6.18	Minimum power density		+/- dBW/Hz

> *Details Uplink 4*

6.19	Designation of emission		
6.20	Assigned frequency		GHz
6.21	Maximum peak power (Supplied to the input of the antenna)		+/- dBW
6.22	Maximum power density		+/- dBW/Hz
6.23	Minimum peak power (Supplied to the input of the antenna)		+/- dBW
6.24	Minimum power density		+/- dBW/Hz

> *Details Uplink 5*

6.25 Designation of emission

6.26 Assigned frequency GHz

6.27 Maximum peak power (Supplied to the input of the antenna) +/- dBW

6.28 Maximum power density +/- dBW/Hz

6.29 Minimum peak power (Supplied to the input of the antenna) +/- dBW

6.30 Minimum power density +/- dBW/Hz

7 Earth station receiving details - Downlink

> *For information see ' Guide to Class of Emissions'*

> *Details Downlink 1*

7.1 Designation of emission

7.2 Assigned frequency GHz

7.3 Clear sky carrier/noise objective dB

7.4 Notes

> *Details Downlink 2*

7.5 Designation of emission

7.6 Assigned frequency GHz

7.7 Clear sky carrier/noise objective dB

7.8 Notes

> *Details Downlink 3*

7.9 Designation of emission

7.10 Assigned frequency GHz

7.11 Clear sky carrier/noise objective dB

7.12 Notes

> *Details Downlink 4*

7.13 Designation of emission

7.14 Assigned frequency GHz

7.15 Clear sky carrier/noise objective dB

7.16 Notes

> *Details Downlink 5*

7.17 Designation of emission

7.18 Assigned frequency GHz

7.19 Clear sky carrier/noise objective dB

7.20 Notes

8 License period

8.1 For which period should the license be granted?

☐ a standard 5 year period

☐ a period less than 5 year from until

9 Invoice

> *For the (annual) compensation (fee) for the use of frequencies you will receive an invoice. For internal use you can fill in an internal order number.*

9.1 Internal order number

> *If the invoicing address differs from residential or correspondence address, please fill in.*

9.2 Invoicing address

9.3 Person of contact /department

9.4 Postcode/town

9.5 Country

10 Direct debit authorization

> *You want pay by automatic debiting, then you can fill in declaration mentioned below and sign.*
> *By signing this form you authorize the Dutch Authority for Digital Infrastructure to direct-debit the annual fee from your bank account until further notice. You may lodge an objection with your bank against a debited amount within 56 days of the debit transaction.*

10.1 Only Dutch bank account number

10.2 Signature

11 Signature

> *The undersigned hereby declares that he/she has truthfully filled in all details (including those on the Application for/change to license for the market sector, if applicable)*

11.1 Name

11.2 Place and date

11.3 Signature

12 Space for any particulars or notes

12.1 particulars or notes

13 General information

Tariffs
For the use of frequencies is compensation due. The compensation that the Dutch Authority for Digital Infrastructure charges for the performance of its tasks is laid down in the "Regeling vergoedingen Dutch Authority for Digital Infrastructure". For information over tariffs, see www.rdi.nl.

Antenna Register
Fixed antenna-installations sending with a power higher than 10 dBW e.r.p. are registered in the Antenna Register. Also registered in the Antenna Register are fixed antenna-installations belonging to a network of which more than half of the antennas individually has a higher transmit power than 10 dBW e.r.p.

Representation by third parties
If the handling of your interests is done via another legal entity, then you should provide an authorization in a separate enclosure by the application/modification of the license. Specify for which aspects the legal entity is authorized. The license holder remains responsible for the (financial) settlement of the obligations connected to the license.

Transfer of license
It is possible in principle to completely or partially transfer the license for use of frequencies (article 3.8 of the Telecommunications Law). The transfer of the license has the advantage that the future license holder can have the same rights as the current license holder. The license transfer can be requested with the "formulier intrekken of overdragen van een vergunning".

Omgevingsvergunning
An environmental permit is required for antenna-installations higher than 5 meters. This so-called 'omgevingsvergunning' is required based on the Wet Algemene Bepalingen Omgevingsrecht. The permit can be obtained in the municipality in which the antenna-installation is placed.

14 Guide to class of emissions for the issue of Satellite Earth Station Licence in case HUB of VSAT

14.1 **Introduction**
Emissions are internationally designated by a nine-character emission code. The designation of emission is made up of three parts, Bandwidth (four characters), Classification (three characters) and Description (two characters). This makes the nine-character emission code.
Example: **8M00G7FHT** is:
8M00 8 MHz bandwidth
G Phase modulated
7 Two or more channels containing quantized or digital information
F Television
H Sound of broadcasting quality
T Time-division multiplex

14.2 **Necessary bandwidth**
The necessary bandwidth is expressed by three numerals and one letter. The letter occupies the position of the decimal point and represents the unit of bandwidth, e.g. Hz, kHz, MHz.
The necessary bandwidth codes use the following letters:
from 0.001 to 999 Hz = letter **H**
from 1.00 to 999 kHz = letter **K**
from 1.00 to 999 MHz = letter **M**
from 1.00 to 999 GHz = letter **G**
Note: The first character shall be neither zero nor K, M or G.

Examples:

1 Hz	= 1H00	180.5 kHz	= 181K
25.33 Hz	= 25H3	180.7 kHz	= 181K
400 Hz	= 400H	1.25 MHz	= 1M25
2.4 kHz	= 2K40	2 MHz	= 2M00
6 kHz	= 6K00	10 MHz	= 10M0
12.5 kHz	= 12K5	202 MHz	= 202M
180.4 kHz	= 180K	5.65 GHz	= 5G65

Note: Carrier only is expressed as 1H00

14.3 **Classification of emission**
Emissions shall be classified and symbolized according to their basis characteristics and are expressed by three characters. The basic characteristics are:
Fifth character: type of modulation of the main carrier;
Sixth character: nature of signal(s) modulating the main carrier;
Seventh character: type of information to be transmitted.

Fifth character
The following characters identify the type of modulation of the main carrier:
N Emission of unmodulated carrier

Types of emissions in which the main carrier is amplitude modulated (including cases where sub carriers are angle modulated):
A Double sideband
H Single sideband, full carrier
R Single sideband, reduced or variable level carrier
J Single sideband, suppressed carrier
B Independent sidebands
C Vestigial sideband

Types of emission in which the main carrier is angle modulated:
F Frequency modulation
G Phase modulation
D Emission in which the main carrier is amplitude and angle modulated either simultaneously or in a pre-established sequence

Types of emission of a sequence of pulses:
P sequence of unmodulated pulses
K modulated in amplitude
L modulated in width/duration
M modulated in position/phase
Q in which the carrier is angle modulated during the period of the pulse
V which is a combination of the foregoing or is produced by other means
W Cases not covered above, in which an emission consists of the main carrier modulated, either simultaneously or in a pre-established sequence, in a combination of two or more of the following modes: amplitude, angle, pulse
X Cases not otherwise covered
Note: Emissions where the main carrier is directly modulated by a signal which has been coded into quantized form (e.g. pulse code modulation) should be designated under emission type amplitude or angle modulated carrier.

Sixth character
The following characters identify the nature of signal(s) modulating the main carrier:
0 No modulating signal
1 A single channel containing quantized or digital information without the use of a modulating sub-carrier. This excludes time-division multiplex
2 A single channel containing quantized or digital information with the use of a modulating sub-carrier. This excludes time-division multiplex
3 A single channel containing analogue information
7 Two or more channels containing quantized or digital information
8 Two or more channels containing analogue information
9 Composite system with one or more channels containing analogue quantized or digital information, together with one or more channels containing analogue information
X Cases not otherwise covered

Seventh character
The following characters identify the type of information to be transmitted:
N No information transmitted
A Telegraphy for aural reception
B Telegraphy for automatic reception
C Facsimile
D Data transmission, telemetry, telecommand
E Telephony (including sound broadcasting)
F Television (video)
W Combination of the above
X Cases not otherwise covered
Note: The term 'Information' does not represent a signal of a constant unvarying nature, as provided by standard frequency emissions, continuous wave and pulse radars, etc.

14.4 **Description of emission (optional)**
Two optional characteristics should be added for a more complete description of an emission. These are:
Eighth character: details of signal(s);
Ninth character: nature of multiplexing.

Note: Where the eighth or ninth characters are not used please indicate on the form by a dash (-) where each character would otherwise appear.

Eighth character
The following characters identify the details of signal(s):
A Two-condition code with elements of differing numbers and/or durations
B Two-condition code without elements of the same number and duration with error-correction
C Two-condition code with elements of the same number and duration with error-correction
D Four-condition code in which each condition represents a signal element (of one or more bits)
E Multi-condition code in which each condition represents a signal element (of one or more bits)
F Multi-condition code in which each condition or combination of conditions represents a character
G Sound of broadcasting quality (monophonic)
H Sound of broadcasting quality (stereophonic or quadrophonic)
J Sound of commercial quality (excluding categories given in K and L below)
K Sound of commercial quality with the use of frequency inversion or band-splitting
L Sound of commercial quality with separate frequency modulated signals to control the level of demodulated signal
M Monochrome television (video only)
N Colour television (video only)
W Combination of the above
X Cases not otherwise covered

2 Ninth character
The following characters identify the nature of multiplexing:
N No multiplexing employed
C Code division multiplex (this includes bandwidth expansion techniques)
F Frequency-division multiplex
T Time-division multiplex
W Combination of frequency-division multiplex and time-division multiplex
X Other types of multiplexing

14.5 Definitions in this note are based on the Radio Regulations 2004 Appendix 1 'Classification of emissions and necessary bandwidths', published by the International Telecommunications Union (ITU).