

OFW 338 Application for a Satellite Service Network Operator License for Earth Stations on Trains – EST(s) 14-14.25GHz March 2006

1. This EST Licence application form can be used to:
 - Apply for a new licence;
 - Amend an existing licence;
 - Cancel an existing station or licence;
 - Request site clearance.
2. An application can be made for a licence for an EST to be deployed within United Kingdom territory including the Isle of Man and the Channel Islands.
3. When making a request for a new application, or a variation to an existing licence, you are advised not to commit to the purchase of the equipment until you have been issued your licence.
4. If you need help with general licensing issues, please contact:

Ofcom
Space Services Unit
Riverside House
2a Southwark Bridge House
London SE1 9HA
Telephone 020 7981 3995 / 3040
Facsimile 020 7981 3060
www.ofcom.org.uk
5. It is a requirement of the Wireless Telegraphy Act 2006 that no radio equipment shall be installed or used in the UK, except under the authority of a licence granted, unless it is licence exempt. It is a condition of an EST Network licence that the apparatus shall comply with the appropriate essential requirements in Article 3 of the R&TTE Directive and other relevant provisions of that Directive. The following standard and subsequent updates is considered a harmonised standard for the purposes of Article 5 of the R&TTE Directive:

EN 302 186

Applicants are advised to confirm that the requirement is met by the proposed equipment or an equivalent standard.
6. The licence charges for the EST product will be calculated using the algorithm as detailed in the published Wireless Telegraphy (Licence Charges) Regulations 2005, schedule 2 and 8) - <http://www.opsi.gov.uk/si/si2005/20051378.htm>
7. Fill in the form by entering information in each field; use Tab and Shift+Tab or the arrow keys to move between fields. Alternatively, you may print this form and complete in dark ink. Place an X in the appropriate box when questions provide multiple answers.
8. Any missing or incorrect application information may delay the application and may require us to return the form to you.

Section A Purpose of application

A.1 Please put X in the appropriate box

New Application

Variation

Cancellation

Site Clearance

Section B Contact details

B.1 Do you already hold an EST Network Operator licence?

Yes

No

B.1.1 If yes, please enter your Ofcom Customer Reference Number

B.2 To whom is the licence to be issued?

Individual or sole trader

Limited company

Incorporated association

Partnership

Public limited company

Registered charity

Other legal entity: _____

Title

Forename

Surname

Company Name

Trading Name

Address

Town

Postcode

Telephone

Extension/DDI No:

Facsimile

Email

B.2.1 Company Registration Number

B.2.2 Nature of business

B.3 Should the licensee, at B.2, also be contacted for account matters?

Yes

No

B.3.1 If no, please provide the account contact details

Title

Forename

Surname

*Company
Name*

Address

Town

Postcode

Telephone

Extension/DDI No:

Facsimile

Email

Please note that all invoices and payment requests will be sent to the stated account contact address. If the contact should change, you should notify Ofcom immediately in writing

B.4 Who should be contacted for technical matters?

Contact as B2

Contact as B3

B.4.1 If neither, please provide technical contact details

Title

Forename

Surname

*Company
Name*

Address

Town

Postcode

Telephone

Extension/DDI No:

Facsimile

Email

Section C Administrative Details

- C.1 For a new application, please enter your own unique reference if you wish _____
- C.2 Please enter the date from which you require the new EST Network licence to become effective _____ (dd/mm/yyyy)
- C.3 Please enter the end date for this new licence if known _____ (dd/mm/yyyy)
- C.4 If this is a variation or cancellation, please quote your existing Ofcom EST Network licence number
- C.4.1 Please enter the date from which you require the specified amendment or cancellation to become effective _____ (dd/mm/yyyy)
-

Section D Network Details

- D.1 Please enter the Name your organisation uses for the EST Satellite Network / Link _____
- D.2 Please enter the Associated Space Station (s) – ITU filing designation _____
- D.3 Please enter the Associated Space Station (s) – Commercial Name _____
- D.4 Please enter the satellite operator name _____
- D.5 Please provide the nominal orbital longitude of the Space Station (s)
- Longitude*
- East/West* ___ ° _ ___ ' _ "
- Longitude*
- East/West* ___ ° _ ___ ' _ "
- D.6 Please give a description of the Satellite beam service area _____
- D.7 Please confirm the maximum aggregated accessible transmit bandwidth available to each terminal _____ MHz
-

Section E Network Control Facility (NCF)

E.1 Please give the address for the Network Control Facility

Site name

Address

Town

*County /
Country*

Postcode

E.2 If the NCF is in the UK, what is the Ofcom Permanent Earth Station licence number?

Licence number _____

E.3 If the NCF is NOT in the UK, which country has authorised the Permanent Earth Station ?

Country _____

E.4 Please state the 24 hour contact telephone number in the event of an emergency, including full country code

E.5 NCF Contact name _____

E.6 Job title of contact name _____

E.7 NCF contact email address _____

E.8 NCF telephone number

E.9 NCF fax number

Section F Local Earth Station (LES) 1

F.1 Please give the address for the Local Earth Station 1 (LES), if different to the Network Control Facility

Site name

Address

Town

*County /
Country*

Postcode

F.2 If the LES is in the UK, what is the Ofcom Permanent Earth Station licence number?

Licence number _____

F.3 If the NCF is NOT in the UK, which country has authorised the Permanent Earth Station ?

Country _____

F.4 Please state the 24 hour contact telephone number in the event of an emergency, including full country code

F.5 LES Contact name _____

F.6 Job title of contact name _____

F.7 LES contact email address _____

F.8 LES telephone number

F.9 LES fax number

Section G Local Earth Station (LES) 2

- G.1** Please give the address for the Local Earth Station 2 (LES), if different to the Network Control Facility

Site name

Address

Town

*County /
Country*

Postcode

- G.2** If the LES is in the UK, what is the Ofcom Permanent Earth Station licence number?

Licence number _____

- G.3** If the NCF is NOT in the UK, which country has authorised the Permanent Earth Station ?

Country _____

- G.4** Please state the 24 hour contact telephone number in the event of an emergency, including full country code

- G.5** LES Contact name _____

- G.6** Job title of contact name _____

- G.7** LES contact email address _____

- G.8** LES telephone number

- G.9** LES fax number

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- G.10** Is there any additional information on operational parameters you wish to comment upon?
-

Section H EST Antenna Equipment and Spectrum Pricing Details*

- H.1 What is the initial estimated number of EST installations to be operated under the licence? _____
- H.2 Terminal Type Identifier – allocate yourself a unique reference to identify this type of terminal _____
- H.3 Please enter the Manufacturer of the terminal _____
- H.4 Please enter the Model _____
- H.5 Type of antenna – Cassegrain / Gregorian – Offset fed reflector etc _____
- H.6 Please enter the diameter / size of the antenna meters
- H.7 Please enter the Maximum E.I.R.P per carrier to one decimal place dBW
Not to exceed 20dBW/40kHz EIRP from any individual EST, each train may transmit a maximum 50dBW EIRP
- H.8 Please enter the Minimum Operational Elevation angle used when in United Kingdom territory degrees
- H.9 Please enter the Polarization used _____
- H.10 Please enter the Stabilised pointing accuracy to two decimal places +/- degrees
- H.11 Please enter the Pointing update time degrees/second
- H.12 Please enter the Charging Power to one decimal place Watts
(This shall be the RF power supplied to the flange of the antenna in Watts.)

WAVEFORM DETAILS

- H.14 Please enter the number(s) of carrier(s) per EST _____
- H.15 Please enter the Maximum occupied bandwidth(s) per carrier MHz
As defined in Harmonised Standard EN 302 186
- H.16 Please enter the carrier(s) centre frequency(ies) MHz
- H.17 Please enter the Emission code applicable _____
Refer to Ofcom OfW84 – [Guide to class of emission codes](#)
- H.18 Please enter the Modulation method employed _____
- H.19 Please enter the multiple access scheme used if applicable _____
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LINK POWER SPECTRAL DENSITY

- H.20 Please enter the Off-axis E.I.R.P emission density within the operating frequency band for co-polarised components at 2.5 degrees dBW/40KHz
- H.21 Please enter the Off-axis emission density within the operating frequency band for cross-polarised components at 2.5 degrees dBW/40KHz
-

CHARACTERISTICS OF THE TRANSMITTING ANTENNA

- H.22 Please enter the Maximum Isotropic gain of the antenna to one decimal place dBi
- H.23 Please enter the 3dB Transmit Beam Width to one decimal place degrees
- H.24 Please enter the Radiation pattern (give reference pattern or provide attachment) _____
- H.25 If attaching an antenna radiation pattern please enter figure number _____
-

*** PLEASE COMPLETE AND ATTACH A SEPARATE SECTION H FOR EACH TERMINAL TYPE TO BE LICENSED**

Section I Train(s) fitted with EST station(s)

Please enter details of which train have EST installations that you control?

Customer – Train operator name	Antenna Terminal Type

Section J Forward Channel Details LES to EST

- J.1 Please enter the Uplink centre frequency MHz
- J.2 Please enter the Uplink polarization _____
- J.3 Please enter the Downlink centre frequency MHz
- J.4 Please enter the Downlink polarization _____
- J.5 If a dual channel transmission is in operation and the characteristics differ please complete a second Section K with a note of clarification.

Section K Return Channel Details EST to LES

- K.1 Please enter the transponder(s) Uplink centre frequency MHz
- K.2 Please enter the Uplink polarization _____
- K.3 Please enter the transponder(s) Downlink centre frequency MHz
- K.4 Please enter the Downlink polarization _____
- K.5 If a dual channel transmission is in operation and the characteristics differ please complete a second Section L with a note of clarification.

Section L EST Stations(s) requiring further clearance

L.1 This section should only be completed if an EST(s) is intended for use within a specified exclusion area(s);

A separate Section I should be completed for each area

Alternatively, complete Ofcom form OFW 192, Site Clearance application, available on the Ofcom website

Individual co-ordination and clearance is required when any of the following conditions are true:

EST(s) routes operate within airfield boundaries within UK territory

Or are intending to operate within exclusion zones as declared by Ofcom

This process can take up to 28 days from submission to the clearance panel

L.2 Please enter your Ofcom EST network licence number

L.3 Please enter the EST Satellite Network Name _____

L.4 On which date will EST station operations start? _____

L.5 On which date will EST station operations end (if known)? _____

L.6 Please enter where the EST operates within airfield/airport boundary exclusion area (if applicable) _____

L.7 Please supply a diagram of the area to clarify the exclusion area of operation if required – Diagram Reference _____

L.8 Please enter the geographical co-ordinates using WGS84 as the geodetic reference as used by the GPS system to further clarify the exclusion area the EST proposes to operate

Latitude/Longitude

N/S ___ ° - ___ ' ___ " E/W ___ ° - ___ ' ___ "

Latitude/Longitude

N/S ___ ° - ___ ' ___ " E/W ___ ° - ___ ' ___ "

Latitude/Longitude

N/S ___ ° - ___ ' ___ " E/W ___ ° - ___ ' ___ "

Latitude/Longitude

N/S ___ ° - ___ ' ___ " E/W ___ ° - ___ ' ___ "

L.9 Please Describe the intended route for EST operation. Please supply a diagram to clarify this – Diagram Reference _____

L.10 Please enter the Associated Space Station –
ITU filing designation the EST will be establishing communications with-

L.11 Please enter the Nominal Orbital Longitude for the associated Space Station

Longitude

E/W ____° - ____' ____"

L.12 Please enter the absolute minimum Elevation angle and the variation of minimum Elevation Angles to the associated Space Station for the intended operating routes degrees

L.13 Please enter the minimum and maximum Azimuth Angle for the intended operating routes degrees

L.14 Please enter the antenna terminal type used _____

EST HEIGHT DETAILS

L.15 Please enter the height (rounded down to the nearest whole metre) of the highest point of the transmitting antenna?

EST 1

as measured in metres above ground level

If a second EST installation exists on the same train

EST 2

as measured in metres above ground level

L.16 Please enter the Maximum E.I.R.P of the EST (1) dBW

If a second EST (2) installation exists on the same train and will be operational please enter the maximum E.I.R.P dBW

L.17 Any other relevant details?

Section M Ofcom Contact Details

For enquires on EST Licensing please contact:

**Ofcom
Spectrum Policy Group
SR-2 Space
Riverside House
2a Southwark Bridge Road
LONDON
SE1 9HA**

**Telephone 020 7981 3995 / 3117
Fax 020 7981 3060
Email satellite.licences@ofcom.org.uk
www.ofcom.org.uk**

Section N Declaration

1. The information requested on this form will be processed for the purpose of approving this application and issuing a Satellite Train Earth Station(s) Network Operator Licence. Any information in the form will be passed to the appointed organisation dealing with frequency assignments.
2. The technical information given in this application meets all the applicable licence conditions and the R&TTE Directive.
3. You should note that:
 - information provided may be made available to other government departments;
 - information provided in answer to the questions on this application form may be passed to international bodies or other governments in accordance with commitments entered into by Her Majesty's Government; and
 - it is an offence to knowingly make a false statement in support of this application and may lead to the licence being refused or revoked.

Date of application

Full name in CAPITAL LETTERS

Position of applicant in organisation (if applicable)
(Partners are taken to be signing on behalf of all partners)

Signed for and on behalf of the applicant

If you have not received an acknowledgement of this application within 2 working weeks please contact the Space Services Unit.

Section O Checklist

O.1 Please put X in the appropriate box

Have you completed all sections of the form applicable to you?

Have you attached and listed any diagrams required?

Have you signed the declaration?

Have you kept a copy for reference?

Section P Where to return your application form

P.1 Please return your completed form and any attachments to:

Ofcom
Spectrum Policy Group
SR-2 Space
Riverside House
2a Southwark Bridge Road
LONDON
SE1 9HA

Telephone 020 7981 3995 / 3117

Preferably email to:

satellite.licences@ofcom.org.uk

Or Fax:

020 7981 3060

www.ofcom.org.uk