Wireless Telegraphy Act 2006

Satellite (Permanent Earth Station)

Sector/class/product	**<Product>**
Licence number	**<Lic_No>**
Licensee	**<Lic_Name>**
Licensee address	**<Address>**
Licence first issue date	**<Issue_Date>**
Licence version date	**<Date>**
Payment interval	**<Year>**

1. This Licence is issued by the Office of Communications ("Ofcom") on **<Date>** and replaces any previous authority granted in respect of the service subject to this Licence by Ofcom or by the Secretary of State.

2. This Licence authorises **<Lic_Name>** ("the Licensee") to establish, install and/or use radio transmitting and/or receiving stations and/or radio apparatus as described in the schedule(s) (hereinafter together called "the radio equipment") subject to the terms set out below and subject to the terms of the General Licence Conditions booklet (Version OfW597).

ISSUED BY OFCOM

Satellite (Permanent Earth Station) Licence

SCHEDULE 1 TO LICENCE NUMBER <Lic_No>

TERMS, PROVISIONS AND LIMITATIONS COVERED BY THIS LICENCE

This schedule forms part of Licence **<Lic_No>**, issued to **<Lic_Name>**, the Licensee on **<Issue_Date>**, and describes the terms and equipment specifications covered by this Licence.

1. The Licensee may establish and use:

1.1. A permanent sending and receiving earth station ("the Station") at the location specified in the attached schedule for the purpose of providing wireless telegraphy links between the station and geostationary satellite(s).

2. Limitations on use

2.1. The stations shall use only:

a) the classes of emission specified in the emission code column of the attached schedule;

b) the frequencies specified in the transmit frequency and receive frequency columns of the schedule;

c) a power not exceeding that specified in the antenna I/P power column of the schedule;

d) the antenna type specified in the antenna type column of the schedule;

e) a power density not exceeding that specified in the spectral power density column of the schedule;

f) the station shall be operated only from the location specified on the schedule.

3. Apparatus

3.1. The Licensee shall ensure that:

a) the apparatus comprised in the station(s) (“the apparatus”) is so designed constructed, maintained and operated, that it does not cause any undue interference to other users of the spectrum;

b) the apparatus complies with (and is maintained in accordance with) the relevant performance specification(s) published by the operator of the geostationary Satellite;

c) the earth station antenna shall not be employed for transmission at elevation of less than 3 degrees measured from the horizontal plane to the direction of maximum radiation as specified in Article 21.14 of the ITU Radio Regulations;

d) the earth stations operating with non-geostationary satellites shall ensure compliance with the equivalent power flux-density limitations specified in Article 22 of the ITU Radio Regulations;

e) the component of effective isotropic radiated power directed towards the horizon and the minimum elevation angle above the horizontal must comply with ITU Radio Regulations and not exceed those limits specified in Articles 21.8 - 21.15 of the ITU Radio Regulations;

f) in the band 13.75GHz - 14GHz, earth stations with an antenna diameter of less than 4.5 m operate in compliance with the pfd limits in ITU Radio Regulations 5.502, that the e.i.r.p. of any emission from an earth station in the fixed satellite service does not exceed 85 dBW and that the e.i.r.p. density of emissions in the band 13.77 - 13. 78 GHz complies with ITU Radio Regulations 5.503;

g) use of the band 29.1 - 29.5 GHz shall be in compliance with ITU Radio Regulations 5.535A;

h) in the bands 27.8185-28.4545 GHz and 28.8265-29.4625 GHz, the power flux density produced by the earth station does not exceed -108.5db(W/(m² . 1MHz) for more than 50% of the time produced at 6m above ground level at a distance of 6 kms from the earth station;

i) the apparatus used for transmission complies with the Radio Equipment Directive and all appropriate National Interface Requirements for Satellite Earth Stations in force within the UK; and

j) the Antenna Radiation Pattern Envelope meets the minimum performance specified by ITU Recommendation ITU-R S.465, or ITU-R S.580 for antennas installed after 1995.

3.2. Where appropriate, Ofcom may require that the Licensee provide additional screening at the installation as a condition of the licence.

4. National and international obligations

a) the earth station must undergo national coordination and site clearance for operation at the specified location;

b) the relevant satellite data shall have been submitted to ITU in accordance with established ITU procedures;

c) all transmissions in the fixed satellite service must be terminated prior to any change of location; unless operating under a specific exemption authorised by Ofcom;

d) the Licensee shall comply with any notice given by Ofcom under section 9A of the Wireless Telegraphy Act 2006 requiring the Licensee to cease or suspend the uplinking by means of the licensed apparatus of any service specified in such notice by such date as may be specified; and

e) the Licensee shall provide such information as Ofcom may request by notice in writing for the purpose of determining whether section 9A of the Wireless Telegraphy Act 2006 applies in relation to a service for which the Licensee provides uplink facilities using the licensed apparatus or for any purpose connected with the giving of a notice by Ofcom under section 9A of the Act.

f) some or all of the operations listed in Schedule 2 are subject to International Co-ordination in accordance with Article 9 of the Radio Regulations. While international coordination is being carried out by Ofcom, these operations are subject to the provisions of Article 4.4 of the Radio Regulations (non-interference, non protected basis with respect to other users of this spectrum). Where international coordination is not successful, the relevant operations will be removed from the licence;

5. Interpretation

5.1. In this and subsequent schedule(s):

a) “Earth Station” means a radio transmitter located on the surface of the earth and intended for communication with one satellite.

b) “Geostationary Satellite” means a satellite in geostationary orbit which remains approximately in a fixed position relative to a position on the surface of the earth.

c) “Uplink” and any cognate expression refers to a transmission in the Earth-to-space direction.

6. Notes

1. This Licence does not affect the requirement, where necessary, to obtain licences or authorisations under other Acts. Some satellite television or radio broadcasting services also require licences under the Broadcasting Act 1990, and some installations require Local Authority Planning Approval.

2. Advice can be sought from Ofcom using the contact details on page 1 of this Licence and the appropriate Local Authority planning department.

3. The Licensee must apply for a variation of the Licence from Ofcom before making any changes which may contravene the Licence.

4. Technical terms used in clause 2 shall have the meanings assigned to them in the ITU Radio Regulations.

SCHEDULE 2

Licence No	<Lic No>	**Licence version date**	<Date>	**Payment Interval**	<1 Year>

Licensing Centre Point	<LCP NGR>

Earth Station Deployment	**Earth Station Name**	**Earth Station NGR**
<ES Deploy No>	<ES Name>	<ES NGR>

			Transmit		**Receive**		
Antenna Centre Height AGL (m)	**Antenna Type**	**Dish Size (m)**	**Tx Gain (dBi)**	**Tx Beamwidth (deg)**	**Rx Gain (dBi)**	**Rx Beamwidth (deg)**	**System Noise temperature (K)**
<antenna height AGL>	<antenna type>	<dish size>	<tx gain>	<tx beamwidth>	<rx gain>	<rx beamwidth>	<Syst noise temp>

Satellite Name	**Orbit Long (deg East)**	**ES Azimuth (deg)**	**ES Elevation (deg)**
<sat name>	<orbit long>	<es azimuth>	<es elevation>

Transmit Frequency	**Receive Frequency**	**Associated Authorised Bandwidth (MHz)**	**Associated Emissions**
<tx-1>		<bandwidth>	<A>
<tx-2>		<bandwidth>	<B>
	<rx-1>	<bandwidth>	<C>
	<rx-2>	<bandwidth>	<D>

Emission reference code	Emission Type	Emission Code	Polarisation	Antenna I/P Power (dBW)	Spectral Power Density (dBW/MHz)
A	<em type>	<em code>	<pol>	<antenna IP power>	<spectral power dens>
B	<em type>	<em code>	<pol>	<antenna IP power>	<spectral power dens>
C	<em type>	<em code>	<pol>	<antenna IP power>	<spectral power dens>
D	<em type>	<em code>	<pol>	<antenna IP power>	<spectral power dens>