

Frequency Allocations for the Fixed Satellite Service in the United Kingdom

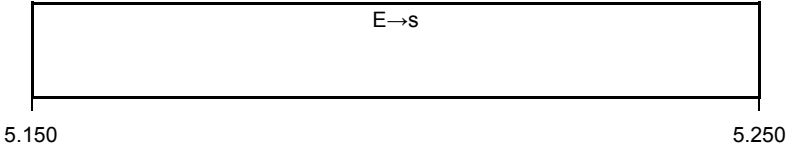
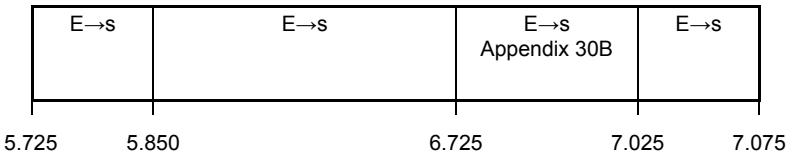

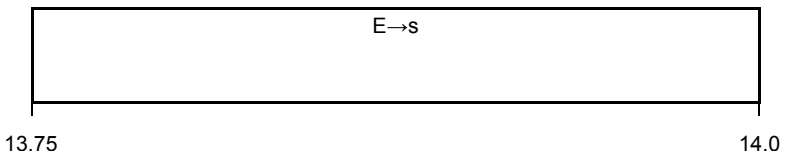
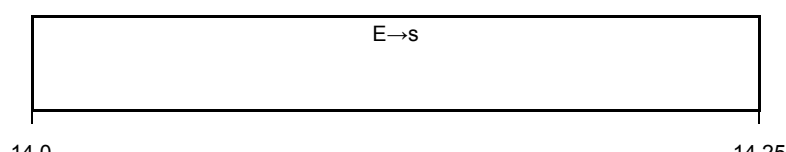
OfW 241

This document provides details of the frequency allocations for Satellite Links that can be licensed for transmission by Ofcom.

Currently, only the transmitter (earth-to-space) can be licensed, but in some bands, protection is provided to the receive (space-to-earth) spectrum for co-ordinated permanent earth stations. For completeness this spectrum is also shown.

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Transmit (Licensed) Bands

5 GHz	Applications	Other Information
 <p>5.150 5.250</p>	<p>This band may only be used for MSS NGSO feeder links.</p>	
6 GHz	Applications	Other Information
 <p>5.725 5.850 6.725 7.025 7.075</p>	<p>Uplink band mainly used for intercontinental television contribution (mainly digital), telephony and digital business links.</p>	<p>A variety of transponder bandwidth sizes from 36 MHz to 140 MHz.</p> <p>Requires co-ordination with fixed links in the band 5.850-7.075 GHz.</p>
12 GHz	Applications	Other Information
 <p>12.5 12.75 13.25</p>	<p>12.5 to 12.75 GHz: primarily used for downlinks. This band is mainly paired with 14.0-14.25 GHz for VSAT and business services.</p> <p>12.75-13.25 GHz: primarily used for uplinks to satellites offering commercial TV and interactive services.</p>	<p>As far as Ofcom is aware, there are no satellites filed with 12.5-12.75 as an uplink (E→s).</p> <p>The 12.75-13.25 GHz band is heavily used by fixed links. There is a requirement to coordinate and protect and as a general rule, use of the band within the M25 and other major conurbations is not feasible.</p>
14 GHz	Applications	Other Information
 <p>13.75 14.0</p>	<p>Currently available for Permanent Earth Stations (13.75-14 GHz) and Transportable earth stations (13.78-14 GHz).</p>	<p>Minimum antenna diameter of 1.2m applies.</p> <p>Use of this band by the FSS is subject to compliance with Radio Regulation footnotes 5.502 and 5.503.</p>
14 GHz	Applications	Other Information
 <p>14.0 14.25</p>	<p>Mainly used for low density carriers, including VSATs and SNGs.</p>	<p>This portion of the 14 GHz band is not shared with terrestrial fixed links.</p> <p>Paired with 12.5-12.75 GHz.</p>

14 GHz	Applications	Other Information
<p style="text-align: center;">E→s</p> <p>14.25 14.5</p>	Used only by PES and SNG.	This portion of the 14 GHz band is shared with terrestrial fixed links and its use is subject to national coordination.

17 GHz	Applications	Other Information
<p style="text-align: center;">E→s / s→E Appendix 30A</p> <p>17.3 17.7</p>	<p>17.3-17.7 GHz is limited for use by BSS feeder links, E→s.</p> <p>The band is available for HDFSS/VSAT services, s→E.</p>	<p>Shared with a few fixed links associated with cable TV systems, subject to national coordination.</p> <p>Paired with BSS downlink bands, 11.7-12.5 GHz.</p>

18 GHz	Applications	Other Information
<p style="text-align: center;">E→s / s→E Appendix 30A</p> <p style="text-align: center;">E→s / s→E</p> <p>17.7 18.1 18.4</p>	<p>17.7-18.4 GHz use as an uplink band is limited to use by BSS feeder links.</p> <p>s→E has limited use (Gateway stations) due to large number of fixed links.</p>	<p>17.7-18.4 GHz is shared with fixed links and is subject to national coordination.</p> <p>In addition, use of the band 18.1-18.4 GHz is not generally feasible within the M25 and some other major conurbations.</p> <p>Paired with BSS downlink bands, 11.7-12.5 GHz.</p>

28 GHz	Applications	Other Information
<p style="text-align: center;">E → s</p> <p style="text-align: center;">E → s</p> <p style="text-align: center;">E ↑ s</p> <p>27.5 27.8285 28.4445 28.8365 29.4525 29.5</p> <p style="text-align: center; font-size: 1.2em;">GHz</p>	<p>The bands available for FSS earth stations are: 27.5 to 27.8285 GHz, 28.4445 to 28.8365 GHz and 29.4525 to 29.5 GHz.</p>	<p>27.5 to 29.5 GHz uplinks when used by FSS Gateway earth stations are normally paired with 17.7 to 19.7 GHz on the downlink.</p> <p>Spectrum between 27.8285 to 28.4445 GHz and 28.8365 to 29.4525 GHz was awarded on a technology neutral basis, including use by the FSS, in February 2008. Details can be found at; http://spectruminfo.ofcom.org.uk/spectrumInfo/licenses</p>

30 GHz	Applications	Other Information
	<p>This band is intended for use by interactive and ubiquitous uncoordinated terminals.</p>	<p>This band is not shared with terrestrial fixed links.</p> <p>Uplinks in the 29.5 to 30.0 GHz band are usually paired with 19.7 to 20.2 GHz downlinks.</p>

Receive Bands

4 GHz	Applications	Other Information
	<p>Downlink band mainly used for intercontinental television contribution (mainly digital), telephony and digital business links.</p> <p>Cable head TV receivers.</p>	<p>A variety of transponder bandwidth sizes from 36 MHz to 140 MHz are available.</p> <p>3.6-4.2 GHz is normally paired with 5.850-6.450 GHz.</p> <p>Shared with fixed links and fixed wireless access - requires co-ordination for protection.</p>

11 GHz	Applications	Other Information
	<p>10.7-11.7 GHz mainly used for Direct to home television, ISP backhaul and Television distribution.</p> <p>12.5-12.75 GHz used for the above and VSATs.</p>	<p>12.5-12.75 is normally paired with 14-14.25 GHz.</p> <p>10.7-11.7 GHz is shared with fixed links and requires coordination for protection.</p> <p>11.7-12.5 GHz for BSS.</p>

18 GHz	Applications	Other Information
	<p>19.7-20.2 GHz mainly intended for use by SOHO and ubiquitous terminals.</p> <p>19.7-20.2 GHz is paired with 29.5-30 GHz for use by uncoordinated terminals.</p>	<p>17.7-19.7 GHz is shared with fixed links and protection will only be provided to coordinated earth stations.</p>

Further information:

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Notes:

1. WT act Licences can only be issued for stations transmitting in the UK.

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Glossary

BSS	broadcast-satellite service
E→s	earth-to-space
FSS	fixed-satellite service
HDFSS	high-density applications in the fixed-satellite service
ISP	internet service provider
MSS	mobile-satellite service
NGSO	non-geostationary satellite orbit
PES	permanent earth station
s→E	space-to-earth
SNG	satellite news gathering
SOHO	small office, home office
VSAT	very small aperture terminal