

	Foundation	Intermediate	Full
	<b>Section 1 — Licensing conditions and station identification</b>		
	<b>Nature of amateur radio, types of licence and call signs</b>		
<b>1A1</b>	Recall that the amateur licence is for self-training in radio communications and is of a non-commercial nature. Business use and commercial advertising is not permitted.		
<b>1A2</b>	<p>Recall the various types of UK Amateur Licence.</p> <p>Recall that Regional Secondary Locators may be used by some amateurs and recall the regional identity of D, E, I, J, M, U &amp; W Locators.</p> <p>Understand that suffixes may be used and recall that suffixes can optionally be used to indicate type of operation.</p> <p>Recall the restrictions applicable to Foundation Licensees in operation from a ship or aircraft.</p> <p><i>Note: The optional club secondary locators are not examined.</i></p>	Recall the restrictions applicable to Intermediate licensees in operation from a ship or aircraft.	<p>Identify the types of UK licence and the format of all call signs in use including the optional regional secondary locators.</p> <p>Recall the restrictions applicable to Full licensees in operation from a ship or aircraft.</p> <p><i>Note: The club, special event and contest call signs are not examined in this section.</i></p>
<b>1A3</b>			

<p><b>1A4</b></p>	<p>Recall that the Licensee must give immediate notice to Ofcom of any change to the Licensee's name and address.</p> <p>Recall that the licensee must confirm that the details shown on the licence remain valid at least once every five years.</p> <p>Recall that the licence can be revoked by Ofcom for breaches of licence conditions or for non-confirmation of licence details.</p>	<p>Recall the conditions related to Variation to and Revocation of Amateur Licences; i.e. failure to advise change of name, address and confirmation of licensee details.</p>	
<p><b>1A5</b></p>	<p>Recall the requirements for station identification.</p> <p>Note: For the purposes of the examination this includes identifying when there is a change of:</p> <ul style="list-style-type: none"> <li>• frequency</li> <li>• mode, including change of digital protocols <ul style="list-style-type: none"> <li>• FM ( Frequency Modulation)</li> <li>• AM (Amplitude Modulation)</li> <li>• SSB (Single Sideband)</li> <li>• CW (Carrier Wave - Morse Code)</li> <li>• DATA (e.g. PSK, RTTY, WSPR, FT8)</li> </ul> </li> <li>• Supervisor</li> <li>• Regional Secondary Locator, if used.</li> </ul>		<p>Recall the requirements for station identification.</p> <p><i>Note: For the purposes of the examination this includes identifying when there is a change of:</i></p> <ul style="list-style-type: none"> <li>• <i>frequency</i></li> <li>• <i>mode</i></li> <li>• <i>operator unless under supervision</i></li> <li>• <i>supervisor</i></li> <li>• <i>Regional Secondary Locator, if used.</i></li> </ul>

	<b>Operators and supervision</b>		
<b>1B1</b>	<p>Recall that only the licensee, or any other person operating under the licensee's supervision, may use the Radio Equipment.</p> <p>Recall that the call sign of the supervisor is used to identify the station and operation is in accordance with the supervisor's licence.</p> <p>Recall that in certain circumstances the licensee may allow the equipment to be used by a member of a User Service.</p> <p><i>Notes:</i></p> <p><i>The term 'Radio Equipment' (in initial capitals) is a defined licence term meaning the equipment used and identified by the operator's call sign. If a visiting amateur uses the radio equipment with his own call sign, it is his/her Radio Equipment.</i></p> <p><i>The nature of the circumstances and identity of the User Service are not examinable</i></p>	<p>Recall that an Intermediate Licensee may operate the Radio Equipment of any other UK licensed amateur under that person's direct supervision using the supervisor's call sign and obeying the terms of the supervisor's licence.</p> <p>Understand the meaning of direct supervision, duties of the supervisor and need for the operator to comply with the licence.</p> <p><i>Note: The term 'Radio Equipment' (in initial capitals) is a defined licence term meaning the equipment used and identified by the operator's call sign. If a visiting amateur uses the radio equipment with their own call sign, it is their Radio Equipment.</i></p>	<p>Understand the requirements when delegating supervisory responsibilities and the permitted uses and conditions.</p>
<b>1B2</b>			

	<b>Messages</b>		
<b>1C1</b>	<p>Recall the requirement to send messages only to other amateurs.</p> <p>Recall that a 'Net' or 'Network' refers to a conversation with several amateurs with whom communication and identification has been established.</p> <p>Recall that transmitting for general reception, that is to anybody who may be listening, is not permitted other than for CQ calls.</p>	<p>Recall that in an international disaster messages may be passed, internationally, on behalf of non-licensed persons.</p> <p>Recall that non-amateur stations involved in international disaster communications may also be heard on amateur frequencies.</p>	<p>Understand the requirements relating to the content of messages and who messages may be sent to.</p> <p>Understand the circumstances when messages, including encrypted content, may be sent.</p> <p>Understand the distinction between the use of codes and abbreviations and encryption.</p> <p>Understand that people of all ages and backgrounds participate in amateur radio and that messages must not cause offence, particularly in the context of relevant legislation including the Wireless Telegraphy (Content of Transmission) Regulations 1988 and the Communications Act (2003).</p>
<b>1C2</b>	<p>Recall that secret codes are not permitted except at the direct request of a User Service.</p> <p><i>Note: Morse code is not a secret code and that it is only secret codes which obscure the meaning of the Message that are prohibited.</i></p>	<p>Recall that the licensee may pass messages on behalf of a User Service and may permit them to use the Radio Equipment to send messages.</p>	<p>Understand the Licence requirements in respect of the receipt of messages from amateurs on non-UK frequencies.</p> <p>Understand the Licence requirements in respect of recorded and re-transmitted messages.</p>

	<b>Apparatus, inspection and closedown</b>		
<b>1D1</b>	<p>Recall the Licensee must carry out tests from time to time to ensure that the station is not causing Undue Interference to other radio users.</p> <p>Recall that a person authorised by Ofcom has the right to any or all of the following:</p> <ul style="list-style-type: none"> <li>• inspect,</li> <li>• require the modification of,</li> <li>• require the closedown of,</li> <li>• restrict the operation of the Radio Equipment.</li> </ul>	<p>Recall that transmissions from the station must not cause undue interference to other radio users.</p> <p>Recall that the Licensee must reduce any emissions causing interference, to the satisfaction of a person authorised by Ofcom.</p> <p>Understand that this may include a reduction in transmit power or any other action required to reduce emissions to an acceptable level.</p>	<p>Understand the requirements for clean and stable transmitters and the need to control transmitted bandwidth.</p> <p>Understand the need to avoid Undue Interference to other wireless telegraphy.</p> <p>Understand the need to conduct tests from time to time to ensure that the station is not causing Undue Interference to other radio users.</p> <p>Understand the need to have equipment for the reception of messages on all frequencies and modes in use for transmissions.</p> <p>Understand the role of Ofcom in cases of Undue Interference.</p>
<b>1D2</b>	<p>Recall that to assist interference identification a person authorised by Ofcom may require the Licence holder to keep a log of all transmissions made over a specified period of time.</p>	<p>Recall the occasions for mandatory log keeping.</p> <p>Understand circumstances in which modification or cessation of operating of the station may be required.</p> <p>Understand circumstances in which modification of transmitting equipment may be required.</p>	

	Unattended and remote control operation		
1E1		<p>Recall the maximum transmitted power of a Beacon.</p> <p>Recall that a Beacon must be capable of close down with 2 hours of being required to do so.</p> <p><i>Note: All licensees may conduct unattended operation of a Beacon, for the purposes of direction-finding competitions, or for digital communications provided operation is consistent with the terms of the Licence.</i></p>	
1E2		<p>Recall that the licensee may use any communication link for the purposes of Remote Control of the main station and must ensure that:</p> <ul style="list-style-type: none"> <li>• any links used for the Remote Control of the Radio Equipment must be adequately secure so as to ensure that no other person is able to control the Radio Equipment;</li> <li>• Remote Control links using Amateur Radio frequencies must use frequency bands above 30 MHz and must not be encrypted;</li> <li>• transmissions from the Radio Equipment can be terminated immediately; and</li> <li>• the Licence Number must be displayed on or next to any unattended Radio Equipment located other than at the address shown in the licence.</li> </ul>	

	<b>CEPT and international</b>		
<b>1F1</b>	Recall that other Administrations (foreign countries) do not routinely recognise the Foundation Licence.	Recall that other Administrations (foreign countries) do not routinely recognise the Intermediate Licence.	<p>Understand the requirements for operation by individual UK Licensees abroad under the CEPT Recommendation T/R 61-01 and T/R 61-02.</p> <p>Understand this facility does not extend to club or reciprocal licences.</p> <p>Understand the purpose and function of the CEPT Harmonised Amateur Radio Examination Certificate (HAREC).</p> <p>Recall that many countries will offer reciprocal licences to UK amateurs with a HAREC Full licence and that operation is in accordance with the host country's rules.</p>
<b>1F2</b>			<p>Understand the requirements for operation whilst on a ship.</p> <p>Identify the 3 ITU regions and recall that the frequencies are given in the ITU Radio Regulations.</p>

	<b>Electromagnetic Fields</b>		
<b>1G1</b>	<p>Recall the</p> <ul style="list-style-type: none"> <li>• purpose of basic EMF restrictions;</li> <li>• equipment to which the EMF restrictions apply;</li> <li>• transmit power level at which the EMF restrictions apply;</li> <li>• persons to which the EMF restrictions apply;</li> <li>• need to keep a written record of assessments carried out.</li> </ul> <p><i>Note:</i></p> <ol style="list-style-type: none"> <li>1. See also 8D1.</li> <li>2. The record includes a justification of why no further action is required if that is the case (e.g., power levels are below the threshold).</li> </ol>	<p>Recall</p> <ul style="list-style-type: none"> <li>• the average and peak transmit power level at which the EMF restrictions apply;</li> <li>• when there is a need to reassess EMF compliance.</li> </ul>	<p>Understand relevant information in the licence.</p> <ul style="list-style-type: none"> <li>• Origin of the EMF restrictions (ICNIRP);</li> <li>• Meaning of the term 'general public';</li> <li>• Areas in which the general public need to be protected from EMF in breach of the limits;</li> <li>• Records of EMF assessment;</li> <li>• Procedure for carrying out an EMF assessment;</li> <li>• Emergency situations.</li> </ul>
	<b>Licence schedule</b>		
<b>1H1</b>	<p>Identify relevant information in Schedule 1 to the Foundation licence.</p> <p><i>A copy of the relevant part of Schedule 1 will be available during the examination.</i></p>	<p>Identify relevant information in Schedule 1 to the Intermediate licence.</p> <p><i>A copy of the relevant part of Schedule 1 will be available during the examination.</i></p>	<p>Identify relevant information in Schedule 1 and A2 Notice of coordination to the Full licence.</p>



	<b>Section 7 – Operating practices and procedures</b>		
	<b>Good operating practices and procedures</b>		
<b>7A1</b>	Understand why one should listen on a frequency before calling and then ask if the frequency is in use.		Understand the reasons why some stations may use split Tx and Rx frequencies within a frequency band.
<b>7A2</b>	Recall how to make a CQ call in SSB and FM modes.		
<b>7A3</b>	Understand the need to move off the calling channel when on VHF/UHF once contact is established. Understand the meaning of Centre of Activity.	Recall common international call sign prefixes; EI(Eire), F(France), I(Italy), JA(Japan), PA(Netherlands), VE(Canada), VK(Australia), W(USA), ZL(New Zealand).	
<b>7A4</b>	Recall the meaning of the optional suffixes /A, /P, /M and /MM.		
<b>7A5</b>	Recall the phonetic alphabet.	Recall that there are awards available for achievements which include: working continents, countries, islands, prefixes, locator squares and that variations may include certain frequency bands or low power. Recall that amateur radio contests require the exchange of information such as signal report, serial number and location. Recall that contests often have sections for different bands, power levels and modes.	

<b>7A6</b>	<p>Understand the advisability and common practice of keeping a log.</p> <p>Understand why UTC is used for logging time.</p> <p>Recall that a log should detail the following information: date, time, mode, call sign of station worked for QSL and contest purposes.</p>		
<b>7A7</b>	<p>Understand that the transmission of music and the use of offensive or threatening language whilst on the air are unacceptable in amateur radio.</p> <p>Understand how to respond to music or inappropriate language overheard or received from other stations.</p>		

	<b>Band plans</b>		
<b>7B1</b>	<p>Recall why band plans are used.</p> <p>Identify items on a typical band plan (e.g. calling frequencies and recommended modes).</p> <p>Recall that narrow band modes are at the lower end of most bands.</p> <p>Recall that lower sideband operation normally occurs below 10MHz and upper sideband above 10MHz.</p> <p>Recall that transmissions on beacon frequencies must be avoided.</p> <p><i>Note: For the purposes of the examination narrow modes are CW and data.</i></p> <p><i>A copy of the relevant band plans will be available during the examination but may not be ones in current use.</i></p> <p><i>Reference Booklets containing examination band plans are available on the RSGB web site.</i></p>	<p>Recall that band plans are produced by the IARU.</p> <p>Recall that the band plans state that:</p> <ul style="list-style-type: none"> <li>• no SSB operation should take place in the 10MHz (30m) band</li> <li>• no contests shall be organised in the 5MHz (60m), 10MHz (30m), 18MHz (17m) and</li> <li>• 24MHz (12m), bands</li> <li>• transmissions on satellite frequencies should be avoided for terrestrial contacts.</li> </ul> <p><i>Note: The 5MHz (60m) band is NOT available to Intermediate Licence holders.</i></p> <p><i>Questions on beacon and satellite frequencies will be limited to the 14MHz (20m) and 144MHz (2m) bands.</i></p> <p><i>A copy of the relevant band plans will be available during the examination but may not be ones in current use.</i></p> <p><i>Reference Booklets containing examination band plans are available on the RSGB web site.</i></p>	<p>Identify items on a typical band-plan (e.g. centre of activity, band width and recommended modes).</p> <p><i>Note: Questions will be limited to the 5MHz (60m) and 472kHz (600m) bands.</i></p> <p><i>A copy of the relevant band plans will be available during the examination but may not be ones in current use.</i></p> <p><i>Reference Booklets containing examination band plans are available on the RSGB web site.</i></p>

<p><b>7B2</b></p>	<p>Recall that frequency bands are allocated for particular use, e.g. broadcasting, aeronautical, maritime and amateur.</p> <p>Recall the frequency bands for HF, VHF, and UHF radio signals.</p> <p>Recall that some amateur bands are shared with or adjacent to other spectrum users.</p> <p>Identify items on a provided chart of spectrum users.</p>		<p>Recall that band plans in other countries and IARU regions may not align with the UK band plan.</p>
	<p><b>Repeaters</b></p>		
<p><b>7C1</b></p>	<p>Recall that repeaters are mainly intended to extend the range of mobile stations.</p> <p>Recall why a frequency offset between transmit and receive is needed.</p> <p>Recall why a CTCSS tone is needed to access a repeater and why different repeaters may have different tones.</p> <p>Recall why repeaters may have a 'reset' tone and a time-out facility.</p> <p>Recall that simplex operation on repeater frequencies should not take place.</p> <p><i>Note: Questions may ask why particular facilities (such as frequency offset) exist, what operational issue they address or how they should be used to establish or maintain a contact.</i></p>		

	<b>Connecting input devices to transmitters</b>		
<b>7D1</b>	Recall that connecting anything other than the supplied microphone to the transmitter requires correct operation of the PTT line and that the audio signal levels are correct.		
	<b>Codes and abbreviations</b>		
<b>7E1</b>		Recall the meaning and the reason for use of the Q codes: QRM, QRN, QRO, QRP, QRT, QSB, QSL, QSO, QSY, QTH.	
<b>7E2</b>	Recall the meaning of the RST code, the number of divisions of each of the three items, and their order of merit.	<b>7E2</b>	Recall the meaning of the RST code, the number of divisions of each of the three items, and their order of merit.
	<b>Digital interfaces</b>		
<b>7F1</b>	Recall that there are Digital Voice (DV) and Digital Data (DD) modes available and that different systems may not be compatible. Recall that appropriate radio equipment is needed for each of these digital systems. Recall that DV radios may embed the call sign in the transmission and this will need to be adjusted if using borrowed equipment.		

<p><b>7F2</b></p>	<p>Recall that users of Digital Voice (DV) should check that the channel is not in use by other modes.</p> <p>Recall that users of FM should check that the channel is not in use by other modes.</p> <p>Recall that such checks are not 100% reliable.</p>	<p>Recall that several types of transmissions can be generated and received with the use of a personal computer and a suitable interface.</p> <p>Recall minimal distortion can be obtained by careful adjustments between the DAC interface and the transmitter.</p> <p>Recall other programs running on the PC that is handling the transmitter or receiver audio may cause interference e.g. warning beeps and alerts.</p>	
	<p><b>Satellites</b></p>		
<p><b>7G1</b></p>	<p>Recall that amateur satellites operate in allocated frequencies within the bands Recall that terrestrial operation on satellite frequencies should not take place.</p>	<p>Recall that satellites orbit the Earth at heights above 250km and understand that most amateur satellites are moving in relation to the Earth and will only be above the horizon at certain times.</p>	
<p><b>7G2</b></p>		<p>Recall that the up-link and down-link frequencies are generally in different amateur bands and that details are published by amateur organisations.</p> <p>Recall that the transmitting station must be able to receive both the up-link and down-link signals.</p>	

7G3		Understand that amateur satellites can only be used when they are above the horizon at both the sending and receiving stations, and that the movement of the satellite will cause frequency variation, known as Doppler shift, on the received signal, which must be allowed for when selecting operating frequencies.	
7G4		Understand that satellites have a very limited power supply, derived from solar panels, and that excessive up-link power may result in wasteful and unfair use of the satellite's power.	
	<b>Special events</b>		
7H1			Recall the purpose of special event stations and the format of their call signs. Recall the process for obtaining a special event call sign.