

# Aeronautical Wireless Telegraphy Act Radio Licences

**Revised October 2004**

# 1. Introduction

This information sheet outlines the regulations governing the civil use of aeronautical radio equipment in the United Kingdom. These regulations require that:

- radio equipment intended for use on aircraft is approved by the Civil Aviation Authority's Safety Regulation Group (SRG);
- installations of radio equipment on registered aircraft, and radio equipment used on the ground for communications and navigation, are approved by SRG;
- the installation and use of the radio equipment are covered by a Wireless Telegraphy Act (WT Act) radio licence; and
- the user of the equipment holds the correct operator's licence, issued by SRG. In the case of aircraft, the user must hold a Flight Radio Telephony Operator's licence (except glider pilots operating only on the nominated glider frequencies, and persons being trained as flight crew in a UK-registered aircraft).

Details of these regulations can be found in the appropriate sections of this information sheet. A list of contacts is provided in Section 16.

This information sheet also provides information on the technical frequency assignment criteria used for Aeronautical Ground Station licences.

## 2. The Office of Communications

The Office of Communications (Ofcom) is responsible for managing that part of the radio spectrum used for civil purposes in the UK.

## 3. The Civil Aviation Authority

The Civil Aviation Authority (CAA) is a public corporation, charged by the Government with regulating all aspects of aviation in the UK. It is split into four directorates, two of which have a direct role in regulating aeronautical radio:

- The **Directorate of Airspace Policy** (DAP) is responsible for the regulation and planning of airspace in the UK, for the benefit of all users – military, commercial and civil business. By agreement with Ofcom, DAP manages the aeronautical radio spectrum in the UK, recognising that there is a direct link with the management of the airspace. Ofcom has also contracted DAP to administer WT Act radio licences for aircraft, aeronautical ground stations and navigation aids.
- The **Safety Regulation Group** (SRG) ensures high standards of safety for civil aviation in the UK. To ensure the safe use of aeronautical radio, it approves the installation and use of aeronautical ground stations and navigational aids, and the carriage of aeronautical radio equipment in aircraft; it also issues certificates of competence to operators.

## 4. Managing the radio spectrum

The radio spectrum is a scarce natural resource with finite capacity, for which demand is constantly increasing. Used by millions of people worldwide for a variety of purposes, radio signals do not stop at national frontiers or man-made borders. Without adequate planning and management, radio signals from different users and services would interfere with each other; above a certain level of interference, radio would become useless as a suitable means of communication.

## 5. Spectrum planning

Ofcom (supported by DAP) plays a key role in many international negotiations, planning and co-ordinating the use of spectrum with neighbouring countries while protecting and promoting the UK's interests.

Aeronautical frequency bands are internationally agreed and set out in the Radio Regulations, which are agreed at World Radio Conferences of the International Telecommunication Union (ITU) – a specialised agency of the United Nations. The Radio Regulations have international treaty status and are binding on ITU member states, including the UK.

Because of international competition between expanding radio services, existing radio users must continually defend and justify the retention of frequency bands already allocated to their service. Civil air operations are expanding rapidly and globally, creating additional pressures on the already stressed and limited resource.

## 6. Regulation and licensing

To ensure that everyone obtains the required service from its use, the radio spectrum must be regulated. This is achieved by:

- controlling the use of radio, e.g. by educating radio users and issuing operators' qualifications;
- ensuring that radio equipment can be used safely in its intended environment without causing interference to other systems and users;
- developing technical specifications for the performance of equipment; and
- issuing licences to users of equipment where there is the potential for interference, to ensure that they comply with the above requirements.

## 7. Wireless Telegraphy Act radio licensing

Ofcom's powers are set out in the Wireless Telegraphy Act 2006, that provides for radio licensing. Under the WT Act, it is an offence to install or use radio transmission equipment without a licence, unless it is specifically licence-exempt.



## 8. The importance of licensing

Abuse of the radio spectrum is an obvious hazard to the safety of life, as well as to commercial activities. Aeronautical services are recognised internationally as prime users of radio frequencies. Without radio, aircraft operations would be unsafe and unable to meet the global demand for rapid and cost-effective transport.

It is important to comply with the terms of a radio licence, as this reduces the likelihood of causing interference to other radio users.

Because of radio spectrum congestion, all users have a duty to ensure that their operations use the radio spectrum efficiently.

## 9. Control of interference and enforcement

Ofcom has offices across the UK, through which we advise customers on radio services and investigate complaints of interference. Where necessary, we will not hesitate to prosecute or take other necessary enforcement action under the WT Act, to prevent interference caused by those who operate without a licence or contravene their licence conditions.

Ofcom staff carry out routine spot checks to ensure that users of aeronautical equipment hold valid licences.

## 10. Radio licences for aircraft

Aircraft radio licences are available in three forms:

- an **Aircraft licence** to cover the use of aeronautical radio equipment in a UK-registered aircraft;
- an **Aircraft licence** to cover unregistered aircraft not intended to fly outside the UK; and
- an **Aircraft Transportable licence** to cover the use of a handheld VHF radio with an integral antenna and power supply on multiple aircraft.

To apply for an Aircraft licence, you should obtain and complete Form ACT1 and return it to DAP's Radio Licensing Section with the appropriate licence fee (see Section 16).

If you want a licence for a registered aircraft, DAP staff will obtain details of the aircraft's equipment fit from the SRG's Applications and Certification Section, and your licence will include the CAA's certificate of approval of radio installation (previously issued as the AD917 document). You should ensure that SRG has approved the equipment fitted in your aircraft, and should inform your maintenance organisation or SRG's Application and Certification Section of any changes to the equipment. The fee for this type of licence depends on the take-off weight of the aircraft; for larger aircraft, there is a choice between the standard 12-month licence and a monthly licence to facilitate delivery of aircraft etc.

If your aircraft is unregistered or you are applying for a Transportable licence, you must supply details of the radio equipment to be used. This will be checked against the CAA's list of approved equipment before a licence is issued.

# 11. Licences for aeronautical ground stations

Aeronautical Ground Station (AGS) licences cover the use of aeronautical radio frequencies for ground-to-air communications.

If you want to establish a new aeronautical ground radio station you must obtain both a WT Act Radio Licence and an Approval issued by SRG under Article 104 of the Air Navigation Order. You should obtain and complete CAA form SRG 1417 Application to Establish or Change an Aeronautical Ground Station.

Once DAP's Radio Licensing Section have received your completed form a copy will be passed to SRG's Air Traffic Safety Standards Department who will process the ANO Approval. Radio Licensing Staff will arrange for a frequency to be assigned (where necessary) before issuing your licence. Technical frequency assignment criteria are used when frequencies are assigned - these are specified in a little more detail in Section 11.1 below.

The AGS licence is required for any testing of the radio station that the ATSSD has authorised. For operational use, it must be accompanied by a valid ANO approval.

Short-term AGS licences are available to cover special events, and must be applied for in the same way.

There are seven forms of AGS licence.

1 The **AGS General Aviation** licence covers:

- Common air to ground frequencies which have been assigned to general aviator sporting use such as the common glider frequency.

2. The **AGS Fire** licence covers:

- Aeronautical fire station assignments on the frequency 121.600 MHz.

3. The **AGS Air to Ground and Flight Information Service licence** covers:

- Air/Ground (A/G) – A two way communication between an aircraft and a ground station in which the ground operator may only pass advisory information regarding the situation local to the aerodrome.
- Aerodrome Flight Information Service (AFIS) – A two way communication between an aircraft and a ground station, in which the ground operator may only pass advisory information regarding the airborne situation local to the aerodrome but can pass instructions to the aircraft on the ground at the aerodrome.

4. The **AGS Air Traffic Control/Ground Movement Control** licence covers:

- Area Control Centre Service (ACC) – A two way communication between an aircraft and a ground station in which the ground operator provides control instructions to the aircraft within a defined region or sector.
- Approach (APP) – a two-way communication between an aircraft and a ground station, in which the ground operator controls the aircraft in the vicinity of an aerodrome traffic zone when the aircraft is not flying by visual reference to the aerodrome
- Automatic Terminal Information Service (ATIS) – A broadcast transmission from a ground station to one or more aircraft, conveying information relating to the aerodrome from which the transmission made is conveyed. Within the UK this service is regarded as an air traffic control service and may be provided by an aerodrome that also provides a tower and/or an approach service.
- Aerodrome Surface (AS) – Either a two-way communication between an aircraft and a ground station in which the ground operator provides either control to or information for an aircraft on the ground category includes Ground Movement Control (GMC) & Fire. Or: An automated broadcast service passing aerodrome information from a ground station to an aircraft on the ground at that aerodrome. This category covers departure ATIS (DATIS).
- Flight Information Service (F or FIS) – A two-way communication between an aircraft and a ground station, in which the ground operator may only pass advisory information as requested by the pilot. This information may include situation awareness and weather information.
- Precision Approach Radar (PR or PAR) –A two-way communication between an aircraft and a ground station, in which the ground operator uses both vertical and horizontal information about an aircraft's position to talk the aircraft down along the glide scope.
- Volmet – A broadcast transmission from a ground station to one or more aircraft, in which meteorological information relating to a number of aerodromes as defined in the UK AIP. Within the UK, this service is regarded as an air traffic control service.
- Tower (TWR) – A two-way communication between an aircraft and a groundstation, in which the ground operator controls the aircraft in the vicinity of an aerodrome traffic zone when the aircraft is flying with visual reference to the aerodrome.

5. The **AGS Operations Control** licence covers:

Operational Control (OPC) – A two-way communication between an aircraft and a ground station for the purposes stated in ICAO Annex 6, Parts 1 & 3, chapter 1:

*"Operational Control. The exercise of authority over the initiation, continuation, diversion or termination of a flight in the interest of safety of the aircraft and the regularity and efficiency of the flight."*

OPC services are currently provided by either voice communications or a slow-speed data communication known as ACARS.

6. The **AGS Offshore Platform** licence covers:

Offshore platforms operating in UK territorial waters that are assigned a Traffic Frequency (A/G) and/or a logistics frequency (OPC), or, a single frequency to be used for both traffic and logistic services. The licence also covers mobile platforms where the Radio Frequency allocation is carried out using an area system based on block on sub blocks. Details of this are published in the UK AIP (CAP 32)

7. The **AGS HF** licence covers:

Aeronautical ground station where an HF assignment is required.

## 11.1 Technical frequency assignment criteria applied to AGS

Technical frequency assignment criteria describe the technical principles and guidelines used to identify which particular radio frequency or radio frequency channel(s), from the bands specified for the relevant licence type, are available for authorisation at any particular location and under what technical conditions.

Technical frequency assignment criteria may limit (or prevent) the availability of a licence, and/or grants of rights under a licence, at a particular location if this is necessary to prevent interference to existing services.

DAP has been delegated responsibility for managing the part of the radio spectrum allocated for aeronautical purposes. DAP's procedure for the management and allocation of radio frequency is contained in Annex M of DAP's Airspace Charter which is available from the CAA website [www.caa.co.uk](http://www.caa.co.uk).

## 12. Licences for aeronautical navigation aids

The Aeronautical Navigation Aid radio licence covers the following main types of navigation aid:

- The **non-directional radio beacon (NDB)** service is used for short/medium-range navigation. When used with automatic direction finder (ADF) equipment in aircraft, NDB provides a bearing with moderate accuracy. NDB is used by larger aircraft over sea or overland routes and is extensively deployed at general aviation aerodromes, where it provides a cost-effective and easily installed facility.
- The **instrument landing system (ILS)** is one of the International Civil Aviation Organization's (ICAO) standard approach and landing systems. The ILS localizer is coupled with glide path frequencies and with the **Microwave landing system (MLS)** and/or DME (see below). MLS is a newer system, which operates in a similar manner to ILS.
- The **VHF omnidirectional radio range (VOR)** is a short/medium-range navigation aid. VOR is normally associated with DME.
- The **distance measuring system (DME)** is the ICAO standard system for determining ranges within radio line of sight, using pulse techniques and time measurement. It is the standard system used for en route and terminal navigation.

### Aeronautical Radar Licence

- A licence is available to cover Aeronautical Primary radar and **Secondary surveillance radar (SSR)** is an ICAO standard system employing secondary radar principles, used either by itself or co-located and synchronised with primary radar. All SSR installations have a frequency for ground-air interrogation and a frequency for the air-ground reply.

## 13. Licence fees

Licence fees are collected to contribute to the costs of managing the radio spectrum. Ofcom is required to cover its costs in full; this is achieved by charging fees for the issue of licences, and by recovering costs from other Government departments and major users of radio spectrum.

DAP collects aeronautical radio licence fees on behalf of Ofcom. Licence fees are reviewed each year, and their level is set by an order of parliament. Licence fees are payable annually for 12-month licences; once a licence has been issued, the fee cannot be refunded.



## 14. Renewing your licence

With the exception of short-term Aircraft and AGS licences, all licences are valid for 12 months and must be renewed to stay in force. DAP will automatically issue a renewal reminder approximately six weeks before the licence renewal date. Once the licence is renewed, a new licence document will be issued. If DAP receives no response to the renewal reminder, a further reminder will be issued approximately one week before the renewal date.

## 15. Amending your licence

If you have an Aircraft licence for a UK-registered aircraft and your address changes, contact the CAA Aircraft Registrations Department, which will automatically ask DAP's Radio Licensing Section to issue an amended licence.

If you change the radio equipment in your registered aircraft, contact the aircraft's maintenance provider or your local CAA office. DAP's Radio Licensing Section will be notified of the change once it has been approved, and will issue an amended Aircraft licence.

Changes to the licensing information for unregistered aircraft should be sent in writing to DAP's Radio Licensing Section.

If the details on your AGS or Aeronautical Navigation Aid licence change, you should obtain and complete CAA form SRG 1417 "Application to Establish or Change an Aeronautical Ground Station" and return it to Radio Licensing. Radio Licensing will liaise with ATSSD to update and reissue the ANO Approval and Radio licence.

## 16. Further information

To obtain an aeronautical radio licence application form, or for information on the processing of a licence, contact DAP's Radio Licensing Section:

**Radio Licensing Section**  
**Directorate of Airspace Policy**

CAA House, K6 G6  
45-59 Kingsway  
London  
WC2B 6TE

Tel: 020 7453 6555  
Fax: 020 7453 6556

Email: [radio.licensing@dap.caa.co.uk](mailto:radio.licensing@dap.caa.co.uk)

Information and application forms can also be obtained via the CAA website, [www.caa.co.uk](http://www.caa.co.uk) -select Airspace from the main menu and then Radio Licensing. For queries relating to WT Act licensing policy, contact Ofcom's Maritime and Aeronautical Team on 020 981 3132/3087.

Ofcom produces information sheets and publications on most aspects of its work. They are available from the Ofcom contact centre on 0845 456 3000, or can be downloaded from Ofcom's website at [www.ofcom.org.uk](http://www.ofcom.org.uk)

The CAA's Safety Regulation Group can be contacted at:

**Safety Regulation Group**  
**Aviation House**

Gatwick Airport South  
West Sussex  
RH6 0YR

Tel: 01293 567171

For general enquiries about operators' licences, including the location of authorized radiotelephony examiners, call the CAA's Flight Crew Licensing Department on 01293 573700.

For enquiries about approval of aeronautical radio equipment on aircraft, call the CAA's Avionics Systems Section on 01293 573935.

For enquiries about approval of aeronautical radio equipment installations on registered aircraft, call the CAA's Applications and Certification Section on 01293 768374.

For enquiries about setting up or taking over an aeronautical ground station or a navigation aid, contact Radio Licensing.

CAA publications can be obtained from:

**Documedia Ltd**  
37 Windsor Street  
Cheltenham  
Gloucestershire  
GL52 2DG

Tel: 01242 283100  
Fax: 01242 584139