

Flight Information Service Officer Manual

CAP 797



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Safety and Airspace Regulation Group



CAP 797

Flight Information Service Officer Manual

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Revision History

The table below is provided as a reference to highlight when major changes were made to the content of CAP 797. It does not cover editorial changes. As necessary, an update will be added to the table at each amendment.

Third Edition

Section	Subject	Source
Section 1 Chapter 1	Incorporate additional material from Reg (EU) 923/2012. Incorporate SI 03/2016.	EASA
Section 1 Chapter 2	Incorporate SI 01/2016.	ICAO
Section 1 Chapter 4	Incorporate material relating to ORS4 No. 1195 and ORS4 No. 1067 and address changes to AFPEX system. Incorporate SI 03/2016.	CAA
Section 2 Chapter 8	Incorporate SI 02/2016.	CAA
Section 4 Chapter 14	Removal of RTF phraseology section.	CAA
Section 6 Chapter 16	Incorporate additional material from Reg (EU) 923/2012 in relation to 'strayed aircraft'. Incorporate additional material relating to aircraft bomb threat.	EASA CAA
Section 9 Chapter 22	Incorporate Reg (EU) 376/2014 and additional guidance material on occurrence reporting. Incorporate SI 03/2016.	EASA CAA
Appendix D	Amendment to contact details.	CAA

Second Edition Amendment 3

Section	Subject	Source
Definitions	Incorporate SI 2015/03.	ICAO
Communications Procedures	Incorporate SI 2015/03.	RTFPWG
Meteorological Services	Incorporate SI 2015/02.	CAA

Second Edition Amendment 2

Section	Subject	Source
Definitions	Incorporate SI 2014/01.	EASA
Flight Rules	Incorporate 2014/01. Incorporate SI 2015/01.	EASA EASA
FIS at Aerodromes	Address EU 923/2012 (SERA.9005(b)(2). Incorporate 2014/01. Incorporate SI 2015/01. Incorporate Instrument Approach Procedures.	EASA EASA EASA CAA
Instrument Approach Procedures	Incorporate Instrument Approach Procedures.	CAA
Communication Procedures	Incorporate Instrument Approach Procedures. Incorporate revised traffic information phraseology.	CAA
Alerting Service	Incorporate SI 2014/01.	EASA
Aircraft Emergencies	Incorporate SI 2014/01.	EASA
Aerodrome Emergency Services	Incorporate aerodrome categories. Provide consistency in definition of terms across CAA policy documentation set.	CAA
Administration	Incorporate Instrument Approach Procedures.	CAA

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Foreword

Introduction

This document contains procedures, instructions, guidance and information, which are intended to form the basis of the services provided by Flight Information Service Officers (FISOs) within the UK. It is published for use by FISOs and may also be of general interest to others associated with civil aviation. This document will be supplemented by local instructions.

Definitions and abbreviations used in this document are defined within CAP 1430 the UK Air Traffic Management Vocabulary.

The units of measurement used in the UK are listed within AIP GEN 2.1-1. Conversion tables to assist ATS personnel to convert specific units of measurement are listed within AIP GEN 2.6.

Where appropriate, this document references European Regulation as source material. References to the 'Cover Regulation' are cited as Reg (EU) XXX/YYYY followed by the appropriate Article; where 'X' is the number of the Regulation and 'YYYY' is the year of publication. References to the Standardised European Rules of the Air (SERA) contained within the Annex to Reg (EU) 923/2012 are cited as 'SERA.XXXX', where 'X' refers to the number of the provision.

Flight Information Service Units

Flight Information Service (FIS) units comprise:

- a) Aerodrome FIS (AFIS) units; and
- b) Area FIS units.

Where the term 'FIS unit' is used in this manual, it applies to all FIS units, whether at an aerodrome or an area centre.

Flight Information Service Officer

A FISO at an aerodrome is referred to as an Aerodrome FISO (AFISO).

Where the term FISO is used in this manual, it applies to all FISOs, whether at an aerodrome or an area centre.

FISO Manual – Status

Operational FISOs are expected to have a detailed knowledge of Sections 1, and 5, together with the same degree of knowledge of sections 2, 3 and 6 as appropriate to their

licence. Sections 4, 7, 8, 9 and 10 are of lesser importance or are for reference. AFISOs whose routine duties do not include those items detailed in Section 2 Chapter 10 are not expected to have in-depth knowledge of this content.

Interpretation of Words

To avoid any misunderstanding within this document, certain words or terms are to be interpreted as having specific meanings as follows:

is to, are to, shall, must	Mean that the instruction is mandatory
should	Means that it is strongly advisable that an instruction is carried out; it is recommended or discretionary. It is applied where the more positive 'shall' is unreasonable but nevertheless a pilot/ FISO would have to have good reason for not doing so.
may	Means that an instruction is permissive, optional or alternative, e.g. 'a FISO may seek assistance' but would not if they did not need it.
will	Is used for informative or descriptive writing, e.g. 'pilots will file...' is not an instruction to the FISO

Where reference is made to an Area Control Centre (ACC) it shall be the centre within whose Flight Information Region (FIR) the aerodrome is situated. Where guidance on an air traffic matter is required, it may be obtained from the watch supervisor at the ACC.

Gender

In the interests of simplicity, any reference to the masculine gender can be taken to mean either male or female.

CAP 797 Amendments

Amendments

Amendments to CAP 797 will be published in April and November.

Underlining is used to indicate new or revised text. Prior to the effective date of an amendment, the full version of CAP 797 will be available on the CAA website (www.caa.co.uk). This document will contain a summary of changes and an updated List of Effective Pages. From the effective date of the amendment, the superseded version of CAP 797 will be removed from the website.

The effective date of an instruction is stated at the foot of the page. Publication of a new edition means that all pages will have the same date; however, new instructions are effective on the amendment publication date.

Supplementary Instructions

Supplementary Instructions to CAP 797 are issued for the following reasons:

- a. to introduce an entirely new subject or a radical change to existing instructions;
- b. to re-emphasise an existing instruction.

Supplementary Instructions will be incorporated into the main body of the document in a suitable and timely manner.

Enquiries

All enquiries concerning the text should be addressed to:

The Editor – CAP 797

Civil Aviation Authority
Safety and Airspace Regulation Group
Intelligence, Strategy and Policy
2W Aviation House
Gatwick Airport South
West Sussex
RH6 0YR

E-mail: ats.enquiries@caa.co.uk

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Section 1 FISO Procedures

Chapter 1

Service provision by FISOs

Introduction

- 1.1 Air traffic services within the UK are provided in accordance with the Air Navigation Order and Rules of the Air Regulations. Generally these are in line with the Standards and Recommended Practices (SARPs) of the International Civil Aviation Organisation (ICAO) and European Union (EU) law.
- 1.2 This document contains procedures, instructions, guidance and information for FISOs providing FIS. These are intended to form the basis of the services provided by FISOs within the UK and to cater for both routine and many emergency situations. However, nothing in this manual prevents FISOs from using their own discretion and initiative in response to unusual circumstances, which may not be covered by the procedures herein.

Language Requirement

- 1.3 In accordance with ICAO requirements the English language shall be used for all operational communications at FIS Units within the United Kingdom (UK).
- 1.4 Operational communication between UK and non-UK Air Traffic Service Units (ATSUs) shall, on the part of the UK Air Navigation Service Provider (ANSP), be conducted in the English language.
- 1.5 ANSPs may designate, within their unit, operational areas in which all communications (operational and non-operational) shall be in the English language.
- 1.6 RTF phraseology is listed within the 'Radiotelephony Manual' CAP 413.

Air Traffic Services

- 1.7 An air traffic service (ATS) is a generic term meaning variously (Reg (EU) 923/2012 Article 2(32):
- a) Air Traffic Control (ATC) Service;
 - b) Air Traffic Advisory Service;
 - c) FIS;
 - d) Alerting Service.

Objectives of the Air Traffic Services

1.8 The objectives of the ATS shall be to (SERA.7001):

- a) prevent collisions between aircraft;
- b) prevent collisions between aircraft on the manoeuvring area and obstructions on that area;
- c) expedite and maintain an orderly flow of air traffic;
- d) provide advice and information useful for the safe and efficient conduct of flights;
- e) notify appropriate organisations regarding aircraft in need of search and rescue aid, and assist such organisations as required.

Note 1. These provisions are general statements which represent high level safety objectives to be met when providing ATS and which are the basis of all the provisions of this part (SERA.7001 GM1).

Note 2. ATS personnel are not solely responsible for the prevention of collisions. Pilots and vehicles drivers must also fulfil their own responsibilities in accordance with the Rules of the Air.

Note 3. Compliance with the procedures contained within this manual and within UK Flight Information Services (CAP 774) and supplemented by local instructions are considered to meet the above objectives.

Flight Information Service

1.9 A FIS (defined in ICAO Annex 11 and transposed into EU Law through Reg (EU) No 923/2012) is a service provided for the purpose of giving advice and information useful for the safe and efficient conduct of flight and shall include the provision of pertinent:

- a) SIGMET and AIRMET information;
- b) information concerning pre-eruption volcanic activity, volcanic eruptions and volcanic ash clouds;
- c) information concerning the release into the atmosphere of radioactive materials or toxic chemicals;
- d) information on changes in the availability of radio navigation services;
- e) information on changes in condition of aerodromes and associated facilities, including information on the state of the aerodrome movement areas when they are affected by snow, ice or significant depth of water;
- f) information on unmanned free balloons;

and of any other information likely to affect safety (SERA.9005(a)).

1.10 Within the UK, the requirements for FIS are met through the provision of:

- a) AFIS; and
- b) A suite of services detailed in CAP 774 (www.caa.co.uk/CAP774), known collectively as the UK Flight Information Services, which comprises:
 - i. Basic Service;
 - ii. Traffic Service;
 - iii. Deconfliction Service;
 - iv. Procedural service.

Note. FISOs are not licensed to provide a Traffic Service, a Deconfliction Service, or a Procedural Service.

Alerting Service

1.11 An Alerting Service is provided to notify appropriate organisations regarding aircraft in need of search and rescue aid, and assist such organisations as required. Within the UK, an Alerting Service shall be provided in association with AFIS and all UK FIS.

Responsibility

1.12 FISOs may issue advice and shall issue information to aircraft in their area of responsibility, useful for the safe and efficient conduct of flights.

1.13 FISOs are not permitted to issue instructions, except for those circumstances in paragraph 1.14, or when relaying a clearance from an air traffic control unit. Pilots therefore are wholly responsible for collision avoidance in conformity with the Rules of the Air.

1.14 In granting or refusing permission under Rules 12 and 13 of the Rules of the Air, AFISOs are permitted to pass instructions to vehicles and personnel operating on the manoeuvring area, as well as:

- a) departing aircraft about to move or moving on the apron and manoeuvring area up to and including the holding point of the runway to be used for departure;
- b) departing aircraft required to utilise the runway for the purposes of taxiing, who will not subsequently vacate the runway prior to departure;
- c) arriving aircraft moving on the manoeuvring area and apron, following the completion of the landing roll;

- d) all other taxiing aircraft intending to move or moving on the apron and manoeuvring area, including the crossing of runways;
- e) to helicopters engaged in air taxiing for departure, up to and including the holding point of the runway to be used for departure or up to and including such other location on the aerodrome from which the helicopter will depart; and
- f) to helicopters engaging in air taxiing on completion of landing or that have reached the hover prior to air taxiing.

Elsewhere on the ground and at all times in the air, information shall be passed.

1.15 In providing advice to aircraft, FISOs should carefully consider whether such advice could be misconstrued as an instruction and should phrase that advice accordingly. The provision of advice by a FISO should be limited to those occasions where they consider that it is essential for the safe conduct of flight; for example the provision of advice on local joining procedures to arriving aircraft approaching the traffic circuit.

1.16 No person whose function is critical to the safety of aviation (safety-sensitive personnel) shall undertake that function while under the influence of any psychoactive substance, by reason of which human performance is impaired. No such person shall engage in any kind of problematic use of substances (SERA.2020).

Note. For the purposes of SERA.2020 and in accordance with Reg (EU) 923/2012 Article 2(116), FISOs are considered to be 'safety-sensitive personnel'.

Coordination between the Aircraft Operator and Air Traffic Services

1.17 EASA Regulations require that ATS units, in carrying out their objectives, shall have due regard for the requirements of the aircraft operators consequent on their obligations as specified in the relevant EU Regulation on Air Operations¹, and, if so required by the aircraft operators, shall make available to them or their designated representatives such information as may be available to enable them or their designated representatives to carry out their responsibilities (SERA.7005(a)).

Note. The expression 'due regard' is meant to indicate that the air traffic services units, in their coordination with the aircraft operators, should take into account the obligations of the operators specified in the European Union rules on air

¹ Reg (EU) 965/2012

operations, and provide them with the information they require to operate in accordance with those rules (SERA.7005(a) GM1).

- 1.18 When so requested by an aircraft operator, messages (including position reports) received by air traffic services units and relating to the operation of the aircraft for which operational control service is provided by that aircraft operator shall, so far as practicable, be made available immediately to the aircraft operator or a designated representative in accordance with locally agreed procedures (SERA.7005(b)).

Tactical co-ordination with other ATSUs

- 1.19 FISOs are not permitted to enter into tactical co-ordination with other ATSUs regarding aircraft receiving a service, due to the limitations of the FISO Licence.

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Chapter 2

Altimeter setting procedures

Units of pressure

- 2.1 Hectopascals (hPa) are the notified units for the measurements of pressure for flying within UK airspace. Pilots are normally expected to carry out their own conversion from hectopascals to inches of mercury if this is necessary and FISOs will only provide pressure settings in inches of mercury when specifically requested by an individual aircraft. A conversion table can be found in Appendix B.

Pressure setting

- 2.2 A correctly calibrated pressure altimeter when set to:
- a) QNH altimeter setting – will indicate altitude;
 - b) QFE altimeter setting – will indicate height above the reference datum.
- 2.3 Both of these settings are rounded down to the nearest whole hectopascal before being passed to the pilot. However, they are given to the nearest tenth of a hectopascal if requested.

System of flight levels

- 2.4 Flight Levels are measured with reference to the standard pressure setting of 1013.2 hPa. In the UK, consecutive Flight Levels above the transition level are separated by pressure intervals corresponding to 500 ft; at and above FL200, by pressure intervals corresponding to 1 000 ft (except in an active Temporary Reserved Area (TRA) where 500 ft pressure intervals are applied up to FL245).

Regional Pressure Setting

- 2.5 The Regional Pressure Setting is a forecast of the lowest QNH value within an Altimeter Setting Region (ASR). The values which are made available hourly for the period Hour (H) + 1 to (H) + 2 are given in whole hectopascals.
- 2.6 AFIS Units are to have available the Regional Pressure Setting for the ASR in which they are situated and appropriate adjacent regions. Area FIS Units are to have available Regional Pressure Settings for their area of coverage and appropriate adjacent regions. These values are to be passed to pilots when requested or at the discretion of the FISO. However, a pressure setting shall not be volunteered if a FISO is uncertain that it is appropriate to the flight.

- 2.7 Airspace below Terminal Control Areas (TMAs) and Control Areas (CTAs) listed in the UK Aeronautical Information Publication (AIP) at ENR 1-7-2 does not form part of the ASR Regional Pressure Setting system. Instead, the QNH of an adjacent aerodrome should be used for aircraft at or below the Transition Altitude.

Transition

Transition Altitude

- 2.8 Transition Altitude is the altitude at or below which the vertical position of an aircraft is normally controlled by reference to altitude (or height when QFE is used). Unless otherwise notified the Transition Altitude for civil aerodromes is 3,000 ft.

Transition Level

- 2.9 Transition level is the lowest Flight Level available for use above the transition altitude and shall be located at least a nominal 1000 ft above the transition altitude to permit the transition altitude and the transition level to be used concurrently in cruising flight, with vertical separation ensured. Except where an alternative means of calculating the transition level is detailed within local instructions, the transition level may be determined from the table in Appendix B as follows:
- a) Within controlled airspace by the controlling authority, where it will normally be based on the QNH of the major aerodrome:
 - b) Outside controlled airspace by the Aerodrome Operator, where it will be based on the aerodrome QNH.

Transition layer

- 2.10 Transition layer is the airspace between the Transition Altitude and the Transition Level.

Expression of vertical position of aircraft

- 2.11 A pilot normally assesses the vertical position of his aircraft above obstacles by using an accurately set altimeter. It is imperative, therefore, that FISOs always issue the correct pressure setting and that they check the readback from the pilot.
- 2.12 When transmitting altimeter pressure settings that are lower than 1,000 hPa, FISOs are to specify clearly the unit of measurement and pay particular attention to the readback.

- 2.13 The table below shows the altimeter subscale settings, the terms in which vertical position is reported and the occasions on which they are used to report to FIS Units.

Subscale setting	Expressed in terms	When used to report vertical position to FIS units
1013.2 hPa	FLIGHT LEVEL	- At, or above, the transition level. - Climbing through the transition layer. - Above 3,000 ft amsl and not in the vicinity of an aerodrome.
QNH	ALTITUDE	- At, or below, the transition altitude, i.e. in the vicinity of an aerodrome or beneath specified TMAs and CTAs listed in ENR 1-7-2. - Descending through the transition layer. - During final approach.
QFE	HEIGHT	During final approach, as local procedures require or when requested by the pilot.
REGIONAL PRESSURE SETTING	ALTITUDE	At, or below, 3,000 ft amsl when outside controlled airspace and not in the vicinity of an aerodrome.

Note. When an aircraft is climbing from an altitude to a Flight Level, vertical position will be reported in terms of Flight Level, unless intermediate altitude reports have been specifically requested by the FIS Unit. Similarly when a pilot is descending from a Flight Level to an altitude, the pilot will change to the aerodrome QNH unless further Flight Level vacating reports have been requested by the FIS Unit, in which case the QNH will be set following the final Flight Level vacating report.

Procedures at Aerodromes

- 2.14 Aerodrome elevation is the elevation of the highest point on the landing area. It is the elevation upon which the height for visual manoeuvring (circling) is based. In addition a threshold elevation is published for each runway.
- 2.15 The pressure settings associated with aerodrome and threshold elevation are expressed as QFE aerodrome and QFE threshold respectively. QFE threshold for an instrument runway is used when the threshold elevation is 7 feet or more below aerodrome elevation.

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Chapter 3

Flight Priorities

Table of flight priorities

- 3.1 Normally requests shall be dealt with in the order in which they are received and issued according to the traffic situation. However, certain flights are given priority over others and the following table shows the categorisation.

Category	Type of Flight
A	Aircraft in emergency (e.g. engine fault, fuel shortage, seriously ill passenger). Aircraft which have declared a 'Police Emergency'. Ambulance/Medical aircraft when the safety of life is involved.
B	Flights operating for search and rescue or other humanitarian reasons. Post-accident flight checks. Other flights, including Open Skies Flights, authorised by the CAA. Police flights under normal operational priority.
C	Royal Flights and Flights carrying visiting Heads of State which have been notified by NOTAM/Temporary Supplement.
D	Flights notified by the CAA carrying Heads of Government or very senior government ministers.
E	Flight check aircraft engaged on, or in transit to, time or weather critical calibration flights. HEMS flight positioning for the purpose of conducting their duties. Other flights authorised by the CAA.
NORMAL FLIGHTS	
i.	Flights which have filed a flight plan in the normal way and conform with normal routing procedures.
ii.	Initial instrument flight tests conducted by the CAA Flight Examining Unit (RTF callsign "EXAM").
Z	Training, Non-standard and other flights.

Minimum Fuel and Fuel Shortage

- 3.2 A pilot's declaration of "MINIMUM FUEL" indicates that an aircraft's fuel supply has reached a state where the flight is committed to land at a specific aerodrome (with not less than final reserve fuel) and no additional delay can be accepted (Reg (EU) 923/2012 Article 2(94a)).

Note. Final reserve fuel typically provides an additional period of flight of 30 minutes for turbine powered aeroplanes, 45 minutes for piston powered aeroplanes and 20 to 30 minutes for light helicopters (Reg (EU) 965/2012 'Air OPS').

- 3.3 There is no requirement to provide priority to pilots of aircraft that have declared "MINIMUM FUEL" or that have indicated that they are becoming short of fuel.
- 3.4 Whilst the meaning of the term "MINIMUM FUEL" has been standardised internationally, the RTF phraseology is not universally used by every aircraft operator and pilot.
- 3.5 Pilots declaring a fuel related emergency should use the following RTF phraseology "MAYDAY, MAYDAY, MAYDAY" or "MAYDAY, MAYDAY, MAYDAY FUEL" and shall be afforded flight priority category A (ICAO Annex 6).

Unusual Aerial Activity (UAA)

- 3.6 Unusual Aerial Activity (UAA) is a generic term which, in its ATS context, includes the following:
- a) A concentration of aircraft that is significantly greater than normal;
 - b) Activities that may require the issue of a Permission or an Exemption from the ANO or Rules of the Air Regulations;
 - c) Air Shows, Displays, Air Races or other competitions; and
 - d) Activities which require the establishment of a temporary ATSU.
- 3.7 FISOs may become involved in arrangements for UAAs, which can take place in any class of airspace. Approval and clearance for a UAA within controlled airspace rests with the relevant airspace controlling authority. However, many UAAs, whether in or outside controlled airspace, involve the AR in co-ordination with the sponsor and other participants and require notification of the event to the aviation community.
- 3.8 Early warning of all UAAs is essential if co-ordination and notification is to be completed in good time by AR. Notice requirements and the responsibilities of sponsors of UAAs are described in the UK AIP and Aeronautical Information Circulars (AICs). AR notifies affected ATS units of airspace reservations or

temporary procedures, which have been agreed with participating agencies by means of NOTAM and Airspace Co-ordination Notices. This initial dissemination may be supplemented by, or transferred to, Temporary Operating Instructions or other locally produced briefing material.

- 3.9 AR is responsible for the allocation of General Air Traffic (GAT) flight priorities and Non-Deviating Status (NDS) in addition to co-ordinating Temporary class D Controlled Airspace (CAS-T) requirements, Very Very Important Person (VVIP)/special/calibration flights, air-to-air refuelling, military deployments and exercises.

Police flights

- 3.10 A Police flight is defined as a flight by an aircraft operating under a Police Air Operator's Certificate, the purpose of which is to facilitate police operations, where immediate and rapid transportation is essential, which includes the following:
- a) Responding to a 'Police Emergency'. The pilot of a police aircraft is likely to declare a 'Police Emergency' in situations where an immediate response is required when life is at immediate risk or a serious crime or major incident is in progress;
 - b) Supporting ground personnel in often sensitive and serious operations; and
 - c) Non-standard and other flights.
- 3.11 The flight categories relevant to Police flying operations are:
- a) Flight Category A: authorised for use by aircraft which have declared a 'Police Emergency';
 - b) Flight Category B: normal operational priority. The operation will not wish to draw attention to itself. The pilot will be expecting the FISO to ask his intentions in the event that the flight would cause a delay to other traffic; and
 - c) Flight Category Z: authorised for training, test and other flights involving police aircraft.
- 3.12 The callsign for a Police flight consists of three elements:
- The radiotelephony callsign 'POLICE'. The ICAO three-letter telephony designator is 'UKP'.

- A two-digit individual aircraft identifier. Exceptionally, sequential three-digit identifiers will be allocated to units operating two or more aircraft. These will consist of a two-digit individual aircraft identifier based root followed by single digits to reflect the number of aircraft in a regional operation.
- When on an operational flight, the two or three-digit identifier is to be suffixed with the Flight Category letter, either 'A' or 'B' as appropriate, to highlight to the ATS provider the priority status requested by the pilot, e.g. 'POLICE 01A'. Flight Category 'Z' is not utilised as a callsign suffix.

Helicopter Emergency Medical Services (HEMS)

- 3.13 HEMS flights operate to incidents where an immediate response is required for the safety of life, e.g. road traffic accidents, and includes transporting patients to hospital.
- 3.14 The flight categories relevant to HEMS operations are:
- a) Flight Category A: applies to all HEMS flights on emergency operational tasks;
 - b) Flight Category E: is authorised for use by an aircraft positioning for the purpose of conducting HEMS duties, e.g. returning to its base after delivering a casualty to hospital. It is afforded priority over normal flights;
 - c) Flight Category Z: authorised for training, test and other flights involving HEMS aircraft.
- 3.15 The callsign for a HEMS flight consists of three elements:
- The radiotelephony callsign 'HELIMED'. The ICAO three-letter telephony designator is 'HLE'.
 - A two-digit individual aircraft identifier allocated to each HEMS aircraft by the .
 - When on a flight that is afforded priority, the two digit identifier is to be suffixed with the Flight Category letter, either 'A' or 'E' as appropriate, to highlight to the ATS provider the priority status requested by the pilot, e.g. 'HELIMED 01A'. Flight Category 'Z' is not utilised as a callsign suffix.
- On routine operational tasks, training or other flights, no suffix letter will be appended, e.g. 'HELIMED 01'.

Search and Rescue

- 3.16 Aircraft involved in Search and Rescue (SAR) operations will use callsigns prefixed by the word "RESCUE". Helicopters will prefix their callsigns "RESCUE HELICOPTER" but may abbreviate this to "RESCUE" after initial contact.

Mareva Injunctions

- 3.17 A Mareva injunction (variously known also as a freezing order, Mareva order or Mareva regime) is a court order which prevents a defendant from removing assets from the UK and, thus, from the jurisdiction of the court. FIS providers and their personnel may be notified of Mareva injunctions imposed on specific aircraft. Although an injunction is most likely to be served at the aerodrome where the aircraft is located, it is possible that an injunction could also be notified to a FIS unit in relation to an aircraft in flight.
- 3.18 Mareva injunctions relating to aircraft are likely to specify the aircraft registration rather than a particular callsign. Upon receipt of such a Mareva injunction, FIS providers should establish whether they are in communication with the aircraft in question.
- 3.19 Where an aircraft subject to a Mareva injunction is being provided with a FIS, FISOs should inform the pilot:
- “You are subject to a Court Order prohibiting your aircraft from leaving the United Kingdom, what are your intentions?”*
- This procedure is to be applied irrespective of whether the aircraft is conducting an internal UK or an international flight.
- 3.20 FISOs must not take any actions that would be detrimental to flight safety; consequently, FIS should continue to be provided as normal, even in the event that the pilot continues his flight. It should be noted that Mareva injunctions are relevant to international flight and that aircraft subject to such an injunction could be flying legitimately on an internal flight with no intention of leaving the UK territorial boundaries.
- 3.21 FIS providers should promulgate, as considered necessary, local procedures dealing with the circumstances of a Mareva injunction being served. In developing such local procedures, FIS providers should also consider taking legal advice as required in order to ensure that the procedures are consistent with legal obligations in relation to the injunction.

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Chapter 4

Flight Rules

Division of airspace

- 4.1 UK airspace is divided into two Flight Information Regions (FIRs). Within each region the airspace below FL245 is known as the Lower FIR and that at and above as the Upper Flight Information Region (UIR).

Classification of airspace

- 4.2 The classification of the airspace within an FIR determines the flight rules which apply. These are summarised below.

Class	Flight rules
A	IFR only
B	IFR and VFR (currently not established in the UK FIRs)
C	IFR and VFR
D	IFR and VFR
E	IFR and VFR
F	IFR and VFR (currently not established in the UK FIRs)
G	IFR and VFR

Aerodrome Traffic Zone (ATZ)

- 4.3 ATZs adopt the classification of airspace within which they are situated. Therefore aircraft flying within the ATZ are subject to the Rules of the Air, the specific conditions of the airspace, and the level of ATS provided at the particular aerodrome. At aerodromes where an AFIS or Air/Ground Communication Service (AGCS) is provided, pilots shall obtain information from the unit to enable the flight to be conducted safely within the zone and maintain a listening watch. Non-radio aircraft must comply with any conditions prescribed by the unit prior to the commencement of the flight.
- 4.4 The commander of an aircraft flying within the ATZ of an aerodrome shall:
- cause a continuous watch to be maintained on the appropriate radio frequency notified for communications at the aerodrome; or

- b) if this is not possible, cause a watch to be kept for such instructions as may be issued by visual means; and
- c) if the aircraft is fitted with means of communication by radio with the ground, communicate his position and height to the air traffic control unit, the FIS unit or the AGCS at the aerodrome (as the case may be) on entering the zone and immediately prior to leaving it.

Visual Flight Rules (VFR)

4.5 The pilot of an aircraft is responsible for determining whether or not the meteorological conditions permit flight in accordance with the VFR. The criteria for determining Visual Meteorological Conditions are summarised in the tables below (SERA.5001 Table S5-1).

By day	Distance from cloud		Flight visibility
	Horizontal	Vertical	
At and above FL 100			
Class <u>B</u> , C, D, E, F and G airspace	1 500 m	1 000 ft	8 km
<u>Below FL100 and above 3 000 ft AMSL, or above 1 000 ft above terrain, whichever is the higher</u>			
Class <u>B</u> , C, D, E, F and G airspace	1 500m	1 000 ft	5 km
<u>At and below 3 000 ft AMSL, or 1 000 ft above terrain, whichever is the higher</u>			
<u>Class B, C, D and E airspace</u>	<u>1 500m</u>	<u>1 000 ft</u>	<u>5 km</u>
Class G airspace	Clear of cloud and with the surface in sight		5 km

Alternatively, at and below 3 000 ft AMSL, flying at 140 kt IAS or less, to give adequate opportunity to observe other traffic or any obstacles in time to avoid collision		
Aircraft other than helicopters		
<u>Transiting Class D airspace and remaining outside the ATZ or aerodrome traffic circuit (ORS4 No. 1195)</u>	<u>Clear of cloud and with the surface in sight</u>	<u>5 km</u>
Class G airspace (<u>ORS4 No. 1067</u>)	Clear of cloud and with the surface in sight	1 500 m
For helicopters		
<u>Transiting Class D airspace and remaining outside the ATZ or aerodrome traffic circuit (ORS4 No. 1195)</u>	Clear of cloud and with the surface in sight	1 500 m
Class G airspace (<u>ORS4 No. 1067</u>)	Clear of cloud and with the surface in sight	1 500 m

By night	Distance from cloud		Flight visibility
	Horizontal	Vertical	
At and above FL100			
Class <u>B</u> , C,D,E, F and G airspace	1 500 m	1 000 ft	8 km
<u>Below FL100 and above 3 000 ft AMSL, or above 1 000 ft above terrain, whichever is the higher</u>			
Class <u>B</u> , C, D, E, F and G airspace	1 500 m	1 000 ft	5 km
<u>At and below 3 000 ft amsl, or 1 000 ft above terrain, whichever is the higher</u>			
Class <u>B</u> , C, D, E <u>airspace</u>	<u>1 500 m</u>	<u>1 000 ft</u>	<u>5 km</u>
	<u>The pilot shall maintain continuous sight of the surface</u>		
<u>Class F and G airspace</u>	<u>Clear of cloud, the pilot shall maintain continuous sight of the surface</u>		<u>5 km</u>

Note 1. The VMC criteria stated in the table above for flight by day in Class D and G airspace at or below 3 000 ft AMSL reflect changes from SERA.5001 Table S5-1, as permitted through exemption by the CAA.

Note 2. For VFR flight at night, the VMC criteria specified in the table above shall apply except that the ceiling shall not be less than 1 500 ft (SERA.5005(c)(3)(i)).

Note 3. Except where Note 4 applies, for fixed-wing and helicopter flights wishing to operate under VFR to or from an aerodrome, or enter the aerodrome traffic zone, or aerodrome traffic circuit in Class D airspace the ground visibility at the aerodrome shall be used.

Note 4. The UK CAA has issued exemptions within the Official Record Series (ORS) 4 – Miscellaneous, which permit the operator and commander of a helicopter registered in the UK and conducting Police, HEMS or Search and Rescue (SAR) flights, including SAR training flights operating in accordance with a Letter of Agreement with the ATS provider, to operate with cloud ceiling, visibility and distance from cloud lower than those specified above, to the extent necessary to achieve the purpose of the flight and in circumstances that render such departure necessary in the interests of safety.

Instrument Flight Rules (IFR)

4.6 A pilot must fly according to the IFR:

- if the airspace has been notified as class A;
- if the meteorological conditions preclude VFR flight.

4.7 The IFR require a pilot to observe the minimum height rule and additional rules according to the type of airspace. These are summarised below.

- Within controlled airspace (classes A to E):
 - a) File a flight plan and obtain a clearance before proceeding with the flight;
 - b) Conduct the flight in accordance with clearances and instructions from ATC;
 - c) Maintain a listening watch on the appropriate radio frequencies; and
 - d) Report the position of the aircraft according to published procedures.

4.8 Outside controlled airspace:

Comply with the semi-circular rule (SERA.5025(a)) when in level flight above 3,000ft amsl. The altimeter is set to 1013.2mb and the cruising level is selected according to the magnetic track unless the aircraft is holding according to published procedures or is otherwise instructed by ATC.

Semi-circular rule – flights at levels below FL195:

Magnetic track	Cruising level
From 000° to 179°	FL030, 050, 070, 090, etc. up to FL190
From 180° to 359°	FL040, 060, 080, 100, etc. up to FL180

Speed limit

Airspace Speed Limit (SERA.6001)

4.9 Aircraft flying below FL100 are required to observe, with exceptions, a speed limit of 250 kt IAS. Such a limit is an essential component of the 'see and avoid' principle and is in addition to speed limits which may be notified for specific procedures.

4.10 The 250 kt IAS speed limit does not apply to:

- flights in Class A and B airspace;
- IFR flights in Class C airspace;
- exempted VFR flights in Class C airspace when authorised by an ATC unit;
- exempted flights in Class D airspace when authorised by an ATC unit;
- test flights in accordance with specified conditions;
- aircraft taking part in flying displays when authorised by the CAA;
- aircraft subject to a written permission granted by the CAA;
- State aircraft such as military aircraft.

Note. Aircraft type and Aircraft Operator combinations exempt from the Class D airspace speed restriction on departure are published in the UK AIP according to the aerodrome to which they apply.

4.11 In Class E, F and G airspace, conflicting traffic may not be known to ATS providers and so it is necessary for all flights to make use of the 'see and avoid' principle. The speed limitation of 250 kt for VFR flights in airspace Classes C, D, E, F, G and for IFR flights in airspace Classes D, E, F, G is intended to facilitate visual acquisition of flights which are not separated (GM1 SERA.6001(b)). As such, with the exception of those flights described in 4.10 (e) to (h) above, the 250 kt IAS speed limit will not be relaxed in Class E, F and G airspace.

Procedure Speed Limits

- 4.12 A speed limitation may be published within specific Instrument Approach Procedures (IAPs) in order to assist the pilot in obstacle avoidance. FISOs are not permitted to issue advice which could be misconstrued as a relaxation of any such speed limitation.

Filing of flight plans

- 4.13 Flight plans fall into two categories:
- a) Full flight plans: the information required on Form CA48/RAF2919.
 - b) Abbreviated flight plans: the limited information required to obtain a clearance for a portion of flight, e.g. flying in a control zone, crossing an airway etc. filed either on the Radiotelephone (RTF) or by telephone prior to take-off.
- 4.14 The local FIS Unit may assist in compiling flight plans and checking them. However, the ultimate responsibility for filing an accurate flight plan rests with the pilot or aircraft operator.
- 4.15 The destination aerodrome will be advised of the flight only if the flight plan information covers the whole route of the flight and if they have the capability to receive Air Movement Messages over the Aeronautical Fixed Telecommunications Network (AFTN).
- 4.16 An airborne flight plan may be filed provided that the pilot leaves sufficient time for the clearance to be issued before the aircraft reaches the boundary of controlled airspace (normally 10 minutes).
- 4.17 A pilot may file a flight plan for any flight.
- 4.18 A pilot is required to file a flight plan for (SERA.4001(b)):
- a) any flight or portion thereof to be provided with an air traffic control service;
 - b) any IFR flight within advisory airspace;
 - c) any flight within or into areas, or along routes designated by the Authority, to facilitate the provision of flight information, alerting and search and rescue services;
 - d) any flight within or into areas or along routes designated by the Authority, to facilitate coordination with appropriate military units or with air traffic service units in adjacent states in order to avoid the possible need for interception for the purposes of identification prescribed by the States concerned;

- e) Any flight across international boundaries;

Note. For the purposes of SERA.4001(b)(5) 'Submission of a flight plan' in the UK, the international borders for flight planning purposes are the international FIR boundaries.

- f) Any flight planned to be operated at night, if leaving the vicinity of an aerodrome.

4.19 A pilot is advised to file a flight plan:

- a) if his flight involves flying over the sea more than 10 miles from the UK coast or flying over sparsely populated areas where Search and Rescue (SAR) operations would be difficult; or
- b) if they intend to fly into an area in which SAR operations are in progress. The flight plan should include the expected times of entering and leaving the area and the details must also be passed to the parent ACC. The ACC is to notify the Aeronautical Rescue Co-ordination Centre (ARCC) concerned.

4.20 A pilot who has filed a flight plan to a destination without an ATSU and/or not connected to the AFTN shall comply with the following procedure:

- a) Nominate a responsible person at his destination and inform him of the planned ETA. If the aircraft fails to arrive within 30 minutes of the ETA the responsible person will notify the parent ATSU. That ATSU will then initiate Alerting action; or
- b) If no responsible person can be found, the pilot will contact the parent ATSU and request that they act in the same capacity. The pilot is then required to inform the parent ATSU of his arrival within 30 minutes of the notified ETA, otherwise Alerting action will automatically be initiated.

Availability of supplementary flight plan information

4.21 Where the operator or departure handling agency of an aircraft at the aerodrome from which it departs closes before ETA at destination plus one hour, they will advise the FIS Unit at the departure aerodrome of the number of persons on board. If there is no FIS Unit, the aerodrome operator or departure handling agency will file with the parent ACC the name and address of a person who has access to flight departure records.

4.22 If the FIS Unit at the departure aerodrome closes before ETA at destination plus one hour, the AFISO shall forward the details contained in field 19 of the flight plan form to the parent ACC ensuring that any change to the endurance or number of persons on board is included.

Booking-out

- 4.23 Pilots who do not file a flight plan either full or abbreviated, are required to inform the AFIS Unit at the aerodrome of their departure. This is referred to as booking-out. The AFIS Unit is to record the departure. No further action is required.

Infringement of legislation

- 4.24 When notification of a flight is received, which if completed as planned, would involve a breach of regulations, the attention of the pilot should be drawn to the probable infringement. The warning should be recorded in the watch log.

Weather minima

- 4.25 A FISO is not responsible for ensuring that pilots observe their weather minima and shall not initiate action in this respect or query the right of a pilot to attempt a landing or take-off.

Non standard flights and exemptions

- 4.26 All requests from operators for exemption from the legislation for particular flights shall be referred to the appropriate ACC.

Failure of navigation lights

- 4.27 The ANO requires that an aircraft shall not depart from an aerodrome at night if there is a failure of any light which the ANO requires to be displayed and the light cannot be immediately repaired or replaced. If the aircraft is in flight, the aircraft shall land as soon as it can safely do so, unless authorised by the appropriate air traffic control unit to continue its flight.
- 4.28 FISOs shall notify pilots if they become aware that the aircraft has experienced failure of any navigation or anti-collision light. FISOs shall not issue authority for pilots to continue flight when they experience failure of any navigation light required by the Air Navigation Order, as this may only be issued in certain circumstances by an air traffic control unit. In such circumstances the FISO should contact the parent ACC.

Operations of aircraft with unserviceable equipment

- 4.29 Notwithstanding paragraphs 4.24 and 4.25, decisions regarding the serviceability of an aircraft for flight are the sole responsibility of the pilot in command.

Action when captive balloons break free

- 4.30 When a FIS Unit receives information that a captive balloon has broken free, the appropriate ACC shall be telephoned without delay stating:
- The type of balloon and whether carrying any person;

- Position of balloon site;
- Direction and speed of drift;
- Last observed height;
- Length of cable attached to balloon; and
- The balloon operator's name and telephone number.

Radio Mandatory Zones (RMZ)

- 4.31 A RMZ is airspace of defined dimensions wherein the carriage and operation of suitable/appropriate radio equipment is mandatory. RMZ airspace is to be operated in accordance with the regulations pertaining to the background airspace classification.
- 4.32 Flights operating in airspace designated as an RMZ by the CAA, shall establish two-way communication before entering the RMZ and maintain a continuous air-ground voice communication watch, as necessary, on the appropriate communication channel, unless in compliance with alternative provisions prescribed for that particular airspace by the Controlling Authority. If unable to establish two-way radio communication with the designated RMZ Controlling Authority the pilot is to remain outside the RMZ.
- 4.33 Two-way communication is considered to have been achieved once the pilot has provided at least the following information on the appropriate communications channel:
- Callsign;
 - Type of aircraft;
 - Position;
 - Level;
 - Intentions of the flight.
- 4.34 When taking off from a site within the RMZ where communications prior to getting airborne are not possible, the pilot shall, whilst maintaining compliance to published local Letters of Agreement or Memoranda of Understanding, establish two-way communication with the RMZ Controlling Authority at the earliest opportunity once airborne.
- 4.35 The pilot of an aircraft that wishes to operate in an RMZ without the necessary radio equipment is to operate in accordance with conditions promulgated for the specific RMZ or in accordance with agreed tactical arrangements with the RMZ Controlling Authority. If a pilot is unable to make such tactical arrangements they are to remain outside the RMZ, unless in an emergency.

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Chapter 5

Airborne Collision Avoidance System (ACAS)

Introduction

- 5.1 Airborne Collision Avoidance Systems (ACAS) are an aircraft system based on SSR transponder signals, which operates independently of ground-based equipment to provide advice to the pilot on potential conflicting aircraft that are equipped with SSR transponders.
- 5.2 From December 2015, the carriage of ACAS II Traffic Alert and Collision Avoidance System (TCAS) II, software version 7.1 was mandated within European Union airspace for all civil aeroplanes with a maximum take-off mass (MTOM) exceeding 5 700 kg or with a maximum approved seating configuration of more than 19 passengers. Aircraft outwith these criteria but which are equipped with ACAS II on a voluntary basis must be equipped with version 7.1. Certain military aircraft may also be TCAS II equipped. Civil registered historical and ex-military turbine-engine aircraft are exempted from this requirement.
- 5.3 Aircraft Operators experiencing ACAS equipment failure may request permission to operate in UK airspace for up to 10 days in accordance with current TCAS II Minimum Equipment List provisions. Due to the safety benefits arising from TCAS operations and the collaborative way in which it arrives at collision avoidance solutions, any aeroplane with an unserviceable transponder as well as an unserviceable TCAS will not be permitted in UK airspace for which mandatory carriage of a transponder is required.
- 5.4 The carriage and use of TCAS II acts only as a safety net, and does not in any way alter the respective responsibilities of pilots and air traffic service staff for the safe operation of aircraft

TCAS II warnings

- 5.5 TCAS II encounters may take place within all classifications of airspace. TCAS II equipment reacts to the transponders of other aircraft to determine whether or not there is a potential risk of collision. The warning, based on the time to an assumed collision, enables the pilot to identify the conflicting traffic and, if necessary, take avoiding action.

Warnings for aircraft equipped with TCAS II are given in two steps:

1. Typically 40 seconds before the assumed collision*
- Traffic Advisory (TA) warning.

- Pilots are advised not to take avoiding action on the basis of TA information alone but may ask for traffic information.
 - Pilot looks for conflicting aircraft visually.
 - Does NOT manoeuvre.
2. Typically 25 seconds before the assumed collision*
- Resolution Advisory (RA) warning.
 - Pilot receives advice to climb, descend or maintain their existing flight profile.
 - Rate of climb or descent may also be given.
 - Pilots are expected to respond immediately but have been instructed to restrict manoeuvres to the minimum necessary to resolve the confliction, advise the FIS unit as soon as is practical thereafter and return to their original flight path as soon as it is safe to do so.

* The times quoted vary with altitude and these examples relate to an aircraft between 5 000 ft and 10 000 ft AMSL. The times will increase or decrease, above or below that level respectively.

- 5.6 If a conflicting aircraft is not reporting altitude, a Traffic Advisory (TA) may be given, but not a Resolution Advisory (RA).
- 5.7 RAs will be presented only if the conflicting aircraft is transponding on Mode C or Mode S. Where both aircraft in an encounter are fitted with TCAS II, the transponders will communicate with each other to agree complementary RAs. If the conflicting aircraft is not transponding, no warnings are given.
- 5.8 TCAS II is programmed to take account of the host aircraft's performance characteristics and level when issuing RAs.

ACAS phraseology

- 5.9 Specific ICAO ACAS phraseology has been adopted. The phraseology is clear, simple, concise and to the maximum extent devoid of ambiguity and potential to cause operational confusion.
1. When a flight crew responds to a RA:
- Pilot: (C/S) TCAS RA
 - FISO: (C/S) ROGER
2. After the RA response is completed:
- Pilot: (C/S) CLEAR OF CONFLICT RETURNING TO (previous level)
 - FISO: (C/S) ROGER