

AERONAUTICAL INFORMATION CIRCULAR Y 127/2019

UNITED KINGDOM



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CHANGES TO CLASS E ATS PROCEDURES – EFFECTIVE 27 FEBRUARY 2020 (AIRAC 03/2020)

1 Introduction

- 1.1 The purpose of this Aeronautical Information Circular (AIC) is to inform airspace users of the changes to Class E Airspace ATS procedures that will take effect on **27 February 2020**.

2 Class E Airspace - General

- 2.1 Instrument flight rules (IFR) and visual flight rules (VFR) flights are permitted within Class E Airspace. IFR flights do so subject to an ATC clearance and are provided with air traffic control (ATC) service and are separated from other IFR flights. Traffic information on VFR flights will be provided as far as practicable, and when a surveillance-based ATS is being provided, traffic avoidance advice will be suggested when requested by the pilot or if deemed necessary by ATC.
- 2.2 In contrast, VFR flights may be operated within Class E Airspace without an ATC clearance, nor must they be in receipt of an ATS. However, pilots of VFR flights may choose to receive an ATS, in which case they will receive traffic information in accordance with CAP 774 - UK Flight Information Services and will remain responsible for collision avoidance with IFR flights and other VFR flights.
- 2.3 Class E Airspace is not used for control zones.

3 Class E ATS Procedure Changes

- 3.1 Following operational feedback and responses to industry consultation (see CAP 1800 - Change Proposals for Class E ATS Procedures: Consultation Report), the CAA concluded that several changes to extant ATS procedures would better serve the needs of ANSPs and airspace users within Class E Airspace.

- 3.2 Changes to SSR transponder procedures will be introduced as follows:

- a VFR conspicuity code, which requires the redefinition of the Mode A7000 transponder code;
- an IFR conspicuity code, which requires the redefinition of the Mode A2000 transponder code; and
- the ability for an ANSP to additionally notify a frequency monitoring code (FMC) for the purposes of VFR conspicuity within Class E Airspace.

These measures will enable pilots to indicate the flight rules to which they are flying, thus facilitating the application of ATS procedures that are more closely aligned with ICAO's requirements of Class E Airspace.

- 3.3 RTF procedures will be refined. Informing pilots of the change of airspace classification when entering and exiting Class E Airspace will be limited to:

- controlled IFR flights in the event of an unplanned diversion, and
- IFR flights that have not filed a flight plan by the time a clearance to enter Class E Airspace is requested.

This reduces the radiotelephony workload for controllers and pilots.

- 3.4 Changes to traffic avoidance advice and traffic information RTF procedures will be refined.

- a) In addition to separation from other IFR flights, pilots of IFR flights within Class E Airspace will whenever practicable, be provided with traffic information on aircraft indicating VFR conspicuity, and when a surveillance-based ATS is being provided, traffic avoidance advice shall be suggested if the pilot so requests or if the situation so warrants in the opinion of the controller.
- b) Pilots of IFR flights requiring traffic avoidance advice in response to the provision of traffic information must use the RTF phraseology "request vectors". When traffic avoidance advice is provided, controllers shall aim to prevent surveillance returns from merging.

- c) When the flight rules of an unknown aircraft cannot be determined, the surveillance returns of the IFR flight and unknown aircraft however presented will not be allowed to merge.

These measures introduce ATS procedures that are consistent with ICAO's definition of Class E Airspace, which are transposed into Regulation (EU) No 923/2012 Standardised European Rules of the Air SERA.6001(e).

4 Operations within Class E and impacts of the changes upon airspace users

4.1 Pilots are required to be aware at all times of the classification of the airspace through which they fly, and to understand the differences between each classification. In addition, pilots must comply with any airspace requirements applicable to specific airspaces, such as TMZ, and understand how these will affect their flight. Unlike airspace classifications C and D, VFR flights within Class E Airspace are uncontrolled and may not be in receipt of an ATS. Consequently, this may diminish the ability of an ATS unit to detect a collision hazard and provide timely and accurate traffic information and/or traffic avoidance advice within Class E Airspace.

4.2 IFR flights:

- unless entering Class E Airspace from another controlled airspace classification (classes A to D), an ATC clearance is required prior to entering Class E Airspace;
- unless engaging in an unplanned diversion or no flight plan has been received at the time a clearance to enter controlled airspace is requested, no alert will be provided by the controlling ATS unit when entering and leaving Class E Airspace; and
- unlike other controlled airspace classifications there will be occasions when the 'see and avoid' principle will be only method of detecting and avoiding collisions with VFR flights, especially within Class E Airspace that is not additionally notified as TMZ.

4.3 VFR flights:

- Although VFR flights are not required to be in receipt of an ATS, it is recommended that pilots seek to obtain a Basic Service or a Traffic Service (see CAP 774) from the controlling ATS authority for the volume of Class E Airspace through which they intend to fly.
- Pilots of VFR flights are responsible for:
 - collision avoidance irrespective of whether an ATS (UK FIS) is obtained;
 - complying with the applicable Class E Airspace VMC requirements;
 - complying with any applicable TMZ that might exist and comply with ENR 1.4 paragraph 2.5.1.2 or comply with a specific instruction from ATS concerning the setting of the transponder; and
 - complying with SERA.13001 and comply with ENR 1.4 paragraph 2.5.1.2 or comply with a specific instruction from ATS concerning the setting of the transponder.
- Pilots should note that, compared to uncontrolled (class G) airspace, there is a greater likelihood of encountering faster and heavier aircraft types within Class E Airspace.

4.4 Pilots who inadvertently enter instrument meteorological conditions (IMC) but are not qualified to fly in IMC should, whilst maintaining control of the aircraft, initiate an appropriate course of action to vacate IMC and when safe to do so:

- a) select transponder code A7700; and/or
- b) declare an emergency with the designated ATS authority or with the Distress and Diversion cell (121.5 MHz).

5 Implementation of Changes and Effective Date

5.1 The measures detailed above will take effect on 27 February 2020 (AIRAC 03/2020) and will be incorporated into:

- The UK Aeronautical Information Publication (AIP);
- Civil Aviation Publication (CAP) 413 – Radiotelephony Manual; and
- CAP 493 – The Manual of Air Traffic Services (MATS) Part 1.

5.2 For further details see Annexes A, B and C.

ANNEX A

UK Aeronautical Information Publication (AIP) Amendments

1. ENR 1.4

1.1 Referencing UK FIS for VFR flights and clarifying Class E Airspace traffic information and traffic avoidance advice provision principles to ENR 1.4 paragraph 2.5:

	IFR	VFR
Service	Air Traffic Control Service	Traffic information in accordance with UK FIS (Basic Service or Traffic Service) – see ENR 1.1, ENR 1.6 and Civil Aviation Publication (CAP) 774 – UK Flight Information Services.
Separation	Separation provided between IFR flights by ATC. Whenever practicable, traffic information is provided on VFR flights and if requested by the pilot or if deemed necessary by the controller, traffic avoidance advice will be suggested (See Note 3 and 4).	None.
ATC Rules	Flight Plan required (See Note 1 and 2); ATC clearance required; Radio Communication required; ATC instructions are mandatory.	None. However, pilots are encouraged to contact ATC and comply with instructions.
VMC Minima	Not applicable.	At or above FL 100: 8 KM flight visibility 1500 M horizontal and 1000 FT vertical distance from cloud; Below FL 100: 5 KM flight visibility 1500 M horizontal and 1000 FT vertical distance from cloud.
Speed Limitation	Below FL 100: 250 KT IAS; OR Lower when published in procedures or instructed by ATC.	

Note 1: In certain circumstances, Flight Plan requirements may be satisfied by passing flight details on RTF (detailed at ENR 1.10).

Note 2: Pilots of IFR flights will be advised when they enter and leave Class E Airspace if the flight is an unplanned diversion or no flight plan has been filed prior to requesting a clearance to enter controlled airspace.

Note 3: Pilots of IFR flights and VFR flights receiving an ATS should be aware of the existence of factors that might adversely affect the ability of a controller to detect a collision hazard and provide timely and accurate traffic information and / or traffic avoidance advice within Class E Airspace. Such factors include:

- the inability of an ATSU to restrict the volume of VFR flights operating within Class E Airspace;
- the inability of an ATSU to anticipate changes in the flightpath of every VFR flight;
- the inability of an ATSU to detect collision hazards on every occasion because of surveillance clutter;
- the inability of an ATSU to provide timely transmissions on every occasion because of RTF congestion;
- the expectation that pilots receiving an ATS will respond appropriately following receipt of traffic information; and
- the requirement for the provision of an air traffic control service to have precedence over the provision of flight information service (SERA.9001(c)).

Note 4: Pilots must consider the need for traffic avoidance advice upon receipt of traffic information. Pilots who require traffic avoidance advice must make a corresponding request as soon as is practicable.

1.2 New paragraph 2.5.1.2:

2.5.1.2 Pilots of VFR flights who wish to operate without receiving an ATS within Class E Airspace in an aircraft with a serviceable transponder, or within Class E Airspace additionally notified as TMZ must display either:

- a) the VFR conspicuity code Mode A7000, with altitude reporting; or
- b) the frequency monitoring code defined as VFR conspicuity with altitude reporting established for use in that airspace (see ENR 1.6).

2. **ENR 1.6**

2.1 The addition of IFR conspicuity code text to paragraph 2.2.1 e):

2.2.1 e) Code 2000. When:

- i. entering United Kingdom airspace from an adjacent region where the operation of transponders has not been required; or
- ii. when operating within United Kingdom airspace in accordance with IFR and is either not receiving an ATS or has not received a specific instruction from ATS concerning the setting of the transponder; or
- iii. unless instructed otherwise by ATS, Mode S transponder equipped aircraft on the aerodrome surface when under tow, or parked and prior to selecting Off or STBDY.

2.2 The addition of VFR and IFR conspicuity code text to paragraph 2.2.2.1.3:

2.2.2.1.3 Types:

*7000 – VFR conspicuity code: when operating within United Kingdom airspace in accordance with VFR and have not received a specific instruction from ATS concerning the setting of the transponder.

*2000 – IFR conspicuity code: when operating within United Kingdom airspace in accordance with IFR and have not received a specific instruction from ATS concerning the setting of the transponder.

ANNEX B

Civil Aviation Publication (CAP) 413 (Radiotelephony Manual) Amendments

1. The addition of the following text exemplar phraseology to paragraph 5.9:

The pilot must respond to SSR instructions, reading back specific settings.
ATC: "BIGJET 347, squawk conspicuity"
Pilot: "Squawk conspicuity, BIGJET 347"

Note: *Conspicuity codes are listed in the UK AIP ENR 1.6 paragraph 2.2.2.1.3*
2. The addition of the following text and exemplar phraseology to paragraph 5.12:

Additionally, pilots of IFR flights will be advised when they enter or leave Class E Airspace in the following circumstances:
A) when the flight is an unplanned diversion; or
B) when no flight plan has been filed at the time a clearance to enter controlled airspace is requested.
ATC: "(Entering / leaving) Class Echo airspace"
Pilot: "(Entering / leaving) Class Echo airspace"
3. The addition of the following text and exemplar phraseology to paragraph 5.27:

Or in Class E Airspace when traffic avoidance advice is requested by a pilot following receipt of traffic information:
ATC: "BIGJET 347, VFR traffic right 2 o'clock, 6 miles converging no height information slow moving"
Pilot: "Request vectors, BIGJET 347"
ATC: "BIGJET 347, avoiding action, turn left immediately heading 270 degrees"
Pilot: "Left heading 270 degrees, BIGJET 347"

ANNEX C

CAP 493 (The Manual of Air Traffic Services Part 1) Amendments

1. The amendment of section 1, chapter 2, paragraph 2.2:

2.2 Notwithstanding the minimum service requirements associated with each airspace classification, the primary objective of the air traffic services is to prevent collisions between aircraft (SERA.7001(a)). In support of this objective, on any occasion a controller considers it necessary in the interests of safety, traffic information and where appropriate, traffic avoidance advice shall be provided. Pilots are responsible for collision avoidance (SERA.3201) and should be aware of the existence of factors that might adversely affect the ability of a controller to detect a collision hazard and provide timely and accurate traffic information, and when surveillance-based ATS is being provided, traffic avoidance advice.

2. The addition of the following text to section 1, chapter 6:

1B.3 Additionally, pilots of IFR flights must be advised of the change of airspace classification when entering and leaving Class E Airspace when the flight is:

- (1) an unplanned diversion; or
- (2) no flight plan has been filed at the time a clearance to enter controlled airspace is requested.

The associated phraseology is contained within CAP 413.

3. The amendment of Class E Airspace elements to section 1, chapter 6:

10A.4 Aircraft Under Radar Control Service. If the intentions of verified Mode S altitude reporting or Mode C transponding aircraft are not known the minimum separation is for:

- (1) IFR flights within Class A, C-E airspace, must be increased to 5000 FT, or alternative approved minima within MATS Part 2; and
- (2) VFR flights within Class C airspace, must be increased to 5000 FT, or alternative approved minima within MATS Part 2.

10A.5 Unverified Mode S altitude reporting or Mode C data may be used for separation purposes within controlled airspace as follows:

- (1) for IFR flights within Class A, C and D airspace, and VFR flights within Class C airspace, a minimum vertical separation of 5000 FT, or an alternative approved minima within MATS Part 2, and surveillance returns however presented are not allowed to merge;
- (2) for IFR within Class E Airspace, except against aircraft displaying VFR conspicuity or a Frequency Monitoring Code, a minimum vertical separation of 5000 FT, or an alternative approved minima within MATS Part 2, and surveillance returns however presented are not allowed to merge; and
- (3) for IFR flights within Class E Airspace, against aircraft displaying VFR conspicuity or a frequency monitoring code, wherever practicable, pass traffic information and if requested by the pilot or when deemed necessary by the controller, suggest traffic avoidance advice.

Note: The procedure in (2) & (3) only applies to Frequency Monitoring codes notified for the purposes of VFR within Class E Airspace.

10A.6 Aircraft that do not meet the published operating requirements for a particular volume of TMZ may be deemed to be operating outside that TMZ unless:

- (1) the controller has approved such an aircraft to enter TMZ Airspace without identifying the aircraft using an appropriate method; or
- (2) information received indicates that an aircraft is lost or has experienced a radio failure.

10A.7 When suggesting traffic avoidance advice, controllers shall aim to prevent surveillance returns from merging.

15.2 The action to be taken by controllers when they observe an unknown aircraft, which they consider to be in unsafe proximity to traffic receiving an ATS varies according to the airspace classification in which the event takes place as follows:

Table 5

Class	Action to be taken by the Controller
A	If surveillance derived or other information indicates that an aircraft is making an unauthorised penetration of the airspace, is lost, or has experienced radio failure, flights shall be given traffic avoidance advice and traffic information shall be passed.

Class	Action to be taken by the Controller
C	<p>If surveillance derived or other information indicates that an aircraft is making an unauthorized penetration of the airspace, is lost, or has experienced radio failure:</p> <p>IFR flights shall be given traffic avoidance advice and traffic information shall be passed.</p> <p>VFR flights shall be given traffic information and if requested by the pilot or when deemed necessary by the controller, traffic avoidance advice shall be suggested.</p>
D	<p>If surveillance derived, or other information, indicates that an aircraft is making an unauthorized penetration of the airspace, is lost, or has experienced radio failure:</p> <p>IFR flights shall be given traffic avoidance advice and traffic information shall be passed.</p> <p>VFR and SVFR flights shall be given traffic information and if requested by the pilot or when deemed necessary by the controller, traffic avoidance advice shall be suggested; see note 1.</p>
E	<p>Pass traffic information unless the controller's primary function of sequencing and separating IFR flights is likely to be compromised.</p> <p>IFR flights shall be given traffic avoidance advice if surveillance derived or other information indicates that an aircraft is lost, or has experienced a radio failure, or an aircraft operating in accordance with IFR infringes Class E Airspace; see note 3.</p> <p>IFR flights shall be given traffic information whenever practicable and if requested by the pilot or when deemed necessary by the controller, traffic avoidance advice shall be suggested; and</p> <p>Participating VFR flights shall be given traffic information in accordance with CAP 774 – UK Flight Information Services.</p>
G	<p>Flights receiving either the Deconfliction Service or Procedural Service shall be given traffic information and deconfliction advice in accordance with CAP 774 – UK Flight Information Services; see note 2, and</p> <p>Flights receiving either the Traffic Service or Basic Service shall be given traffic information in accordance with CAP 774 – UK Flight Information Services.</p>

Note 1: When providing traffic avoiding advice, controllers shall remind pilots of their responsibility to remain clear of cloud with the surface in sight.

Note 2: When the controller considers that more immediate action is required by the pilot, traffic avoidance advice may be passed by ATC before traffic information.

Note 3: Whenever the flight rules employed by pilots of unknown aircraft cannot be determined the procedure detailed in section 1, chapter 6, paragraph 10A.5(2) shall be applied.