



## SAFETY NET OPERATING IN CLASS D AIRSPACE

Whether operating at a Metropolitan Class D (ex-GAAP) or a Regional Class D aerodrome, the principles of operating within Class D airspace are the same.

This Safety Net aims to clarify several of the common areas of confusion based on the questions and incident reports received. It does not cover all scenarios or procedures and is not to be considered the authoritative information source—readers should always refer to AIP.

Common questions/incidents relate to:

- the level of separation provided to IFR and VFR aircraft operating in Class D airspace
- the requirement to follow ATC instructions and clearances
- confusion regarding the abbreviated clearance process— outbound and inbound
- aircraft manoeuvring to maintain separation with another aircraft in such a way that causes a TCAS Resolution Advisory (RA) alert
- the requirement to give a departure report.

### SEPARATION STANDARDS

In Class D airspace, all flights are provided with an air traffic control service.

IFR flights are separated from other IFR and special VFR flights, and receive traffic information (not separation) in respect to VFR flights.

VFR flights receive traffic information in respect to all other flights.

Special VFR flights are separated from other special VFR flights when visibility is less than VMC.

Under certain conditions, the pilot of one aircraft may be given responsibility for separation with other aircraft. For example, there may be instances where an aircraft has been instructed to maintain separation from, or pass behind, an IFR aircraft. In this situation, ATC will issue traffic information to the pilot of the IFR aircraft, including advice that responsibility for separation has been assigned to the other aircraft.

- Remember: if at any stage you are unable to sight or if you lose sight of traffic, advise ATC.
- If you need to take avoiding action, do so and advise ATC immediately.

When conditions permit, pilots of IFR aircraft are encouraged to operate VFR within Class D airspace whenever possible and advise ATC by either cancelling IFR or requesting a VFR departure. This may help remove

delays caused by separation requirements for IFR flights within the zone and adjoining airspace. Traffic information and sequencing will be provided. Remember, if changing to operate VFR, you must be able to continue to operate in VMC.

### SIGHT AND FOLLOW AND RUNWAY SEPARATION (REF: AIP ENR 1.1, 14.6)

A regular occurrence at Class D aerodromes is ATC having to send an aircraft around due to aircraft being closer than the minimum distance required to allow a takeoff or landing (the runway separation standard). The runway separation standard is determined by several factors and can also vary depending on whether ATC are separating two arrivals, two departures or a combination. This standard is also different for helicopters.

Two major factors influencing the distance are the aircraft Maximum Take Off Weight (MTOW) and the aircraft speed over the landing threshold. As the MTOW and landing speed increases, so too does the distance required. As a rough guide, the minimum distance ATC requires between aircraft is 600 m for two arrivals or two departures by light GA aircraft (MTOW no more than 2000 kg).

- If you are following an aircraft, ensure you allow enough spacing so that by the time you are over the threshold the preceding aircraft is the prescribed distance ahead, or clear of the runway.

### CLEARANCES

All aircraft require a clearance to operate in, or transit through, Class D airspace. Pilots must establish and maintain two-way communications with the tower and receive clearance (either abbreviated or full) prior to entering the airspace.

Is the tower active?

- If you are unsure if the tower is active, listen to the ATIS. If the tower is not active, the ATIS will be information ZULU and will include the time of tower activation and CTAF frequency.

Check ERSAs and NOTAMs for the airports involved in your flight. Often there are local traffic regulations promulgated which specify departure and arrival procedures (tracks and altitudes).

Consider obtaining your departure airways clearance prior to taxi. This helps reduce the length of transmissions, workload, and errors in readbacks.

On initial contact, you must inform ATC of:

- your aircraft call-sign
- your aircraft type
- your current position and level
- your intentions
- confirmation that you have received the ATIS information.

ATC may issue an abbreviated clearance (as detailed in AIP ENR 1.1.12.3) or a more detailed clearance. In all situations, pilots are required to read back and comply with the clearance.

In addition to your initial clearance (either abbreviated or full), you will also need a specific clearance from ATC for:

- take-off and landing
- entering, crossing or taxiing along any runway
- turns in a direction contrary to the circuit for a particular runway (during parallel runway operations)
- operations on routes or at altitudes different from those published in ERSA and/or different to your existing ATC clearance.

You must obtain a taxi clearance prior to moving on the manoeuvring area.

When operating in Class D airspace, you must also:

- sight and maintain separation from other aircraft
- comply with ATC instructions while ensuring you maintain separation from other aircraft
- notify ATC if requiring a change from the abbreviated clearance previously advised
- immediately advise ATC if unable to comply with a control instruction
- advise ATC if unable to see, or if you lose sight of, other aircraft notified as traffic.

## FREQUENCY CONGESTION

A major contributor to frequency congestion is when ATC have to follow up on calls because the required readback was not provided. Conversely, reading back items not required can also tie up the frequency unnecessarily.

Think about what you want to say PRIOR to making your transmission.

Think about what ATC may say in response to your call and what you might be required to read back to ATC as a result.

AIP GEN 3.4, 4.4 details pilot readback requirements. However, generally speaking the following components of an ATC transmission will require readback:

1. route clearance
2. runway/HLS clearances
3. assigned runway/HLS
4. QNH
5. transponder code

6. radio frequency
7. altitude
8. holding instructions
9. turns/headings.

## DEPARTURE REPORTS

VFR aircraft do not make a departure report when departing the Class D Control Zone (CTR) directly into Class G airspace. The height of the Control Zone varies for different airports.

For other flights, a departure report is only required at certain Class D aerodromes where the tower also provides a procedural approach control service (see ERSA). At the Metropolitan Class D aerodromes (formerly GAAP), a departure report is not required.

## AIRBORNE COLLISION AVOIDANCE SYSTEM (ACAS)

If you have been given an instruction or clearance by ATC, you are required to comply with it or immediately notify them if you are unable. You should not manoeuvre outside of your clearance as you may infringe the separation minimum.

Unlike an ATC clearance that provides separation based on distance, time or altitude, the alerting threshold in ACAS uses the existing speeds of both aircraft to estimate the separation that will exist. ACAS does not limit its trajectory prediction on the basis of an ATC clearance or your planned manoeuvre to level off, regain track, etcetera. Should this projection be less than the ACAS-desired separation, a RA will be issued and must be followed by the pilot and reported in accordance with AIP GEN 1.5.

It is important for pilots to:

- comply with any ATC clearance
- manoeuvre in such a way that will not cause an ACAS RA.

## FOR MORE INFORMATION

- AIP GEN 3.4
- AIP ENR 1.1
- Airborne Collision Avoidance System (ACAS) Manual, ICAO Doc 9863
- Procedures—Aircraft Operations—Volume I, ICAO Doc 8168
- AIP ERSA

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