

Flying displays and special events: A guide to safety and administrative arrangements

CAP 403



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Contents

Revision history	5
General information	6
Introduction	7
Background	8
Terminology	9
 PART A	
Chapter 1: Part A - Flying display legal requirements	11
Chapter 2: Part A - Personnel and preliminary planning	15
Chapter 3: Part A - The flying display - site and display management	21
Chapter 4: Part A - Liaison with the CAA, Local Authority and Emergency Services	38
Chapter 5: Part A - Pilot display competency	51
Chapter 6: Part A - Skill levels for authorisation of aerobatic displays	66
Chapter 7: Part A - Formation flying	69
Chapter 8: Part A - Ballooning as part of a flying display	77
Chapter 9: Part A - Parachuting as part of a flying display	79
Chapter 10: Part A - Banner towing as part of a flying display	82
Chapter 11: Part A - Twilight and airborne pyrotechnic displays	84
Chapter 12: Part A - Foot-launched aircraft as part of a flying display	86
Chapter 13: Part A - Model aircraft as part of a flying display	88
Chapter 14: Part A - Air racing as part of a flying display	90

PART B

Chapter 1: Part B - Air race events	92
Chapter 2: Part B - Balloon events	93
Chapter 3: Part B - Fly-ins and rallies	97
Chapter 4: Part B - Helicopter and gyroplane events	100
Chapter 5: Part B - Model flying events	102
Chapter 6: Part B - Microlight aircraft events	103
Appendix A: Risk assessment	106
Appendix B: Certificate supplied to the FDD by a pilot participating in a flying display	110
Appendix C: Points for inclusion in the written, verbal and telephone briefings	113
Appendix D: Summary of deadlines for flying display or special event organisers	117
Appendix E: Flying display and unusual aerial activity notification forms	119
Appendix F: Charges for permissions for flying displays and other special events	120
Appendix G: Military participation	123
Appendix H: Useful contact details	124
Appendix I: Application forms for the renewal and upgrade display authorisation	132
Appendix J: Relevant legislation	133
Appendix K: Charges for the temporary allocations of radio frequency and licensing, ATCU and FISO	135
Appendix L: Quick reference display administration (QRDA)	137

Revision history

Edition 10

March 2007

This revision incorporates changes to the Air Navigation Order (ANO) references to reflect the 2005 edition of the ANO.

References to internal departments have also been updated to reflect changes in the organisational structure of the CAA.

Other minor editorial corrections, convenient to be included at this time, have also been included. All technical changes are marked by a marginal line.

Edition 11

April 2009

This revision incorporates changes to the Rules of the Air regulations references to reflect the 2007 edition of the ANO.

Other minor editorial corrections, convenient to be included at this time, have also been included. All technical changes are marked by a marginal line.

Edition 12

March 2010

This revision incorporates changes to the Air Navigation Order (ANO) references to reflect the 2009 edition of the ANO.

Other minor editorial corrections, convenient to be included at this time, have also been included. All technical changes are marked by a marginal line.

Edition 12, Amendment 2012/01

June 2012

This amendment amends Chapter 6, paragraphs 3.1 and 4 to address two AAIB Safety Recommendations (2011-001 and 2011-002 in FACTOR 02/2011, available via www.caa.co.uk/factor022011). Due to their urgent nature these changes have been made ahead of the major revision to this CAP.

Edition 13

February 2015

This revision is a complete rewrite of CAP403. The CAP is now split into Part A and Part B covering Flying Displays and Special Events respectively.

Edition 13, Amendment 2016/01**March 2016**

Amends to reflect change in display application requirements (Chapter 3 Part A, Chapter 4 Part A and Annex A – Risk Assessment) and introduction of fitness assessment for Flying Display Director and display pilots (Chapter 1 Part A). All subsequent to CAA's review of flying display regulation conducted in 2015/6. Due to their urgent nature these changes have been made ahead of a major revision to this CAP in late 2016.

Edition 13, Amendment 2016/02**April 2016**

Amends to reflect change to requirements on FDDs, requirements attached to display authorisations and preliminary planning requirements (Chapter 2 Part A), and amends to reflect changes in site assessment and display planning rules and new requirements on post event feedback and safety breach reporting (Chapter 3 Part A). Introduction of requirement to collect and communicate information on latent hazards within aircraft (Chapter 4 Part A). Further amends on DAE appointment and competency and the requirements and processes attached to Display Authorisations and Display Authorisation renewals (Chapter 5 Part A).

All subsequent to CAA's review of flying display regulation conducted in 2015/6. Due to their urgent nature these changes have been made ahead of a major revision to this CAP in late 2016.

General information

Introduction

- 1.1 Flying displays and aerial special events form a significant part of the UK leisure industry today and participation, together with their organisation and administration, needs careful consideration if the highest safety standards are to be achieved and maintained. This publication is intended as a code of practice and an indicator of best practice to provide guidance to ensure that the safety of both the participants and the spectators is not compromised.
- 1.2 The coverage of this CAP is split into two parts:
- PART A Flying displays**
PART B Special events
- 1.3 Participating in or organising flying displays and special events carries a heavy responsibility. Safety is paramount; not only that of the participants, but arguably even more important, that of the spectators, whether paying or not. Therefore only the highest standards are acceptable. Displays must be carefully planned both on the ground and in the air and nothing should be considered without careful thought to ensure that it is safe. A risk assessment procedure is included to help in this process.
- 1.4 **The impromptu, ad hoc, unrehearsed or unplanned should never be attempted.**

Background

- 1.5 Article 162 of [The Air Navigation Order 2009](#) (ANO) (as amended), empowers the Civil Aviation Authority (CAA) to regulate civil flying displays within the United Kingdom. This publication sets out the safety and administrative procedures to be followed by the organisers and participants at such events.
- 1.6 Military flying displays are defined in Article 162 paragraph (15) of the [ANO](#). Military flying displays and flypasts are conducted under the regulation of the Military Aviation Authority (MAA) and in accordance with [MAA Regulatory Article 2335](#).
- 1.7 Guidance is also provided, beyond the statutory requirements, so that experience gained from past displays can be of use to those new to the organisation of such events. For the same reason, some basic supplementary advice is included in Part B for air races, balloon events, fly-ins, helicopter events, microlight events, model events and other special events none of which are subject to the regulations governing flying displays.
- 1.8 FDDs, when making application for a Permission to hold a flying display, are required to confirm that the organisation and conduct of the flying display will be in accordance with the provisions of this CAP.
- 1.9 Nothing in this publication is intended to conflict with the [ANO](#) or other legislation, which, in case of doubt, must be regarded as overriding.
- 1.10 An [Aeronautical Information Circular](#) (AIC) 'Regulation of Flying Displays', is issued periodically to update the information in this publication.
- 1.11 An [AIC](#), 'Notification of Unusual Aerial Activities', is issued periodically to advise current notification procedures.
- 1.12 A list of addresses of organisations referred to in this publication is given at Appendix H and the [Flying Display](#) and [Unusual Aerial Activity Notification](#) forms are at Appendix E.
- 1.13 Some of the text of this publication is presented in the third person singular. For conciseness, the pronoun 'he' is used throughout. 'She' should be substituted when appropriate.
- 1.14 Further useful information can be found at www.caa.co.uk/airdisplays and the [QRDA](#) link therein.

Terminology

1.15 Throughout this CAP the following terms are used:

Flying display - Any flying activity deliberately performed for the purpose of providing an exhibition or entertainment at an advertised event open to the public. (Article 162 of the [ANO](#))

Special event - Any flying activity during which aircraft may not necessarily comply with the Rules of the Air and normal air traffic control rules and which requires consideration of one or more of the following:

- the issue of special procedures;
- the level of an 'air traffic service' to be provided;
- the establishment of Restriction of Flying Regulations.

Crowd line - The forward edge of the areas intended for spectators and any car park to which the public has access during a Flying Display.

Display line or axis - A line defining the closest a display aircraft should approach the crowd line.

Display area – The ground area the FDD intends the display to be confined within to comply with their Article 162 permission.

Event organiser - The Organiser of an event which includes a Flying Display.

Flying Display Director (FDD) - The person responsible to the CAA for the safe conduct of a flying display.

Display item - A single aircraft, or formation of aircraft, flying as one display 'act'.

NOTE: Random collections of aircraft are not considered to be a single display item unless they are flying together as a formation.

Display pilot - A pilot who holds a Display Authorisation (DA) or Exemption, issued by his appropriate national authority, which allows him to take part in a Flying Display.

NOTE: In the UK this only applies to civil Display Pilots. Military Display Pilots are approved and authorised as specified by the MOD normally in the form of a PDA

Spectator - A person attending a flying display and remaining in the areas set aside by the organiser for the public.

Display Authorisation (DA) - A national document detailing the types or groups of aircraft in which a pilot is authorised to display, together with any limitations and other specific endorsements.

Display Authorisation Evaluator (DAE) – A CAA authorised person qualified to conduct examinations and tests for the award of a DA.

Skill levels for authorisation of aerobatic displays - See Part A Chapter 6 for the manoeuvres appropriate to each skill level. The skill levels used on DAs are:

- Standard
- Intermediate
- Advanced
- Unlimited

Pleasure flights - Any passenger flight starting from, or arriving at, the display site purely for the purpose of commercial air transport pleasure flying.

Static aircraft park - A park for aircraft to which the public has access at all times.

Aircraft parking area - A park for aircraft to which the public has no access during the period of the display.

Car parks - Where the words 'Car Park(s)' are used in the text of this CAP, the words are only intended to apply to Car Park(s) to which the public has access during the flying display and as such must be considered the same as the spectator area.

ATC – references to 'ATC' contained in this CAP apply to all ground to air operators transmitting on an approved frequency.

Chapter 1

Part A - Flying display legal requirements

Article 162

- 1.1 Article 162 of the [ANO](#) deals with civil flying displays within the United Kingdom. Where such a flying display is at an advertised event open to the public, Article 162 places responsibilities on both the organiser of a flying display (hereafter referred to as the 'Flying Display Director') and the participating pilots. For such an event, the Flying Display Director (FDD) must obtain the permission in writing of the CAA and civil display pilots must hold a DA.
- 1.2 Before a Permission can be issued, the CAA must be satisfied that:
A person is fit and competent as an FDD, having regard in particular to his previous conduct and experience, his organisation, staffing and other arrangements, to safely organise the proposed flying display.
- 1.3 Similarly, a pilot must satisfy the CAA that:
He is a fit person to hold a DA and is qualified by reason of his knowledge, experience, competence, skill, history, physical and mental fitness.
- 1.4 To this end, the pilot is required to provide such evidence and undergo such tests and examinations as the CAA may require of him.
- 1.5 In deciding if an application for a Permission under Article 162 should be made, the FDD should note that the 'open to the public' requirement is the principle requirement rather than the 'advertised' element. If the general public are permitted onto the site for the purposes of witnessing the event, with or without payment, during the flying display, an Article 162 Permission will be required.
- 1.6 Flights at events that are not open to the public remain subject to the low flying rules. If an Exemption is needed from any aspect of the low flying rules then this must be sought by completion of [Form 1304](#)

- 1.7 Races and contests, are specifically exempt from the requirements of Article 162 of the [ANO](#). However, where the public has access to the site of the race or contest the organiser should comply with those parts of this CAP relating to public safety particularly in relation to minimum separation distances between aircraft, in flight and on the ground, and the public.

Military events, venues and military participation in civil flying displays

- 1.8 Displays organised by the MOD as specified in Article 162 of the [ANO](#) are exempt from the other provisions of Article 162.
- 1.9 Flying displays held on or over MOD property by civilian organisers are also exempt from the provisions of Article 162. Participation by civilian pilots in such displays will be subject to compliance with display limits as approved by the Military Aviation Authority.
- 1.10 Further information can be found in Appendix G - Military participation.
- 1.11 Before any military aircraft may participate in a UK flying display, its participation must be approved by the MOD. In the case of UK military aircraft, it can be assumed that the required approval has been given by the MOD when the display aircraft is allocated to the flying display by the relevant service. See paragraph 1.16 below for the position concerning foreign military aircraft.

Foreign participation

Foreign civil participants from countries operating a DA system

- 1.12 Certain other countries have issued, or are in the process of issuing, DAs to their display pilots. DAs issued by other countries may be accepted by the UK CAA for pilots participating in displays in the UK ([ANO](#) Article 162). The limitations imposed on pilots holding a DA issued in another country whilst displaying in the UK are the higher of the limits specified in the pilot's DA or the limits imposed in the Article 162 Permission.

- 1.13 Confirmation of foreign DA pilots acceptability should be directed initially to the FDD. If the foreign DA pilot is also the FDD, approval may be gained in either case from the UK [CAA](#).
- 1.14 Pilots from other countries may hold, if they wish, a UK DA provided they have met all the requirements as specified in Chapter 5 and have been recommended to the CAA by a UK DAE. The limitations of the UK DA will apply to flying displays flown in the United Kingdom.

Foreign civil participation from other countries without a DA system

- 1.15 A foreign civil licensed pilot from countries without a DA system wishing to take part in a flying display under an Article 162 Permission is required to hold a UK DA or, exceptionally, an Exemption from the need to hold one. Where a foreign qualification equivalent to a DA is held, the CAA may be prepared to accept it as confirmation of competence in considering the issue of a UK DA or an Exemption from the need to hold a DA. Further details may be obtained from the [CAA](#).

Foreign military participation

- 1.16 All foreign military display items require the specific approval of the MOD before participating in a UK flying display. FDDs should seek early clarification from the [MAA](#) if they believe that such items will be participating in their flying display.
- 1.17 In some countries, foreign military registered aircraft may be operated by non-military organisations. In this case the [MAA](#) and the [CAA](#) must be consulted for clarification as to whether a form of military PDA/validation or DA is required prior to participating in a UK flying display.
- 1.18 In some countries, foreign civilian registered aircraft may be operated by foreign military organisations. Again in this case the [CAA](#) and the [MAA](#) must be consulted for clarification as to whether a form of military PDA/validation or DA is required prior to participating in a UK flying display.

Civil foreign registered aircraft

- 1.19 Flying displays are aerial work. Consequently, civil foreign registered aircraft appearing at any UK flying display, civil or military, may well require Permission under Article 225 of the [ANO](#) from the UK CAA ([foreigncarrierpermits](#)). Copies of the Certificate of Insurance, Certificate of Registration and the Certificate of Airworthiness must be submitted.

- 1.20 Where foreign registered aircraft are carrying passengers for valuable consideration into an airfield hosting a flying display, a Permission under Article 223 of the [ANO](#) may be required. The FDD should advise the operators of such aircraft to contact the UK CAA ([foreigncarrierpermits](#)) for clarification and full details.
- 1.21 Any civil foreign registered aircraft operating on any form of non-standard or restricted Certificate of Airworthiness (equivalent to the UK Permit to Fly) requires an Exemption to fly in UK airspace. Exemptions are issued by the CAA [Applications and Approvals Department](#). In addition, for ex-military aircraft with a Maximum Take-off Mass Allowed (MTMA) in excess of 2730kgs, a degree of equivalence with BCAR A8-23/25 and [CAP 632](#) will be required. Details on making an application for an Exemption to fly in UK airspace can be obtained from the [Applications and Approvals Department](#).

Further reading

- 1.22 A list of the articles of the [ANO](#) with particular relevance to flying displays is given at Appendix J.

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Chapter 2

Part A - Personnel and preliminary planning

The event organiser

- 2.1 One person must assume overall responsibility as the Event Organiser. Responsibility for particular aspects (such as site survey, air traffic services, provision of emergency services and conduct of flying activities) should only be allocated to people with the relevant experience and, if applicable, licences.

The Flying Display Director

- 2.2 The FDD is the person responsible to the CAA for the safe conduct of the flying display and is named as such on the Permission issued under Article 162 of the [ANO](#).
- 2.3 It therefore follows that the FDD must be suitably experienced, dependent upon the size and complexity of the flying display, in all matters relating to flying in general and flying displays in particular, before being appointed to the position. The FDD is responsible for flying discipline generally, control of the flying display programme and cancellation or modification to the programme in the light of prevailing weather or other conditions.
- 2.4 FDD's are required to undergo behavioural and attitudinal fitness assessment as a condition of their acceptance in relation to flying display applications. As part of this, FDDs should submit a behavioural and attitudinal fitness questionnaire ([SRG 1303B](#)), prior to, or alongside the first display application containing their name each year. Information of how these assessments are applied can be found [here](#).
- 2.5 At small flying displays - 3 items or less - the pilot of a participating aircraft may act as the FDD.
- 2.6 At a flying display with up to 6 items, the role of Event Organiser and FDD may be combined if the Event Organiser is suitably qualified it is however recommended to separate these two duties where possible. At displays of 7 items or more, a separate FDD should be nominated.

- 2.7 It is very strongly recommended that FDDs at displays of 7 or more items should not take any other part in the flying display, especially as a participant, commentator or organiser.
- 2.8 During 2016, FDDs wishing to direct displays of 7 or more items are required to undergo further briefing as a condition of their acceptance. Additional information may be sought from the CAA GA Unit.
- 2.9 It is essential that the FDD has adequate communications with all appropriate agencies and the flying display participants throughout the flying display. In the event that the FDD is sited away from the air traffic services unit, it is recommended that a fixed communications link is established to enable instant two-way communications in the event of an emergency arising. Mobile telephones should not to be used for this purpose, except in extremis.
- 2.10 It also follows that there is a robust means of communication with the commentator in order to liaise when programme changes have been made and more importantly if an emergency arises the commentator will be essential if crowd control is required.
- 2.11 The FDD must take an active role in every aspect of the flying display including selection of display items, display timings including pre-event briefings with on and off site emergency services where appropriate.
- 2.12 The FDD must ensure that all pilots participating at civil air displays submit a pre-display declaration certificate which appears at Appendix B.
- 2.13 During the display, the Flying Display Director should monitor the safety of the display supported by any Flying Control Committee and/or DAEs present, and using the information that they have about the ground area to be displayed over and the manoeuvres that performing pilots intend to perform. The FDD should stop the display item or in some cases the whole display where this is justified by safety concerns.

Flying control committee

- 2.14 It is strongly recommended that a Flying Control Committee (FCC) is utilised at display of 7 or more items. The roles of the FCC are:
- a) to assist the FDD in monitoring display standards;

- b) to provide specialist knowledge for specific display items; and
 - c) to provide opinion in case of any regulatory infringements.
- 2.15 Advice on whether such a committee is required may be obtained from the [CAA](#).
- 2.16 The FCC should, wherever possible, comprise pilots with experience on the types of aircraft being flown at the flying display. Additionally, members of the FCC should hold, or have held, a civilian DA, or have extensive military flying display experience.
- 2.17 The FCC should be available throughout the period of the flying display.
- 2.18 The FCC should have the clear authority of the Event Organiser to curtail or stop, on the grounds of safety, any display item or, in extreme cases, the whole flying display.

Appointment of officials

- 2.19 Experienced staff must be detailed to supervise the parking of aircraft and cars, to operate any public address system, to control messengers and other staff. Sufficient marshals must be available to control members of the public, to ensure that on and off site emergency vehicle access is kept clear, to be available in the case of emergency and to prevent public access beyond the crowd line.
- 2.20 It is generally possible to find persons competent to undertake such duties from among the membership of a flying club or other suitable aviation organisation. At a large flying display, only persons trained and experienced in flight line ground handling of aircraft must be used in the aircraft movement area. For car parking, the services of one of the organisations that specialise in the arrangement and management of car parks may be worth considering. All officials must be thoroughly briefed in the duties expected of them and provided with some means of identification, such as arm-bands.
- 2.21 Air cadets and other youth organisations should not be used as marshals unless well briefed and supervised.

Flight crew

- 2.22 All participating civil pilots must hold a current licence with a current class or type rating, or, where no type rating exists, an Aircraft Type

Rating Exemption (ATRE), which entitles him to fly the type of aircraft to be displayed. Any questions relating to license matters should be addressed to CAA's Shared Service Centre.

- 2.23 All civil display pilots taking part in a flying display which requires Permission under Article 162 of the [ANO](#) must possess a current and valid DA issued by the CAA. DAs issued by other countries may be accepted by the CAA. Details of the UK DA system, validity of DAs and DA recency requirements can be found in Chapter 5. Additional information may be sought from the [CAA GA Unit](#).
- 2.24 DAs are only valid if the pilot holds either an EU medical certificate issued by an AME or an ICAO medical certificate that is of an equivalent or higher standard.
- 2.25 Pilots authorised to perform standard level aerobatics will only be permitted to perform loops or barrel rolls in civil registered ex-military jet aircraft at civil air displays if they have received explicit approval from a suitably qualified DAE and this is recorded on their DA.
- 2.26 Pilots participating at civil air displays are required to submit a pre-display declaration certificate containing the information and declarations contained at Appendix B.
- 2.27 Exemptions from the need to hold a DA may exceptionally be issued, but only for a specific display approved by the [CAA GA Unit](#) prior to the issue of the Exemption. No deviation from the agreed routine is permitted, except where this is justified by safety concerns. This is of particular relevance to Air Operator's Certificate (AOC) operators of large transport aircraft where the display permission will generally be for a simple demonstration or flypast.
- 2.28 Special provision is extant for emergency services operators and confirmation should be sought through the Chief Pilot and the relevant Flight Operations Inspector. Before a DA Exemption can be considered for an AOC operator, the proposed display routine must be approved and recommended to the [CAA GA Unit](#) by the assigned CAA Flight Ops Inspector.
- 2.29 Military display pilots are approved and authorised as specified by the MOD. FDDs should note, however, that Article 162 of the [ANO](#) stipulates that military pilots are subject to the more restrictive limits imposed by MAA [Regulatory Article 2335](#) or the flying display Permission when they appear at a civil flying display. In practice, this rarely causes difficulty because the limits set down in MAA

[Regulatory Article 2335](#) are generally at least the same as, or higher, than those imposed in this CAP. The only exception to this may be at off-airfield display sites where military aircraft display limits could be lower than the Permission limits.

Preliminary planning

2.30 The Event Organiser and the FDD will, in particular, need to consider and make arrangements for:

1. Event site and flying display management covering:
 - a) site assessment;
 - b) airspace/air traffic management requirements
 - c) spectator enclosures, car parks and public address system;
 - d) areas and buildings outside the event where members of the public may congregate, busy roads and railway lines – which are put at increased risk by the fact the display is happening;
 - e) parking and ground manoeuvring of aircraft (participants, visitors, static display);
 - f) the display line;
 - g) over-flight of spectators and car parks;
 - h) setting of minimum heights;
 - i) aircraft maximum speeds;
 - j) weather minima;
 - k) use and allocation of radio frequencies;
 - l) ground special effects safety;
 - m) briefing;
 - n) document checks;
 - o) pilot display programmes;
 - p) pleasure flights;
 - q) any latent hazards in participating aircraft.

2. Liaison with the UK CAA SARG and the local authority and emergency services including:
 - a) prior notification of the event to the UK CAA SARG, local authority and emergency services; and
 - b) notification time scales

NOTE: Each of these aspects is discussed in detail in Chapter 4.

Chapter 3

Part A - The flying display - site and display management and post-event feedback

Site assessment

- 3.1 Where the flying display is held at a licensed aerodrome, the aerodrome licensee remains responsible for ensuring that the conditions of the aerodrome licence are not infringed. If any such condition is likely to be infringed then early discussion must take place between the Event Organiser or the FDD, the aerodrome licensee and CAA Aerodrome Standards. The aerodrome licensee, his representative or the aerodrome operators (if the aerodrome is unlicensed) must be involved at all stages of preparation for the flying display.
- 3.2 While many flying displays and special events are held at licensed aerodromes and can take advantage of facilities already available, many are staged at other sites. In assessing any proposed site the FDD should take into account:
- a) The suitability of surfaces used by aircraft for take-off, landing and taxiing;
 - b) The take-off and landing distances available and required; and
 - c) Obstructions in the vicinity with regard to the aircraft types which are expected to take part;
 - d) The proximity of congested areas, particularly if they include schools or hospitals. A congested area is defined in Article 255 of the [ANO](#) as being any area in relation to a city, town or settlement which is substantially used for residential, industrial, commercial or recreational purposes. It should be noted that, with few exceptions, flight below 1000 feet over such areas is illegal except when an aircraft is taking off, practising approaches to or landing at a licensed or government aerodrome;
 - e) The proximity of any sensitive or restricted areas (nuclear power stations or hospitals etc). Local police should be able to advise on such areas;

- f) The presence of livestock or wildlife conservation areas. The local branch of the [National Farmers' Union](#) can often help in identifying the owners of particular fields;
- g) The proximity of controlled airspace, aerodromes, heliports, helipads, airstrips, microlight sites, ballooning sites, parachuting, hang gliding, gliding, ridge soaring, paragliding sites and VRP's;
- h) The availability of clear entry and exit routes for on and /or off site emergency service vehicles appropriate to the scale of the event.

3.3 FDDs should consider imposing minimum height restrictions over local sensitive and congested areas. Details of any restrictions imposed should be clearly promulgated in the flying display instructions and form part of the application to hold the event.

3.4 Applicants for flying display permissions are required to submit an up-to-date 1:50,000 scale Ordnance Survey map (or colour copy) alongside their application showing the event location and the layout of the site including:

- the display axis or axes
- boundaries of the display area
- spectator's enclosures and car parks

and, any surrounding:

- congested areas - hospitals, schools, power stations;
- masts, railway lines, bridges and other local infrastructure;
- major / busy roads;
- areas where non-paying spectators assemble,

that are put at increased risk as a result of the display taking place.

3.5 This information forms part of the assessment CAA conducts as part of the display approval process.

3.6 In advance of the display happening, the FDD should contact participating pilots to request a description of the ground area and vertical space that they are likely to cover in the course of their display. FDDs should consider this information to assess whether or

not the display will enable compliance with the Article 162 permission granted and, if not, request alterations so that it does.

- 3.7 Gas-filled toy balloons when released are a potential hazard to aircraft. Event Organisers must ensure that the vendors of such balloons are not allowed into the public enclosures.
- 3.8 Existing legislation provides that unmanned, gas-filled, advertising balloons should not be flown in captive flight at or near an aerodrome without written permission from [Airspace Regulation](#). If such permission has been granted or, in any event if the flying display is not sited at an aerodrome, the Event Organiser must arrange that any such balloon, and other obstructions with vertical extent such as hot-air balloons and bungee jumping cranes are lowered to ground level during the period of the display.

Spectator enclosures, car parks and public address systems

- 3.9 The FDD must carefully select sites for the spectator enclosures and car parks in relation to the aircraft flight paths during the flying display. Any area to which the public has access must never be located closer than the appropriate distance to, or under, the planned display line or area.
- 3.10 Spectator enclosures and car parks should be positioned behind the crowd line which is usually parallel to the display line. Normally spectator enclosures and car parks should be confined to one side of the site thus allowing aircraft maximum freedom of movement on the other side.
- 3.11 If no practical alternative exists, spectators' vehicles and visiting aircraft may be parked under the display line or area provided the FDD does not permit access to these areas by the public for the duration of the flying display.
- 3.12 A public address system covering the spectator enclosures is essential. Such a system, when installed, must be audible throughout the whole area to which spectators have access.
- 3.13 The commentator should be in a position where important messages or emergency information can be given to him for rapid broadcast to the public. Pre-scripted emergency messages covering major emergencies should be available.

Parking and ground manoeuvring of aircraft

- 3.14 Aircraft taking part in the flying display should be segregated from both visiting and static aircraft parks unless arrangements are made to tow aircraft from the static aircraft parks to an aircraft parking or manoeuvring area, appropriately segregated from the public, prior to start. In this case, adequate arrangements must be made to ensure public safety during aircraft movement. Under no circumstances will aircraft have any engines running or move under their own power.
- 3.15 Appropriate security should be in place to guard against interference with aircraft. Pilots should be advised to ensure that starting systems etc. are isolated. Fire extinguishers should be readily available and aircraft should be parked so that fire vehicles can achieve easy access and move freely amongst them. Parking areas must be out of bounds to spectators when aircraft engines are running or aircraft are taxiing.
- 3.16 Where possible taxiing parallel to the crowd line, shutting down and man handling into place should be considered during the planning of marshalling activities. Consideration must also be given to any expected aircraft arriving without brakes or a poor turning ability.
- 3.17 Spectator enclosures and car parks should be sited away from taxiway and runway strips and so arranged that no part of a taxiing aircraft passes within 10 metres of the enclosure or car park. This distance will need to be increased significantly if spectators are positioned behind or close to where aircraft are ground running engines, particularly in the case of high powered aircraft, jet aircraft or large helicopters and more particularly when aircraft are likely to use significant amounts of power such as when turning. Helicopters should only be permitted to ground taxi in the above circumstances and in any case, with at least 10 metres separation.
- 3.18 Spectators should not be allowed closer than 15 metres to any fixed refuelling area, nor closer than 15 metres radially from any fuelling or venting point on an aircraft or bowser whilst refuelling is being carried out.
- 3.19 Effective barriers and marshalling arrangements are required to keep spectators clear of aircraft manoeuvring areas. Areas in which spectators are not permitted must be properly enclosed at all times. Marshals must be detailed to control the movement of spectators throughout the event. Pilots and passengers of visiting aircraft must remain behind the crowd line during the period of the display. If the

- visiting aircraft parking area is remote from the spectators' area, a method of transporting pilots and passengers must be established.
- 3.20 In the interests of safety, smoking must not be permitted in aircraft parking areas or static aircraft parks.
- 3.21 Aircraft may take-off and land provided the runway centre line is at least 75 metres from the crowd line. The [CAA GA Unit](#) may grant a concession to allow a lesser distance where geographical or topographical features or the layout of the airfield restrict the distances available. The grant of any concession is conditional on the type of aircraft involved.
- 3.22 The runway should be kept available as much as possible for emergency purposes during the flying display and aircraft departing and landing should minimise the time they occupy the runway whilst other aircraft are displaying. Certain display items, such as the Red Arrows, may require the runway to be available for emergency landings for the duration of their display.

The display line or axis

- 3.23 Displaying aircraft perform relative to the display line which must be clearly identified. On an aerodrome this is usually parallel to a runway or, in the case of off aerodrome sites, parallel to some significant feature. Where the display line is not clearly delineated by a paved runway or other obvious line feature it should be marked with day-glo pyramids or panels, whitewashed lines or by some other suitable method.
- 3.24 Marking of more than one display line is at the discretion of the FDD. Ideally, two clearly defined lines, covering the separation distances most likely to be used by pilots during the flying display should be available, allowing pilots to interpolate for intermediate distances. Intelligent positioning of the crowd line in relation to existing ground features, such as the runway edges, can be of great assistance in this respect.
- 3.25 The display datum or centre should be clearly marked where this is not co-located with some obvious ground feature.
- 3.26 **Sea front displays.** A Maritime Exclusion zone or local equivalent should where possible be established after consultation with the Coastguard and or local maritime agency. It is essential that the

display line is marked with hi-visibility buoys or marker floats, additionally a distinctive buoy or group of buoys should be used to mark display datum.

3.27 The distance between the display line and the crowd line is related to the actual speed of the aircraft and the type of display. For aircraft flying in formation, the distances are applicable to the aircraft performing nearest to the crowd line.

3.28 The minimum distances are as follows:

<u>Type of Aircraft</u>	<u>Type of Display</u>	<u>Separation Distance</u>
<u>All Aircraft</u>	<u>All aircraft including rotary-wing aerobatics</u>	<u>230 metres</u>
<u>All Aircraft</u>	<u>Speed greater than 300KIAS with velocity vector towards crowd</u>	<u>450 metres</u>

3.29 For the following aircraft and activities, reduced minimum separations are permitted:

<u>Type of Aircraft</u>	<u>Type of Display</u>	<u>Separation Distance</u>
<u>Light Aircraft</u>	<u>MTOM less than 1200kg and speed less than 150KIAS throughout the display</u>	<u>150 metres</u>
<u>Rotary-wing</u>	<u>Take-off, landing and transitional manoeuvres</u>	<u>150 metres</u>
<u>Rotary-wing</u>	<u>Non-aerobatic flight and underslung load operations</u>	<u>150 metres</u>
<u>VSTOL Aircraft</u>	<u>Vertical take-off, landing and non wing borne flight at low speed</u>	<u>150 metres</u>
<u>VSTOL Aircraft</u>	<u>Conventional wing borne flight</u>	<u>230 metres</u>

3.30 The speed ranges given above are the speed of the aircraft at any particular time during the display. A pilot may vary the separation distances if the speed of the aircraft varies during the display. If any doubt exists about a particular aircraft, the relevant distances and if

Touch and Goes (in light STOL types) are to be part of a sequence the [CAA GA Unit](#) should be consulted.

- 3.31 Simulated Go-Arounds may involve a number of configuration and power changes therefore the aerobatic separation distance appropriate to the actual approach speed of the aircraft should be used, as specified in the table above.
- 3.32 Pilots should plan their flying sequence such that they can always regain the display line without infringing the minimum lateral separation distance from the crowd line. Effects of any on-crowd velocity vectors and on-crowd wind component must be taken into account.
- 3.33 Rotorcraft must not be flown in such proximity to spectators' enclosures, buildings or aircraft on the ground as to cause a possible hazard either from downwash or as a result of control difficulties. Similarly, helicopters with under-slung loads should only be flown over clear areas.

Over-flight of spectators

- 3.34 Display aircraft are not permitted to overfly the spectator enclosures or car parks unless with the specific written permission of [CAA GA Unit](#). Outside the display area, normal Rules of the Air apply.
- 3.35 Permission may be granted provided the application is for an established formation team of four (or more) similar powered fixed wing aircraft, supported by a comprehensive Risk Assessment (updated annually).
- 3.36 Aircraft carrying parachutists may overfly the spectators' enclosures or car parks whilst positioning to drop, but not below a minimum height of 1500 feet above ground level.

Setting of minimum heights

- 3.37 Where Flying Displays are held at an aerodrome, the CAA will normally authorise the FDD to allow pilots to fly down to the minimum height specified in their individual DA.
- 3.38 Where Flying Displays are held away from an aerodrome, the CAA will impose a minimum height. This is usually 200 feet above ground

level over land and 100 feet above surface level over water. Higher minima may be imposed if considered appropriate at a particular venue.

- 3.39 Until further notice, the CAA will not permit civil registered ex-military jet aircraft to perform aerobatic manoeuvres below 500 feet and requires pilots performing in these aircraft to always recover manoeuvres at their aerobatic height before transitioning to their flypast height as a separate manoeuvre.
- 3.40 FDDs are free to impose higher limits but should take into account that any increase in minima may increase risk without any increase in safety. Pilots who are asked to substantially alter or restrict their display limits may unwittingly be pressured into flying an unpractised display.
- 3.41 FDDs should ensure that pilots are advised of the minimum heights applicable at the flying display in writing, supported by verbal or telephone briefs.
- 3.42 Pilots of military aircraft participating in a civil flying display should advise the FDD of their individual height minima. Where the limits laid down in the Permission issued under Article 162 of the [ANO](#) are higher than the military pilot's limits, the pilot is to be informed that the more stringent limit applies during the Flying Display. This does not apply to the Red Arrows, who are permitted to display to their set limits.
- 3.43 For parachute displays, the minimum height by which parachutists must have their main parachute open is normally 2,000 feet above ground level (agl). FAI 'D' Certificate holders on parachuting displays may, exceptionally, deploy so as to be open by 1,500 feet agl.
- 3.44 For private events not requiring a Permission under Article 162 of the [ANO](#) when no DA is necessary, acceptable minimum heights will depend on the particular site, the pilot's experience and competence on type, the task, compliance with the RoTA and the prevailing weather, but the following are recommended:
- a) 100 feet - erect straight and level flypast, flour bag bombing, and air race finishing lines;
 - b) 500 feet - Balloon bursting, streamer cutting and complete recovery from aerobatic manoeuvres and inverted flight.

- 3.45 The recommended minima do not absolve the organiser or pilot from compliance with the [ANO](#) or Rules of the Air unless an Exemption or Permission has been issued by the CAA. The [CAA GA Unit](#) will give advice on any particular circumstances.

Aircraft maximum speeds

- 3.46 An absolute true limit of Mach 0.90 or 600 kt, whichever is reached first, is not to be exceeded in straight and level flight. Aircraft flying at or approaching this speed should reduce speed further before initiating any manoeuvre to avoid inadvertent sonic booms.
- 3.47 Aircraft taking part in Flying Displays for which a Permission has been granted under Article 162 of the [ANO](#) are exempt from the maximum speed limit of 250 kt IAS when flying below Flight Level 100 ([SRG 1318](#)). FDDs should be aware that this exemption only applies during the validity period of the flying display Permission and within the immediate vicinity of the flying display site.

Weather minima

- 3.48 Minimum weather conditions must be determined in advance, published and strictly observed. Recommended minima are contained in the table below:

Pilots and FDD's should give greater consideration to visual reference when there is little or no defined horizon.

			Weather minima	
Type aircraft	Type of display		<u>Cloud ceiling or significant cloud (4/8 or more)</u> <u>Cloud base broken (BKN) or overcast (OVC)</u>	Visibility
V/STOL aircraft, rotorcraft and other aircraft with a stalling speed below 50 knots ¹	Flypasts	Solo aircraft	500 ft	1,500 m
		Formations	500 ft	3,000 m
	Full aerobatic displays	Solo aircraft	800 ft	3,000 m
		Formations	800 ft	5 km
Flying displays by other aircraft	Flypasts or flat aerobatic displays	Solo aircraft	500 ft	~~3,000 m~~ 5 km
		Formations	800 ft	5 km
	Full aerobatic displays	Solo aircraft	1,000 ft	5 km
		Piston formations	1,000 ft	5 km
		Jet / turboprop formations	1,500 ft	8 km

- 3.49 FDDs should consider carefully operating characteristics of participating aircraft which may necessitate specific increases in the above minima. Military displays, particularly jet formations, may have significantly higher weather limitations than those specified above.
- 3.50 FDDs and pilots should also be aware of a condition known as 'goldfish bowl effect' at coastal display sites. This gives the impression that the sea and sky merge, with no defined horizon. Where visibility is reduced by haze, and when combined with a grey sea colour, this will make positioning relative to the horizon difficult.
- 3.51 It should be borne in mind that participants may be further restricted by their licence or rating privileges.

¹ This applies only to VSTOL aircraft operating in VSTOL mode.

Use and allocation of radio frequencies

- 3.52 With the exception of small events, most Flying Displays will require the use of some level of radio communications. Details of the air traffic control aspects, allocation of frequencies and the use of frequencies can be found in Chapter 4. The frequency allocation application form www.caa.co.uk/srq1417
- 3.53 Where feasible and within the constraints covered in Chapter 4, FDDs should endeavour to allocate a quiet frequency for use during the flying display with another frequency being available for administrative requirements and communication with non-display aircraft. If only one frequency is available, the FDD must emphasise, in the written brief and at the verbal briefing, the need for good Radio Telephony (RT) discipline and for the minimum use of RT.

Ground special effects safety

- 3.54 The use of explosives for simulated groundbursts, smoke and other special effects must be strictly controlled by a competent person appointed by the Event Organiser. Debris from such effects must not impinge on aircraft, the spectators or the runway/ taxiways and to this end the scale of any effects must be known before the event. Briefings for ground officials and Display Pilots must draw attention to the hazardous nature of such devices and approval of all involved Display Pilots must be achieved before any demonstration goes ahead. The location of the explosives and safety radii, if appropriate, are to be out of bounds to all staff except those directly involved with their operation.

Briefing

- 3.55 Regardless of the size of the Flying Display, the importance of a thorough, formal briefing cannot be over-emphasised. No pilot is to take part in a flying display unless he has received a briefing.
- 3.56 A comprehensive written brief covering the arrangements for the flying programme should be circulated in advance to all participating pilots, Air Traffic Control, pleasure flight operators and those in charge of particular aspects of the display, such as safety services. A list of points which should be covered is given in Appendix C.

- 3.57 A formal verbal briefing must be given on each day of the flying display and at any rehearsal or press day, and all participants must attend if physically possible. The briefing should include all the points detailed in Appendix C. If a NOTAM or Restricted Area (Temporary) (RA(T)) has been issued, specifying the limits of the airspace within which the aircraft will be performing, pilots must be reminded of the need to keep within those boundaries, and that they are still required to observe the rules for avoiding aerial collisions.
- 3.58 The display minima, whether these be DA or other limits imposed by the CAA or the FDD, should be confirmed at the verbal briefing. The extent and method of marking the display line(s) and display datum must be confirmed, preferably with the use of a large scale map.
- 3.59 Participants not landing at the flying display site or flying in to display prior to landing must contact the FDD by telephone, immediately prior to the display to obtain a full formal briefing, this may be in the form of a crib sheet identical to both FDD and participant issued by the FDD as part of the comprehensive written brief covering the arrangements for the flying programme.

Document checks and insurance

- 3.60 Prior to the flying display, FDDs are responsible for checking all required pilot documentation including:
- pilot licence;
 - correct display authorisation for intended display, including, when relevant to the intended display, explicit approval from a DAE to display loops or barrel rolls in civil registered ex-military jet aircraft, as contained in their DA;
 - possession of an EU medical certificate issued by an AME or an ICAO medical certificate that is of an equivalent or higher standard;
 - display currency confirmation;
 - list of manoeuvres the pilot intends to confine their display to.
- 3.61 FDDs should also check the following in the pilot's pre-display submission:
- Certificates of Registration and Airworthiness or Permit to Fly;

- confirmation from pilot that their intended display complies with the conditions placed on the performing aircraft's CoA, Permit to Fly etc.
 - appropriate insurance;
 - information about any hazardous material contained in the aircraft together with contact information for person or organisation available on the day to advise on making them safe should an emergency occur.
- 3.62 Participating pilots are required to communicate this information to the FDD as part of a pre-display declaration. A certificate for these purposes can be found at Appendix B.
- 3.63 Although there is no requirement within UK civil aviation legislation for third party insurance cover of Flying Displays and other aviation events, Event Organisers and participants are strongly advised to give this particular aspect serious consideration. Insurance cover is normally conditional on compliance with legal requirements, and violation of the law or the conditions of a Permission or Exemption may render insurance invalid.
- 3.64 Event Organisers are strongly advised to seek professional guidance on liability aspects and to obtain advice from a reputable insurance broker with aviation experience as to the appropriate level of third party liability coverage that should be effected. This should be done at the earliest possible stage in planning.
- 3.65 The MOD will require Event Organisers to buy into the MOD insurance policy as a condition of allowing military aircraft to take part in the Flying Display.

Pilot display programmes

- 3.66 FDDs are to ensure that pilots of display aircraft do not carry out any form of impromptu display such as on arrival (unless a pre-planned and agreed display practice) or departure.

Post-event feedback

- 3.67 FDDs are required to submit a post-event feedback report using Form (SRG 1305), within seven days of their display. The report contains

the display items performed on each day of the display, what went well, any lapses and breaches from the required standards and any lessons learned. The FDD should use any information provided by the Flying Control Committee, performing pilots and any DAEs in attendance in writing the report.

- 3.68 CAA uses the intelligence gathered from these reports to better understand the risks associated with civil air displays, assist DAEs in monitoring and evaluating standards, feedback lessons learnt to the air display community through briefings and seminars, and identify opportunities to improve air display safety.

Safety breach reporting

- 3.69 Serious safety breaches resulting in stop calls should be reported by the FDD to CAA GA Unit immediately following the display, including a clear statement of what happened, the perceived breach, and any supporting evidence.
- 3.70 Where a stop is called because an FDD (or FCC member) has reason to doubt the fitness or competence of a pilot (i.e. a safety concern related to the pilot's performance) that pilot will be subject to a provisional suspension of their display authorisation pending an investigation by the CAA of the circumstances leading to the stop being called. A provisional suspension notice will be issued by the CAA once it has received the report from the FDD. Pending issue of the provisional suspension notice by the CAA, the pilot should not exercise the privileges of their display authorisation until an investigation is complete.
- 3.71 Where it is known that the pilot concerned is due to appear in a subsequent display and, where possible, the FDD should also notify the FDD and event organisers of the next and subsequent displays that a stop has been called.
- 3.72 The provisional suspension will only be lifted once the outcome of a CAA investigation is known and, where appropriate, a re-evaluation by a new DAE.

Carriage of persons on board display aircraft

- 3.73 No persons other than minimum crew, as detailed in the aircraft C of A or Permit to Fly, shall be on board a civil registered aircraft during a

display unless the prior written permission of the [CAA GA Unit](#) has been obtained.

Displays by Air Operator's Certificate operators

- 3.74 Displays by AOC operators i.e. large transport aircraft, will normally be conducted under an Exemption from the need to hold a DA issued by the [CAA GA Unit](#). The requested display profile is to be submitted in advance to both the [CAA GA Unit](#) and the assigned CAA Flight Operations Inspector (FOI) in the form of a Captain's brief. The Exemption will be issued only after the assigned FOI has agreed the content of the Captain's brief.
- 3.75 Passengers are not to be carried during flypast by AOC operators. However, additional flight crew or specialist maintenance personnel may be carried provided that a recommendation to that effect is made to the [CAA GA Unit](#) by the assigned FOI.
- 3.76 Formation flights by large commercial air transport aircraft will not normally be permitted but specific applications will be considered on their merits.
- 3.77 Displays by UK registered Emergency Services Helicopters are exempt from the requirements of the Captain to hold a DA provided he operates in accordance with his approved company Operations Manual detailing such flights and under an annual Exemption issued to the CAA FOI (H) by the [CAA GA Unit](#).

Pleasure flights

- 3.78 Pleasure Flights for valuable consideration may only be conducted by companies holding an AOC and (with the exception of flights in helicopters) may take place only at a Government aerodrome or a licensed aerodrome. Initial application for a temporary aerodrome licence, if required, should be made to the CAA using form [SRG 2003](#).
- 3.79 Flights conducted under SSAC or Charity Flights must not be conducted during a day when an airshow or associated media coverage is organised.
- 3.80 FDDs are to coordinate Pleasure Flights and are to ensure that they do not take place during the flying display period itself, unless the

prior approval of both ATC and the flying display participants has been obtained. At other times care should be taken to ensure integration with other aerodrome traffic.

- 3.81 Aircraft engaged on Pleasure Flights must be parked away from aircraft taking part in the flying display itself, and passengers must be escorted between the spectator enclosures and the aircraft before and after each flight and to remain behind the crowd line whilst aircraft are displaying. The escort route must be planned to take them well clear of other aircraft. It is recommended that all personnel associated with the pleasure flying operation remain behind the crowd line when aircraft are displaying. Smoking must not be permitted in the aircraft parking area.

Helicopter flights

- 3.82 If helicopters are used for Pleasure Flights they must be positioned and routed so as to prevent problems with rotor downwash. In all cases, the site used for passenger loading and unloading must be well clear of the flying area, and be approved by the FDD. If the helicopter operating area is not adjacent to the spectator enclosure, as could be the case at off-aerodrome events, those parts of the site at which passengers would be expected to assemble before being escorted to the helicopter should be fenced off securely. Arrangements must also be made to prevent access to the helicopter operating area by third parties.
- 3.83 Helicopter operators are recommended to maintain a list of passenger names so that it is known who is on board the helicopter during each pleasure flight. This information could prove invaluable to police and rescue services in the event of an accident.

Pleasure flight escorts

- 3.84 Escorts must remain on duty until all Pleasure Flights have finished. Escorts must be briefed on, and demonstrate their knowledge of, the correct manner of boarding and alighting from aircraft. A pre-arranged system of signalling between escort and pilot is essential so that the pilot may know when passengers and escort are clear of the aircraft. To avoid the possibility of any misunderstanding between the pilot and escort they must, before the start of flying,

discuss together and agree such matters as the positioning of the aircraft at the changeover point, and the boarding and alighting procedures to be used. Clear procedures are vital where operational circumstances make it desirable to keep engines running or helicopter rotors turning during changeover.

Inspection of flying displays and special events by CAA

- 3.85 The [CAA GA Unit](#) is required to inspect and monitor safety standards at a number of events annually. Formal written notification will normally be given to the FDD in adequate time stating that a formal inspection of the event will take place. However, the CAA reserves the right to inspect any flying display or Special Event without notice.
- 3.86 The CAA Air Traffic Management oversight team may exercise its right to inspect facilities, equipment, processes and procedures in cases where a formal Approval against Articles 169, 205 or 206 of the ANO 2009 (as amended) is necessary.

Chapter 4

Part A - Liaison with the CAA, Local Authority and Emergency Services

Notification to the CAA

- 4.1 The smooth and expeditious planning for a Flying Display, or any other Special Event, requires that various applications are made to the CAA within an appropriate timescale. These timescales are dictated by the requirements of the CAA to discharge their obligations to third parties, to achieve preparation of appropriate documentation including various regulations in the case of a Restricted Area (Temporary) (RA(T)) and to achieve satisfactory dissemination of the information to all interested parties.
- 4.2 This section of the CAP will deal with the required applications in timescale sequence, starting with the first required actions. The timescales given are the **minimum** requirements. Where possible, and certainly in the busy summer periods, Event Organisers are requested to give as much warning as possible. All contact addresses, telephone numbers and details are given in Appendix H.

120 days prior to the event

Restricted Area (RA(T)) - major events

- 4.3 Application should be made to [Airspace Regulation](#) in respect of a RA(T) for major events at least 120 days prior to the event.

90 days prior to the event

Restricted Area (RA(T)) - other events

- 4.4 As above, application should be made to [Airspace Regulation](#) for any RA(T) requirements.
- 4.5 Event Organisers should note that RA(T)s are automatically provided for Red Arrows and other major military jet formation display teams but only for the duration of their display plus a small margin.

- 4.6 RA(T)s may be available for medium size and large Flying Displays where these are sited at natural choke points, in otherwise unprotected airspace such as coastal events or where the size and nature of the event warrant the setting up of a RA(T). Event Organisers should contact [Airspace Regulation](#) for guidance.

Air Traffic Service requirements

- 4.7 The following is a guideline to the requirements for the provision of an air traffic service, Air Ground Communications Service or Radio Communications Service at a flying display or other Special Event.

Air Traffic Control Service

- 4.8 If it is intended to establish a Temporary Air Traffic Control Unit at an event, it is essential that organisers/operators refer to CAA [CAP 670](#) ATS Safety Requirements, which contains comprehensive information and requirements for the establishment of such a unit.
- 4.9 Temporary Air Traffic Control Services must be provided in accordance with CAA [CAP 774](#).
- 4.10 A provider of Air Traffic Control must be nominated and he is required to apply to the appropriate CAA ATSD Regional office a minimum of 90 days in advance of the event for unit approval. This application should be made via submission of a copy of the Form [SRG 1417](#) (Application to establish or change an Aeronautical Ground Radio Station) that must also be submitted to the Radio Licensing Section within the same timescale. A copy of the proposed Manual of Air Traffic Services Part 2 (MATS Part 2) should be submitted to the ATS Regional Office as soon as possible but no later than 60 days before the event. The format of the MATS Part 2 is laid out in CAA [CAP 670](#), ATC 02, Section 2, with further information in CAA [CAP670](#), Part B, Section 1, APP 04, Page 3, paragraph 8.
- 4.11 Established ATC Units intending to hold a flying display or Special Event are required to notify their ATS Regional Office if the event requires changes to:
- Promulgated Air Traffic Services (including category of service);
 - Safety Related Procedures;
 - Air Traffic Services Equipment (Radios, Navigational Aids, Surveillance equipment, etc.);
 - Groundstation Callsigns or Identification Codes; or

- Groundstation Designated Operational Coverage.

- 4.12 Further information applicable to the conduct of Special Events and ATC licensing requirements may be obtained from the following documents:
- c) [CAP 670](http://www.caa.co.uk/cap670) ATS Safety Requirements (www.caa.co.uk/cap670)
 - d) [CAP 744](http://www.caa.co.uk/cap744) United Kingdom Manual of Personnel Licensing - Air Traffic Controllers (www.caa.co.uk/cap744)
 - e) [CAP 793](http://www.caa.co.uk/cap793) Safe Operating Practices at Unlicensed Aerodromes (www.caa.co.uk/cap793)
 - f) [Aeronautical Information Circulars](#)
 - g) [CAP 393](http://www.caa.co.uk/cap393) Air Navigation Order (www.caa.co.uk/cap393)
- 4.13 The requirement to provide an air traffic control service depends on various factors, some of which are listed below:
- a) The number of aircraft expected to attend, the arrival/departure 'time window' available for these aircraft and the movement rate generated by such;
 - b) The complexity of the flying programme itself, e.g. is the event fixed-wing only or a mix of rotary/fixed-wing, are a wide variety of types expected? Is it intended to operate cross runways/night operations? and
 - c) The need to co-ordinate the activity with other ATS units in the area.
- 4.14 As a general guide, if an event is likely to generate more than 100 movements **per day**, proposals should be discussed with the Regional Manager ATS. These discussions must be initiated in order to allow at least 90 days from submission of the application to the date of the event. If any doubt exists within an organiser's mind as to the need to provide an air traffic control service, he should contact the Regional Manager ATS for advice.
- 4.15 Questions relating to air traffic personnel requirements, provision of a Visual Control Room and the procedures relating to the inspection and approval of any facility should be addressed to the appropriate Regional Manager ATS Safety Regulation. Form [SRG 1417](#) may be obtained from the [CAA web site](http://www.caa.co.uk/forms) (www.caa.co.uk/forms).

- 4.16 There are two ATS Regional Offices (Northern and Southern), and boundary of responsibility is a line from just North of Caernarfon to just south of Skegness. The addresses of the Regional Offices are detailed in Appendix H of this document.
- 4.17 Approval for a temporary air traffic control unit is required under Part 23 of the [ANO](#). The unit will also require Article 205 Approval - Air traffic service equipment and Article 206 Approval - Air traffic service equipment records. It is essential that details of the radio and recording equipment to be used are submitted a minimum of 90 days before the date of the event.

Flight information service

- 4.18 Event Organisers who wish to provide a Flight Information Service (FIS) at a temporary site; or an established site not normally providing FIS, are required to apply to the appropriate CAA ATS Regional Office and also submit an application on Form [SRG 1417](#) to the Radio Licensing Section 90 days before the event.
- 4.19 Temporary Flight Information Services must be provided in accordance with [CAP 1032](#).
- 4.20 The unit will require approval for any air traffic service equipment under Article 205. The provision of suitable recording equipment is encouraged, but [ANO](#) Article 206 Approval is not required.
- 4.21 A set of Local Instructions for the unit shall be submitted a minimum of 60 days before the event. Guidance for the format of the Local Instructions is detailed in [CAP 797](#) Flight Information Service Officer Manual.
- 4.22 Organisers should refer to the following documents which are also available on website:
- a) [CAP 1032](#) Aerodrome Flight Information Service Officer Licensing (www.caa.co.uk/cap1032)
 - b) [CAP 797](#) Flight Information Service Officer Manual (www.caa.co.uk/cap797)
 - c) [CAP 774](#) Flight Information Services (www.caa.co.uk/cap774)
 - d) [CAP 413](#) Radiotelephony Manual (www.caa.co.uk/cap413)
- 4.23 Further guidance may be obtained from the appropriate ATS Regional Office and an application Form [SRG 1417](#) may be obtained from the [CAA web site](#).

Air/Ground communication service (A/G)

- 4.24 A large number of events are run on an Air/Ground basis. Event Organisers must ensure that they have obtained Article 205 approval and that personnel providing the A/G Communications Service possess a Radio Operator's Certificate of Competence (ROCC) (CA 1308). The holder of the particular radio station's Wireless Telegraphy Act license is responsible for ensuring that all individuals using the radio are competent in both the operation of the equipment and local procedures, and must sign the CA1308 Certificate to confirm this. Organisers should refer to:

[CAP 452](#) The Aeronautical Radio Station Operator's Guide and
[CAP 413](#) Radiotelephony Manual

Operational Control (OPC)

- 4.25 Some events require communication for synchronisation or intervention purposes only. Typically OPC assignments are used for synchronising single aircraft movements with music or other ground activities. Such assignments can also be made for the purposes of facilitating FDD intervention during a display. The latter use will normally be assigned a 'Judges' callsign. Event Organisers must ensure that they have obtained an Article 205 Approval and the Wireless Telegraphy Act (WTA) Licence. The WTA Licence holder is responsible for ensuring that users of these groundstations use appropriate radio discipline.

NOTE: Organisers should ensure that the type of service (i.e. ATC, FIS or AGCS or OPC) is suitable for their event and that the event has been adequately notified. The CAA may, in the interests of safety, direct the person in charge of any aerodrome (other than a Government aerodrome) to provide an air traffic control service, a flight information service or an air/ground communication service as considered appropriate.

Air Traffic Service Personnel

- 4.26 ATCOs, or FISOs intending to provide an ATS at a Special Event or flying display based at a temporary site, or a site not normally providing the service intended must ensure that they:
- provide a minimum of 30 days' notice to the appropriate Regional Manager ATS specifying the type of service they wish to provide, confirming their licence details and requesting examination dates