RA 2335 - Flying Displays, Display Flying, ► Display Parachuting, ◄ **Role Demonstrations and Flypasts**

Rationale	Military involvement in Flying Displays, Display Flying, ► Display Parachuting, ◄ Role Demonstrations and Flypasts ¹ plays an important role in Defence Engagement in the UK and abroad. These activities also allow Heads of Establishment (HoE) ² to engage with the families and friends of serving military personnel, and Commanders to engage with their local communities. Flying Displays, Display Flying, ► Display Parachuting, ◀ Role Demonstrations and Flypasts can involve Aircraft ► and / or Parachutists ◀ operating in close proximity to gatherings of people; this activity involves an increase in Risk to Life (RtL) over normal operating ► ◀. This Regulatory Article (RA) regulates all UK military registered Aircraft ³ (when conducting Display Flying, Role Demonstrations and Flypasts ► ◀ worldwide) and foreign military registered Aircraft (when conducting Display Flying, Role Demonstrations and Flypasts ► ◀ in the UK); additionally, it regulates all Flying Displays held over MOD-Occupied Property ⁴ in the UK, ► ◀ Flying Displays held over non MOD-Occupied Property in the UK that involve military registered Aircraft only, ► and, all military Display Parachuting. ◀ It ensures that appropriate individuals are made responsible for all facets of planning, organizing, managing and delivering Flying Displays, Display Flying, ► Display Parachuting, ◀ Role Demonstrations and Flypasts ► ◀ to ensure RtL remains As Low As Reasonably Practicable (ALARP) ⁵ and Tolerable.
Contents	Applicability of this RADefinitions Relevant to this RA2335(1): Flying Display Organization and Management2335(2): Display Flying, Practices, Role Demonstrations andFlypasts ► ◄2335(3): Separation Distances, Minima and Restrictions► 2335(4): Flying Display Director Accreditation2335(5): Display Parachuting Organization and Management2335(6): Display Parachuting Training and Practices2335(7): Display Parachuting Separation Distances, Minima andRestrictions ◄
Applicability	 Applicability of this RA. When conducting Flying Displays, ► Display Parachuting, ◄ Practices and Validations this RA applies to the following: a. The HoE, Event Organizers (EO) and Flying Display Directors (FDD) of Flying Displays held over MOD-Occupied Property. b. Aviation Duty Holders (ADH), Accountable Managers (Military Flying) (AM(MF)), EO and FDD involved in Display Flying over non MOD-Occupied Property that involves UK military registered Aircraft only. c. All personnel involved in conducting Display Flying, Role Demonstrations or Flypasts ► ◄ utilizing military registered Aircraft⁶.

¹ Words and terms in this Regulation with capitalization are defined in either MAA02: MAA Master Glossary or UK CAA CAP 403.

² Refer to MAA02 – MAA Master Glossary. Note that the MAA02 definition of HoE requires all MOD establishments to have a HoE and, for the context of this Regulation, where a Defence Contractor Flying Organization is also the operator of an unlicensed non-MOD Aerodrome then by definition a HoE will be in place. Additionally, the term HoE also includes Commanding Officers of aviation capable His Majesty's (HM) / MOD Ships. ³ That is any Aircraft on the Military Aircraft Register, or any ► Civil Registered ◄ Aircraft utilized and piloted by the MOD.

⁴ The term 'over MOD-Occupied Property' refers to Display Flying, Display Parachuting, Role Demonstration or Flypast activity conducted for personnel located within the boundaries of an MOD site even if the activity is conducted over civilian land or water. ⁵ Refer to RA 1210 – Ownership and Management of Operating Risk (Risk to Life).

⁶ This includes all military registered Remotely Piloted Air Systems (RPAS) detailed in the RA 1600 Series: Remotely Piloted Air Systems.

Applicability	 All personnel involved in conducting Display Flying, ► Non-Aerobatic Display Flying⁷ or Flypasts utilizing civil registered Aircraft over MOD- Occupied Property.
	e. ►All personnel involved in Display Parachuting utilizing civil or military registered Aircraft over MOD-Occupied or non-MOD-Occupied Property.
	 All foreign military registered Aircraft when conducting Display Flying, Role Demonstrations and Flypasts ► < in the UK.
Definitions	Definitions Relevant to this RA
	2. Aerobatic Manoeuvres. Intentionally performed manoeuvres which involve angles of pitch or bank greater than 90° to the horizon or yawing through angles greater than 20°. Exceptions to this definition are:
	a. Stalling and spinning.
	b. Operational training manoeuvres stipulated by ADH / AM(MF).
	c. Yawing turns in Rotary Wing Aircraft and Vertical and Short Take-Off an Landing (VSTOL) Aircraft.
	 d. Trials or air weapons range manoeuvres stipulated by appropriate authorities.
	3. Car Parks. Where the term 'Car Park' is used in this RA, it applies to Car Park to which Spectators have access during Flying Displays, ▶ Parachuting Displays, ◀ Role Demonstrations or Flypasts and as such will be considered in the same mannel as the Spectator Area.
	4. UK Civil Aviation Authority (CAA) Flying Display Permission. A Permissio granted by the UK CAA for a Flying Display in accordance with (iaw) the Air Navigation Order (ANO) and Civil Aviation Publication (CAP) 403 ⁷ through either an Article 86 Permission or a Standardised European Rules of the Air (SERA) 5005(f)(2) Private Flying Display Permission; throughout this RA ▶ this is ◄ referred to as a UK CAA Flying Display Permission.
	5. Congested Area⁸. Any area ▶ in relation to a city, town, or settlement ◄ which is substantially used for residential, industrial, commercial or recreational purposes.
	6. Crowd Line. The line delineating the closest edge of any area, including Car Parks, accessible to Spectators with respect to the Display Area / Display Line.
	7. Display Area. The Display Area is the ground area footprint of the airspace within which displaying Aircraft may be manoeuvred below the following ► Minimum Separation Distance (MSD)s, ◄ subject to the limits of the UK CAA Flying Display Permission (if applicable), any restrictions imposed by the FDD, and the individual Participant's Public Display Authority (PDA) or Display Authorization (DA):
	a. Military ► Registered ◄ Aircraft:
	(1) 500' MSD for Aerobatic Manoeuvres.
	(2) 250' MSD for Non-Aerobatic Manoeuvres in Fixed Wing Aircraft.
	(3) 100' MSD for Non-Aerobatic Manoeuvres in Rotary Wing Aircraft.
	b. ► Civil Registered ◄ Aircraft ⁹ :
	(1) SERA.5005(f)(1) and SERA.5005(f)(2).
	8. Display Authorization (DA). A national document detailing the groups and categories of ► Civil Registered ◄ Aircraft in which a pilot is authorized to display, together with any limitations and other specific endorsements.

 ⁷ As defined in CAP 403 – Flying Displays and Special Events: Safety and Administrative Requirements and Guidance.
 ⁸ Refer to Schedule 1 of the ANO 2016 or MAA02: MAA Master Glossary.
 ⁴ For planning purposes and clarification, a golf course attached to a Congested Area is considered part of that Congested Area and must be treated as such when considering overflight restrictions.

⁹ Civil Registered Aircraft limitations and minima are detailed in the ANO, SERA.5005 Visual Flight Rules and CAP 403.

Definitions	9. Display Datum. The Display Datum is the point on the Display Line upon which individual displays are based and is normally the centre point of the crowd ¹⁰ .
	10. Display Flying. Any flying activity designed to demonstrate an Aircraft's performance beyond that normally carried out during routine operations and training, whether or not it is performed in front of the public.
	11. Display Flying Supervisor. A Suitably Qualified and Experienced Person (SQEP) selected by the ADH / AM(MF) to supervise Display Flying Aircrew during their work-up period and throughout the display season.
	12. Display Team / Display Item. A single, formation or group of Aircraft ► or Parachutists, ◄ flying as one single display 'act' throughout.
	13. Display Line / Display Axis. A line defining the track along which displaying Aircraft may operate.
	14. Display Pilot. A pilot who holds a DA, DA Exemption, or civilian equivalent issued by their National Aviation Authority, or a military PDA, which allows them to participate in a Flying Display.
	15. ► Display Parachuting. Any parachuting activity deliberately performed for the purpose of providing an exhibition or entertainment whether or not it is performed in front of the public. All military Parachutists require a PDA or foreign equivalent (except during Display Parachuting work-up training as per RA 2335(6)).
	16. Display Sequence. The Display Sequence is a complete list of all the individual manoeuvres, in chronological order, that are intended to be demonstrated by a Participant during a Flying Display ¹¹ .
	17. Display Site. The Display Site is the combined area encompassing the Display Area and the surrounding airspace utilized for the Flying ►or Parachuting ◄ Display.
	18. Event Organizer (EO). The EO is the person responsible for all matters pertaining to the wider planning and execution of an event that includes a Flying ▶or Parachuting ◄ Display and for the Safety of the general public, both at the event and those affected by the wider impacts of the event.
	19. Flying Control Committee (FCC). A group of suitably experienced persons appointed to assist the FDD with the Safety Management of a Flying Display.
	20. Flying Display. Any event at which Display Flying is deliberately performed for the purpose of providing an exhibition or entertainment. For the purpose of this RA a Flying Display commences when the first Aircraft begins Display Flying ► and finishes when the last Aircraft completes ◄ Display Flying ► ¹² ◀.
	21. Flying Display Director (FDD). The person responsible for the safe conduct of a Flying Display ¹³ .
	22. Flying Display Director Mentor (FDD Mentor). A FDD that has been accredited under the joint UK CAA / MAA FDD accreditation scheme so endorsed as to permit mentoring of aspiring FDDs ¹⁴ .
	23. Flypast ^{▶15} • A Flypast ▶ • involves military registered Aircraft flying, either singly or in formation, over or past a gathering of Spectators along a pre-planned route without manoeuvring, other than when necessary for safe and accurate navigation or repositioning. Accordingly, Flypasts will not include Aerobatic Manoeuvres but may include up to 3 pre-planned passes.
	24. High and Low Energy Display Flying. Display Flying is considered High Energy if it contains Aircraft with a Max Take Off Mass of >1200 kg or ►if ◄ the

¹⁰ FDD may elect not to mark the Display Datum if there is a suitable and easily recognisable physical feature in the correct position. ¹¹ The CAP 403 equivalent is a Display Routine - A series of linked manoeuvres to be performed during a Flying Display.

 ¹³ The EO and FDD might in some cases be the same person.
 ¹⁴ The UK CAA and MAA review the FDD accreditation list annually and invite SQEP Tier 3 FDDs to become FDD Mentors. Whilst FDD Mentors are usually Tier 3, experienced FDDs from Tier 1 and Tier 2 will be considered but will not mentor a FDD of a higher Tier.

 $^{^{12}}$ The FDD may define a wider time window for the display for display management purposes.

¹⁵ ► Refer to <u>CAP 403 Flying Displays and Special Events</u>, for the definition of a civilian flypast. ◄

Definitions	Aircraft display Separate > 150 Knots Indicated Air Spaced (KIAS); all other Display		
Definitions	Aircraft display ▶ speed ◀ >150 Knots Indicated Air Speed (KIAS); all other Display Flying is considered Low Energy.		
	25. MOD-Occupied Property ¹⁶ . An Aerodrome in the occupation of the MOD or of any visiting force in the UK ¹⁷ or any other premises in the occupation or under the control of the MOD.		
	26. Participant. An airborne performer or any person directly involved in the conduct of Display Flying, ► Display Parachuting, ◄ Role Demonstrations or Flypasts.		
	27. Public Display Authority (PDA). A document detailing the Display Sequence or individual manoeuvres a military Display Pilot is authorized to conduct in a specific Aircraft, together with any limitations and other specific endorsements.		
	28. Role Demonstration. Any flying activity designed to demonstrate an Aircraft's performance commensurate with that normally carried out during routine operations and training.		
	29. Secondary Spectator. A person viewing a Flying Display from a location which has not been specifically designated for Spectators by the EO or FDD. This definition may include third parties.		
	30. Spectator. A person attending a Flying Display specifically to witness the event.		
	31. Spectator Area. An area specifically designated for Spectators by the EO or FDD and approved by the FDD for Flying Display Safety purposes which includes all areas to which Spectators have access during the Flying Display.		
	32. ► Validation. An assessment, conducted by a suitably experienced individual, that a foreign military Display participant's authorized public Display Sequence is regulatory compliant ¹⁸ . ◄		
Regulation	Flying Display Organization and Management		
2335(1)	 2335(1) All Flying Displays, Practices and Validations shall be planned, managed, organized and delivered ► by SQEP < ensuring RtL is ALARP and Tolerable. 		
Acceptable	Flying Display Organization and Management		
Means of	33. ► ◄		
Compliance	a. ► <		
2335(1)	b. ► ◄		
	HoE Responsibilities		
	34. HoE. The HoE should:		
	 Be Accountable for planning, managing, organizing and delivering a Flying Display, assuring themselves that RtL is ALARP and Tolerable. 		
	b. Issue Terms of Reference (ToRs) to the EO and FDD that appropriately bound their Responsibilities (see para $\triangleright 67 \blacktriangleleft$ for guidance).		
	c. Provide a Safe Operating Environment within which Aircraft can conduct Display Flying.		
	d. As ADH-facing and AM(MF)-facing ► < actively support the relevant		
	ADH / AM(MF), or equivalent, in their management of Air Safety and identify any decision, activity or change in circumstances that has the potential to introduce new or increased RtL to an ADH / AM(MF)'s operations, or which challenges the achievement of their ALARP and Tolerable status ¹⁹ .		

¹⁶ As defined in CAP 403 and ANO 2016, <u>Article 86 Para 15 (a)</u>.

¹⁷ Visiting Force is any visiting foreign military in this context.

¹⁸ This definition of Validation is relevant to Display Flying only and differs from the definition of Validation contained in the MAA02

Master Glossary. ◄ ¹⁹ Refer to <u>RA 1032 – Aviation Duty Holder-Facing Organizations and Accountable Manager (Military Flying)-Facing Organizations -</u> <u>Roles and Responsibilities</u>.

35.

Appointing Flying Display Executives. The HoE should appoint suitably experienced Flying Display Executives as follows:

EO. The post of EO **should** be held by a suitably experienced person. a.

b. FDD. The post of FDD (and Deputy FDD, when appointed) should be held by a SQEP who should not be a Participant in the Flying Display. Additionally, the FDD should:

Hold a valid FDD accreditation for the Tier of Flying Display being (1)held, iaw para ▶ 119, and 120. ◄

Be current for the Tier of Flying Display being held, iaw para >44, (2) 119, 120 and 122.

The FDD **should** have primacy over the EO in all matters concerning Air C. Safety.

Flying Displays held over non MOD-Occupied Property with military 36 registered Aircraft only. Where a Flying Display is held over non MOD-Occupied Property and / or there is no HoE, the EO or FDD should accept Accountability for the HoE Responsibilities listed at para ▶ 34, 35, 52 and 56 ◄ of this RA. If the EO or FDD is unable or unwilling to accept Accountability, the Flying Display should not involve military registered Aircraft.

ADH / AM(MF) Responsibilities

ADH / AM(MF) Responsibilities. ADH / AM(MF) should retain Responsibility 37. for the safe operation of Aircraft in their Area of Responsibility (AoR) when they are involved in Display Flying, Role Demonstrations and Flypasts > <.

ADH / AM(MF) should ensure that Display Flying conducted by Aircraft within 38 their AoR is specifically included within the Air System Safety Case (ASSC)²⁰.

Authority and Permissions

Authority to conduct Flying Displays. Authority to conduct a Flying Display 39. over MOD-Occupied Property should be given by the HoE and the MAA informed (DSA-MAA-Display-Forms@mod.gov.uk) at least 42 days prior to the event using RA 2335 Form 1 (Flying Display Notification Form). ► For parachuting displays only, the MAA should be informed using RA 2335 Form 9 (Parachuting Display Notification Form).
The HoE should detail in orders the administrative arrangements for such events.

40 Events over non MOD-Occupied Property in the UK. Where an event is held over non MOD-Occupied Property, military registered Aircraft should only conduct Role Demonstrations or Flypasts ► ◀, unless a UK CAA Flying Display Permission is in place.

Flying Displays over non MOD-Occupied Property in the UK with a. military registered Aircraft only. Such events are MAA regulated for which a UK CAA Flying Display Permission will not be issued; in these circumstances a Participant's ADH / AM(MF) should (providing they assess the activity is appropriate, ALARP and Tolerable) ► seek a Waiver to para 40 from the MAA ◄ iaw MAA03²¹ having:

Assured themselves that an EO and FDD have been appointed. (1)

(2) Ensured that the EO understands and accepts Accountability for planning, managing, organizing and delivering the Event.

Ensured that the FDD understands that this RA applies to the (3)event and complies with its requirements fully.

Assured themselves that the FDD has conducted a Risk (4)Assessment in lieu of an HoE as per para ▶ 56. ◄

²⁰ Refer to RA 1205 – Air System Safety Cases.

²¹ Refer to Annex B of MAA03: MAA Regulatory Processes.

(5) Confirmed that the venue is suitable for their Aircraft to conduct Display Flying.

b. Where there are multiple Participants and more than one ADH / AM(MF), the ADH / AM(MF) with the most Aircraft involved in the Flying Display **should** liaise with the other Participants ADH / AM(MF) prior to submission of a combined Waiver request, covering all Aircraft involved, to the MAA.

42. **Flying Display Categorization.** The following criteria **should** be used by HoE, EO and FDD in conjunction with Table 1 to categorize Flying Displays into Tiers²³ ► ◀:

a. **High and Low Energy** Display Flying (as per para >24 <).

b. **Complexity.** HoE, EO and FDD **should** consider the following criteria when making a judgement on whether an event is High or Low complexity:

(1) **Airspace.** Consider the complexity of the airspace surrounding the display venue, including proximity to Controlled Airspace or areas with specific limitations that may affect the type of Aircraft displaying.

(2) **Geography.** Consider the Hazards posed by the terrain along with the event layout.

(3) **Congested Areas ► and Public Assemblies**³¹. < Consider the proximity, density and size of Congested Areas ► and any Public Assemblies not directly related to the Display. <

(4) **Secondary Spectators and Third Parties.** Consider the likelihood and controllability of Secondary Spectators and third parties gathering outside the designated Spectator Areas and any effect the Flying Display might have on members of the public in the vicinity. Consider the proximity of major roads, railway lines and local infrastructure and how busy they are likely to be during the event.

(5) **Display Length.** Consider the effect of the Flying Display window on deconfliction issues, eg 3 items over 2 hours may be less complex than 3 items over 15 minutes.

(6) **Display Team²⁴ / Display Item Size.** Consider the number and type of Aircraft in a Display Team / Display Item with respect to the size and nature of the display venue.

(7) **Event Type.** Consider the type of event and how Display Flying activity is integrated; ie is the Flying Display the focus of the event or just an additional attraction?

²² ► Refer to <u>RA 1028 – Contractor Flying Approved Organization Scheme</u>. ◄

²³ The MAA may increase the Tier of event anticipated by the HoE, EO and FDD.

²⁴ A Display Team is classed as a single Display Item.

Table 1. Flying Display Tiers

No of	Low Complexity		High Complexity	
Items ²⁴	Low Energy	High Energy	Low Energy	High Energy
1	Tier 1	Tier 1	Tier 1	Tier 1
2-3	Tier 1	Tier 2	Tier 1	Tier 2
4-7	Tier 1	Tier 2	Tier 2	Tier 2
8-12	Tier 2	Tier 2	Tier 2	Tier 3
13+	Tier 3	Tier 3	Tier 3	Tier 3

Note: Any Flying Display with a High Energy Display Team of 3 or more Aircraft **should** be categorized as a minimum Tier 2.

EO, FDD and FCC Responsibilities

43. **EO.** The EO **should** be responsible for all matters pertaining to the wider planning and execution of the event. As a minimum the EO **should**²⁵:

a. Be responsible **>** for producing **<** an event Risk Assessment.

b. Ensure that appropriate insurance arrangements are in place for all participating Aircraft, whether participating as a Static Display, Flypast, Role Demonstration or conducting ► Display Parachuting or ◄ Display Flying²⁶.

44. **FDD.** At events over MOD-Occupied Property the FDD is responsible to the HoE for the safe conduct of the Flying Display. ► FDDs **should** be accredited to at least the same Tier as that of the Flying Display. ◄ As a minimum, the FDD **should** be responsible for²⁵:

a. Designating a Display Area. Details of Obstacles, Hazards, Structures occupied by non-essential personnel and any anticipated areas of Secondary Spectators or third parties within the Display Area **should** be annotated on a 1:50,000 scale map which is promulgated to all Participants at least 42 days prior to the event.

b. Hazard identification and the subsequent assessment of Risk, application of control measures and mitigations associated with the Flying Display elements of an event.

c. Production ► ◀ of a Flying Display Risk Assessment ► which **should** be made available ◀ to all Participants ► ◀ prior to the event.

d. The coordination, control and Safety of all flying activities conducted as part of a Flying Display.

e. Monitoring flying discipline during a Flying Display.

f. The scrutiny of all Participants' DA, DA Exemption, PDA or foreign Participants national equivalents for regulatory compliance.

g. The briefing (including the production of written Display Pilots' notes) and debriefing of all Participants.

h. Control of the Flying Display programme and cancellation or modification of the programme in the case of adverse weather or other conditions that directly affect the Flying Display.

i. The appointment and management of a FCC, if applicable (see para >45 and 46 <).

j. Ensuring appropriate orders or instructions for the Flying Display are in place, including orders or instructions for Incident and Post-Crash Management.

k. Coordinating the completion and submission of <u>RA 2335 Form 2 (Foreign</u> <u>Military Participant Application Form</u>) seeking Approval from the MAA (<u>DSA-</u>

²⁵ This list is not exhaustive, and the HoE may wish to expand Responsibilities within ToRs.

²⁶ For insurance requirements see <u>JSP 360 - Use of Military Aerodromes by Civil Aircraft</u>, Part 2: Guidance, Chapter 2: Insurance and Fees, Para 4.

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Acceptable	MAA-Display-Forms@mod.gov.uk) for foreign military registered Aircraft			
Means of	involvement at least 42 days prior to the event and <u>RA 2335 Form 3 (Foreign</u> Military Participant Validation Form) iaw para ▶49 and 50. ◄			
Compliance 2335(1)	I. ► Coordinating the completion and submission of <u>RA 2335 Form 7</u> (Foreign Military Parachute Display Application Form) seeking Approval from			
	the MAA (<u>DSA-MAA-Display-Forms@mod.gov.uk</u>) for foreign Parachute Display involvement at least 42 days prior to the event and <u>RA 2335 Form 8 (Foreign</u> <u>Military Parachute Display Validation Form</u>) iaw para 49 and 50. ◄			
	m. Event Occurrence reporting.			
	n. Ensuring the Local Authority Safety Advisory Group (SAG) is involved in the planning from the earliest opportunity possible.			
	 Ensuring appropriate airspace reservations have been considered iaw CAP 403 and the relevant submissions are made using UK CAA <u>on-line</u> <u>Airspace Coordination and Obstacle Management form</u> within the timescales specified²⁷. 			
	p. Providing written feedback to the MAA (<u>DSA-MAA-Display-</u> <u>Forms@mod.gov.uk</u>) using <u>RA 2335 Form 4 (Flying Display Director Post Event</u> <u>Feedback Form</u>) within 7 days of the event.			
	 q. When appointed, issue the FCC with ToRs that bound its Responsibilities. 			
	45. FCC. An FCC should be appointed by the FDD for Flying Displays where there are 4 or more Display Items.			
	46. FCC Responsibilities. As a minimum, the FCC's Responsibilities should include:			
	a. Assisting the FDD with the safe delivery of the Flying Display.			
	b. Assisting the FDD to monitor the standard and Flying Display related discipline of Participants.			
	c. Assisting the FDD in the Validation of any display Participants, if required.			
	d. Providing the FDD with specialist knowledge regarding Display Items.			
	e. Providing the FDD ▶ with specialist opinion regarding regulatory infringements or flying discipline concerns. ◄			
	f. Advising the FDD on restrictions or additional limitations if required.			
	 g. Monitoring the conduct of all display Participants for regulatory compliance. 			
	h. Intervening or stopping, on the grounds of Safety, any display Participant or, in $\triangleright \blacktriangleleft$ cases where the FDD cannot be consulted, the whole Flying Display.			
	i. Being available throughout the period of the Flying Display.			
	Foreign Military Participants at Flying Displays in the UK			
	47. ► Responsibilities of the FDD. On behalf of the MOD the MAA maintains oversight of all foreign military registered Aircraft and foreign military Parachute Display Teams participating at UK Flying Displays. The FDD should ensure that all Participants are SQEP, suitably approved at a national level and the proposed Display Sequence complies with this RA using the documentation supplied by the Participant and submit to the MAA for approval using a <u>RA 2335 Form 2 (Foreign Military Participant Application Form)</u> .			
	48. FDD Responsibilities. If foreign military Aircrew ²⁸ ► and / or foreign Display Parachutists ◄ intend to participate at a Flying Display in the UK, the FDD should ensure that:			

²⁷ The establishment of a Restricted Airspace (Temporary) (RA(T)) requires the issue of a statutory instrument by the Department for Transport and requires notification a minimum of 90 days in advance of the event. RA(T) applications are requested from and submitted to the UK CAA Airspace Regulation department at: <u>AROps@caa.co.uk</u>. ²⁸ For further guidance on foreign military registered Aircraft Participating at UK Flying Displays see para >72-73.

a. Foreign military Participants are approved to conduct Display Flying,
▶ Display Parachuting, ◄ Role Demonstrations or Flypasts ▶ ◄ at Flying Displays in the UK by the MAA.

b. Foreign military Participants are validated to conduct Display Flying,
▶ Display Parachuting, < Role Demonstrations or Flypasts ▶ < at Flying Displays in the UK, if required (see para ▶ 49 and 50 <).

c. A completed <u>RA 2335 Form 2 (Foreign Military Participant Application</u> Form) ► and / or <u>RA 2335 Form 7 (Foreign Military Parachute Display</u> <u>Application</u>) ◄ is submitted to the MAA (<u>DSA-MAA-Display-</u> <u>Forms@mod.gov.uk</u>) at least 42 days prior to the event.

d. The foreign military Participant submits the planned (zero wind speed) Display Sequence to the FDD which **should**, ▶ where appropriate, ◄ include detail on minimum Heights and maximum speeds for each manoeuvre. The FDD **should** use this information to confirm the Participant complies with this RA and that the Display Sequence is suitable for the Display Site. Confirmation that the sequence is suitable **should** be included within the RA 2335 Form 2 ▶ or RA 2335 Form 7 ◀ submission. A map showing the Display Site with the Display Sequence footprint overlaid may be included with the ▶ RA 2335 ◀ Form 2 ▶ or RA 2335 Form 7 ◀ submission or provided when requested by the MAA. The FDD **should** ensure the Display Item is included within the Flying Display Risk Assessment.

e. Where a foreign military display Participant has a nationally approved sequence (PDA or equivalent) which does not adhere to the limits within this RA then the HoE (or equivalent accountable individual for a UK CAA regulated event), working with the FDD or EO, **should** consider which is safer; to request the foreign display Participant to change the approved display or to ▶obtain a Waiver²¹ from ◄ the MAA to allow the nationally approved sequence to be flown.

49. ► Foreign Military Participant Validation. Foreign Military Display Participants should be validated prior to performing their first UK Display. Validation at subsequent venues and Displays could be required; the decision on subsequent Validations should be made by the MAA once the documentation for the venue has been supplied by the Participant and the FDD. Validations should take place at any display venue within the same display season.

50. ► If required by the MAA, HoE, EO or the FDD, the Validation of ► Foreign Military Participants **should** be conducted by the FDD, or a suitably experienced individual nominated by, and on behalf of, the FDD.

a. Validation Reporting. The FDD should complete and submit <u>RA 2335</u> Form 3 (Foreign Military Participant Validation Form) for ► Foreign Military Aircraft and / or a <u>RA 2335 Form 8 (Foreign Military Parachute Display Team</u> Validation Form) < to the MAA (<u>DSA-MAA-Display-Forms@mod.gov.uk</u>) prior to the Flying Display for which the Validation is intended. For further guidance see para ► 72 and 73. <

b. Validation during a Flying Display or ▶ Parachuting Display. ◄ Validation of a Participant should not take place during the Flying Display ▶ or Parachuting Display ◄ for which the Validation is intended. Validation may take place on the day of a Flying Display ▶ or Parachuting Display ◄ but in order to protect Spectators, Secondary Spectators and third parties, Validation should not take place after the arrival on site of the first Spectator through to the departure from site of the last Spectator.

c. Validation in areas where overflight of Third Parties or Secondary Spectators cannot be avoided. When validating a Display Sequence at a venue where the display footprint either overflies or could overfly third parties or Secondary Spectators, then the FDD **should** assess the Risk to these persons and, if appropriate, conduct Validation at an alternative location. If the Risk to third parties and Secondary Spectators cannot be avoided, then the HoE **should** ensure the Risk is ALARP and Tolerable and record the decision appropriately.

Regulatory Artic	CIE 2335 UNCONTROLLED COPY WHEN PRINTED			
Acceptable	Foreign Military Registered Aircraft conducting Flypasts > < at other events			
Means of Compliance 2335(1)	51. Foreign Flypast ► < Foreign military registered Aircraft conducting a Flypast ► < at an event other than a Flying Display in the UK do not require formal MAA Approval; however, the relevant sections of <u>RA 2335 Form 2 (Foreign Military</u> <u>Participant Application Form</u>) should be submitted to the MAA (<u>DSA-MAA-Display- Forms@mod.gov.uk</u>) at least 14 days prior to the event and the activity should be conducted iaw RA 2330 ²⁹ and the UK Military Low Flying Handbook (UKMLFH) ³⁰ .			
	Safety Considerations			
	52. Secondary Spectators and Third Parties. The HoE, EO and FDD should take all reasonable steps to minimize the Risk to Secondary Spectators and third parties. Particular consideration should be given to the following:			
	a. Congested Areas ► and Public Assemblies ³¹ . < Flight over Congested Areas ► and Public Assemblies < should be conducted iaw RA 2330 ²⁹ . Where flight over Congested Areas ► and Public Assemblies < cannot be undertaken iaw RA 2330 the HoE, working with the FDD and / or EO, should put in place appropriate mitigations to ensure RtL is ALARP and Tolerable and ► obtain < a Waiver against RA 2330 ²⁹ , iaw MAA03 ²¹ .			
	b. Roads and Railways. The HoE, working with the FDD and EO, should put in place and record appropriate mitigations to ensure RtL is reduced to ALARP and Tolerable for third parties on busy roads and railways surrounding a Flying Display venue.			
	c. Secondary Spectators. The HoE, working with the EO, should identify areas likely to be occupied by Secondary Spectators and take all reasonable steps to prevent Secondary Spectators gathering in high-Risk areas. Prevention will not always be possible; in this case the EO should take all reasonable steps to inform Secondary Spectators of the Risk to them and record the mitigations taken.			
	d. Third Parties. The HoE, working with the EO, should identify areas likely to be occupied by third parties and take all reasonable steps to relocate them. This may not always be possible; in this case the EO should take all reasonable steps to inform third parties of the event. The HoE should ensure that any RtL is reduced to ALARP and Tolerable and record decisions made and mitigations taken.			
	e. Curtailing a Flying Display due to Secondary Spectators or Third Parties. The presence of Secondary Spectators or third parties may not automatically require a Flying Display to be curtailed or abandoned; an EO and / or FDD should use their judgement to assess the Risk against the mitigations taken and satisfy the HoE that all reasonable steps to ensure any RtL is reduced to ALARP and Tolerable ► and record decisions made and mitigations taken. <			
	53. Arrivals and Departures at Flying Display venues. All arrivals and departures at display venues should be conducted iaw Aerodrome procedures and / or extant Regulations.			
	54. Use of PDA or DA privileges during arrivals and departures. Participants should not use the privileges of their PDA or DA during arrivals or departures unless explicitly approved by the FDD; such Approvals should be limited to pre-arranged Display Flying practices or when the arrival or departure is conducted as part of the Display Sequence during the Flying Display itself.			
	55. Minimum Public Safety Considerations. HoE, EOs and FDDs should ensure that, as a minimum, the following specific requirements for public Safety are met:			
	a. Spectator Areas should be clearly delineated by barriers. At display venues where the Spectator Area also has defined sides, the Crowd Line, for			

venues where the Spectator Area also has defined sides, the Crowd Line, for the purpose of an Aircraft maintaining the correct lateral separation distances,

 ²⁹ Refer to <u>RA 2330 – Low Flying</u>.
 ³⁰ UKMLFH para 01.04.07 and 01.04.08 refers.
 ³¹ ► For the purpose of this RA, a Public Assembly is deemed to exist where there is a gathering of more than 1000 people.

should be considered to run along the front and down the sides of the Spectator Area.

b. Adequate markings **should** be set up in the Display Area to enable Participants to maintain appropriate separation from the Spectator Areas. Details of ground markings and lateral separation distances are at para >58 and 106 <respectively.

c. Aircraft approach and departure routes to the Display Area **should** be chosen to avoid overflight of Spectator Areas. These routes **should** minimize Risk for adjacent Congested Areas ► and Public Assemblies³¹, ◄ see para ► 52. ◄

d. Aircraft parking areas **should** be out of bounds to Spectators when engines are running or Aircraft are taxiing within the parking area.

e. Suitable routes for emergency vehicles **should** be established, clearly marked, and kept free from obstruction at all times.

f. Participants **should** advise the FDD of specific Hazards relating to their Aircraft. The EO and / or FDD **should** check the hazardous materials of military registered Aircraft on the MOD Aircraft Crash Hazards Document Set (accessible via MOD computer systems only)³².

56. **Risk Management.** The HoE, working with the EO and FDD, **should** ensure that Hazards to public Safety specific to their event are identified and that Risk Assessments are carried out. The core elements of a Risk Assessment, that focuses on RtL, that **should** be conducted are:

a. Hazard identification.

b. Assessment of the Risk (likelihood, consequence, who is exposed, existing mitigation, and Accountability).

- c. Reduce Risk until ALARP ▶ and ensure any ◄ residual Risk is Tolerable.
- d. Record significant findings.
- e. Monitor and review.

57. HoEs **should** maintain clear, unambiguous and auditable records of each of their Risks including details of Risk decisions and periodic Risk reviews.

58. Main Display Line and other Ground Markings.

a. Full use **should** be made of existing ground features such as Runways or taxiways, supplemented as necessary by other visual means including markers (preferably with vertical extent) and lighting. Markers **should** be fixed firmly to minimize the effect of downwash.

b. The Main Display Line **should** be \triangleright a minimum of \triangleleft 230 m from the Crowd Line and parallel to it.

c. FDDs **should** consider recognizable and / or compelling features that may be a distraction to Participants when considering how to mark the Main Display Line, eg a non-parallel taxiway or Runway³³.

d. FDDs **should** mark the Display Datum if there is not a suitable and easily recognisable physical feature to identify the correct position³³.

e. FDD **should** provide additional markings to assist Participants to identify appropriate minimum lateral separation distances from the Crowd Line for various aspects of each Participants' Display Sequence, where these are different from the 230 m ▶ Main Display Line. ◄ If used, FDD **should** ensure that Participants are fully briefed on their position and meaning iaw para ▶ 44.g.

³² MOD Aircraft Crash Hazard information can be obtained from the RAF Events Team, Royal Navy or Joint ►Aviation ◄ Command Flying Display Tasking Cells, from the Display Teams themselves or, in extremis via the RAF Regional Liaison Officer (RAFRLO). ³³ The FDD may elect not to mark features such as Display Datum, supplementary Display Lines and even the Main Display Line if there is a suitable and easily recognizable physical feature, at least the minimum required lateral separation distance from the Crowd Line, and in the correct orientation.



³⁴ For military Display Pilots flying MOD-owned Civil Registered Aircraft the requirements detailed in RA 2335(2) apply.

³⁵ Other than a DA Exemption which permits a pilot to conduct Display Flying without a DA.

Civil Registered Aircraft flown over MOD-Occupied Property by pilots 62. without a DA for that Aircraft. FDD should not allow Civil Registered Aircraft flown by pilots without a DA or DA Exemption for that Aircraft to conduct Display Flying, Role Demonstrations or Flypasts over MOD-Occupied Property without first seeking endorsement from the UK CAA via GA@CAA.co.uk. The MAA should be informed of such activity (DSA-MAA-Display@mod.gov.uk) at least 14 days prior to the event.

63.

Warning and Stop Calls

Standard Warning and Stop Calls. If the FDD and / or FCC perceive minima 64. are being encroached, breached or have Safety concerns that require the cessation of a Participants Display Sequence / Routine, the Standard Warning,

Terminate

and Stop Calls and responses at Table 2 **should** be used. FDDs **should** consider the safest and most appropriate time to make a Warning, Terminate or STOP call and to not jeopardise Safety by causing an unnecessary distraction for the pilot at a critical point during their display.
Where Safety critical circumstances require a radio call that is not listed below, the FDD or FCC member should make the radio call using clear unambiguous language; when such a call is made the FDD should ensure a Defence Aviation Safety Occurrence Report (DASOR) is submitted.

FDD / FCC Warning Call	Pilot Response
'(Callsign) Too Low'	'Roger (Callsign)'
'(Callsign) Too Close'	'Roger (Callsign)'
FDD / FCC Terminate Call	Pilot Response
'(Callsign) Terminate'	'Wilco (Callsign)'
FDD / FCC Stop Call	Pilot Response
'(Callsign) Stop Stop Stop, Acknowledge'	'Wilco (Callsign)'

Too Low Call. A 'Too Low' Call should be made at an appropriate time if a. the FDD and / or FCC assess that an Aircraft has descended below the Participant's PDA or DA minima or the minima in place for the Flying Display.

Too Close Call. A 'Too Close' Call should be made at an appropriate h time if the FDD and / or FCC assess that an Aircraft has breached the minimum lateral separation distance appropriate to that Display Item.

Terminate Call. A 'Terminate' Call should be used when a Participant is C. required to suspend Display Flying for a reason other than their fitness or Competence (eq intruder Aircraft, birds, etc). A 'Terminate' Call can also be used by a Participant to notify their intention to halt a display if deemed necessary for any reason. At the discretion of both the FDD and the Participant, the Display Sequence / Routine may be resumed if safe to do so.

Stop Call. A 'Stop' Call should be made if the FDD and / or FCC has a d. Safety concern related to a Participants' fitness or Competence; additionally, a 'Stop' Call should be made if a third Warning Call is required. Once a 'Stop' Call has been made, the Participant should not continue their display or recommence their Display Sequence / Routine. A 'Stop' Call can be made outright, or because of the need to issue a third Warning Call.

Where an event has a Participant with a non-radio capable Aircraft, a fully e. briefed procedure **should** be established to enable communication of Standard Warning,
Terminate
and Stop Calls.

f. ► For Warning calls only, where the FDD / FCC considers, for flight Safety reasons, there is no 'appropriate time' to make a call during the Participant's remaining display, they should verbally debrief the Participant once landed. In addition to the verbal debrief, the Occurrence should be recorded as a 'Warning call' on the 'Flying Display Director Post Display

Acceptable Means of	Feedback Form' RA 2335 Form 4 along with a narrative detailing debrief points and justification for withholding the call.				
Compliance 2335(1)	g. For 'Stop' Calls, once the Flying Display is complete (or earlier if safe and practicable) the FDD should :				
2000(1)	(1) Confirm the Participant understands they have been stopped and explain why.				
	(2) Where the Participant is flying a civil registered Aircraft, inform the UK CAA General Aviation Unit as soon as practicable on 01293 573919 and, if appropriate, submit a Mandatory Occurrence Report (MOR).				
	(3) Where the Participant is flying a military registered Aircraft or the event is conducted over MOD-Occupied Property, submit a DASOR ³⁶ .				
	(4) ► Where the participant is flying a foreign military registered Aircraft the FDD should:				
	i. Prevent any further display flying for the participant until clearance to recommence display flying is received from the from the participant's national command chain.				
	ii. Consider the circumstances of the Stop Call and any further actions required prior to the participant recommencing display flying. The FDD should assess whether an additional Validation is required.				
	iii. Inform the MAA of the Stop Call being issued and any follow up actions taken.				
	iv. Ensure all details of the Stop Call, participants national command chain actions and requirement for further Validation are included in the <u>RA 2335 Form 4 (Flying Display Director Post Event</u> Feedback Form) ³⁷ . ◄				
	(5) Record the event on the <u>RA 2335 Form 4 (Flying Display Director</u> <u>Post Event Feedback Form)³⁸.</u>				
	65. ► Participant < action after the Issue of a Stop Call. Where the FDD / FCC has issued a 'Stop' Call ³⁹ due to a breach of minima or limits, or other Safety concern surrounding military Display Participant fitness or Competence, the Participant should:				
	a. Cease further Display Flying ►/ Parachuting ◄ until approved by their ADH / AM(MF).				
	b. Submit a DASOR as soon as practicable.				
	66. Action after the Issue of a Warning ► or Terminate < Call. ADH / AM(MF) should issue orders or instructions which state the actions to be taken by Display Participants after a Warning ► or Terminate < Call is issued.				
Guidance	Flying Display Organization and Management				
Material	Management of a Flying Display				
2335(1)	67. Boundaries of Responsibility. When HoE are considering the ToRs for the EO and FDD, there are a number of Responsibilities that they may wish to allocate. These may include, but are not limited to:				
	a. The location of Car Parks.				
	b. The location and number of Spectator Areas.				
	c. Aircraft parking and marshalling areas.				

³⁶ If a FDD is unable to access the Air Safety Information Management System (ASIMS) to submit a DASOR then they **should** contact the MAA via email (<u>DSA-MAA-Display@mod.gov.uk</u>) and request guidance on how to submit a DASOR. ³⁷ ► MAA equivalent to UK CAA Form Safety Regulation Group (SRG) 1305. ◄

 ³⁸ MAA equivalent to UK CAA Form Safety Regulation Group (SRG) 1305.
 ³⁹ iaw para ▶64.

Guidance	d. Aircraft refuelling areas.				
Material	e. Emergency vehicle access and egress points.				
2335(1)	f. Emergency control centre location and set up.				
	68. FCC. The FCC will consist of suitably experienced personnel appropriate for the Tier of Flying Display, the Aircraft participating, and will be issued with ToR from the FDD. The FCC may include the FDD, who may act as chairperson of the FCC, and additional members who have the requisite experience of Display Flying and / or Flying Display planning, organization, management and delivery. ► The chair ◄ of the FCC may also be delegated.				
	69. Categorization of an Event as a Flying Display. The HoE (EO or FDD for events with no HoE), may categorize an event that only has Flypasts or Role Demonstrations as a Flying Display if they consider it necessary. Reasons for this may include:				
	a. The complicated nature of an event (such as very unusual mixed formations).				
	b. Large gatherings of people.				
	c. Complex geography or airspace restrictions.				
	70. ► The Guidance Material from RA 2335 Issue 12 para 66 to 75 pertaining to FDD Accreditation has been moved to RA 2335(4) and elevated to Acceptable Means of Compliance. ◄				
	Foreign Military Registered Aircraft ►or Parachute Display Teams < Participating at UK Flying Displays				
	71. ► ◄				
	 72. Validation. The MAA and / or the FDD can mandate the Validation of any foreign military display Participant in order to ensure the display Participant can conduct < a Display Sequence compliant with the MRP or in accordance with any provisions stipulated in Waiver Approvals where compliance cannot be demonstrated. Where a Participant has more than one authorized Display Sequence, then Validation of any one of the Display Sequences is normally accepted by the MAA as sufficiently appropriate to Validate the Participant to fly all Display Sequences. 				
	a. ► <				
	b. ► <				
	73. ► Subsequent Display Validations. FDDs may utilize information from any previous in-season Validation as part of their documentation submitted to the MAA. The MAA may mandate Validation if the new Display Site layout presents significantly greater limitations, or any Display Sequence has been changed since the original Validation. Subsequent Validations follow the same process as for the initial Validation. <				
	Public Safety				
	74. Safety and Risk Assessment. Guidance on managing and recording Risk is contained within RA 1210 ⁵ .				
	75. Civil Participants Operating Minima. The UK CAA has granted the MOD a Permission for civilian Participants holding a DA or DA Exemption to operate to less restrictive minima than that stated in SERA.5005(f)(2) during Flying Displays held over nominated MOD-Occupied Properties.				
	76. CAP 403 – Flying Displays and Special Events: Safety and Administrative Requirements and Guidance. CAP 403 provides additional guidance to EO and FDD for the Safety planning associated with a Flying Display, including working with Local Authorities, Emergency Services, Highways Authorities, SAG and wider Health and Safety Executive requirements.				

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Regulation 2335(2)	 Display Flying, Practices, Role Demonstrations and Flypasts ► 2335(2) ADH / AM(MF) shall ensure that personnel involved in conducting Display Flying, Practices, Role Demonstrations and Flypasts ► are Competent and appropriately trained, approved, authorized and supervised.
Acceptable Means of Compliance 2335(2)	 Display Flying, Practices, Role Demonstrations and Flypasts ► 77. ► Display Flying Regulations. The most restrictive Regulations of this RA or the following should always be applied: a. North Atlantic Treaty Organization (NATO) Standardization Agreement
	 (STANAG) 3533 / Allied Flight Safety Publication (AFSP) 5, if applicable⁴⁰. b. Orders or instructions issued by the ADH / AM(MF) for Aircraft in their AoR conducting Display Flying, Practices, Role Demonstrations or Flypasts
	c. Orders or instructions issued by the HoE, EO or FDD for a specific event.
	d. CAP 403 where a UK CAA Flying Display Permission exists for an event. Whilst the UK CAA Flying Display Permission will be time bounded, any Participants flying military registered Aircraft on the same day should apply the limitations of the CAA Flying Display Permission and CAP 403 regardless of what time they conduct their flying activity unless Approval is obtained from the MAA (<u>DSA-MAA-Display@mod.gov.uk</u>) at least 14 days prior to the event.
	e. PDA, DA or DA Exemption.
	f. Any host nation Regulations and orders or instructions when conducting Display Flying, Practices, Role Demonstrations or Flypasts ► ◄ outside the UK.
	Aircrew and Support Personnel
	78. Display Flying Aircrew. ADH / AM(MF) should ensure that:
	 The Aircrew selected to conduct Display Flying are SQEP in both airborne and ground-based aspects of Display Flying.
	 Where Display Flying Aircrew are responsible for conducting Risk Assessments, they are appropriately trained and supported.
	 Display Flying Aircrew hold a valid PDA and / or DA prior to conducting Display Flying at a Flying Display.
	79. Display Flying Supervisor. ADH / AM(MF) should nominate a SQEP Display Flying Supervisor.
	80. Display Flying Support Personnel . ADH / AM(MF) should allocate sufficient support personnel and / or resource to allow Aircrew selected for Display Flying to safely and effectively conduct activity throughout the display season.
	81. Ground Knowledge. ADH / AM(MF) should ensure that, in addition to the pre- season Display Flying work-up detailed in para ► 84, ◄ Aircrew and support personnel selected for Display Flying are appropriately trained in the relevant non-flying aspects of Display Flying, such as Human Factors, Fatigue Management, Supervision and relevant regulatory knowledge (ie RA 2335, the ANO, CAP 403 and CAP 1724).
	Pre-Season and Practice Display Flying
	82. Practice Display Flying. ADH / AM(MF) should assure themselves that practice Display Flying is conducted in such a way and at such a location as to ensure that RtL to Participants, Secondary Spectators and third parties is ALARP and Tolerable. ► Practice Display Flying should not take place during a Flying Display. Practice Display Flying may take place on the day of a Flying Display but in order to protect Spectators, Secondary Spectators and third parties, practice Display Flying

⁴⁰ If a Flying Display involves Participants from two or more NATO Nations the NATO STANAG / AFSP 05 applies.

should not take place after the arrival on site of the first Spectator through to the departure from site of the last Spectator.

83. **Practice Display Flying Minimum ► MSD.** ADH / AM(MF) **should** promulgate orders or instructions stipulating who can approve Display Flying Aircrew to operate at a ► MSD < lower than those specified in orders or instructions for routine operations and training; this **should not** be delegated below Sqn Cdr ► or an < OF-4. The individuals detailed in orders or instructions are responsible for signing the Display Flying Aircrew's training record⁴¹.

84. **Pre-Season Display Flying Work-Up and PDA.** Pre-season Flying Display practices **should** be personally authorized by the Display Flying Supervisor. The following points **should** be applied when authorizing and supervising Display Flying work-up flights:

a. The work-up **should** be of a progressive nature leading, in stages, down to the approved display \triangleright MSD, \triangleleft and initially conducted only over their own Airfield unless the ADH / AM(MF) directs otherwise.

b. Consideration **should** be given to the use of appropriate Synthetic Training Devices for initial practice displays.

c. The previous season's Display Pilot **should** be used in an advisory and / or monitoring capacity during practice $\triangleright \blacktriangleleft$.

d. Each practice Display Flying sortie **should** be monitored by the Display Flying Supervisor. If the Display Flying Supervisor is on the ground, they **should** be in a suitable position to ensure they are not a distraction to the Display Flying Aircrew.

e. All practice Display Flying below 2000' MSD **should** be video recorded.

f. A record of Display Flying practices detailing weather, Runway, etc. **should** be maintained in the Display Flying Aircrew's training record.

Public Display Authority

85. **ADH / AM(MF) Display Sequence Approval.** The Display Flying Aircrew and the Display Sequence **should** be approved by the ADH / AM(MF) using <u>RA 2335</u> <u>Form 5 (Public Display Authority Form)</u> as the mechanism to signify that final Approval has been granted to conduct Display Flying in front of the general public. The MAA **should** be provided with a completed copy of RA 2335 Form 5 (Public Display Authority Form) once the PDA has been awarded via <u>DSA-MAA-Display-Forms@mod.gov.uk</u>.

86. **PDA Form.** The PDA, as detailed on the approved RA 2335 Form 5, **should** detail all of the permitted activity, as well as any limitations, and **should** be made available to the FDD ► **4**. If an FDD ► does not **4** accept the Participant's PDA or Display Sequence the Participant **should not** perform.

87. **Deviations from PDA.** Deviations from the PDA or permitted modifications to the Display Sequence, as detailed on the approved RA 2335 Form 5 (Public Display Authority Form), **should not** be permitted without Authorization by the ADH / AM(MF). If a FDD ► does not < accept the Participant's PDA or Display Sequence the Participant **should not** perform.

88. **Role Demonstrations.** Role Demonstrations do not necessarily require a PDA, however, ADH / AM(MF) **should** issue orders or instructions that, as a minimum, detail the following:

a. Approved Role Demonstration manoeuvres that may be conducted by Aircraft within their AoR.

b. The approval mechanism, clearance procedures and Authorization process for Role Demonstrations.

c. Safety Management procedures, limitations and restrictions.

⁴¹ Or electronic equivalent.

the air and a 89. Flypasts a PDA. However, <i>J</i> appropriate limitati AoR. A Flypast Display Venue Su 90. Display Ven venues at which A suitable, safe and intended Display S a. The para 35. b. RtL a remains ALA material and	 ADH / AM(MF) s ADH / AM ADH / AM<	Me conduct of Fly (MF) should ► Parachutists he Aircraft ► and should include be O are suitably	e Display Flying ders or instructic pasts ► ◀ on Ai ned passes. assure themse vithin their AoR p / or Parachutists eing satisfied tha	so do not require ons detailing rcraft within their elves that display perform are s ◀ and ► their ◀ tt:
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▶ para 35. ◀ b. RtL a remains ALA material and	ttributable to Dis		experienced or o	
remains ALA material and				qualified iaw
c Red	l Flying Display I	play Flying, Role ble including havi Risk Assessment	ng reviewed the	s or Flypasts ► ◄ FDD's briefing
		isplay Venue sui ed in RA 2335(7)		hute Displays no
91. 🕨 ┥				
92. 🕨 ┥				
93. 🕨 ┥				
94. Applicabilit Participants which	Applicability of RA 2335 or CAP 403. Tables 3 and 4 show Flying Display icipants which Regulations (relevant to Flying Displays) apply and therefore what			
			_	stered Aircraft
				Other Event
Permitted Activity	Display Flying, Role Demonstrations and Flypast ► ◀ (iaw para ► 104 and 105 ◀)	Role Demonstrations and Flypast ► ◀ (iaw para ► 107 ◀)	Display Flying and Flypast	As per the ANO / SERA
Regulation (most restrictive of)	RA 2335	RA 2335	RA 2335 CAP 403	As per the ANO / SERA
	92. • • • • • • • • • • • • • • • • • • •	92. ► 93. ► Display Flying, Practices, F 94. Applicability of RA 2335 or Participants which Regulations (rel flying activity is permitted. Table 3. Event Military Regi Flying Display Permitted Display Flying, Role Demonstrations and Flypast ► (iaw para ► 104 and 105 Regulation (most RA 2335	92. ► 93. ► Display Flying, Practices, Role Demonstrations 94. Applicability of RA 2335 or CAP 403. Table Participants which Regulations (relevant to Flying D flying activity is permitted. Table 3. Events over MOD-Occur MoD-Occur Military Registered Aircraft Flying Display Other Event Permitted Display Flying, Role Activity Display Flying, Role Demonstrations and Flypast ► (iaw para ► 104 and 105 Regulation (most RA 2335	92. ► 93. ► Display Flying, Practices, Role Demonstrations and I 94. Applicability of RA 2335 or CAP 403. Tables 3 and 4 show 94. Applicability of RA 2335 or CAP 403. Tables 3 and 4 show Participants which Regulations (relevant to Flying Displays) apply ar flying activity is permitted. Table 3. Events over MOD-Occupied Property MoD-Occupied Property Military Registered Aircraft Civil Regist Flying Display Other Event Flying Display Permitted Display Flying, Role Role Display Flying and Flypast ► Demonstrations and Flypast ► and 105 Participant ► (iaw para ► 107 RA 2335 Regulation (most RA 2335 RA 2335 RA 2335

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Guidance		Table 4. Events	over non MOD-C	Occupied Property	/
Material			Non MOD-Occupie	ed Property in the U	K
2335(2)			UK CAA Flying D	bisplay Permission ⁴²	
		Y	/es	1	No
		Military Registered	Civil Registered	Military Registered	Civil Registered
	Permitted Activity	Display Flying, Role Demonstrations and Flypast ► ◄ (iaw para ► 104 and 105 ◄)	Display Flying and Flypast	Display Flying ⁴³ , Role Demonstrations and Flypast ► ◄ (iaw para ► 107 ◄))	As per the ANO / SERA
	Regulation (most restrictive of)	RA 2335 CAP 403	CAP 403	RA 2335	As per the ANO / SERA
	Note: For Flying Disp of RA 2335 and releva			ircraft must comply w	ith the most restrictive
	95. Role Demonstrations or Flypast ► < being Categorized as Display Flying ADH / AM(MF) may, if they deem appropriate, categorize Role Demonstrations or Flypasts ► < as Display Flying.				
Regulation	Separation Dis	stances, Mini	ma and Rest	rictions	
2335(3)	· · ·			d lateral separa	
	distances, and other applicable minima and restrictions shall be complied with at all times during Display Flying, Practices, Role Demonstrations and Flypasts.				
Acceptable Means of	Separation Dis General	stances, Mini	ma and Rest	rictions	
Compliance 2335(3)	96. ADH / AM(MF) Approval for overflight of Congested Areas. Display Flying, Practices, Role Demonstrations and Flypasts ► < over Congested Areas should be approved by the Aircraft ADH / AM(MF) in advance. Where a Congested Area ► < is within the Display Site of a civilian event where the UK CAA has issued a Flying Display Permission then the ADH / AM(MF) should determine if the Display Sequence will overfly the Congested Area ► at Heights below those minima specified in RA 2330 ²⁹ < and if so, ensure a Waiver request iaw MAA03 ²¹ has been applied for ► and approved. <				
	97. Congested Areas ► and Public Assemblies ³¹ . ▲ Display Flying, Practice Role Demonstrations or Flypasts ► ◄ over Congested Areas ► and Public Assemblies ◄ should be conducted iaw ► the Height limits in ◄ RA 2330 ²⁹ and the UKMLFH. If Display Flying, Role Demonstration or Flypast over the Congested A ► or Public Assembly at Heights below those minima specified in RA 2330 ²⁹ ◄ is considered appropriate, the ADH / AM(MF) is to conduct a Risk Assessment considering Spectators, Secondary Spectators and third parties, and should ens the Participant's flight over the Congested Area ► or Public Assembly ◄ is ALAR Tolerable. This should be recorded formally in the ► appropriate ◄ Risk Assess In addition:				Public 2330 ²⁹ and the Congested Area 2330 ²⁹ ◀ is essment should ensure y ◀ is ALARP and
				emblies not withir refer to para 108.	
	MAA03 ²¹²¹ fo Assembly ³¹	or Display Partic at Heights less	ipants flying over s than those stip	should seek a W r the Congested A ulated in RA 2330 oly ◀ may be part	Area ▶or Public) ²⁹ para 25. Flight

 ⁴² Unless the MAA have approved a Flypast ▶ < to be conducted on the same day as the UK CAA Flying Display Permission.
 ⁴³ For an event which involves military registered Aircraft only (see para ▶ 40a < of this RA).
 ⁴⁴ NATO STANAG 3533, AFSP 5 or any host nation Flying Display Regulations.

Sequence, positioning for a Display Sequence, transition to the Display Area, conducting a Display Practice or conducting a Validation.

c. **Civilian Regulated Events**. UK and foreign military Aircraft participating at a UK CAA regulated event are military regulated and **should** operate to the most restrictive of RA 2335 or CAP403. For flight ► over Congested Areas and Public Assemblies³¹ < RA 2335 is the most restrictive Regulation and Waivers **should** be sought as follows:

(1) **UK Military Participants.** In lieu of an HoE the ADH / AM(MF) **should** seek a Waiver iaw MAA03²¹ for UK Display Participants flying over the Congested Area ► or Public Assembly³¹ ◄ at Heights less than those stipulated in RA 2330²⁹ para 25. This Waiver is required when conducting a Display Sequence, positioning for a Display Sequence, transition to the Display Area or conducting a Display Practice ► ◀.

(2) Foreign Military Display Participants. Foreign military display participants do not operate under ► an < ADH construct but are approved by the MAA. For flight over Congested Areas ► and Public Assemblies³¹ < at Heights less than those stipulated in RA 2330²⁹ para 25 the FDD should seek a Waiver iaw MAA03²¹. This Waiver is required when conducting a Display Sequence, positioning for a Display Sequence, transition to the Display Area, conducting a Display Practice or conducting a Validation.

d. Events over Civilian Occupied Property involving only Military Display Items. Where an event is held over civilian property involving only military Display Items the UK CAA will not issue an Article 86 Permission and the event will be military regulated. If the event is an Air Display the FDD should confirm that the ADH has conducted a Risk Assessment and obtained a Waiver iaw MAA03²¹ for flight over the Congested Area ► or Public Assembly³¹ < at Heights less than those stipulated in RA 2330²⁹ para 25. If the event is a Role Demonstration or Flypast ► < then the ADH, in addition to conducting their Risk Assessment, should obtain a Waiver for flight over the Congested Area ► or Public Assembly < iaw MAA03²¹.

98. **Performance Limitations - Speed.** An absolute true limit of Mach ► 0.95 < or 600 KIAS (whichever is reached first) **should not** be exceeded.

99. **Performance Limitations - Multi-Engine Fixed Wing Aircraft.** Multi-Engine Fixed Wing Aircraft **should not** fly below the speed at which it is still possible to climb away, without change of configuration, if any one engine fails.

100. Weather Minima. ADH / AM(MF) should stipulate the minimum weather conditions for Display Flying, Practices, Role Demonstrations and Flypasts ► ◀ by Aircraft in their AoR. The following table should be the absolute minimum weather conditions for Participants that hold a valid PDA or DA when operating at a Flying Display, ► conducting a Flying Display Practice ◀ or during PDA work-up iaw RA 2335(2); the Visual Meteorological Conditions (VMC) minima in RA 2307⁴⁵ apply at all other times:

⁴⁵ Refer to <u>RA 2307 – Rules of the Air</u>.

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Acceptable	
Means of	
Compliance	
2335(3)	

Table 5: Weather Minima

			Weather	Minima
Type of Aircraft	Туре с	of display	cloud base (feet)	visibility
VSTOL ⁴⁶ , Rotary Wing and other	Flypasts, non- aerobatic Display	Solo Aircraft	500	1500 metres
Aircraft with a stalling speed below	Flying and Role Demonstrations	Formations	500	3000 metres
50 KIAS	Aerobatic Display Flying	Solo Aircraft	800	3000 metres
		Formations	1000	5 km
All other Aircraft	Flypasts, non- aerobatic Display Flying, 'flat'	Solo Aircraft	500	5 km
	Aerobatic Display Flying and Role Demonstrations	Formations	1000	5 km
	Aerobatic Display	Solo Aircraft	1000	5 km
		Piston Formations	1000	5 km
	Flying	Jet / Turboprop Formations	1500	5 km

Notes: (i) Where a 'flat aerobatic display' is a Display Sequence considered for the Aircraft it **should** be formally approved as part of the Participant's PDA.

(ii) Subject to FDD Approval, Aircraft unable to display because of low cloud base may fly an instrument approach to land, touch-and-go or low approach.

Display Flying Separation Distances, Minima and Restrictions

101. **Overflight of Spectators.** All Participants **should** avoid overflight of the Spectator Areas unless a Waiver has been granted for a specific condition such as crowd rear arrival. The Risk created by overflight of Secondary Spectators and third parties during a Flying Display, Validation or Practice **should** be assessed by the HoE to ensure RtL is ALARP and Tolerable. The associated Risks, mitigations and decisions **should** be documented.

102. MSD Inside the Display Area.

a. Participants **should not** perform Aerobatic Manoeuvres above any structures occupied by non-essential personnel, Secondary Spectators or third parties within the Display Area.

b. Participants **should not** perform non-aerobatic overflight of any structures occupied by non-essential personnel, Secondary Spectators or third parties during a Display Sequence at less than 500' MSD within the Display Area.

103. **MSD Outside the Display Area.** UK and foreign military Participants **should** adhere to the following MSD outside of the Display Area at Flying Displays in the UK⁴⁷:

- a. Aerobatic Manoeuvres All Aircraft⁴⁸. 500 feet MSD.
- b. Fixed Wing Aircraft Non-Aerobatic Manoeuvres. 250 feet MSD.
- c. Rotary Wing Aircraft Non-Aerobatic Manoeuvres. 100 feet MSD.

104. ► MSD < at a Flying Display. ADH / AM(MF) should specify minimum ► MSDs < for Display Flying, Role Demonstrations and Flypast ► < flown by their Aircrew, dependent upon the Aircraft type, Aircrew experience and location of the event. However, they should not be less than the MSD⁴⁹ specified in Table 6 unless para ► 104c < applies:

⁴⁶ This only applies to VSTOL Aircraft operating in VSTOL mode.

⁴⁷ Civilian Participants are to adhere to the ANO / SERA outside the Display Area.

⁴⁸ This limitation applies from when the Aircraft commences its run in for its Display Sequence, Role Demonstration or Flypast > < to when it has completed its Display Sequence, Role Demonstration or Flypast > <.

⁴⁹ Where the Flying Display is outside the UK, the most restrictive of this Regulation and any applicable local / national orders apply.

Acceptable	Tabl	le 6. Minimun	n ►MSD◀ Pa	art 1		
Means of Compliance		MSD (feet		Display Sequenc splay	e at a Flying	
2335(3)		Fixed Wing	Rotary Wing	Fixed Wing Close Formation	Rotary Wing Close Formation	
	Flypast Only - Wings Level Flight ≤20° Angle of Bank (AOB)	100	50	250	100	
	Non-Aerobatic Flight ≤90° AOB	100	100	300	100	
	Aerobatic Manoeuvres, Inverted Flight and Link Manoeuvres	300	300	300	300	
	 a. Link Manoeuvres. Where one Aerobatic Manoeuvre is linked directly to another, Aircraft should remain above the minimum ►MSD ◄ for Aerobatic Manoeuvres throughout the transition. Where an Aerobatic Manoeuvre is followed by a Non-Aerobatic Manoeuvre, Participants should be certain of capturing the minimum ►MSD ◄ for Aerobatic Manoeuvres during the recovery before continuing descent to the non-aerobatic minima specified in Table 6. b. Manoeuvre After Take-Off. Once safely airborne and not below 50 feet MSD throughout the manoeuvre, the Participant may commence a turn away from the Crowd Line to capture the appropriate Display Line. No more than 60° AOB should be used and a positive climbing vector should be maintained throughout the manoeuvre. On crossing the appropriate Display Line (if the Runway is inside it) the Participant should be at or above 100 feet MSD. c. Rotary Wing and VSTOL Aircraft. Rotary Wing and VSTOL Aircraft should operate iaw the MSD in Table 6 unless conducting hovering and transition manoeuvres. 105. ►MSD ◄ when not part of a PDA Display Sequence at a Flying Display. ADH / AM(MF) should specify minimum ►MSD ◄ for Role Demonstrations and Flypasts ► ◀ when not part of a PDA Display Sequence at a Flying Display. These ►MSD ◄ should be dependent upon the Aircraft type, Aircrew experience and the location of the event. However, they should not be less than the MSD specified in 					
	Table 7:		n ►MSD◀ Pa			
	MSD (feet) when NOT part of a PDA Display Sequence at a Flying Display				Sequence at a	
		Fixed Wing	Rotary Wing	Fixed Wing Close Formation	Rotary Wing Close Formation	
	Flypast Only - Wings Level Flight ≤20° AOB	100	50	250	100	
	Role Demonstration Manoeuvres - Non-Aerobatic Flight ≤90° AOB	250	100	500	250	
	Aerobatic Manoeuvres, Inverted Flight and Link Manoeuvres	500	N/A PDA Required	N/A PDA Required	N/A PDA Required	
	106. Lateral Separation. The apply to all military registered A Aircraft at Flying Displays over Participant or their ADH / AM(M any specific Aircraft or manoeu with:	Aircraft at all MOD-Occup MF) considers	Flying Display bied Property. s that a greate	s and ►Civil ◄ Where an HoE r separation is	Registered , FDD, required for	
	a. Ground Operatio servicing and at any time separation distance of 1 and the nearest point of	e when engin 5 m should b	es or rotors and the maintained	re running, a m between Spec	ninimum lateral ctator Areas	
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taxiing or air-taxiing, except when such taxiing is away from a marked taxiway and without the assistance of a marshaller, when the minimum lateral separation distance **should** be increased to 65 m.

b. **In-Use Runways.** The minimum lateral separation distance between the near edge of any Runway used for conventional Fixed Wing take-off and landing (including 'touch and go' and 'low approach') and the Crowd Line **should** be 100 m except for light Aircraft with a Maximum Take-Off Mass (MTOM) of $\leq 1200 \text{ kg}$, and a take-off and landing speed of less than 100 KIAS, this separation may be decreased to 65 m. Other than for emergencies, a Runway **should** only be used for non-standard take-off, $\blacktriangleright \triangleleft$ landing Procedure conducted during routine operations and training for that Aircraft), if its near edge is at least 230 m from the Crowd Line at all points \triangleright (150 m for Aircraft with a MTOM $\leq 1200 \text{ kg}$).

c. **In Flight.** The normal minimum lateral separation distance between the Crowd Line and Aircraft conducting Display Flying, Role Demonstration or Flypast including Rotary Wing displays that involve aerobatics, **should** be 230 m. However, the following additional minima apply for specific circumstances:

(1) **High Speed Aircraft.** Where the displaying Aircraft is at a speed in excess of 300 KIAS, and has a velocity vector towards a Spectator Area, the minimum lateral separation distance **should** be increased to 450 m.

(2) **Low Energy Display Flying.** For Low Energy Display Flying, as defined in para ► 24, ◄ the minimum lateral separation distance **should** be 150 m.

(3) **Rotary Wing.** For normal take-off and landing, and during transitional manoeuvres, the minimum lateral separation distance **should** be 65 m. For other stages of non-aerobatic flight, or at any time when an underslung load is carried, the minimum lateral separation distance **should** be increased to 100 m.

(4) **VSTOL Aircraft (including Tilt Rotor Aircraft).** For vertical takeoff and landing, and during non-wing borne flight at low speed, the minimum lateral separation distance **should** be 150 m. By the time conventional wing borne flight is achieved, the Aircraft **should** be at the normal minimum lateral separation distance of 230 m.

(5) **Balloons.** At displays where balloons operate, FDD **should** follow the guidance in CAP 403 and CAP 1741⁵⁰.

(6) **Airships.** Airships are operated as lighter-than-air Aircraft, and as such **should** be subject to Regulations applying to Fixed Wing Aircraft.

(7) **Model Aircraft.** FDD **should** follow the guidance given in CAP 403 and CAP 722 Unmanned Aircraft System Operations in UK Airspace⁵¹.

(8) **Remotely Piloted Air Systems (RPAS)**⁵². RPAS **should not** be operated in a manner that presents undue Risk or Hazard to any person, vehicle, vessel or structure. The HoE **should** ensure RPAS are operated iaw CAP 1789A or any lateral separation limits specified in the applicable RA 1600 Series Regulation or the RPAS Letter of Endorsed Categorization. If this separation criteria differs from that in this RA, the most stringent limit **should** be applied.

d. **Dual Spectator Areas.** In the case of Flying Displays at Airfields / locations where Spectator Areas (and / or concentrations of Secondary Spectators) are on, or expected to be on, both sides of the Display Axis, the minimum lateral separation distance between the Display Line and the

⁵⁰ Refer to <u>CAP 1741 – Balloon Declared Operator Guidance</u>.

⁵¹ Refer to <u>CAP 1789A – Unmanned Aircraft Systems</u>.

⁵² Refer to RA 1600 Series: Remotely Piloted Air Systems.

Acceptable Means of	Spectator Areas, specific Line.	ed above, sho	uld apply on	both sides of	the Display
Compliance	Role Demonstrations and Flypasts ► ◄				
2335(3)	107. ► MSD < at any other event. ADH / AM(MF) should specify minimum ► MSD < for Role Demonstrations and Flypasts ► < not conducted as part of a Flying Display. These ► MSD < should be dependent upon the Aircraft type, Aircrew experience and the location of the event. However, they should not be less than the MSD specified in Table 8: Table 8. Minimum ► MSD < Part 3				
				any other event	
		Fixed Wing	Rotary Wing	Fixed Wing Close Formation	Rotary Wing Close Formation
	Flypast Only – Wings Level Flight ≤20° AOB	250	100	500	250
	Role Demonstration Manoeuvres - Non-Aerobatic Flight ≤90° AOB	250 ⁵³	100 ⁵⁴	500	250
	Aerobatic Manoeuvres, Inverted Flight and Link Manoeuvres	500	N/A PDA Required	N/A PDA Required	N/A PDA Required
	108. ► Flypasts over a Public Public Assemblies at Heights Ic AM(MF) should:				
	a. Conduct a Risk As Spectators and third part with the Flypast is ALAR	ies, and satist	fy themselves		
	 b. Formally record an Assessment. ◄ 	nd maintain ar	n auditable re	cord of this Ri	sk
	Other Restrictions when con Flypasts ► ◀	ducting Disp	lay Flying, R	ole Demonst	rations or
	109. Control of Engines. Engineathered in flight; symmetrical an engine failure or unintended or Flypast should be Terminate	thrust should shutdown, th	l be maintain	ed at all times.	. In the event of
	110. Armament. Live weapor weapons circuit-breakers and s flares and pyrotechnics when a	witches shou	I ld be in the '	safe' condition	(except for
	111. Rotary Wing and VSTO not be flown or taxied in such p cause a Hazard from downwas consideration should be given	proximity to bu	ildings or Air ng underslung	craft on the group of the group	ound as to due
	112. Parachute Demonstrati parachuting, all flying activity w Area ⁵⁵ , except that which is new The engines of Fixed Wing Airc rotors should not be turning ur	ithin the desc cessary for dis craft should b	ent airspace spatching Par e shut down	and Parachute rachutists, sho and Rotary Wi	e Landing ould cease.
	113. Use of Flares and Pyro Flying Display should be subje the ADH / AM(MF) of the partic signal and smoke cartridges, an Height and position that preven	ect to a specifi ipating Aircraf nd pyrotechnic	c Risk Asses it, the HoE, th cs should on	sment and fina the EO and the ally be fired from	al Approval by FDD. Flares, n such a

⁵³ VSTOL Aircraft may operate below the MSD in Table 8 during hovering and transition manoeuvres iaw para ▶ 104.c (4).
 ⁵⁴ Rotary Wing Aircraft may operate below the MSD in Table 8 during hovering and transition manoeuvres iaw para ▶ 104.c (3).
 ⁵⁵ Including planned alternate Parachute Landing Areas.

	······································			
Acceptable Means of	Spectators, near taxiing or static Aircraft, supporting personnel, ground equipment or third parties.			
Compliance	► RPAS			
2335(3)	114. RPAS as part of a Flying Display. RPAS Safety guidance is the Responsibility of the ADH / AM(MF) / RPAS Responsible Officers (RO) / RPAS Accountable Managers (AM) / Civilian Operator and the HoE, who, through the FDD, should ensure that RPAS displaying as part of a Flying Display maintain safe separation iaw the ADH / AM(MF) / RPAS ROs / RPAS AMs / Civilian Operator's safe operating guidelines.			
	a. The HoE should record any Risks, ensure that the RtL caused by the operation of RPAS at a Flying Display is ALARP and Tolerable and should record the Risks and mitigations appropriately.			
	b. The FDD should:			
	(1) Ensure that all RPAS activity is appropriately deconflicted from any crewed Display Items.			
	(2) Ensure that RPASs are not flown as part of a Display Item with a crewed Aircraft.			
	(3) Ensure RPASs used to provide media footage or live feeds are deconflicted from the Flying Display by either time or distance. If distance deconfliction is taking place, RPAS operating areas should be deconflicted from the Display Area and all display crews briefed on RPAS operations, locations and timings.			
	c. Open Category RPAS ⁵⁶ . The FDD should Review the RPAS safe separation minima prior to the event; where minima are unavailable, or the HoE deems them to be inappropriate then the FDD should apply the minima applicable to a fixed wing Display Item.			
	d. Specific and Certified RPAS ⁵⁶ . The FDD should ensure that Specific and Certified RPAS are flown to the RA 2335 limits applicable to an appropriate crewed system. ◄			
Guidance	Separation Distances, Minima and Restrictions			
Material	115.			
2335(3)	116.			
	a.			
	b. ►			
	(1) • •			
	(2) • •			
	(3) 🕨 ┥			
	(4)			
	117. UK Military Participants at UK CAA-regulated events. The UK CAA accepts a PDA for UK military Display Participants to display at UK CAA regulated events ▶ to the PDA limits. The FDD for a UK CAA regulated Flying Display may accept the PDA of UK military registered Aircraft as proof that they are Competent and current in all required facets of Display Flying, as detailed in CAP 403.			

118. ► **RPAS as part of a Flying Display.** Additional guidance on inclusion of an RPAS into a UK CAA regulated Flying Display can be found in CAP 403⁷.

⁵⁶ ► Refer to RA 1600 – Remotely Piloted Air Systems and CAP 722: Unmanned Aircraft System Operations in UK Airspace. ◄

Regulation	Flying Display Director Accreditation			
2335(4)	2335(4) All military FDDs shall be suitably qualified and current to			
	manage Flying Displays.◀			
Acceptable	► Flying Display Director Accreditation			
Means of	119. FDD Accreditation Course. The UK CAA / MAA conduct joint FDD			
Compliance	Accreditation Courses to qualify FDDs in the UK:			
2335(4)	a. Military Applicants. The MAA approves military applicants to attend the FDD Accreditation Course. Military applicants should provide justification for the application and their suitability for the FDD role, which should be endorsed by the relevant HoE or ADH ⁵⁷ .			
	b. FDD Accreditation. A joint UK CAA / MAA FDD Accreditation Panel is convened after FDD Accreditation Courses to review each candidates' performance during the course. The FDD Accreditation Panel should consider the candidates experience, preparation for and interaction during the course, and their examination results before awarding a Tier. Successful candidates are then accredited as a Tier 1, 2 or 3 FDD.			
	c. 'Mil' and 'Civ' Accreditation. The FDD Accreditation Panel should also consider, based on the experience of individuals, and their knowledge and understanding of the Regulations as demonstrated during the course, whether they should be accredited as a 'Mil', 'Civ' or 'Civ / Mil' FDD.			
	 Mil. The individual should only be permitted to be FDD / Deputy FDD at Flying Displays regulated by the MAA iaw RA 2335. 			
	(2) Civ. The individual should only be permitted to be FDD / Deputy FDD at Flying Displays regulated by the UK CAA iaw CAP 403.			
	(3) Civ / Mil. The individual should be permitted to be FDD / Deputy FDD at both UK CAA and MAA regulated Flying Displays. The individual should be accredited to an appropriate tier for each category.			
	120. Validity. FDD Accreditation should remain valid for a period of 3 years from the date of accreditation.			
	121. Deputy FDD. An appropriately accredited FDD ⁵⁸ can act as Deputy FDD to provide resilience for an event. The individual(s) should be annotated as a Deputy FDD on the RA 2335 Form 1, or application for a UK CAA Flying Display Permission.			
	122. Currency. To maintain currency, individuals should act as FDD at the appropriate Tier of event at least once every two years. However, if, for example, a Tier 3 FDD only acts as FDD for a Tier 1 or Tier 2 Flying Display within the currency period, Tier 3 currency will be lost and currency at the lower Tier should be maintained. Similarly, where an FDD is Civ / Mil accredited, unless both types of regulated event have been directed, the type not directed will be forfeited at the end of the currency period. If an event is cancelled on the day currency credit should be given to the FDD.			
	123. Deputy FDD Currency. FDD currency can also be maintained by acting as a Deputy FDD. In order for the currency to be valid, the following conditions should be met:			
	a. The Deputy FDD details are annotated on the RA 2335 Form 1 or application for UK CAA Flying Display Permission.			
	b. The Deputy FDD takes an active part in the planning, organization, management, and delivery of the Flying Display.			
	c. Deputy FDD is in attendance for the duration of the Flying Display.			

⁵⁷ Military applicants **should** only be accepted when their qualification is primarily for military purposes; supported by the HoE or ADH. Serving military personnel who are not required to act as an FDD for military purposes can apply for accreditation through the UK CAA.

⁵⁸ A FDD who is accredited for the Tier of Flying Display at which they are Deputizing.

Acceptable Means of Compliance	d. The nature and extent of their Deputy FDD participation, and the intent to reset their currency, is annotated by the primary FDD on the <u>RA 2335 Form 4</u> (Flying Display Director Post Event Feedback Form).
2335(4)	124. Shadow FDD. Tier 1 or Tier 2 accredited FDDs can shadow the FDD for a higher Tier event to build experience. This Shadow FDD role can be used to improve the level of Competence to support an upgrade application to a higher Tier in the future. The primary FDD should record the level of participation of the Shadow FDD on the <u>RA 2335 Form 4 (Flying Display Director Post Event Feedback Form)</u> which will enable the UK CAA and MAA to properly assess the level of experience of the individual if an upgrade is requested at a later date.
	125. FDD Revalidation. A qualified FDD can renew their accreditation following successful completion of a FDD Revalidation Course. The FDD Revalidation Course considers the same criteria as the FDD Accreditation Course and is also assessed by a joint UK CAA / MAA FDD Accreditation Panel. Candidates' successful completion of the FDD Revalidation Course extends their FDD qualification for a further 3 years. Exceptionally, the MAA can conduct in-field revalidations. The in-field revalidation process involves oversight of the preparations and delivery of a Flying Display. An FDD wishing to revalidate in the field should contact the MAA at least 3 months prior to the Flying Display at which the in-field revalidation will take place.
	126. FDD Upgrades. To upgrade to a higher FDD Tier or from 'Mil' or 'Civ' to 'Civ / Mil', FDDs should provide the UK CAA / MAA with evidence of events they have been involved with, to demonstrate that they have gained the necessary experience to be considered for an upgrade to the higher Tier. The submission should include detail on their involvement in the planning, organization, management, and delivery of the events. FDD upgrade applications should be endorsed by the relevant HoE or ADH. FDDs should plan to be assessed for an upgrade on the next available FDD course and expect an MAA Assurance visit to a Flying Display being undertaken at their new Tier. Exceptionally the MAA can conduct in-field upgrades. The in-field upgrade process involves oversight of the preparations and delivery of a Flying Display at the requested Tier. An FDD wishing to upgrade in the field should contact the MAA at least 6 months prior to the Flying Display at which the in-field upgrade will take place.
	127. Revocation. If Safety concerns are raised regarding an FDD an investigation should be undertaken by the MAA iaw the Defence Aviation Flowchart Analysis of Investigation Results II (DA FAiR II) system detailed in the MAA Manual of Air Safety. After the investigation, the following actions are available to the UK CAA and / or MAA:
	a. No action.
	b. Downgrade Tier.
	c. Further training.
	d. Suspension.
	e. Complete revocation.
	128. SQEP Recording. The MAA is responsible for administering military FDDs and should ensure the correct Competency is recorded on the military Joint Personnel Administration System. This data will detail an individual qualification (ie the Tier of Flying Display they are accredited to conduct) and details of the Flying Displays that they have directed. Military accredited FDD details can be provided on request by the MAA. ◀
Guidance Material 2335(4)	► Flying Display Director Accreditation 129. Nil. ◄
Regulation 2335(5)	 Display Parachuting Organization and Management 2335(5) Display Parachuting shall be planned, managed, organized, and delivered by SQEP ensuring RtL is ALARP and Tolerable.

Acceptable	Display Parachuting Organization and Management				
Means of Compliance	Parachuting Governance.				
2335(5)	130. When participating at a Flying Display, MOD-approved Parachute Display Teams should be deemed to be on duty. MOD personnel participating in non MOD- approved Parachute Display Teams are deemed to be part of a civilian Parachute Display Team and are not on duty.				
	131. MOD-approved parachute display teams should comply with orders or instructions issued by their respective Duty Holder (DH) / ADH. Parachute Display Team leaders should be responsible for parachuting and flying operations carried out by that Display Team, the provision of a qualified Drop Zone Safety Officer and ensuring adequate liaison and co-ordination is conducted with the FDD or EO where an FDD has not been appointed.				
	HoE Responsibilities				
	132. Authority to conduct Parachuting Displays. Authority to conduct a Parachuting Display over MOD-Occupied Property should be given by the HoE. If the Parachuting Display forms part of a Flying Display then the MAA should be informed as part of the Flying Display notification procedure in para 39. If the Parachuting Display does not form part of a Flying Display then the MAA should be informed, at least 21 days prior to the event, using RA 2335 Form 9 (Parachuting Display Notification Form). The HoE should detail the administrative arrangements for such events in orders.				
	DH / ADH Responsibilities				
	133. DH / ADH Responsibilities. DH / ADH should retain Responsibility for the Safety of Parachute Display Team personnel in their AoR when they are involved in Display Parachuting. DH / ADH should take all reasonable measures to assure themselves that display venues at which Display Parachuting is conducted within their AoR are suitable, safe and appropriate for the intended Display Sequence.				
	134. Risk Management. The DH / ADH, working with the EO and FDD where appropriate, should ensure that Hazards to public Safety specific to each Parachute Display, Practice or Training event are identified and that Risk Assessments are carried out. DHs / ADHs should maintain clear, unambiguous and auditable records of each of their Risks including details of Risk decisions and periodic Risk reviews. The core elements of a Risk Assessment, that focuses on RtL, that should be conducted are:				
	a. Hazard identification.				
	b. Assessment of the Risk (likelihood, consequence, who is exposed, existing mitigation, and Accountability).				
	c. Reduce Risk until ALARP and ensure any residual Risk is Tolerable.				
	d. Record significant findings.				
	e. Monitor and review.				
	Authority and Permissions non-MOD Occupied Property in the UK				
	135. Events over non MOD-Occupied Property in the UK. Where an event is held over non MOD-Occupied Property, not as part of a CAA Article 86 Permission Flying Display, military Parachute Displays are MAA regulated. The DH / ADH for the Parachute Display Team should satisfy themselves that the activity is appropriate, ALARP and Tolerable. The DH / ADH should inform the MAA at least 21 days prior to the event using RA 2335 Form 9 (Parachuting Display Notification Form) having:				
	a. Assured themselves that an EO and, if appropriate, an FDD has been appointed.				
	b. Ensured that the EO understands and accepts Accountability for planning, managing, organizing and delivering the Event.				
	c. Ensured that the Parachute Display Team have conducted a Risk Assessment in lieu of an HoE as per para 34, 52 and 56.				

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Acceptable Means of Compliance 2335(5)

d. Confirmed that the venue is suitable for the Parachute Display Team to conduct a Parachute Display.

Display Parachuting Regulations

136. The most restrictive limitations of this RA and the RA 1700 series or the following **should** be complied with:

a. Orders or instructions issued by the DH / ADH for personnel in their AoR conducting Display Parachuting, Practices and Training.

- b. Orders or instructions issued by the HoE, EO or FDD for a specific event.
- c. CAP 403 where a UK CAA Flying Display Permission exists for an event.
- d. CAA CAP 660, Chapter 5 at all events over non-MOD Occupied property.
- e. Any conditions stipulated by the relevant PDA, as per para 145.

f. Any host nation Regulations and orders or instructions when conducting Display Parachuting, Training and Practices outside the UK.

Foreign Military Parachute Displays in the UK

137. The MAA maintains oversight of all foreign military Parachute Display Team participating at UK Flying Displays or events on behalf of the MOD. The procedures for the Approval and Validation of foreign military Parachute Display Teams at para 44.I, 47-50, 72 and 73 **should** be followed. Where a foreign military parachuting display is held over non MOD-Occupied Property and / or there is no HoE, the EO **should** accept Accountability for the HoE Responsibilities listed at para 132 of this RA. The EO **should** seek SQEP display parachuting input to the foreign military parachute display Application and ensure that a suitably qualified individual carries out the foreign military parachute display Validation.

Post Event Reporting

138. The DH / ADH **should** ensure that post Parachute Display reporting takes place by providing written feed-back to the MAA (<u>DSA-MAA-Display-Forms@mod.gov.uk</u>) using <u>RA 2335 Form 10</u> (<u>Parachute Display Post Event Feedback Form</u>) within 7 days of the event. If the Parachute Display is part of a Flying Display, then the FDD **should** submit an RA 2335 Form 4 (or SRG 1305 if applicable) and there is no requirement to submit an RA 2335 Form 10; however, the Parachute Display Team Leader **should** ensure that the FDD is provided with any relevant information to include in their report. In addition, any flight Safety issues **should** be included in the RA 2335 Form 10 and a DASOR submitted.

Parachute Display Team Participants and Supervision

139. DH / ADH **should** ensure that:

a. The personnel selected to conduct Parachuting Displays are SQEP in both airborne and ground-based aspects of Display Parachuting.

b. Where Display Parachuting personnel are responsible for conducting Risk Assessments, that they are appropriately trained and supported.

c. Display Parachuting personnel hold a valid PDA and are current prior to conducting any Parachuting Display activity.

d. Appropriate airspace reservations have been considered and the relevant submissions are made using UK CAA on-line Airspace Coordination and Obstacle Management form within the timescales specified.

140. **Role Demonstrations.** Role Demonstrations do not necessarily require a PDA, however, DH / ADH **should** issue orders or instructions that, as a minimum, detail the following:

a. Approved Role Demonstration content that may be conducted by Parachutists within their AoR.

b. The approval mechanism, clearance procedures and Authorization process for Role Demonstrations.

Regulatory Artic	CIE 2335 UNCONTROLLED COPY WHEN PRINTED
Acceptable Means of Compliance 2335(5)	 c. Safety Management procedures, limitations and restrictions. d. Competence / SQEP requirements of the Parachutists and supporting personnel. e. Notification of the Role Demonstration taking place, including any limitations, should be forwarded to the MAA using <u>RA 2335 Form 9</u> (Parachuting Display Notification Form).
Guidance Material 2335(5)	► Display Parachuting Organization and Management 141. Nil. ◄
Regulation 2335(6)	 Display Parachuting Training and Practices DH / ADH shall ensure that personnel involved in conducting Display Parachuting are Competent, appropriately trained, approved, authorized, and supervised.
Acceptable Means of	Display Parachuting Training and Practices Display Parachuting Supervisor.
Compliance	142. DH / ADH should nominate a SQEP Display Parachuting Supervisor.
2335(6)	Display Parachuting Support Personnel
	143. DH / ADH should allocate sufficient support personnel and / or resource to allow personnel selected for Display Parachuting to conduct the activity safely and effectively throughout the display season. These support personnel should include the following roles as a minimum ⁵⁹ :
	a. Parachute Display Team Manager.
	b. Parachute Display Team Leaders.
	c. Parachuting Drop Zone Safety Officers (DZSO).
	d. Parachute Display Team Supervisor.
	Pre-Season Display Parachuting Work-Up and PDA.
	144. Pre-season Display Parachuting practices should be personally authorized by the Display Parachuting Supervisor. The following points should be applied when authorizing and supervising Display Parachuting work-up jumps:
	a. The work-up should be of a progressive nature leading, in stages, to encompass all approved elements of the Parachuting Display.
	b. Consideration should be given to the use of appropriate Synthetic Training Devices during the work-up program.
	c. Each practice Display Parachuting drop should be monitored by the Display Parachuting Supervisor. If the Display Parachuting Supervisor is on the ground, they should be in a suitable position to ensure they are not a distraction to the Display Parachuting personnel.
	d. All practice Display Parachuting should be video recorded.
	 e. A record of Display Parachuting practices detailing despatch altitude, drop Aircraft type, landing area conditions and any other relevant details. should be maintained by Display Parachuting personnel.
	PDA
	145. PDA Form. The PDA, as detailed on the approved RA 2335 Form 6, should contain all permitted activity, as well as any limitations. The PDA should be made available to FDD or EO prior to displays being conducted. If an FDD or EO does not

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 $^{^{\}rm 59}$ \blacktriangleright One individual may undertake more than one role. \blacktriangleleft

Acceptable Means of Compliance 2335(6)	 accept the Participant's PDA the team should not perform. The MAA should be provided with a completed copy of RA 2335 Form 6 (Display Parachuting Public Display Authority Form) once the PDA has been awarded via <u>DSA-MAA-Display-Forms@mod.gov.uk</u>. 146. Deviations from PDA. Deviations from the PDA or permitted modifications to the Parachute Display Sequence, as detailed on the approved RA 2335 Form 6 (Display Parachuting Public Display Authority Form), should not be permitted without written Authorization by the DH. 147. Minimum Safe Useable Area (SUA). DH / ADH should stipulate the minimum SUA dimensions for Display Parachuting by personnel in their AoR. ◄
Guidance Material 2335(6)	► Display Parachuting Training and Practices 148. Nil. ◄
Regulation 2335(7)	 Display Parachuting Separation Distances, Minima and Restrictions 2335(7) Authorized minimum lateral separation distances, and other applicable minima and restrictions shall be complied with during Parachuting Displays, Practices, and Training.
Acceptable Means of Compliance 2335(7)	 Display Parachuting Separation Distances, Minima and Restrictions 149. Propellers / Rotors. DZSO should ensure that during the whole period scheduled for Display Parachuting, all flying activity within the descent airspace and Display Venue, except that which is necessary for dispatching Parachutists, should cease. The engines of Fixed Wing Aircraft should be shut down and Rotary Wing Aircraft rotors should not be turning until the last Parachutist has landed. 150. Control of Pyrotechnics. The use of pyrotechnics (smoke generation) during a Parachuting Display should be strictly controlled by a Competent person appointed by the DH / ADH. Use of pyrotechnics and all Safety procedures should be agreed by the EO. Briefings for ground officials and participants should describe the hazardous nature of such devices. 151. Display Parachuting Drop Aircraft Post Drop Activity. DH / ADH / AM(MF) should issue orders and instructions for the actions of parachute dropping Aircraft post the exit of the last Display Parachutist. The following limits should be applied to Display Parachuting drop Aircraft where the Aircraft Commander does not have a PDA, DA or ADH Approval to coordinate Flypast activity with a Parachute Display: a. Display Parachuting drop Aircraft should not descend below the drop altitude until all Parachutists are on the ground. b. Display Parachuting drop Aircraft should not descend below the drop altitude to provide Safety overwatch but should vacate the Display Area once the last Display Parachutist has landed. 152. Minimum Separation from Spectators. The minimum separation distance from spectators on touch down of each Parachutist should be greater than 15 m. 153. Minimum overflight of Spectators, Secondary Spectators and Third Parties. The minimum Height that a Parachutist and their equipment should pass over Spectators, Secondary Spectators and third pa

Acceptable Means of Compliance 2335(7)	 Height at which the parachute is to be fully inflated and be in a condition to be controlled by the user should be 1500 ft AGL. 156. Minimum Safe Useable Area (SUA). The DZSO should ensure that the SUA available⁶⁰ is a minimum of 5000 square metres in area with a minimum width of 50 metres. 157. At a Flying Display, the Wind Direction Indicator / Balloon release should be approved by the FDD prior to the release taking place. 158. Drop Zone (DZ) Recce. The DH / ADH should ensure that prior to a Parachute Display a DZ recce takes place. An auditable record of the DZ recce should be retained for not less than 12 months. ◄
Guidance	► Display Parachuting Separation Distances, Minima and
Material	Restrictions
2335(7)	159. Nil. ◄

⁶⁰ ► For displays over non-MOD Occupied property CAP403 / CAP660 refer to the SUA Planed Landing Area (PLA). ◄