

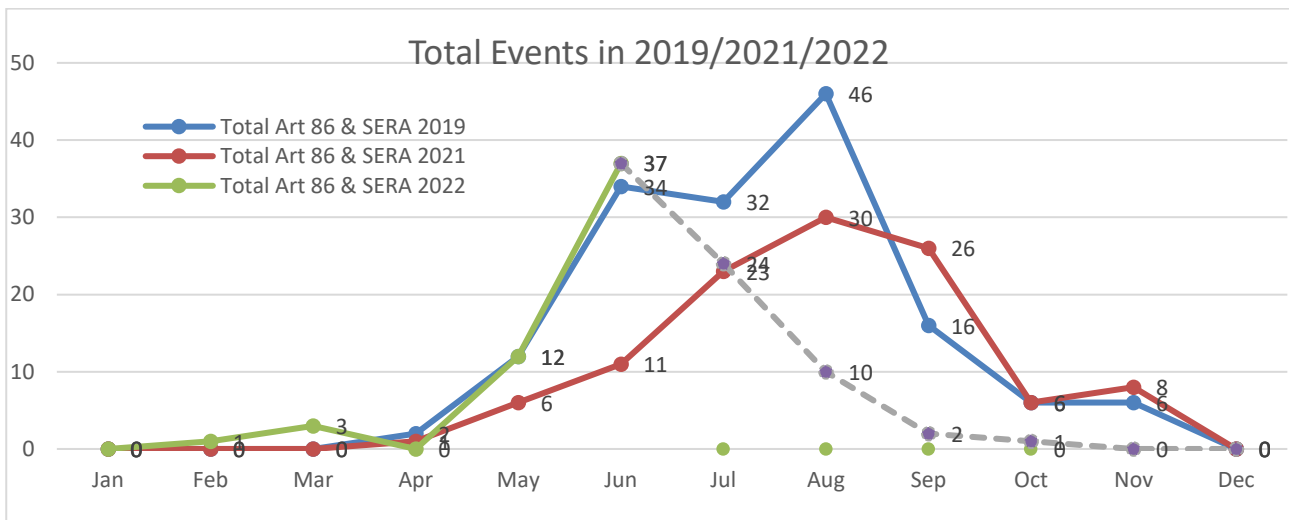
### Flying Display Season 2022 Mid-Season Update

1. As we approach the mid-point of this year’s Flying Display Season (DS 22), this update is designed to assist all those involved in delivering or participating in display activity, by providing feedback and updates on the Flying Display Season (DS) and associated activity thus far.....

**Sign up to Skywise for Flying Display Season Updates ([Home - SkyWise \(caa.co.uk\)](http://Home - SkyWise (caa.co.uk)))**

#### DS 22 Flying Display Activity

2. Following the limited display activity in DS21, the number of Art 86 and Private Flying Displays for mid-June 2022 is slightly above that for the same point in 2019. The graph below shows the relative number of display events for 2019, 2021 and 2022. The solid green line depicts Art 86 and Private Flying Displays completed up to mid-June 2022 and the dotted grey line depicts 2022 events for which an application has been received. It is reasonable to assume there will be more applications for the remainder of the display season, and thus expectation is that display season 2022 will be at c85-95% of 2019 display activity.



#### DS 22 Trends/Issues

3. There are currently no significant safety trends to report from the Post Event Feedback, submissions of which have been excellent with all reports returned within 7 days of the display event. Most returns have been a thorough and detailed account of the incidents or issues arising, a summary of the incidents/feedback from the 35 reports thus far is as below (direct quotes from FDD reports):

2 Flying related Safety Incidents	1. Aircraft commenced final approach to reciprocal runway to that in use (MOR submitted).
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	2. Engine vibration detected during display a/c curtailed display and landed safely rest of team continued.
2 Undesirable events	1. Panel missing, observed at end of display a/c RTB with no problems. 2. Gear problem during display, attempt to rectify at end of display a/c RTB and landed without issue.
4 Too close calls	1. B axis break slightly late call made no further problems. 2. B axis break 'a heartbeat too late' no further problems (investigation underway by FDD to establish if it is a topography issue) 3. 'Playful on crowd wind 0-15kts' caught a tyro out - call given and no further issues. 4. Leader did not make allowance for #5 as he turned onto A axis, #5 marginally went through the minimum separation distance, call made – no further issues.
1 Terminate call	Photographer climbed farmers fence - display terminated. Photographer moved on and display recommenced.
Mechanical Failures	Aircraft suffered a loose spinner and landed - no further issues.

### CAA on-site Inspection – Trends

4. The CAA Air Display Team undertakes a 100% tabletop audit of all display applications received and conducts an on-site inspection of some events following a Performance Based Oversight (PBO) assessment. The PBO assessment is a 12-point matrix that considers items including: *Geographical Complexity of the site; Congested Area Complexity; Second Party Complexity; Flying Display Directors Experience; Number of aircraft displaying; Complexity of Display; Aircraft Performance; Formation/Scenario Flying and Dusk/Pyro Display.*

5. Thus far 10 of the planned 22 onsite inspections have been completed, this combined with the DAE Oversight Visits give rise to the following observations:

- a. SRG 1327. Quality, accuracy and timeliness of SRG 1327 (Display Pilot's / Aircraft Owner's / Aircraft Operator's Certified Declaration for Submission to the Flying Display Director) vary considerably – Display Pilots are reminded to submit their SRG 1327 form on later than 7 days before the event to ensure that the FDD is able to review:
  - i. The legal information
  - ii. The list of aerobatic manoeuvres
  - iii. The Hazard Information to ensure that the Emergency Services are advised.
  - iv. Accurate NOK. Note, this should not quote someone who is flying in the same formation.

.b. Whilst the minimum display flying currency is being met, discussion with FDDs, FCCs and DAEs highlights that the effect of the increased cost of living and its associated impact on fuel, insurance and general running costs, could begin to affect the number of (additional) training flights a display pilot may undertake.

c. FDDs and FCCs are reminded to closely review display flying currency and pilot's display activity preceding their event.

d. An increase in the number of display events conducted by one pilot/s on the same day – some in dissimilar aircraft – has been highlighted.

i. Pilots should carefully consider the Human Factor issues associated with conducting multiple displays on the same day (fatigue, pressure, negative transfer of behaviours, etc).

ii. FDDs should review and closely coordinate with FDDs of other events on the same day (as should be listed on the pilot's SRG1327) that the participation (or otherwise) of a pilot conducting multiple displays is suitably mitigated. Particular regard should be paid to an appropriate number of (display) events, the amount of rest between events and the variation in type of aircraft flown in any one day.

iii. Display Team leaders who have team members that are known to be intending to display at several events on the same day, in other teams / aircraft, should consider factors that may affect the pilot's performance as part of their team.

**6.** Display Authorisation (DA) Paperwork. In addition to the issues with SRG 1327 mentioned above it has become apparent that in some instances:

a. Old Format DAs are still being used, despite new format DAs being issued.

b. Old DAs with incorrect skill levels have been submitted to FDDs despite new DAs being issued.

c. Display pilots have submitted valid DAs but with the category / group of aircraft intended for the display being invalid (i.e. not renewed within 26 months).

**7.** The Display Authorisation, as issued by the CAA, is a ANO legislative requirement, and thus:

a. Display pilots should ALWAYS submit the latest, complete version of the DA as issued by the CAA.

b. DAEs should ONLY sign the 28-day extension and NOT sign any old version DAs.

c. FDDs should scrutinise the DA submitted to ensure not only validity but the category or skill level that the pilot intends to use during the display is appropriate and current. Further information concerning renewal requirements can be found in chapter 11 of CAP1724.

**8.** Feedback/Incident/Occurrence Reporting. We encourage feedback from any member of the Flying Display community operating in any capacity to enhance the safety and performance of the Flying Display industry. The Flying Display Focus Group (FDFG) is proving to be an excellent sounding board but equally we are open to receiving any comments, observations and lessons learnt related to the safety of either a specific Flying Display or Flying Displays in general. Any issue can be reported, no matter how insignificant it may seem. All reports will be treated confidentially.

**9.** In addition to the SRG 1305 there are several other ways to submit a report: a Mandatory Occurrence Report (MOR) for civilian participants or a Defence Aviation Safety Occurrence Report (DASOR) for the military. If colleagues wish to submit confidential reports, the Confidential Human Factors Incident Reporting Programme (CHIRP) or the Defence Confidential Occurrence Reporting Scheme (DCORS) is available.

**10.** FDD Accreditation and Currency. With the Initial FDD, AFDD Accreditation and FDD Revalidation contract soon due to be retendered, the opportunity to review the FDD Accreditation Course construct, so as to better support and grow the FDD Cadre, was taken. Following Consultation with the Display Community the following will be implemented as part of the new FDD Accreditation Course:

- a. Initial FDD Accreditation Course – 2-day course (attendance) – to remain as a 2-day attendance course.
- b. Initial AFDD Accreditation and Revalidation Course 1-day course (attendance) to run concurrently with the Initial FDD Course.
- c. FDD Accreditation Revalidation – One day revalidation course (attendance - preferred option) – **mandatory if FDD Currency has lapsed.**
- d. FDD Accreditation Revalidation – CAA FSOs may conduct 'in the field' revalidation (in extremis and subject to CAA FSO availability) provided the **FDD is current.** Revalidation is to be requested during the application for the display permission and coordinated with the CAA.

**11.** The in 'the field option' is only available for the first revalidation following an attendance course. Every second revalidation must be by attendance course. CAP 403 will be amended as part of the normal annual review process and dates for FDD Accreditation courses for 2022/23/24 will be promulgated by 1 August 2022.

**12.** Display Symposiums. It is widely accepted that the 2 Flying Display Symposiums each year provide a unique opportunity to network and share feedback with regulators, so as to improve the Flying Display environment as a whole and also discuss lessons learnt and disseminate best practice. However, it is also accepted that a review and refresh of the format and content of each symposium is required. To inform the review, attendees of the recent Pre-Display Symposium were encouraged to complete the feedback and with 42% of attendees returning the Feedback Proforma, the results were as follows:

- a. 68% Prefer a 2-day event.
- b. 27% Prefer a 1-day event.
- c. 61% Prefer attending both Pre and Post Display Symposia.
- d. 39% Would prefer an attended pre-display Symposia and an online post display Symposia.

In addition, attendees specifically requested:

- a. Greater discussion and in-season incidents i.e. warning calls and SRG 1305 reports.
- b. More discussion on FDD issues.
- c. Discussion on Display Item/Team preparation and issues arising.
- d. More Case Studies.
- e. More guest speakers.
- f. Discussion on how best to encourage Event Organisers to attend future Symposiums.

There was also a general consensus on the use of the Defence Academy Shrivenham for the Symposiums; however, it is accepted that its location is not ideal for all attendees and thus, following discussion with the IWM Duxford, we will aim to use its facilities for the post Display Symposium in 2023.

**16.** Future Events. 2022 Post Display Symposium and Pre-Display Seminar - Following further discussion at the FDFG it was agreed that the 2022 Post Display Symposium and Pre-Display Seminar will be:

- a. **15 November 2022** - DAE Seminar – for DAEs only
- b. **16 November 2022** - One day event open to all in the Display Regulated Community

Registration will be available from 1 September 2022 at [Display symposia events | Civil Aviation Authority \(caa.co.uk\)](#).

**17.** In addition, the:

- a. 2023 Pre-Display Symposium will be at Defence College Shrivenham in March 2023 (date tbc)
- b. 2023 Post Display and DAE Seminar will be at IWM Duxford in mid-October 2023 (date tbc)

Registration will be available in Jan 2023 and July 2023 respectively at [Display symposia events | Civil Aviation Authority \(caa.co.uk\)](#).

**18.** Virtual Voyage. The work of the Air Display Team will be the focus of the next Virtual Voyage scheduled for this autumn. As part of this programme we will be showcasing the work we do with STEM and Just Culture, as well as providing an overview of our work. More information will be shared via SkyWise. [Virtual voyage | Civil Aviation Authority \(caa.co.uk\)](#)

**19.** Human Factors – Flying Displays. The display community will be aware that the CAA has a contract with Astral Aviation to provide a safety campaign for General Aviation pilots. Their resources, on a wide variety of subjects (including *inter alia*: Loss of Safe Separation, Reporting; Blind Spots; Human Factors; Spinning; Return to Flying post COVID) is available at [Resources — Astral Aviation Consulting](#). Additionally, the CAA is working with Baines Simmons, (whose Flowchart Analysis of Investigation Results (FAiR) model underpins any investigative work

undertaken by the Air Display Regulation Team to make available a revised Flying Display Human Factors syllabus.

**20.** The syllabus aims to enhance understanding of Flying Display Human Factors (HF) within the flying display sector by making available to Display Pilots, DAEs and FDDs a series of videos, online, webinars and display symposium discussion. It is anticipated that the course will be available from 1 August 2022 and thereafter all Display Pilots and FDDs will be required to complete the course over a 2-year period. Details on how to log in and view the material will be promulgated over the coming weeks.

## **Conclusion**

**21.** We have had a safe and successful first half of DS22, please do keep up with the communication and engagement. We hope that this update has been informative and of value to you. Please feel free to feedback anything you wish via the [GA@CAA.co.uk](mailto:GA@CAA.co.uk) or [DSA-MAA-Display@mod.gov.uk](mailto:DSA-MAA-Display@mod.gov.uk) mailboxes. We wish you uneventful flying, blue skies and bumper crowds for the remainder of the display season



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