Background

This document has been published in order to highlight proposed significant changes in edition 5 of CAP 1724. It does not include minor changes / corrections to previous text. The aim is make the consultation process easier and less time consuming by providing an alternative to reading through the entire CAP in order to find proposed changes. The full draft version of edition 5 of CAP 1724 has also been offered for consultation for those who prefer to view the complete document and for context if required for those who chose to use this document.

To avoid numerous extracts, it should be noted that the term of 'non-aerobatic' or 'non-aerobatic Flying Display' has replaced the term of 'Flypast' throughout the CAP as appropriate.

All proposed amendments are underlined in red.

CAP 1724 Title

We are proposing a change of name from "Flying Display Standards Document" to "Flying Display Pilot Authorisation and Evaluation: Requirements and Guidance".

Chapter 6

Following significant feedback, comment and engagement with DAEs, chapter 6 Aerobatic Skill levels has been significantly reviewed and amended.

Due to the number of proposed changes in this chapter, it is recommended that reference to chapter 6 of edition 4 is made for comparison.

6.1. In order to perform aerobatic manoeuvres during a Flying Display, the pilot **must** hold a DA or DA Exemption that has been appropriately endorsed, either with one of the skill levels set out below or individual evaluated manoeuvres. Manoeuvres from more advanced aerobatic skill levels **may** be included as "add-ons" and endorsed on DAs subject to satisfactory DAE recommendation, "aA plus Lomcevak" for example.

Fixed wing skill levels

Standard level (aS) aerobatic evaluation criteria

6.3. The evaluation criteria for aS aerobatic authorisations are as follows:

a) **Spins.** Erect Spins of one turn

b) **Stall turns.** Stall turns

c) **Loops and eights**. Inside circular loops, loops with roll off the top, 'Cuban 8s'

d) **Rolls.** Single aileron rolls and barrel rolls

Intermediate level (aI) aerobatic evaluation criteria

6.4. The evaluation criteria for aI aerobatic authorisations include those for aS above and the following:

a) **Spins.** Erect spins of up to two turns

b) **Stall turns**. Stall turns with rolls in the vertical climb and / or dive

c) **Loops and eights.** Inside half loops, reverse Cuban 8s, square loops.

d) **Rolls**. Slow rolls, hesitation rolls, positive flick rolls. Rolls can be inserted in other figures

e) **Inverted flight.** Sustained inverted flight

Advanced level (aA) aerobatic evaluation criteria

6.5. The evaluation criteria for aA aerobatic authorisations include those for aI above and the following:

a) **Spins**. Inverted spins with entry and exit in normal or inverted flight

b) **Stall turns**. Stall turns with inverted entry and exit

c) **Loops and eights**. Outside half loops, outside loops and outside horizontal eights with inverted entry and exit, diamond and eight–sided loops.

d) **Rolls**. Multiple continuous rolls, multiple flick / snap rolls (positive and negative), rolling turns

Unlimited level (aU) aerobatic evaluation criteria

6.7. The evaluation criteria for unlimited level aerobatic authorisations are as follows:

b) Applicants **must** be current with flat erect spinning, flat inverted spinning, knife edge spinning and cross over spinning all of which **should** be recovered onto specific headings

Chapter 9

Jet Powered Aeroplanes (**JPA**)	**G1**	Straight wing, single engine jet aircraft
	G2	Swept wing, single engine jet aircraft
	H1	Straight wing, multi engine jet aircraft
	H2	Swept wing, multi engine jet aircraft

Chapter 13

Due to the increasing awareness and recognised importance of Human Factors (HF) in display flying, a new dedicated chapter has been created. The HF content previously included elsewhere in the CAP has been moved here along with the additional new text (shown below):

Background

13.1. HF issues impact all parts of the aviation environment and **should** be considered before, during and after Flying Displays by everyone involved.

13.2. Improving the understanding of how HF impacts on the safety of Flying Displays is a priority for the CAA. Increasing awareness of HF influences amongst the air display community led to the CAA commissioning two specific studies to look at, and better understand, Flying Display HF; the first of which was conducted by NATS: Human Factors in Flying Displays. The second study was conducted by the Health and Safety Laboratory: CAP 1694. Human Factors in Air Displays: Transfer of Behaviours and Error Path Study.

13.3. The outcomes of the two reports feed into our ongoing commitment to make discussion of HF a routine part of our engagement with the Air

Display community. HF briefings will be an integral element of pre and post-season symposia, DAE seminars, DA evaluations and FDD accreditation courses and aim to ensure that experiences, insights and best practice, not only those of display participants / organisers, but also those from the wider aviation community are shared.

13.4. As part of awareness raising and, in line with the direction set out in the CAA HF strategy, an on-line area to act as a repository for HF material that will be of interest to the Air Display community has been developed. Any suggestions for additional material would be welcomed and should be directed to ga@caa.co.uk or human.factors@caa.co.uk.

Human Factors and the DA Evaluation

13.6. HF topics worthy of covering initially and on a periodic basis during DA evaluations include the following:

i) Workload / doing too much. The issues associated with conducting multiple displays on the same day, whether at single or multiple locations, in the same or multiple types

Flying Display HF course

13.9. In addition to the routine engagement at pre and post-season display symposia, DAE seminars, DA evaluations and FDD accreditation courses, for Display Season (DS) 23 an on-line Flying Display HF Course is available and comprises:

a) five online videos on Performance Influence Factors (PIFs), available to view as required
b) two online interactive webinars (one on the FAiR Model and another on PIFs)

13.10. The online Flying Display HF Course is a mandatory requirement for all DAEs, DA holders and FDDs for completion prior to their next planned display activity. The course is a one-off requirement and once completed HF will be covered as set out below. Course completion is not a

prerequisite for the issue / renewal / revalidation of a DA or FDD accreditation. For access to the course email ga@caa.co.uk.

Display Symposiums - HF in Flying Displays

13.11. Following completion of the online course and to ensure HF in Flying Display experiences, insights and best practice are continued to be exposed to the wider display community, AFDDs, DAEs and DA holders **shall**:

a) continue to have HF discussed at their respective DA Evaluations
b) continue to ensure they attend a minimum of one display symposia every 3 years[1].

13.12. Further information on HF in air displays is available on the CAA website: Human Factors in Air Displays. Additional sources of information on aviation related HF considerations includes the following:

CAP 719 "Fundamental Human Factors Concepts"
CAP 737 "Flight Crew Human Factors Handbook"

[1] DAEs may attend either a DAE Seminar or a Display Symposium to satisfy this 3 year requirement.