FAI Aerobatics Commission (CIVA)
Annual Plenary Meeting 2023
Polish Aviation Museum, Krakow

Chief Judge's Report – the 15th FAI WAAC
Jean Airport, Nevada, USA
October 24th to November 3rd, 2023

Chief Judge: Nick Buckenham (GBR) assisted by Leif Culpin and Jen Buckenham.

Judges: Jerome Houdier (FRA), Galyna Suprunenko (UKR), Steve Todd (GBR), Violeta Gedminaite (LIT), Eladi Lozano (ESP), Laszlo Liskay (RSA), Edward Waasdorp (NLD), Peggy Reidinger (USA).

Competitors and Registrations

With over 70 competitors registered for this championship it was bound to be a busy event, though ultimately just 58 remained at the start to ensure that the judging panel would need to work very efficiently to ensure the maximum were able to compete. Of those entered six were H/C pilots, the remainder representing a total of 15 nations from around the world.

Video recordings

The services of an experienced video operator with high quality equipment was available throughout the championship, and he quickly became proficient at providing a good standard of recordings for review by the panel when required. As we had found at the recent EAC in Italy the need to use these videos to resolve HZ's awarded by judges especially for poorly performed flick-rolls became a frequent occurrence. A suitable video monitor was available in a slightly darkened tent adjacent to the Chief Judge's position, though during the lunch break and after the close of flying each day our reviews were made in the main briefing tent. Using these video records we were able to resolve all of the relevant

issues from each performance, though on a couple of occasions competitor's pre-sequence warm-up activities were not fully recorded and the suspected non-legal actions had to be ignored.

The Performance Zone

Two zones were available prior to the event, a training box to the north-west of the airfield providing a separate area for practice prior to the start of the event as well as the designated area for the championship some distance to the south-east of the active runway. Both sites were substantially flat and at the same altitude as the active runway, with only mildly elevated ground behind the judging position at the east side of the contest box that we used each morning. The daytime temperature was generally in the 70 to 80°F range (21-28°C), though this fell extremely rapidly at about 5pm each day before flying stopped due to imminent sunset at around 5.45. Two days were lost due to high winds, though generally wind conditions were light – predominantly from the south but occasionally from the north, enabling two judging locations at the east and west sides of the box to be used throughout.

Warm-Up Pilots

The organisers had secured the services of two experienced warm-up pilots, Craig Gifford (USA) with his EA-330SC and Martjin Kersten (NED) with a CAP-232. Both flew the box lines at the Low (200m) and Low-Low (100m) levels when requested and provided high-quality sequences with intentional 'errors' for judges to detect.

Score-sheet transmission to the Scoring Office

Throughout the championship a simple frame and mobile phone arrangement was used to capture and send photos of all judging sheets to the scoring office, enabling scorer Mary Beth Rudd to quickly enter the judges' marks and publish updated results at regular intervals. This process was however necessarily delayed when the sheets were held pending HZ resolutions using the video recordings.

Flying standards

The quality of sequence flying was more than usually variable, reflecting the wide range of pilots and skills that had been able to enter the championship. The results show that sequence scores below 60% were recorded on 19 occasions during the championship, possibly an indication of lack of care by their NAC when approving these pilots to enter and fly at this extremely challenging World class Advanced category aerobatic championship.

Two pilots were excluded following their performances in the Free Known programme, both assessed by the judging panel and the on-duty jury representative at the judging position as displaying unsafe and low flying. Two other pilots were disqualified during programme-2 for practicing at least one figure from their Free Unknown sequence during their warm-up period, apparently on the advice of their trainer! In general however there was a good deal of very high quality figure execution and positioning, showing that pilots operating with high quality modern machinery can, when well trained in this category, achieve a consistently

high standard of aerobatic sequence flying. Rivalry between competitors toward the top of the results in each programme was consistently high and very rewarding to judge.

Quality of Judging

Seven judges and assistants had been selected by the JC for this championship, and an eighth judge and assistant from the US were also present. They all performed to a good standard throughout the event, despite the tricky local conditions at each judging position from the very fine sand and scrub vegetation in the Nevada desert location. The overall analysis below shows a broad range of performances as interpreted by the FairPlay results calculation system, in most cases with low bias and a reasonably well-controlled pattern of grading compared to the overall picture from the panel. The post-flight evaluation of Hard Zeros awarded to flick rolls and spins however once again provided a high proportion of the video assessments.

Nick Buckenham
WAAC-23 Chief Judge

Analysis of Judges Combined Anomalies

Sequences: Seq01 Programme 1: Free Known, Seq02 Programme 2: Free Unknown #1 (ADV), Seq03 Programme 3: Free Unknown #2 (ADV), Seq04 Programme 4: Free Unknown #3

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	All Judges No	All Judges %	FRA Jerome Houdier RI 12.60 [4]		UKR Galina Suprunenko RI 13.34 [4]		GBR Steve Todd RI 15.89 [4]		ESP Eladi Lozano RI 16.08 [4]		LTU Violeta Gedminate RI 19.17 [4]		RSA Laszlo Liskay RI 19.31 [4]		NED Edward Waasdorp RI 27.86 [4]		USA Peggy Riedinger RI 29.82 [4]	
Use of Marks:																		
HZ - Hard Zeros	329	*1.6*	55	*2.1*	34	*1.3*	36	*1.4*	41	*1.6*	29	*1.1*	30	*1.2*	49	*1.9*	55	*2.1*
PZ - Perception Zeros	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*	0	*0.0*
Marks from 0.0 to 6.5	5291	*25.4*	892	*34.3*	805	*30.9*	1065	*40.9*	288	*11.1*	360	*13.8*	499	*19.2*	649	*25.0*	733	*28.2*
Marks from 7.0 to 10.0	15138	*72.8*	1652	*63.5*	1761	*67.7*	1478	*56.8*	2264	*87.0*	2212	*85.0*	2069	*79.5*	1902	*73.1*	1800	*69.2*
AV - averages	50	*0.2*	2	*0.1*	1	*0.0*	22	*0.8*	8	*0.3*	0	*0.0*	3	*0.1*	1	*0.0*	13	*0.5*
Total marks *Pilots/Judge*	20808		2601	*190*	2601	*190*	2601	*190*	2601	*190*	2601	*190*	2601	*190*	2601	*190*	2601	*190*

Style Comparison:
Average and Style of Judges Raw Marks compared to normalised all-Judges average
Style ♡ 2 x Raw SD

Vertical axis scale:
1 mark = 82mm

		FRA	UKR	GBR	ESP	LTU	RSA	NED	USA
Average:	1.86	1.80	1.85	1.76	1.98	1.99	1.92	1.81	1.81
Style:	0.42	0.52	0.40	0.58	0.30	0.42	0.30	0.39	0.43
Raw Marks Factors: *Average %:*	100	− 3.47	− 0.51	− 5.72	+ 5.99	+ 6.52	+ 2.94	− 3.03	− 2.73
Style %:	100	+ 24.17	− 4.19	+ 37.82	− 28.22	+ 0.65	− 27.53	− 6.31	+ 3.60

Figure anomalies

HZ to fitted value	131	*0.6*	27	10	12	18	5	7	27	25
Mark to confirmed HZ	105	*0.5*	11	14	14	14	14	14	16	8
PZ to confirmed HZ	0	*0.0*	-	-	-	-	-	-	-	-
PZ to fitted value	0	*0.0*	-	-	-	-	-	-	-	-
AV to confirmed HZ	2	*0.0*	-	-	-	1	-	1	-	-
AV to fitted value	48	*0.2*	2	1	22	7	-	2	1	13
Lo to fitted value	225	*1.1*	38	11	26	22	29	29	27	43
Hi to fitted value	87	*0.4*	2	7	12	11	14	5	27	9
The 60% Rule	32	*0.2*	4	4	4	4	4	4	4	4
Total figure anomalies	630		84	47	90	77	66	62	102	102

Sequences: Seq01 Programme 1: Free Known, Seq02 Programme 2: Free Unknown #1 (ADV), Seq03 Programme 3: Free Unknown #2 (ADV), Seq04 Programme 4: Free Unknown #3

Sequence anomalies

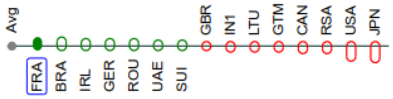
Team		Pilots assessed in FPS pass-2		FRA Jerome Houdier		UKR Galina Suprunenko		GBR Steve Todd		ESP Eladi Lozano		LTU Violeta Gedminate		RSA Laszlo Liskay		NED Edward Waasdorp		USA Peggy Riedinger	
BRA	Brazil	21	7 Lo 4 Hi	-	-	-	-	-	1 Hi	-	1 Hi	2 Lo	1 Hi	2 Lo	-	-	1 Hi	3 Lo	-
CAN	Canada	27	6 Lo 9 Hi	1 Lo	2 Hi	1 Lo	-	-	-	1 Lo	-	2 Lo	2 Hi	-	1 Hi	-	-	1 Lo	4 Hi
FRA	France	20	8 Lo 4 Hi	-	1 Hi	2 Lo	-	-	-	-	3 Hi	-	-	2 Lo	-	2 Lo	-	2 Lo	-
GBR	Great Britain	4	1 Lo 3 Hi	-	-	-	-	-	3 Hi	-	-	-	-	-	-	1 Lo	-	-	-
GTM	Guatemala	3	1 Lo 1 Hi	-	-	-	-	-	-	-	-	-	-	-	-	-	1 Hi	1 Lo	-
IRL	Ireland	3	1 Lo 1 Hi	-	-	-	-	-	-	1 Lo	-	-	-	-	-	-	-	-	1 Hi
JPN	Japan	6	2 Lo 4 Hi	-	-	-	-	1 Lo	1 Hi	1 Lo	-	-	-	-	-	-	1 Hi	-	2 Hi
LTU	Lithuania	4	0 Lo 3 Hi	-	1 Hi	-	-	-	-	-	-	-	2 Hi	-	-	-	-	-	-
ROU	Romania	30	7 Lo 6 Hi	-	-	-	3 Hi	-	1 Hi	-	-	1 Lo	-	-	-	2 Lo	2 Hi	4 Lo	-
RSA	South Africa	11	3 Lo 5 Hi	1 Lo	-	-	-	-	1 Hi	-	-	1 Lo	-	1 Lo	3 Hi	-	-	-	1 Hi
SUI	Switzerland	6	2 Lo 3 Hi	-	-	-	-	1 Lo	-	-	1 Hi	1 Lo	1 Hi	-	1 Hi	-	-	-	-
UAE	United Arab Emirates	3	2 Lo 2 Hi	-	-	1 Lo	-	-	-	1 Lo	-	-	1 Hi	-	-	-	1 Hi	-	-
USA	United States	31	6 Lo 14 Hi	1 Lo	-	1 Lo	2 Hi	1 Lo	2 Hi	-	-	-	-	3 Lo	1 Hi	-	2 Hi	-	7 Hi
IN1	Independent	3	2 Lo 2 Hi	-	-	-	-	-	-	1 Lo	-	-	2 Hi	-	-	1 Lo	-	-	-
No Team			7 Lo 8 Hi	-	-	1 Lo	1 Hi	1 Lo	-	1 Lo	1 Hi	1 Lo	2 Hi	1 Lo	1 Hi	-	-	2 Lo	3 Hi
Total sequence anomalies			55 Lo 69 Hi	3 Lo	4 Hi	6 Lo	6 Hi	4 Lo	9 Hi	6 Lo	6 Hi	8 Lo	11 Hi	9 Lo	7 Hi	6 Lo	8 Hi	13 Lo	18 Hi

Cumulative RI contributions per Team

Jerome HOUDIER (FRA)

Judge: max country bias = 0.34 min = -0.74
Panel: = 4.53 min = -4.94

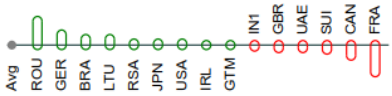
Most favoured *Least favoured*



Galina SUPRUNENKO (UKR)

Judge: max country bias = 1.59 min = -1.76
Panel: = 4.53 min = -4.94

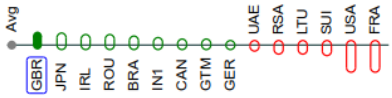
Most favoured *Least favoured*



Steve TODD (GBR)

Judge: max country bias = 0.64 min = -1.53
Panel: = 4.53 min = -4.94

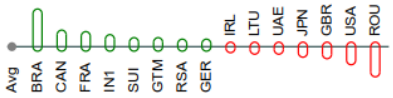
Most favoured *Least favoured*



Eladi LOZANO (ESP)

Judge: max country bias = 2.21 min = -1.71
Panel: = 4.53 min = -4.94

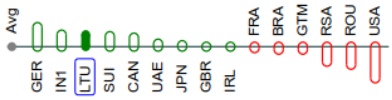
Most favoured *Least favoured*



Violeta GEDMINATE (LTU)

Judge: max country bias = 1.32 min = -2.05
Panel: = 4.53 min = -4.94

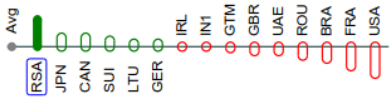
Most favoured *Least favoured*



Laszlo LISKAY (RSA)

Judge: max country bias = 1.79 min = -1.78
Panel: = 4.53 min = -4.94

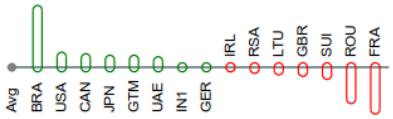
Most favoured *Least favoured*



Edward WAASDORP (NED)

Judge: max country bias = 3.71 min = -2.73
Panel: = 4.53 min = -4.94

Most favoured *Least favoured*



Peggy RIEDINGER (USA)

Judge: max country bias = 4.53 min = -4.94
Panel: = 4.53 min = -4.94

Most favoured *Least favoured*