

New scoring system

for the

annual overall ranking

of the

CONTEST Eurotour

in the

competition category F5J

from 2024

(Short version)

1 Introduction

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1 Introduction

This document is the short version of explaining the new scoring system for the annual overall ranking of the CONTEST Eurotour in the competition category F5J for 2024. This document contains only the explanation for the application of the new evaluation system without explanations of background.

At the Contest Eurotour competition results from different competitions must be added together as fairly as possible. In order to end the injustice that has existed so far with the old scoring system, a new, suitable scoring system is needed for the CONTEST Eurotour that, so to speak, standardizes the competition results of different competitions and thus makes them more fairly comparable. As it goes without saying in a competition, each individual flight group is normalized to 1000 in order to compensate for the changing weather conditions every 15 minutes. In the same way, it is necessary to normalize the actual rankings and therefore the performance of the pilots in different competitions with completely different boundary conditions. The latter has not yet taken place simply by adding up the percentage results of the old scoring system.

A solution for a fairer evaluation is a scoring system that is based solely on the ranking achieved by a pilot in a competition, rather than on the percentage of flight results.

It is the responsibility and duty of the CONTEST Eurotour to provide the best possible, fair and class-specific scoring system. For the F5J competition class, the CONTEST Eurotour has therefore made the decision to introduce a new ranking-based scoring system (B) for the 2024 competition season, which will be presented in the next section "without" an explanation of the background and detailed considerations in such a way that the calculation methodology of the new one scoring system becomes clear and comprehensible.

F5J CONTEST Eurotour Tourmanager Andreas Freundl 22.03.2024

2 New scoring system for the annual overall ranking of the CONTEST Eurotour in the F5J competition category from 2024

Preliminary remark

To avoid misunderstandings. The new scoring system refers "solely" to how the results of the competitions for the individual pilots are added together in terms of points based on the ranking achieved in order to calculate the overall annual result for the CONTEST Eurotour. There will be no changes at all to the implementation and evaluation of the individual competitions. Competitions are conducted and evaluated 100% in accordance with the original FAI rules in force - without any changes.

Old scoring system used up to 2023

For the sake of completeness, here is the initial situation as to how the annual result for a pilot were previously determined:

Up until now, the CONTEST Eurotour has been like this, that the total result (sum of points) of the winner of the "qualifying rounds" was normalized to 100% and all other pilots get the proportionate percent as score.
And additionally, a bonus was granted for the best placed of the fly-off: $1^{st} = 3,0\%$, $2^{nd} = 2,0\%$, $3^{rd} = 1,5\%$, $4^{th} = 1,0\%$, $5^{th} = 0,5\%$
By that, the maximum possible result of a competition is 103% and the maximum possible overall annual result as a sum of 3 competitions could be up to 309%.
Up until now there were no limitation in size of competitions and there were no normalization of the competition depending of size and weather conditions and other parameters.
The only basic requirement was (,is and will be), that at a CONTEST Eurotour competition must take part pilots from at least 2 nations, that this competition can be accepted as an international competition and is not only a local event.

New scoring system from 2024

Core items:

The new scoring system is based on the ranking that pilots achieve in a competition, and not on the percentage result. This means it doesn't matter whether a competition had a tiny spread in results because of super thermal flight conditions or whether there was a large percentage spread because of difficult flight conditions. This is the core idea of the normalization and comparability of different competitions under different weather conditions, seasons and deciding geographical factors.

The rank achieved is assigned a new "calculated" number of %-points, which then represents the competition result for a pilot and is included in the overall annual result.

The new number of %-points is calculated depending on the total number of participants in the fly-off, so that an appropriate comparison of competitions of different sizes can take place. See the calculation example below using the attached Excel table.

To date, there have been no requirements regarding the minimum number of participants for a competition. A definition of at least 10 participants has now been made. A competition that has fewer participants will not be included in the annual ranking. Not even if the competition was included in the official CONTEST calendar.

And there is also the following new definition. For a pilot's annual ranking, the sum of his maximum 3 best competitions in which in sum at least 70 participants took part counts. There is no minimum requirement when entering just one or two competitions.

Explanation of the calculation using the attached Excel table

New F5J scoring system 2024 (calculation example B) based on Excel spreadsheet B

Calculation example B is the objectively fairest compromise from all suggestions, wishes and the specifications from the FAI regulations. Therefore, this version was selected as the new scoring system for the F5J CONTEST Eurotour and will be introduced for the 2024 annual round.

The experiences gained from this can then be the starting point for future modifications.

Calculation example B, like the old scoring system, is based on adding the preliminary round result and a bonus for the fly-off placement achieved.

In this example B, the bonus for the fly-off is chosen, so that in every mathematically possible combination, the winner of the fly-off also becomes the winner on points - even if he was the last to get into the fly-off with the lowest number of points. The second in the fly-off is always second in points and the third in the fly-off is always third in points. The distribution of final sum of points for the remaining places is no longer based on the fly-off placement, but rather with a dominance of the preliminary round results. To make this mathematically possible, there is a slightly larger spread in the results of a maximum of 11,5% points than in the alternatively discussed versions A1/A2 and C1/C2 (refer to the long version of this document). However, the spread of 11,5% points is still significantly smaller than it could have been in a competition with difficult weather conditions according to the old points system (in extreme cases up to 25% points). Explanation: The spread is the maximum possible percentage point distance including the fly-off bonus from the best winner (= 1st of the preliminary rounds and winner of the fly-off) to the worst fly-off participant (last of the ins Fly-Off and finished last there).

Procedure for determining the points:

Step 1:

In cell B 86, enter the total number of participants in the competition. Here in the example "100"

A	B C	D	E F	G H	I J	K L	M	N	0 P	Q	R	S T	U	V	W X
83															
84 Number	of participants/pilots	(Np) in the preliminary	rounds who actually	flew at least 1 flight	and the resulting number of	participants for the fl	-off according	g to the rules							
35															
86 N	lp = 100		Nf	= 30% from Np	30 but max. 14 by the rules										
87	V														
88	Resulting number of par	rticipants for the fly-off accord	ling to the rules												
89	v														
90	47 up to max	44 to 46	40 to 43	37 to 39	9 34 to 36	30 to 33		27-29	24 to 26		20 to 23	17 to 19		14 to 16	10 to 13
91	V	v	v	v	v	v		v	v		v	v		v	v
92	Columns = Number of p	ilots in Fly-Off	v	v	v	v		v	v		v	v		v	V
93	14	13	12	11	10	9		8	7		6	5		4	3
94															

Step 2:

For all valid results, only look at the columns that correspond to the assigned number of participants for the fly-off.

A fly-off with 14 participants should first be considered here. So now only column B should be considered. Compare cell B93.

A		В	С	D	E	F	G	н	I.	J	К	L	М	N	0	Р	Q	R	S	Т	U	V	W	Х
1																								
Scorin	ng for the <mark>j</mark>	prelimina	ary rounds	based on t	the placeme	ent dependi	ng on the t	total numb	er of partic	ipants and	d the numbe	r of particip	oants in the	fly-off										
The evalu	uation is base	d on the actu	al number of p	articipants at t	he Fly Off (e.g. b	ecause the area o	does not allow	enough starting	places)															
														L										
-			of pilots in Fly-								0.11					_	6 N I			-			a 11 - 1	
Place			- New place		2 - New place		- New place		- New place		9 - New place		- New place		7 - New place	/	6 - New place	6	5 - New place	5	4 - New place		3 - New place	3
		100,000 99,500	1,000 2,083	100,000 99,479	1,000 2,182	100,000 99,455	1,000 2,300	100,000 99,425	1,000 2,444	100,000 99,389	1,000 2,625	100,000 99,344	1,000 2,857	100,000 99,286	1,000 3,167	100,000 99,208	1,000 3,600	100,000		100,000 98,988	1,000 5,333	100,000	1,000 7,500	100,0
		99,250	3,167	99,479	3,364	99,455	3,600	99,425	3,889	99,389	4,250	99,344	4,714	99,280	5,333	99,208	6,200	99,100 98,890		98,988	9,667	98,933 98,717	14,000	98,8 98,5
		99,000	4,250	98,988	4,545	98,973	4,900	98,955	5,333	99,028	5,875	98,988	6,571	98,904	7,500	98,935	8,800	98,890		98,663	14,000	98,717	14,000	98,3
		98,950	5,333	98,933	5,727	98,914	6,200	98,890	6,778	98,861	7,500	98,825	8,429	98,779	9,667	98,717	11,400	98,630		98,505	14,000	95,000		94,0
		98,900	6,417	98,879	6,909	98,855	7,500	98,830	8,222	98,789	9,125	98,744	10,286	98,686	11,833	98,608	14,000	98,505		95,000		94,011		88,1
		98,850	7,500	98,825	8,091	98,795	8,800	98,760	9,667	98,717	10,750	98,663	12,143	98,593	14,000	98,505	14,000	95,000		94,000		88,126		87,2
	8	98,800	8,583	98,771	9,273	98,736	10,100	98,695	11,111	98,644	12,375	98,581	14,000	98,505	_ 1,000	95,000		93,989		88,106		87,189		86,2
	9	98,750	9,667	98,717	10,455	98,677	11,400	98,630	12,556	98,572	14,000	98,505	,	95,000		93,978		88,086		87,160		86,253		85,3
	10	98,700	10,750	98,663	11,636	98,618	12,700	98,565	14,000	98,505	,	95,000		93,967		88,065		87,129		86,213		85,316		84,4
	11	98,650	11,833	98,608	12,818	98,559	14,000	98,505	, i	95,000		93,956		88,044		87,098		86,172		85,266		84,379		83,5
	12	98,600	12,917	98,554	14,000	98,505		95,000		93,944		88,022		87,066		86,130		85,215		84,319		83,442		82,5
	13	98,550	14,000	98,505		95,000		93,932		88,000		87,033		86,088		85,163		84,258		83,372		82,505		81,6
	14	98,505		95,000		93,920		87,977		87,000		86,044		85,110		84,196		83,301		82,426		81,568		80,7
	15	95,000		93,907		87,954		86,966		86,000		85,056		84,132		83,228		82,344		81,479		80,632		79,8
	16	93,894		87,930		86,931		85,955		85,000		84,067		83,154		82,261		81,387		80,532		79,695		78,8
	17	87,906		86,895		85,908		84,943		84,000		83,078		82,176		81,293		80,430		79,585		78,758		77,
		86,859		85,860		84,885		83,932		83,000		82,089		81,198		80,326		79,473		78,638		77,821		77,
		85,812		84,826		83,862		82,920		82,000		81,100		80,220		79,359		78,516		77,691		76,884		76,
		84,765		83,791		82,839		81,909		81,000		80,111		79,242		78,391		77,559		76,745		75,947		75,
	21	83,718		82,756		81,816		80,898		80,000		79,122		78,264		77,424		76,602		75,798		75,011		74,
		82,671		81,721		80,793		79,886		79,000		78,133		77,286		76,457		75,645		74,851		74,074		73,
		81,624		80,686		79,770		78,875		78,000		77,144		76,308		75,489		74,688		73,904		73,137		72,
	24 25	80,576 79,529		79,651 78,616		78,747 77,724		77,864 76,852		77,000 76,000		76,156 75,167		75,330 74,352		74,522 73,554		73,731 72,774		72,957 72,011		72,200 71,263		71, 70,
	25	79,529 78,482		78,616		76,701		75,841		75,000		75,167		74,352		73,554		72,774		72,011		70,326		70, 69,
		77,435		76,547		75,678		74,830		74,000		73,189		72,396		72,587		70,860		70,117		69,389		68,
	28	76,388		75,512		74,655		73,818		73,000		72,200		71,418		70,652		69,903		69,170		68,453		67,
	29	75,341		74,477		73,632		72,807		72,000		71,211		70,440		69,685		68,946		68,223		67,516		66,
		74,294		73,442		72,609		71,795		71,000		70,222		69,462		68,717		67,989		67,277		66,579		65,
	31	73,247		72,407		71,586		70,784		70,000		69,233		68,484		67,750		67,032		66,330		65,642		64,9
	32	72,200		71,372		70,563		69,773		69,000		68,244		67,505		66,783		66,075		65,383		64,705		64,0
	33	71,153		70,337		69,540		68,761		68,000		67,256		66,527		65,815		65,118		64,436		63,768		63,1
	34	70,106		69,302		68,517		67,750		67,000		66,267		65,549		64,848		64,161		63,489		62,832		62,3
		69,059		68,267		67,494		66,739		66,000		65,278		64,571		63,880		63,204		62,543		61,895		61,2
		68,012		67,233		66,471		65,727		65,000		64,289		63,593		62,913		62,247		61,596		60,958		60,3
1	37	66,965		66,198		65,448		64,716		64,000		63,300		62,615		61,946		61,290		60,649		60,021		59,4

.....

098	¥	$\times \sqrt{f_x}$											
	A	B C	D E	F G	н	J K	L M	N O	Р	Q R	S T	U V W	х
189	89	12,518	12,384	12,253	12,125	12,000	11,878	11,758	11,641	11,527	11,415	11,305	11,198
190	90	11,471	11,349	11,230	11,114	11,000	10,889	10,780	10,674	10,570	10,468	10,368	10,271
191	91	10,424	10,314	10,207	10,102	10,000	9,900	9,802	9,707	9,613	9,521	9,432	9,344
192	92	9,376	9,279	9,184	9,091	9,000	8,911	8,824	8,739	8,656	8,574	8,495	8,417
193	93	8,329	8,244	8,161	8,080	8,000	7,922	7,846	7,772	7,699	7,628	7,558	7,490
194	94	7,282	7,209	7,138	7,068	7,000	6,933	6,868	6,804	6,742	6,681	6,621	6,563
195	95	6,235	6,174	6,115	6,057	6,000	5,944	5,890	5,837	5,785	5,734	5,684	5,635
196	96	5,188	5,140	5,092	5,045	5,000	4,956	4,912	4,870	4,828	4,787	4,747	4,708
197	97	4,141	4,105	4,069	4,034	4,000	3,967	3,934	3,902	3,871	3,840	3,811	3,781
198	98	3,094	3,070	3,046	3,023	3,000	2,978	2,956	2,935	2,914	2,894	2,874	2,854
199	99	2,047	2,035	2,023	2,011	2,000	1,989	1,978	1,967	1,957	1,947	1,937	1,927
200	100	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
201	101	-0,047	-0,035	-0,023	-0,011	0,000	0,011	0,022	0,033	0,043	0,053	0,063	0,073
202	102	-1,094	-1,070	-1,046	-1,023	-1,000	-0,978	-0,956	-0,935	-0,914	-0,894	-0,874	-0,854
203	103	-2,141	-2,105	-2,069	-2,034	-2,000	-1,967	-1,934	-1,902	-1,871	-1,840	-1,811	-1,781
204	104	-3,188	-3,140	-3,092	-3,045	-3,000	-2,956	-2,912	-2,870	-2,828	-2,787	-2,747	-2,708

In this example, the winner of the preliminary rounds receives 100.000% points (cell B101) The 9th receives 98.750% points (cell B109). The (14th placed) last participant in the fly-off receives 98.505% points (cell B114).

The (15th) first outside the fly-off receives 95% points (cell B115) If the number of fly-off participants is different, the first one outside the fly-off always receives 95% points. See cells D114, F113, H112, etc. The 100th = last receives 1 percentage point (cell B200). If the number of participants is different, the last one always receives 1 percentage point.

There is always linear interpolation between the first outside the fly-off and the last. This means that, depending on the total number of participants, a fair distribution of points based on size is achieved.

With 100 participants, 30th place receives 74.294 percentage points (cell B130)

For comparison: With 50 participants, 30th place receives 51.857 percentage points (cell B130)

83			
84	Number of p	oarticipants/	pilots (Np) ir
85			
86	Np =	50	
87		v	
88		Resulting numb	er of participan
89		V	
55			

		_	
	A	В	C
126	26	62,029	
127	27	59,486	
128	28	56,943	
129	29	54,400	
130	30	51,857	
131	31	49,314	
132	32	46,771	
133	33	44,229	
134	34	41,686	

For further consideration of the points calculation, column B with the 14 participants in the fly-off is the reference size for calculating the points for competitions with a smaller number of fly-off participants. In a first step, the new comparison places of the smaller fly-off are scaled down linearly to the size of the fly-off with 14 participants. In the second step, the points from reference column B are then determined for each calculated comparison position by linear interpolation and thus assigned to the actual positions in the smaller fly-offs.

	А	В	С	D	E	F	G	Н	I	J	K	L	М	N	0	Р	Q	R	S	Т	U	V	W	Х
4																								
5 Sco	oring for	the prelim	inary rounds	based or	n the placem	ent deper	nding on the	total num	nber of parti	cipants an	d the numbe	er of partici	pants in th	e fly-off										
96	-		-						· · ·	•														
7 The	evaluation is	s based on the a	actual number of p	participants a	t the Fly Off (e.g. b	pecause the ar	ea does not allow	enough starti	ing places)															
8																								
9		Columns = Num	ber of pilots in Fly	-Off = Nf																				
00 Plac	e	14	13 - New place	13	12 - New place	12	11 - New place	11	10 - New place	10	9 - New place	9 8	3 - New place	8	7 - New place	7	6 - New place	6	5 - New place	5	4 - New place	4	3 - New place	3
01	1	100,000	1,000	100,000	1,000	100,000	1,000	100,000	1,000	100,000	1,000	100,000	1,000	100,000	1,000	100,000	1,000	100,000	1,000	100,000	1,000	100,000	1,000	100,000
02	2	99,500	2,083	99,479	2,182	99,455	2,300	99,425	2,444	99,389	2,625	99,344	2,857	99,286	3,167	99,208	3,600	99,100	4,250	98,988	5,333	98,933	7,500	98,82
03	3	99,250	3,167	99,208	3,364	99,159	3,600	99,100	3,889	99,028	4,250	98,988	4,714	98,964	5,333	98,933	6,200	98,890	7,500	98,825	9,667	98,717	14,000	98,50
04	4	99,000	4,250	98,988	4,545	98,973	4,900	98,955	5,333	98,933	5,875	98,906	6,571	98,871	7,500	98,825	8,800	98,760	10,750	98,663	14,000	98,505		95,000
05	5	98,950	5,333	98,933	5,727	98,914	6,200	98,890	6,778	98,861	7,500	98,825	8,429	98,779	9,667	98,717	11,400	98,630	14,000	98,505		95,000		92,957
06	6	98,900	6,417	98,879	6,909	98,855	7,500	98,825	8,222	98,789	9,125	98,744	10,286	98,686	11,833	98,608	14,000	98,505		95,000		92,911		86,130
07	7	98,850	7,500	98,825	8,091	98,795	8,800	98,760	9,667	98,717	10,750	98,663	12,143	98,593	14,000	98,505		95,000		92,864		86,044		84,196
08	8	98,800	8,583	98,771	9,273	98,736	10,100	98,695	11,111	98,644	12,375	98,581	14,000	98,505		95,000		92,814		85,955		84,067		82,261
09	9	98,750	9,667	98,717	10,455	98,677	11,400	98,630	12,556	98,572	14,000	98,505		95,000		92,762		85,860		83,932		82,089		80,326
10	10	98,700	10,750	98,663	11,636	98,618	12,700	98,565	14,000	98,505		95,000		92,707		85,762		83,791		81,909		80,111		78,391
11	11	98,650	11,833	98,608	12,818	98,559	14,000	98,505		95,000		92,650		85,659		83,643		81,721		79,886		78,133		76,457
12	12	98,600	12,917	98,554	14,000	98,505		95,000		92,590		85,550		83,488		81,524		79,651		77,864		76,156		74,522
13	13	98,550	14,000	98,505		95,000		92,526		85,436		83,325		81,317		79,405		77,581		75,841		74,178		72,587
14	14	98,505		95,000		92,459		85,316		83,154		81,100		79,146		77,286		75,512		73,818		72,200		70,652
15	15	95,000		92,389		85,189		82,974		80,872		78,875		76,976		75,167		73,442		71,795		70,222		68,717
16	16	92,314		85,056		82,784		80,632		78,590		76,650		74,805		73,048		71,372		69,773		68,244		66,783

Let's assume that the fly-off participant number is only 7 pilots (cell P100).

Then the comparable reference place is first calculated in column O with respect to column B.

With 7 pilots, 4th place is the "middle" place corresponds relatively speaking to 7,5th place in a fly-off with 14 participants (cell O104).

The pilot therefore receives 98.825 points for fourth place (cell P104). That is the average value between place 7 and 8 of a Fly-Off with 14 participants (compare cells B107/B108). One could say that 3rd place in a 7-man fly-off is only worth 7.5th place in a 14-man fly-off. That's fair in that respect, because not only is the fly-off smaller, but the entire competition is also smaller, and it was therefore easier to achieve fourth place in the preliminary rounds. Yet another example.

Let's assume that the fly-off participant number is 10 pilots (cell J100).

Then the comparable reference position is first calculated in column I with respect to column B.

With 10 pilots, 3rd place corresponds relatively speaking to 3,889 place in a fly-off with 14 participants (cell I103).

The pilot therefore receives 99.028 points for third place (cell J103). This is slightly more than 3rd place with 7 fly-off participants and slightly less than the fly-off with 14 participants. The value 99.028% points is now calculated by linear interpolation between the values from 3rd and 4th place in column B - i.e. cells B103 and B104.

If a competition ends "without" a fly-off due to bad weather, for example, these results from the table from line 101 in the corresponding column are also the final competition results.

If the fly-off is carried out, there will be a new order in the placement. In this order, the fly-off participants now receive a bonus, which is added to their personal result from the preliminary round.

For this purpose, we now look again at a fly-off with 14 participants in column B from line 63

B86	-	× <	<i>fx</i> 50																					
A		В	С	D	E	F	G	н	I.	J	К	L	М	N	0	Р	Q	R	S	т	U	V	W	x
58																								
59 FlyOff	bonus	depending	on the number	r of particip	ants in the fl	y-off																		
60																								
51		Columns = Nun	nber of pilots in Fly	-Off = Nf																				
62 Place		14	13 - New place	13	12 - New place	12 1	1 - New place	11 1	0 - New place	10	9 - New place	9	8 - New place	8	7 - New place	7	6 - New place	6	5 - New place	5	4 - New place	4	3 - New place	3
53	1	10,000	1,000	10,000	1,000	10,000	1,000	10,000	1,000	10,000		10,000	1,000	10,000	1,000	10,000	1,000	10,000		10,000		10,000		10,000
54	2	8,500	2,083	8,375	2,182	8,227	2,300	8,050	2,444	7,833		7,563	2,857	7,214	3,167	6,750	3,600	6,100		5,250		4,167		2,500
65	3	7,000	3,167	6,750	3,364	6,455	3,600	6,100	3,889	5,667	-	5,250	4,714	4,786	5,333	4,167	6,200	3,350		2,500		1,583		0,000
66	4	5,500	4,250	5,250	4,545	4,955	4,900	4,600	5,333	4,167		3,625	6,571	3,071	7,500	2,500	8,800	1,850		0,938	,	0,000		
67	5	4,500	5,333	4,167	5,727	3,773	6,200	3,350	6,778	2,917		2,500	8,429	2,036	9,667	1,583	11,400	0,650	14,000	0,000				
58	6	3,500	6,417	3,188	6,909	2,818	7,500	2,500	8,222	2,139		1,719	10,286	1,286	11,833	0,542	14,000	0,000						
69	7	2,750	7,500	2,500	8,091	2,205	8,800	1,850	9,667	1,583		0,938	12,143	0,464	14,000	0,000								
70	8	2,250	8,583	1,958	9,273	1,682	10,100	1,425	11,111	0,722		0,406	14,000	0,000										
71	9	1,750	9,667	1,583	10,455	1,159	11,400	0,650	12,556	0,361		0,000												
72	10	1,500	10,750	0,938	11,636	0,591	12,700	0,325	14,000	0,000														
73	11	0,750	11,833	0,542	12,818	0,295	14,000	0,000																
74	12	0,500	12,917	0,271	14,000	0,000																		
75	13	0,250	14,000	0,000																				
76	14	0,000																						
/7																								

The winner of the fly-off receives a bonus of 10% points (cell B63). This bonus will be added to his result from the preliminary rounds. The 2nd fly-off pilot receives a bonus of 8.5% points (cell B64). And so forth...

If the fly-off has fewer participants, then the fly-off bonus is calculated accordingly by double calculation (first the new reference place and then the interpolated percentage points). After all, it is the identical calculation as above.

In a fly-off with 10 participants, the third place gets the new comparison position 3,889 (cell I65). From cells B65 and B66, the fly-off bonus is then calculated here at 5.667 % points (cell J65) using linear interpolation. This value will be added to his preliminary round result to form his overall result for this competition.

That's all.

(Examples are on the next page)

Just to get an idea of possible combinations of results:

Examples of possible percentage point combinations from competition results can be found in the table starting in line 16. As usual in Excel, you can mark cells and then see the calculation and the underlying cells marked. Line 16 shows the result 110% points for a pilot who wins the preliminary rounds (P1 = 1st of preliminary rounds) and the fly-off (F1 = first of fly-off). (P1+F1) Line 17 shows the result 108.5...102.5 %-points for a pilot who won the preliminary rounds (P1 = 1st of preliminary rounds) and came second in the fly-off (F2 = 2nd of fly-off). (P1+F2). In a very small competition with only total 10 participants and 3 participants in Fly-Off (cell X17), the result of 2nd place is significantly devalued because the bonus is very small at only 2.500%.

pilot with place x unds // Fy = Place y per of pilots in Fly-O Best 1st Best 2nd Best 2nd Best 4th Best last	r in the Fly-Off ff 13 110,000 108,375 106,750 105,250 100,000 109,479	nds and place y in the Fi 12 110,000 108,227 106,455 104,955 100,000	ly-Off) 11 110,000 108,050 106,100 104,600 100,000	10 110,000 107,833 105,667 104,167	10	10,000 07,563	8	7		6	5		4	3
unds // Fy = Place y per of pilots in Fly-O Best 1st Best 2nd Best 3rd Best 4th	r in the Fly-Off ff 13 110,000 108,375 106,750 105,250 100,000 109,479	12 110,000 108,227 106,455 104,955	11 110,000 108,050 106,100 104,600	110,000 107,833 105,667	1: 1: 1(10,000				6	5		4	3
Deer of pilots in Fly-O Best 1st Best 2nd Best 3rd Best 4th	ff 13 110,000 108,375 106,750 105,250 100,000 109,479	110,000 108,227 106,455 104,955	110,000 108,050 106,100 104,600	110,000 107,833 105,667	1: 1: 1(10,000				6	5		4	3
Deer of pilots in Fly-O Best 1st Best 2nd Best 3rd Best 4th	ff 13 110,000 108,375 106,750 105,250 100,000 109,479	110,000 108,227 106,455 104,955	110,000 108,050 106,100 104,600	110,000 107,833 105,667	1: 1: 1(10,000				6	5		4	3
Best 1st Best 2nd Best 3rd Best 4th	13 110,000 108,375 106,750 105,250 100,000 109,479	110,000 108,227 106,455 104,955	110,000 108,050 106,100 104,600	110,000 107,833 105,667	1: 1: 1(10,000				6	5		4	3
Best 1st Best 2nd Best 3rd Best 4th	13 110,000 108,375 106,750 105,250 100,000 109,479	110,000 108,227 106,455 104,955	110,000 108,050 106,100 104,600	110,000 107,833 105,667	1: 1: 1(10,000				6	5		4	3
Best 2nd Best 3rd Best 4th	110,000 108,375 106,750 105,250 100,000 109,479	110,000 108,227 106,455 104,955	110,000 108,050 106,100 104,600	110,000 107,833 105,667	1: 1: 1(10,000				6	5		4	3
Best 2nd Best 3rd Best 4th	108,375 106,750 105,250 100,000 109,479	108,227 106,455 104,955	108,050 106,100 104,600	107,833 105,667	10		110.000							
Best 2nd Best 3rd Best 4th	108,375 106,750 105,250 100,000 109,479	108,227 106,455 104,955	108,050 106,100 104,600	107,833 105,667	10		110.000		~~~					
Best 3rd Best 4th	106,750 105,250 100,000 109,479	106,455 104,955	106,100 104,600	105,667	10	07,563		110		110,000	110,000		110,000	110,00
Best 4th	105,250 100,000 109,479	104,955	104,600			05,250	107,214 104,786	106		106,100 103,350	105,250 102,500		104,167 101,583	102,50
	100,000 109,479			104,107	11	03,625	104,788	104		103,350	102,500		100,000	100,00
Best last	109,479	100,000	100,000		1	03,025	105,071	102	500	101,850	100,538		100,000	
	109,479			100,000	10	00,000	100,000	100	000	100,000	100,000		100,000	100,00
	107.954	109,455	109,425	109,389	10	09,344	109,286	109	208	109,100	108,988		108,933	108,82
	107,854	107,682	107,475	107,222	10	06,906	106,500	105	958	105,200	104,238		103,100	101,32
	106,229	105,909	105,525	105,056	10	04,594	104,071	103	375	102,450	101,488		100,517	98,82
	104,458	104,114	103,700	103,194	1	02,613	102,036	101	433	100,740	99,763		98,717	
	99,479	99,455	99,425	99,389		99,344	99,286	99	208	99,100	98,988		98,933	98,82
	109,208	109,159	109,100	109,028		08,988	108,964	108		108,890	108,825		108,717	108,50
	107,583 105,958	107,386 105,614	107,150 105,200	106,861 104,694		06,550 04,238	106,179 103,750	105		104,990 102,240	104,075 101,325		102,883 100,300	101,00 98,50
	104,458	104,114	103,700	104,094		02,613	102,036	105		102,240	99,763		98,717	98,50
	104,450	104,114	105,700	105,154	1	.02,013	102,030	101	+55	100,740	55,705		50,717	· · · · · ·
	99,208	99,159	99,100	99,028		98,988	98,964	98	933	98,890	98,825		98,717	98,50
	,	,	,	,		,	,			,				,
	108,988	108,973	108,955	108,933	10	08,906	108,871	108	825	108,760	108,663		108,505	1
	107,363	107,200	107,005	106,767	1	06,469	106,086	105	575	104,860	103,913		102,672	
														3
	104,238	103,927	103,555	103,100	10	02,531	101,943	101	325	100,610	99,600		98,505	:
	98,988	98,973	98,955	98,933		98,906	98,871	98	825	98,760	98,663		98,505	
	109 554	109 550	109 565	109 572	11	09 591	109 502	109	609	109 620			v	
													~	
	103,804										x		x	
	,	,	,	,		,	,			,				
	98,554	98,559	98,565	98,572		98,581	98,593	98	608	98,630	x		x	
Worst 1st	108,505	108,505	108,505	108,505			108,505			108,505	108,505		x	>
Norst 2nd	106,880	106,732	106,555	106,338			105,719			104,605	103,755		x	>
Norst 3rd													x	3
Norst 4th	103,755	103,460	103,105	102,672	10	02,130	101,576	101	005	100,355	99,443		x	2
	00 505	00 505	00.505	00.505		00.505	00 505			00.505	00 505			
Manak la ak	98,505	98,505	98,505	98,505		98,505	98,505	98	505	98,505	98,505		X	×
Noi Noi	rst 2nd rst 3rd	98,554 98,554 rst 1st 108,505 rst 2nd 106,880 rst 3rd 105,255 rst 4th 103,755	104,238 103,927 98,988 98,973 108,554 108,559 106,929 106,786 105,304 105,014 103,804 103,514 103,805 108,559 103,804 103,514 103,804 103,514 103,804 103,514 103,805 108,505 104,800 106,732 105,255 104,960 rst 1xt 103,755 103,460	104,238 103,927 103,555 98,988 98,973 98,955 108,554 108,559 108,565 108,554 108,559 108,565 106,929 106,786 106,615 103,804 103,514 103,165 103,804 103,514 103,165 103,805 108,505 108,505 rst 1st 108,505 108,505 106,732 106,555 rst 2nd 106,880 106,732 103,755 103,460 103,105	104,238 103,927 103,555 103,100 98,988 98,973 98,955 98,933 108,554 108,559 108,565 108,572 106,929 106,786 106,615 106,406 103,804 105,014 104,665 104,239 103,804 103,514 103,165 102,739 98,555 98,559 98,565 98,572 rst 1st 108,505 108,505 108,505 rst 1st 108,505 108,505 108,505 rst 1st 106,780 106,732 106,555 104,960 104,605 104,172 rst 4th 103,755 103,460 103,105	104,238 103,927 103,555 103,100 1 98,988 98,973 98,955 98,933 1 108,554 108,559 108,565 108,572 1 106,929 106,786 106,615 106,406 1 103,804 105,014 104,665 104,239 1 103,804 103,514 103,165 102,739 1 103,804 103,514 103,165 102,739 1 103,804 103,514 103,165 102,739 1 103,804 103,514 103,165 102,739 1 103,804 103,514 103,165 102,739 1 103,804 103,514 103,165 102,739 1 103,805 108,505 108,505 108,505 1 rst 1st 108,505 108,505 108,505 1 rst 2nd 106,732 106,555 106,338 1 rst 3rd 105,255 104,960 104,605 104,172 1 rst 4th 103,755 103,460 103,105	104,238 103,927 103,555 103,100 102,531 98,988 98,973 98,955 98,933 98,906 108,554 108,559 108,565 108,572 108,581 106,929 106,786 106,615 106,406 106,144 103,804 105,014 104,665 104,239 103,831 103,804 103,514 103,165 102,739 102,206 103,804 103,514 103,165 102,739 102,206 103,804 103,514 103,165 102,739 102,206 103,804 103,514 103,165 102,739 102,206 103,814 103,165 102,739 102,206 102,206 103,855 98,559 98,565 98,572 98,581 104,050 108,505 108,505 108,505 108,505 105,155 108,505 108,505 108,505 108,505 104,060 106,732 106,555 106,338 106,068 104,105,255 104,400 104,605 104,172 103,755 104,105,10	104,238 103,927 103,555 103,100 102,531 101,943 98,988 98,973 98,955 98,933 98,906 98,906 98,871 108,554 108,559 108,565 108,572 108,581 108,580 106,929 106,786 106,615 106,406 106,144 105,807 105,304 105,014 104,665 104,239 103,831 103,379 103,804 103,514 103,165 102,739 102,206 101,664 98,554 98,555 108,505 108,505 108,505 108,505 108,505 105,805 108,505 108,505 108,505 108,505 108,505 108,505 105,805 108,505 108,505 108,505 108,505 108,505 108,505 105,805 108,505 108,505 108,505 108,505 108,505 108,505 105,255 104,960 104,605 104,172 103,755 103,729 105,255 104,960 104,605 104,172 103,755 103,291 105,255 10	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	104,238 103,927 103,555 103,100 102,531 101,943 101,325 98,988 98,973 98,975 98,955 98,933 98,906 98,871 98,871 108,554 108,559 108,555 108,572 108,581 108,593 108,608 106,929 106,786 106,615 106,406 106,144 105,807 105,358 105,304 105,014 104,665 104,239 103,831 103,379 102,775 105,304 103,514 103,165 102,779 102,206 101,664 101,108 98,554 98,559 98,555 108,505 108	104,238 103,927 103,555 103,100 102,531 101,943 101,325 100,610 98,988 98,973 98,955 98,933 98,906 98,871 98,871 98,825 98,870 106,524 108,555 108,565 108,572 108,581 108,593 108,608 108,630 106,929 106,786 106,615 106,406 106,144 105,807 105,338 104,730 105,304 105,514 106,615 106,406 106,144 103,379 102,775 101,980 103,804 103,514 103,514 103,615 102,739 102,206 101,664 101,108 100,400 98,555 108,505 108,505 108,505 108,505 108,505 108,505 108,608 101,108 100,400 rst 1st 108,505 108,50	104,238 103,927 103,555 103,100 102,531 101,943 101,325 100,610 99,600 108,554 08,959 08,955 08,955 108,555 108,557 108,581 108,593 108,608 108,505 <td< td=""><td>104,238 103,927 103,555 103,100 102,531 101,943 101,325 100,610 99,600 98,988 98,973 98,955 98,933 98,906 98,871 98,825 98,825 98,760 98,663 × 106,554 108,559 108,565 108,572 108,581 105,939 108,683 × × 105,304 105,014 104,665 104,239 103,831 103,379 102,775 101,980 × 108,554 98,554 98,559 98,565 108,572 102,739 102,739 102,775 101,980 × 108,504 105,014 104,665 104,239 103,831 103,379 102,775 101,980 × 108,505 103,755 104,605 103,755 104,605 103,755</td><td>104,28 103,927 103,555 103,100 102,511 101,943 101,325 100,610 99,600 98,505 88,988 98,973 98,955 98,955 98,965 98,973 98,965 98,973 98,965 98,973 98,965 98,973 98,965 98,973 98,965 98,973 98,965 98,973 98,965 98,973 98,973 98,965 98,973 98,965 98,973 98,973 98,965 98,973 98,973 98,965 98,973 98,973 98,965 98,973 98,963 98,973</td></td<>	104,238 103,927 103,555 103,100 102,531 101,943 101,325 100,610 99,600 98,988 98,973 98,955 98,933 98,906 98,871 98,825 98,825 98,760 98,663 × 106,554 108,559 108,565 108,572 108,581 105,939 108,683 × × 105,304 105,014 104,665 104,239 103,831 103,379 102,775 101,980 × 108,554 98,554 98,559 98,565 108,572 102,739 102,739 102,775 101,980 × 108,504 105,014 104,665 104,239 103,831 103,379 102,775 101,980 × 108,505 103,755 104,605 103,755 104,605 103,755	104,28 103,927 103,555 103,100 102,511 101,943 101,325 100,610 99,600 98,505 88,988 98,973 98,955 98,955 98,965 98,973 98,965 98,973 98,965 98,973 98,965 98,973 98,965 98,973 98,965 98,973 98,965 98,973 98,965 98,973 98,973 98,965 98,973 98,965 98,973 98,973 98,965 98,973 98,973 98,965 98,973 98,973 98,965 98,973 98,963 98,973

It may seem complicated at first.

But mathematically it's all just a simple linear interpolation that linearly scales different competition sizes to match the point distribution.

As a mental model, you could imagine that all competitions are scaled linearly to the reference competition with 100 total participants. The points for the non-fly-off participants are always distributed linearly between 95% points and 1% points. And within the fly-off participants, the points from the preliminary rounds are always staggered between 100% points and 98,505 % points (nonlinear), so that the better placed receive a little more points – and as more as more participants a fly-off have.

In principle, the point range of 98,505 to 100,000 % points for the fly-off participants and 1 to 95% points for the rest of the field could also be chosen differently. The selection "like this" and not otherwise was based on the evaluation of various competitions and other boundary conditions.

Together with the ranking-solution, competitions can be sensibly standardized according to size and weather conditions and can therefore be added fairly to the overall annual result. That is the main goal of this new scoring system.

As a side effect of the non-linear spread of the percentage points for the fly-off bonus, pilots who win both the preliminary rounds and the fly-off - the dominant winners - would receive a fair, particularly high scoring.

There still remains a question of fairness where winners of 3 small competitions would have an advantage because it is mathematically/statistically easier to win small competitions. In order to prevent this, the rule mentioned above was introduced that a pilot is considered to have his 3 best competition results from the competitions in which at least 70 participants took part. The number 70 was initially set for 2024 for certain reasons and can be modified in the future if necessary.

That's the explanation here. For further information, please consult the long version of this document.