New scoring system

for the

annual overall ranking

of the

CONTEST Eurotour

in the

competition category F5J

from 2024

(Long version)

A notice:

Who only wants to understand how the new scoring system works conceptually, is applied and calculated - and is not interested in any explanations or background information, needs only to read the blue text.

1
Introduction

The CONTEST Eurotour was originally launched 30 years ago as a competition series for the F3B competition class in order to offer competition pilots from several countries an opportunity to compete outside of the European and World Championships (in which only very few pilots from each partaking country are allowed) with each other to determine an annual overall winner.

Back then F3B started with very few competitions in the center of Europe over the summer phase. For an annual overall ranking, the 3 best percentage results of each pilot were then simply added together. The CONTEST Eurotour was later expanded to include the DLG (F3K) and F3J classes. In the F3J class, the best pilots from the field of participants were, and still are determined in the preliminary rounds in order to then determine the winner from these best pilots in a fly-off. As part of the CONTEST Eurotour, an arbitrarily determined fly-off bonus was introduced for the best placed.

Over the course of the last 30 years, more and more competition classes were added to the CONTEST Eurotour. Depending on the type of competition class, these are held with or without a fly-off. In individual classes, modifications to this historically developed points system were discussed from time to time and, in individual cases, adapted. But at the heart of the matter, this historical scoring system has never been questioned in terms of the appropriateness and fairness for the individual competition classes and the changing conditions and requirements for the different competition classes over the years.

The then provisional FAI competition class F5J was added as the youngest competition class in 2011. F5J quickly developed into today's most popular and widespread competition class with currently almost 30 World Cup competitions in Europe alone, of which 25 competitions are part of the CONTEST Eurotour. Due to the large number of competitions, a season extends from early spring (March) to late autumn (October). Geographically, the competition now extends from Portugal to Ukraine and from Greece/Cyprus to Norway/Finland across the whole of Europe, and is not, as in the origins of the CONTEST Eurotour, limited to just a few countries in the center of Europe. So, it is hardly surprising that the different seasons with the different weather conditions as well as geographical conditions (e.g. competition areas near the coast) have an influence on the competition and thus on the competition results for the pilots.

As a comprehensive evaluation of competition results shows, the influence of weather conditions as well as geographical constraints can be clearly seen in the sometimes-drastic spread in the percentage competition results. [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 participants partaking in the Fly-Off and finished last there). For competitions with extreme thermals, the spread is typically 5% points. On average for the CONTEST Eurotour competitions from 2023, the spread according to the old rating system is 9% points. And peak values go well over 20 percentage points.]

This has been observed and controversially discussed in the F5J scene for a long time. For example, it may be that at a Central European competition there are extremely strong thermals under continental climatic conditions. Under these conditions, even below-average pilots can achieve a competition result of well over 90% - without great effort and personal performance. Nevertheless, they then only place 35-45th out of 60-70 participants. On the other hand, it may be that on a competition site with difficult geographical conditions and bad weather (torn thermals) a top pilot achieves the fly-off of this competition with less than 90% and then still wins the fly-off and thus the entire competition. In the end, despite the fly-off bonus, this top pilot receives fewer percentage points for this competition in the overall annual ranking than the previously considered below-average pilot in the competition with extreme thermal conditions.

The best-known example of a competition with changing weather conditions and difficult conditions was the 2023 F5J World Championship in Bulgaria, where around 75% of the flights took place in difficult weather conditions, which led to a wide spread in results. And around 25% of the flights took place under strong thermal conditions, with the “same” pilots only a few percentage points apart. And there is no doubt that the large result differences in these difficult conditions aren’t due to the fact that these pilots can suddenly no longer fly well under these conditions. The World Championship was a single completed competition that does not compare to other competitions or whose results must be added to other competitions.

At the Contest Eurotour, however, competition results from different competitions must be added together as fairly as possible. In order to end the injustice that has existed so far, 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.

A solution for a fairer evaluation was already introduced in 2020 by a country to determine participants for its national team. This 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.
Here, the rank achieved is assigned a calculated rating depending on the size of the competition. After 3 years of experience, one must come to the conclusion that such a ranking point system has led to a much fairer comparability and evaluation of different competitions. There will certainly be points of criticism with such a rating system, but the major injustices, such as those that occur when adding up the previous percentage rating, can certainly be eliminated.
However, this specific scoring system in the way it was introduced for the national team of this country cannot be transferred to the CONTEST Eurotour.

After a comprehensive evaluation of competition results from the F5J competition class and the sum of all considerations regarding the creation of fair conditions for the CONTEST Eurotour, the decision was made in a tour manager meeting that a separate scoring system adapted to the specific competition class can and should be introduced for each competition category, as to best meets the specific requirements of each class. In this sense, it was also made clear that annual adjustments to class-specific needs can also take place in the future; e.g. if the number of competitions and participants in a competition class grows or shrinks.

It is the responsibility and duty of the CONTEST Eurotour to provide the best possible, fair and class-specific scoring system. However, not only should justice be achieved for the pilots, but the needs of the organizers (particularly in the outskirts of Europe) should also be taken into account, so that competitions in “all” Europe have a chance at becoming equally attractive for pilots and organizers, thus preserving model flying for all of us and hopefully giving the sport a chance to grow again in the future. It is not without reason that the motto of the CONTEST Eurotour is “CONTEST – an idea for the future of the model sport”.

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. For comparison, the previous scoring system is presented.

It should be noted here, that the new ranking-based scoring system was discussed in three forms (A: dominance of the preliminary round result + fly-off bonus; C: dominance of the fly-off result with final order of results according to the fly-off result (FAI ranking) and B as a compromise between the two).

After numerous considerations and consultation with one of the original founders of the CONTEST Eurotour, as well as various opinions from organizers from different countries, the CONTEST Eurotour ultimately made the decision to introduce the new rating system with the compromise solution (B) for 2024. For comparison and further understanding, the two non-selected versions (A) and (C) are then presented additionally according to the new scoring system.

To avoid fundamental 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 annual overall 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.

In a further section, numerous considerations are then considered and described, which ultimately led to the draft of the rating system decided specifically for 2024. These thoughts are shared here so that the diversity of the problems for a fair rating system in Europe can be made clear, and so that everyone can take part in further discussions in order to perhaps find even better solutions in the future or at least to create a better mutual understanding of completely different problems. This then makes it clear that there cannot be absolute justice. Therefore, parameters are built into the new scoring system right from the start, which in the future can be adjusted from year to year, if necessary, based on the experience available. The aim of the whole thing is to reach the best compromise, which hopefully everyone (pilots and organizers) can accept, so that the annual winner of the CONTEST Eurotour can be recognized and accepted by everyone as the best pilot.

In this context, for the sake of completeness, it must also be mentioned that there are certainly critical voices against the introduction of a new rating system, which are of course based on long experience and good reasons. On the other hand, there are opinions that believe changes do not go far enough.

Therefore, a please to everyone to accept the new rating system for 2024 and give it a reasonable chance. A lot of work has been done in the background to create the new scoring system developed here, which, with appropriate modifications, may be used as a scoring system for all competition classes in the future.

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 competition and the 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 competition results from 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.

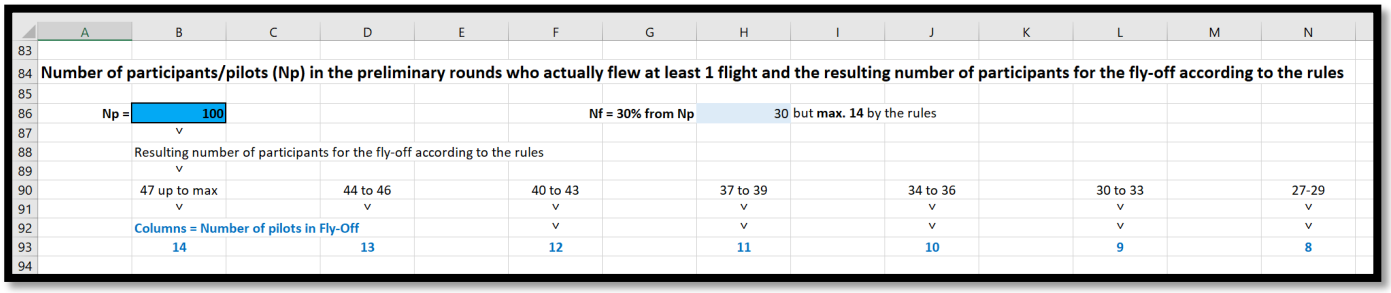
Calculation example B, like the old scoring system, is based on adding the preliminary round result and a bonus for the fly-off placement achieved.

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. 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
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 fly-off according to the rules**													
85														
86	**Np =**	**100**					**Nf = 30% from Np**	30	but **max. 14** by the rules					
87		v												
88		Resulting number of participants for the fly-off according to the rules												
89		v												
90		47 up to max		44 to 46		40 to 43		37 to 39		34 to 36		30 to 33		27-29
91		v		v		v		v		v		v		v
92		**Columns = Number of pilots in Fly-Off**				v		v		v		v		v
93		**14**		**13**		**12**		**11**		**10**		**9**		**8**
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	B	C	D	E	F	G	H
94								
95	**Scoring for the preliminary rounds based on the placement depending on the total numb**							
96								
97	The evaluation is based on the actual number of participants at the Fly Off (e.g. because the area does not allow enough starting							
98								
99		Columns = Number of pilots in Fly-Off = Nf						
100	Place	14	13 - New place	13	12 - New place	12	11 - New place	11
101	1	100,000	1,000	100,000	1,000	100,000	1,000	100,000
102	2	99,500	2,083	99,479	2,182	99,455	2,300	99,425
103	3	99,250	3,167	99,208	3,364	99,159	3,600	99,100
104	4	99,000	4,250	98,988	4,545	98,973	4,900	98,955
105	5	98,950	5,333	98,933	5,727	98,914	6,200	98,890
106	6	98,900	6,417	98,879	6,909	98,855	7,500	98,825
107	7	98,850	7,500	98,825	8,091	98,795	8,800	98,760
108	8	98,800	8,583	98,771	9,273	98,736	10,100	98,695
109	9	98,750	9,667	98,717	10,455	98,677	11,400	98,630
110	10	98,700	10,750	98,663	11,636	98,618	12,700	98,565
111	11	98,650	11,833	98,608	12,818	98,559	14,000	98,505
112	12	98,600	12,917	98,554	14,000	98,505		95,000
113	13	98,550	14,000	98,505		95,000		93,932
114	14	98,505		95,000		93,920		87,977
115	15	95,000		93,907		87,954		86,966
116	16	93,894		87,930		86,931		85,955
117	17	87,906		86,895		85,908		84,943
118	18	86,859		85,860		84,885		83,932
119	19	85,812		84,826		83,862		82,920
120	20	84,765		83,791		82,839		81,909
121	21	83,718		82,756		81,816		80,898
122	22	82,671		81,721		80,793		79,886
123	23	81,624		80,686		79,770		78,875
124	24	80,576		79,651		78,747		77,864
125	25	79,529		78,616		77,724		76,852
126	26	78,482		77,581		76,701		75,841
127	27	77,435		76,547		75,678		74,830
128	28	76,388		75,512		74,655		73,818
129	29	75,341		74,477		73,632		72,807
130	30	74,294		73,442		72,609		71,795
131	31	73,247		72,407		71,586		70,784
132	32	72,200		71,372		70,563		69,773
133	33	71,153		70,337		69,540		68,761
134	34	70,106		69,302		68,517		67,750
135	35	69,059		68,267		67,494		66,739
136	36	68,012		67,233		66,471		65,727
137	37	66,965		66,198		65,448		64,716

.....

	A	B	C	D	E	F	G	H
194	94	7,282		7,209		7,138		7,068
195	95	6,235		6,174		6,115		6,057
196	96	5,188		5,140		5,092		5,045
197	97	4,141		4,105		4,069		4,034
198	98	3,094		3,070		3,046		3,023
199	99	2,047		2,035		2,023		2,011
200	100	1,000		1,000		1,000		1,000
201	101	-0,047		-0,035		-0,023		-0,011
202	102	-1,094		-1,070		-1,046		-1,023

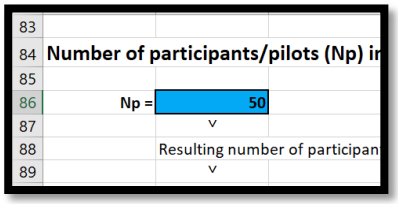
In this example, the winner of the preliminary rounds receives 100.000% points (cell B101)
The 9th receives 98.750% points (cell B109). The (14th placed) last participant in the fly-off receives 98.505% points (cell B114).

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)

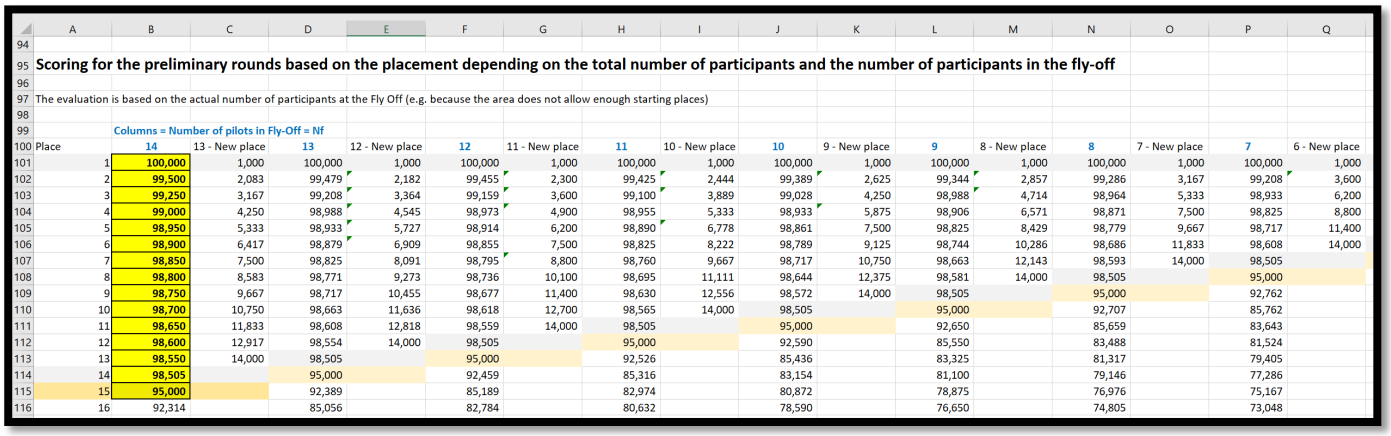
For comparison: With 50 participants, 30th place receives 51.857 percentage points (cell B130)



84	Number of participants/pilots (Np) ir
86	Np = 50
88	Resulting number of participan

	A	B	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 (columns “New place”) 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.



Scoring for the preliminary rounds based on the placement depending on the total number of participants and the number of participants in the fly-off

The evaluation is based on the actual number of participants at the Fly Off (e.g. because the area does not allow enough starting places)

Columns = Number of pilots in Fly-Off = Nf

Place	14	13 - New place	13	12 - New place	12	11 - New place	11	10 - New place	10	9 - New place	9	8 - New place	8	7 - New place	7	6 - New place
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
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
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
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
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
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
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	
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	
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	
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	
11	98,650	11,833	98,608	12,818	98,559	14,000	98,505		95,000		92,650		85,659		83,643	
12	98,600	12,917	98,554	14,000	98,505		95,000		92,590		85,550		83,488		81,524	
13	98,550	14,000	98,505		95,000		92,526		85,436		83,325		81,317		79,405	
14	98,505		95,000		92,459		85,316		83,154		81,100		79,146		77,286	
15	95,000		92,389		85,189		82,974		80,872		78,875		76,976		75,167	
16	92,314		85,056		82,784		80,632		78,590		76,650		74,805		73,048	

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 4th 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.

Step 3:

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

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
58																
59	**FlyOff bonus depending on the number of participants in the fly-off**															
60																
61		Columns = Number of pilots in Fly-Off = Nf														
62	Place	14	13 - New place	13	12 - New place	12	11 - New place	11	10 - New place	10	9 - New place	9	8 - New place	8	7 - New place	7
63	1	10,000	1,000	10,000	1,000	10,000	1,000	10,000	1,000	10,000	1,000	10,000	1,000	10,000	1,000	10,000
64	2	8,500	2,083	8,375	2,182	8,227	2,300	8,050	2,444	7,833	2,625	7,563	2,857	7,214	3,167	6,750
65	3	7,000	3,167	6,750	3,364	6,455	3,600	6,100	3,889	5,667	4,250	5,250	4,714	4,786	5,333	4,167
66	4	5,500	4,250	5,250	4,545	4,955	4,900	4,600	5,333	4,167	5,875	3,625	6,571	3,071	7,500	2,500
67	5	4,500	5,333	4,167	5,727	3,773	6,200	3,350	6,778	2,917	7,500	2,500	8,429	2,036	9,667	1,583
68	6	3,500	6,417	3,188	6,909	2,818	7,500	2,500	8,222	2,139	9,125	1,719	10,286	1,286	11,833	0,542
69	7	2,750	7,500	2,500	8,091	2,205	8,800	1,850	9,667	1,583	10,750	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	12,375	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	14,000	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														

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 place 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.

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%.

	A	B	C	D	E	F	G	H	I	J
8										
9	**Examples** (Total points for a pilot with place x in the preliminary rounds and place y in the Fly-Off)									
10										
11	Px = Place x in the preliminary rounds // Fy = Place y in the Fly-Off									
12										
13		Columns = Number of pilots in Fly-Off								
14	**Place**	14		13		12		11		10
15										
16	P1+F1	110,000	Best 1st	110,000		110,000		110,000		110,000
17	P1+F2	108,500	Best 2nd	108,375		108,227		108,050		107,833
18	P1+F3	107,000	Best 3rd	106,750		106,455		106,100		105,667
19	P1+F4	105,500	Best 4th	105,250		104,955		104,600		104,167
20	....									
21	P1+F_last	100,000	Best last	100,000		100,000		100,000		100,000
22										
23	P2+F1	109,500		109,479		109,455		109,425		109,389
24	P2+F2	108,000		107,854		107,682		107,475		107,222
25	P2+F3	106,500		106,229		105,909		105,525		105,056
26	P2+F4	104,750		104,458		104,114		103,700		103,194
27	....									
28	P2+F_last	99,500		99,479		99,455		99,425		99,389
29										
30	P3+F1	109,250		109,208		109,159		109,100		109,028
31	P3+F2	107,750		107,583		107,386		107,150		106,861
32	P3+F3	106,250		105,958		105,614		105,200		104,694
33	P3+F4	104,750		104,458		104,114		103,700		103,194
34	....									
35	P3+F_last	99,250		99,208		99,159		99,100		99,028
36										
37										
38	P4+F1	109,000		108,988		108,973		108,955		108,933
39	P4+F2	107,500		107,363		107,200		107,005		106,767
40	P4+F3	106,000		105,738		105,427		105,055		104,600
41	P4+F4	104,500		104,238		103,927		103,555		103,100
42	....									
43	P4+F_last	99,000		98,988		98,973		98,955		98,933
44										
45	P last+1 +F1	108,550		108,554		108,559		108,565		108,572
46	P last+1 +F2	107,050		106,929		106,786		106,615		106,406
47	P last+1 +F3	105,550		105,304		105,014		104,665		104,239
48	P last+1 +F4	104,050		103,804		103,514		103,165		102,739
49	....									
50	P last+1+F_last	98,550		98,554		98,559		98,565		98,572
51										
52	P last +F1	108,505	Worst 1st	108,505		108,505		108,505		108,505
53	P last +F2	107,005	Worst 2nd	106,880		106,732		106,555		106,338
54	P last +F3	105,505	Worst 3rd	105,255		104,960		104,605		104,172
55	P last +F4	104,005	Worst 4th	103,755		103,460		103,105		102,672
56	....									
57	P last+F_last	98,505	Worst last	98,505		98,505		98,505		98,505

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 and 14 fly-off 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.

Only for comparison and better understanding, here is the calculation example A1 or A2 based on the Excel spreadsheet A1 or A2 - This calculation example is not valid for the 2024 annual ranking

The calculation according to A1 and A2 are completely identical to calculation example B.
The only difference is the distribution of points for the fly-off participants' bonus.

In the **calculation example A1,** the fly-off bonus for the 1st = 3.0%, 2nd = 2.0%, 3rd =1.5%, 4th = 1.0%, 5th = 0.5% and for the other places 0%. Compare column B. Exactly as was the case with the old rating system. However, this only applies to a fly-off with a maximum number of participants of 14. For fly-offs with a smaller number of participants, the points are reduced linearly depending on the size.

	A	B	C	D	E	F	G	H
58								
59	**FlyOff bonus depending on the number of participants in the fly-off**							
60								
61		Columns = Number of pilots in Fly-Off = Nf						
62	Place	14	13 - New place	13	12 - New place	12	11 - New place	11
63	1	3,000	1,000	3,000	1,000	3,000	1,000	3,000
64	2	2,000	2,083	1,958	2,182	1,909	2,300	1,850
65	3	1,500	3,167	1,417	3,364	1,318	3,600	1,200
66	4	1,000	4,250	0,875	4,545	0,727	4,900	0,550
67	5	0,500	5,333	0,333	5,727	0,136	6,200	0,000
68	6	0,000	6,417	0,000	6,909	0,000	7,500	0,000
69	7	0,000	7,500	0,000	8,091	0,000	8,800	0,000
70	8	0,000	8,583	0,000	9,273	0,000	10,100	0,000
71	9	0,000	9,667	0,000	10,455	0,000	11,400	0,000
72	10	0,000	10,750	0,000	11,636	0,000	12,700	0,000
73	11	0,000	11,833	0,000	12,818	0,000	14,000	0,000
74	12	0,000	12,917	0,000	14,000	0,000		
75	13	0,000	14,000	0,000				
76	14	0,000						

For the sake of thought representation: In a competition with very strong thermals and many participants (>47), so that the number of fly-off participants could be 14, the calculation example A1 would result in almost identical numerical values for the first 20 places, as previously existed according to the old scoring system.
If you want to look at this as an analogy and to help with understanding, this is ultimately how competitions with difficult weather conditions are scaled to thermal conditions.
But please understand correctly, that is not and was not the goal of the new scoring system. It's about evaluating the performance of the pilots based on the order achieved in the competitions and rewarding them with percentage points. Reference should be made here to the initial example that the winner of a competition with difficult weather conditions could have fewer percentage points under the old rating system than a below-average pilot who came 35-45th out of 60-70 in a thermal competition.
According to the calculation example A1 presented here, this injustice is eliminated.
Despite the similar distribution of points to a thermal competition, the new scoring system is fundamentally different due to the ranking.

Overall, according to this scoring system, the preliminary round results would dominate in terms of the points that can be achieved, although the winner of the competition would most likely not be the winner based on percentage points.

And this ultimately goes against the core idea of the FAI rules, in which the preliminary rounds only serve to determine the best for the fly-off and the winner is then determined in the fly-off. Nevertheless, these calculation examples A1 and A3 were definitely preferred by some.

However, the problem with this in practice is the lack of prerequisites. The smaller the number of participants in the fly-off - because, for example, there are only a limited number of starting places available even though there are a lot of participants (e.g. only 8 starting places with >60 participants, as is unfortunately the case in many competitions) - the more such a dominance of the results from the preliminary rounds can be unfair, as not all pilots flew against each other and so the first one from the preliminary rounds does not necessarily have to be the best, but just happened to reach first place.

In order to prevent this with this system (A1+A2), the organizers would have to comply with the FAI rules regarding the recommended number of fly-off participants (30%; max. 14) in the future, so that no new injustices could arise here. Further mathematical considerations mean that you would need at least 10 preliminary rounds so that the winner of the preliminary rounds could be considered the best pilot. But precisely on airfields with few starting places, when there are high numbers of participants, there are particularly few rounds (sometimes only 5 rounds with 10 groups), so that not even close to all pilots could fly against each other. This is also part of the injustice of the old system and would also be the problem with the A1/A2 system.

Since there is now a change in the scoring system anyway, it is therefore not an option to adopt the previous problems unresolved into a new scoring system. In this respect, scoring system B is the best compromise between compliance with the FAI rules and the desire for strong consideration of the results from the preliminary rounds.

In **calculation example A2,** the maximum fly-off bonus for 1st place is 5.0% and then gradually decreases to 0.0% up to 14th place.

	A	B	C	D	E	F	G	H
58								
59	**FlyOff bonus depending on the number of participants in the fly-off**							
60								
61		Columns = Number of pilots in Fly-Off = Nf						
62	Place	14	13 - New place	13	12 - New place	12	11 - New place	11
63	1	5,000	1,000	5,000	1,000	5,000	1,000	5,000
64	2	3,500	2,083	3,417	2,182	3,318	2,300	3,200
65	3	2,500	3,167	2,417	3,364	2,318	3,600	2,200
66	4	2,000	4,250	1,875	4,545	1,727	4,900	1,550
67	5	1,500	5,333	1,333	5,727	1,136	6,200	0,960
68	6	1,000	6,417	0,917	6,909	0,818	7,500	0,700
69	7	0,800	7,500	0,700	8,091	0,591	8,800	0,520
70	8	0,600	8,583	0,542	9,273	0,473	10,100	0,390
71	9	0,500	9,667	0,433	10,455	0,355	11,400	0,260
72	10	0,400	10,750	0,325	11,636	0,236	12,700	0,130
73	11	0,300	11,833	0,217	12,818	0,118	14,000	0,000
74	12	0,200	12,917	0,108	14,000	0,000		
75	13	0,100	14,000	0,000				
76	14	0,000						
77								

Other than the aforementioned points, everything is identical to calculation example A1.
In terms of points distribution, calculation example A2 lies somewhere between calculation example A1 and calculation example B. The preliminary rounds remain dominant. The winners are now more likely to become winners on points, but that is not necessarily the case and not in the right order.

Only for comparison and better understanding, here is the calculation example C1 or C2 based on the Excel spreadsheet C1 or C2 - This calculation example is not valid for the 2024 annual ranking

Here the calculation according to C1 and C2 are “only” completely identical to calculation example B with regard to the “preliminary rounds”.

The only difference lies in the points awarded to the fly-off participants.

If a competition ends without a fly-off taking place, for example due to the weather, the preliminary round results according to the Excel table from line 101 onwards are the final results

If a fly-off takes place, a new final ranking of the fly-off participants will be determined after the fly-off.
The new percentage points will then be awarded strictly according to this final ranking according to the Excel table from line 63 onwards. The results from the preliminary rounds will then no longer be relevant for the fly-off participants and will not be taken into account in any way. The percentage points would then be awarded strictly according to the FAI rules in the order of the final ranking.

Here for the **calculation example C1** with a percentage point spread of a total of 6,5% in analogy to a fictitious bonus of 5%

	A	B	C	D	E	F	G	H	I	J	K	L
58												
59	**Final new fixed total score after Fly-Off in the strict order of the final result. Depending on the number of participants in the fly-off**											
60	The result of the preliminary rounds for the participants of the Fly-Off are withdrawn and replaced by the score of the final ranking mentioned here below											
61		Columns = Number of pilots in Fly-Off = Nf										
62	Place	14	13 - New place	13	12 - New place	12	11 - New place	11	10 - New place	10	9 - New place	9
63	1	105,000	1,000	105,000	1,000	105,000	1,000	105,000	1,000	105,000	1,000	105,000
64	2	103,000	2,083	102,875	2,182	102,727	2,300	102,550	2,444	102,333	2,625	102,063
65	3	101,500	3,167	101,333	3,364	101,136	3,600	100,900	3,889	100,611	4,250	100,375
66	4	100,500	4,250	100,375	4,545	100,227	4,900	100,050	5,333	99,917	5,875	99,781
67	5	100,000	5,333	99,917	5,727	99,818	6,200	99,700	6,778	99,556	7,500	99,375
68	6	99,750	6,417	99,646	6,909	99,523	7,500	99,375	8,222	99,194	9,125	98,988
69	7	99,500	7,500	99,375	8,091	99,227	8,800	99,050	9,667	98,933	10,750	98,825
70	8	99,250	8,583	99,104	9,273	98,973	10,100	98,890	11,111	98,789	12,375	98,663
71	9	99,000	9,667	98,933	10,455	98,855	11,400	98,760	12,556	98,644	14,000	98,500
72	10	98,900	10,750	98,825	11,636	98,736	12,700	98,630	14,000	98,500		
73	11	98,800	11,833	98,717	12,818	98,618	14,000	98,500				
74	12	98,700	12,917	98,608	14,000	98,500						
75	13	98,600	14,000	98,500								
76	14	98,500										
77												

Here for the **calculation example C2** with a percentage point spread of a total of 4,5% in analogy to a fictitious bonus of 3%

	A	B	C	D	E	F	G	H	I	J	K	L
58												
59	**Final new fixed total score after Fly-Off in the strict order of the final result. Depending on the number of participants in the fly-off**											
60	The result of the preliminary rounds for the participants of the Fly-Off are withdrawn and replaced by the score of the final ranking mentioned here below											
61		Columns = Number of pilots in Fly-Off = Nf										
62	Place	14	13 - New place	13	12 - New place	12	11 - New place	11	10 - New place	10	9 - New place	9
63	1	103,000	1,000	103,000	1,000	103,000	1,000	103,000	1,000	103,000	1,000	103,000
64	2	102,000	2,083	101,938	2,182	101,864	2,300	101,775	2,444	101,667	2,625	101,531
65	3	101,250	3,167	101,125	3,364	100,977	3,600	100,800	3,889	100,583	4,250	100,375
66	4	100,500	4,250	100,375	4,545	100,227	4,900	100,050	5,333	99,917	5,875	99,781
67	5	100,000	5,333	99,917	5,727	99,818	6,200	99,700	6,778	99,556	7,500	99,375
68	6	99,750	6,417	99,646	6,909	99,523	7,500	99,375	8,222	99,194	9,125	98,988
69	7	99,500	7,500	99,375	8,091	99,227	8,800	99,050	9,667	98,933	10,750	98,825
70	8	99,250	8,583	99,104	9,273	98,973	10,100	98,890	11,111	98,789	12,375	98,663
71	9	99,000	9,667	98,933	10,455	98,855	11,400	98,760	12,556	98,644	14,000	98,500
72	10	98,900	10,750	98,825	11,636	98,736	12,700	98,630	14,000	98,500		
73	11	98,800	11,833	98,717	12,818	98,618	14,000	98,500				
74	12	98,700	12,917	98,608	14,000	98,500						
75	13	98,600	14,000	98,500								
76	14	98,500										
77												

In principle, the choice for the new scoring system could have been one of these two rating systems C1 or C2. However, since there are wishes regarding both extreme positions A-C, the CONTEST Eurotour selected and decided on the rating system B as a compromise for 2024.
It is no problem and no contradiction to make changes and adjustments for 2025 based on the experiences from 2024. In order to keep your thoughts free, the different variants have been presented here for future discussions.

3
Reflections on the topic of F5J competitions in Europe and a fair scoring system for the CONTEST Eurotour

In this section, numerous considerations on the subject of F5J competitions in Europe are considered and described, which ultimately led to the draft of the new rating system in the form described above.

These thoughts are shared here so that the diversity of the problems for a fair rating system in Europe can be made clear. This also makes it clear that there cannot be absolute justice because there are far too many contradictory boundary conditions, some of which have nothing to do with model flying at all.

Below, these ideas are reflected in a completely random manner and in no particular order, which have become known in discussions and reflections on the subject of F5J competitions in Europe. Some points contain redundant and similar information because this is a collection of the information provided:

a) Thoughts on the goals for a new scoring system for the F5J CONTEST Eurotour

Here are mentioned just the main goals:

Neutralization of weather influences and geographical conditions of competition areas.

The winner of the fly-off should also be the winner by the awarded points.

The total result should be the result of the pre-rounds + a bonus "Or" the result should be only the result of the fly-off (- this seems to be a general controversial question among different pilots).

Fair inclusion of small and large competitions, so that small competitions remain lucrative even in the peripheral areas of Europe or even new competitions can be created, and the overall winner of the year can still be viewed by everyone as the "best" pilot and winner.

Appropriate consideration of points distribution depending on competition size.

On the one hand, each competition independent of size (10 or 120 participants) must allow the same “highest top score”. Otherwise, it will be impossible that little competition on the edges of Europe can survive or even create new ones. As soon as an evaluation system makes a difference in the maximum possible “highest top score” by taking the size of a competition into the calculation, then it makes no more sense to go to a little competition because you cannot become an annual overall winner anymore. And then little competitions become smaller and less lucrative because fewer top pilots go there, and then such competitions die, and no new competitions can be created for the same reason… and bigger competition will become bigger and bigger until limits of participants are reached and then further pilots cannot take part in such competition, and by that, such excluded pilots are also excluded from the opportunity to win the annual ranking… (please compare with the already existing effect of national ranking system caused to some other competition… see g))

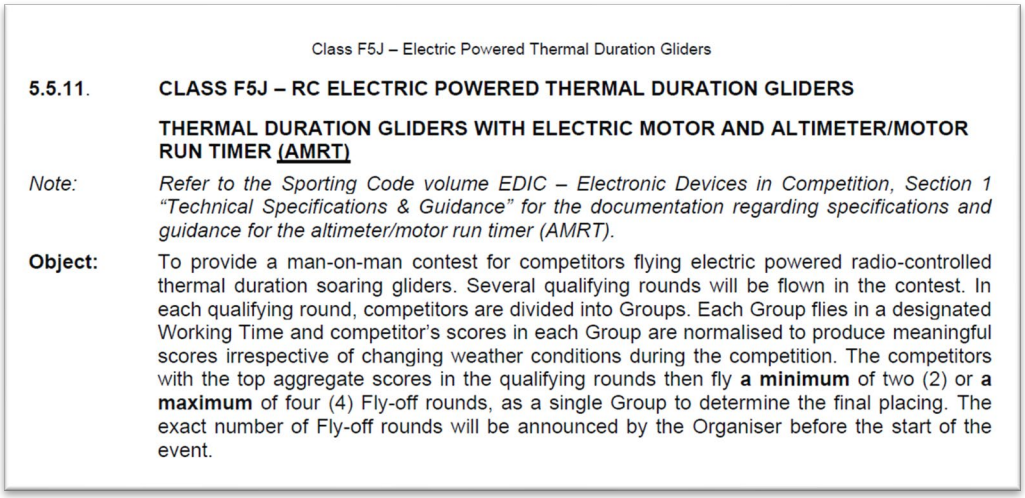
And of course, I completely agree that the performance of a pilot who wins the pre-rounds of a competition with 120 pilots “and” wins the fly-off with 14 pilots is a lot better than that of a pilot who came last (3rd) into a fly-off at a competition with only 10 pilots.

And of course, it cannot be that someone wins the whole CONTEST Eurotour by winning 3 little competitions.

To resolve this conflict, the rule could be that a pilot has to take part in 3 competitions with > in sum < “X” pilots. “X” is a number that has to be discussed and decided. Let’s say, for example, 70 – just to mention a first number. If a pilot wins one or two little competitions, it will also be necessary for this pilot to win two average size or a very big competition; otherwise, this pilot cannot win the whole Eurotour. (Remark: 70 is the number that would allow a pilot from the region Portugal/Spain and the region Greece/Macedonia/Bulgaria to perhaps become the overall winner of the year if he were to win three competitions in these regions there in a dominant manner…)

Overall, if a pilot lives in a county at the edges of Europe, he could take part in up to two little local FAI World Cups included in the CONTEST Eurotour. And the third competition has to be in any way a competition in another country. For that third competition, each pilot can select a competition that is suitable for his personal needs of the size of the competition, his possibilities by his personal calendar (job, holiday), and his personal budget.

b) Core idea of the rules → Object (SC4_Vol_F5_Electric_23)



Class F5J – Electric Powered Thermal Duration Gliders

5.5.11. CLASS F5J – RC ELECTRIC POWERED THERMAL DURATION GLIDERS

THERMAL DURATION GLIDERS WITH ELECTRIC MOTOR AND ALTIMETER/MOTOR RUN TIMER (AMRT)

Note: *Refer to the Sporting Code volume EDIC – Electronic Devices in Competition, Section 1 "Technical Specifications & Guidance" for the documentation regarding specifications and guidance for the altimeter/motor run timer (AMRT).*

Object: To provide a man-on-man contest for competitors flying electric powered radio-controlled thermal duration soaring gliders. Several qualifying rounds will be flown in the contest. In each qualifying round, competitors are divided into Groups. Each Group flies in a designated Working Time and competitor's scores in each Group are normalised to produce meaningful scores irrespective of changing weather conditions during the competition. The competitors with the top aggregate scores in the qualifying rounds then fly **a minimum** of two (2) or **a maximum** of four (4) Fly-off rounds, as a single Group to determine the final placing. The exact number of Fly-off rounds will be announced by the Organiser before the start of the event.

Until now, the overall ranking was the result of the preliminary round + a bonus as shown before. Unfortunately, depending on the results of the preliminary rounds, the winner of the fly-off is still not the winner on points. This contradicts the core idea of the competition rules and gives the preliminary rounds a higher priority than the final. This is not okay. On the other hand, many people think that it is a great achievement by the pilots to win the preliminary rounds and should be rewarded. But the last argument is only correct if it is possible that enough/all pilots actually flew against each other in the preliminary rounds. But as long as there are competitions with a small number of lanes and therefore with a small number of rounds, the best pilots will be selected, provided the starting matrix is fairly selected. But it is not guaranteed that the ranking of the preliminary rounds corresponds to the order of the performance of the pilots (see point d below). The order of the best can ultimately only be determined through the fly-off. And that is exactly the fundamental core idea of the rules.

c) Size of competitions and weather and geographical conditions

The biggest problem with the old scoring system is that it does not adequately take into account the size of individual competitions or the specific weather and geographical conditions of a competition location.

For example, a not-so-good pilot (me) had a score of 91.62% in a competition in the Netherlands under almost good (but not consistently fantastic) thermal conditions, placing 24th out of 51 pilots (24/51 = 47%). Please compare this with the last-place pilot (14th out of 88 pilots = 16%) in the Fly-Off at the WCH in Bulgaria, facing incredibly windy conditions, with a score of 92.30%. Under the old scoring system, this pilot would be considered approximately equally skilled, which is certainly not the case.

As demonstrated in this example, in several competitions with strong thermals, more than 50% of the participants achieve a score above 90%, while in competitions with difficult conditions, the last-place pilot enters the fly-off with a score below 90%.

It's essential to consider that Europe spans an area of 4000 x 4000 km, where special regions often experience bad windy conditions, while other regions (sometimes at special airfields, e.g., moors) often experience extremely strong thermal conditions. Additionally, we fly in different weather seasons from March/April to October/November. This creates an imbalance between different competitions. With the old system, it makes no sense to visit competitions with generally difficult conditions (e.g., regions close to coasts).

Now, imagine that the 14th-place pilot in the example above wins the WCH. Then, with the old CONTEST Eurotour scoring system, he would receive a bonus of 3% for winning the whole competition. His overall score would then be only 95.3%, at least 4.7% less than the winner of the pre-rounds if the winner of the pre-rounds were last in the fly-off. It is not fair that the competition winner is not the winner in terms of points.

Furthermore, comparing competitions with different weather conditions, where someone at a strong thermal competition with a low ranking gets more points than a top pilot with a good ranking under difficult weather conditions, clearly illustrates that adding the results of such different competitions under the old system leads to an unfair total result.

The old scoring system creates exactly these problems. This is the main reason for changing the scoring system from percentages to ranking points, as described in Chapter 2.

d) “Draw/matrix” of a competition

Just to mention another problem: If you could hold a competition at the same location, day, and conditions twice, there is still a problem that probably very few people have thought about --> the draw/matrix of a competition:

It is easy to understand that the draw/matrix of a competition can have a significant influence on the selection of the best pilot. For example, a competition with 64 pilots should have a fly-off with 14 pilots (rule 5.5.11.13. c), 30% but max. 14). But the organizer is free to decide about the number of lanes (local possibilities - limited space of the airfield – limited number of timekeepers…) and rounds (available time). Such a competition can be done with 16 lanes and 4 groups per round (~1 hour/round) or with 8 lanes and 8 groups per round (~2 hours/round). In a typical 2-day competition (without breaks for bad weather), there are about 12 hours available for the qualifying rounds. This means, for example, that with 16 lanes, up to 12 rounds are possible, and with 8 lanes, only up to 6 rounds are possible. It is obvious that the mathematical probability that each pilot flew against each other pilot is a lot bigger in the competition with 16 lanes. Additionally, there can be a bad draw for the matrix. I know about a competition with a small number of lanes and, due to that, with a small number of rounds, where some pilots flew several times against each other, meanwhile other pilots never flew against each other. And then there were also only a little number of pilots in the fly-off. Of course, such a bad draw is against the core idea of a man-on-man contest, and at this event, it was not sure that the best pilots were selected for the fly-off. Conclusion: A competition should have the maximum possible number of lanes that belong to the maximum possible number of participants for fly-off (30% rule but max. 14). (Remark: There could be even more lanes in the qualification rounds than later participants in the fly-off.). This will also lead to the maximum number of rounds and, by that, to the highest mathematical probability that really everyone flew against each other.

It seems obvious that a scoring system cannot solve such a bad matrix problem, but at least it is important to point out this problem and give the recommendation to the organizers to enable a competition with as many starting points and rounds as possible. Ten rounds (and more) would make sense from a mathematical perspective. Especially if you are in favor of a scoring system that takes the result of the preliminary rounds into account in the overall result. If necessary, you should also think at least at competitions with a big number of pilots about 3-day competitions, as it is already the case with the Samba Cup and Chomutov Cup, to enable as many preliminary rounds as possible. (Thanks to the organizers of Samba Cup and Chomutov Cup to make that possible.)

e) Size of competitions as factor of quality

How to evaluate if size (number of participating pilots at a competition) is a "quality" factor for a specific competition?

Until now, the old scoring system does not take into account the size of competitions. So, it is/was possible that a pilot wins three little competitions and by that the total annual CONTEST Eurotour – theoretically.

In several discussions, many people have the opinion that the value to win a big competition is higher than the value to win a little competition. Of course, this is obvious already by the mathematical possibilities independent of the quality of the pilots. For example, at a competition with 10 pilots, the chance to win this competition is 10 times higher than at a competition with 100 pilots.

On the other hand, we have to allow little competitions and give them the same chance; otherwise, we will lose the competitions on the edges of Europe or in large and sparsely populated countries (Nordic countries) as already happened.

As you can see in the results of the World and European Championships, there are always pilots living in regions with little or no international competition in the top positions. At the WCH 2023, around 50% of the pilots came from regions with small or only local (non-international) competition entered in the fly-off. At ECH 2022, around 30%. At WCH 2019, around 40%. And at ECH 2018, around 10%.

Conclusion: We have to accept and respect that there are top pilots living in regions with bad possibilities to take part in big competitions. And if they can take part only in little competitions and win them, then it does not mean that the quality and the value of such a little competition is smaller...

f) Number of competitions for the annual ranking + money + distances as factor for same fair chances

Number of counted competitions, money, time, distances as factors for ensuring a fair chance for all to win the whole annual CONTEST Eurotour:

There was the idea that 4 competitions instead of 3 competitions should be summarized and counted for the total annual ranking of the CONTEST Eurotour. Yes, of course, that is a possibility for better differentiation of the top pilots. But we also have to take into account who in Europe is "able" to participate in 4 or more competitions?

Based on the Contest Calendar 2024, please note the following:

If you live in Austria, you can reach 12 competitions within a distance of less than 500 km at a normal weekend traveling by car from Friday midday to Sunday late evening without any problem. So, you can go to a lot of competitions to increase your chance of winning the total annual CONTEST Eurotour or at least to improve your position in the total ranking. But of course, in all of these nearby competitions are many competitors. So, overall, it is more difficult to win these competitions than to win little competitions at the edges of Europe.

If you live in Portugal or Spain, then you have only 3 possible competitions within a distance of 500-1000 km and then you have to participate in all 3 competitions on the specified date. If you have to work on one of these 3 dates, then you have to travel at least much more than 1500 km to participate in any other 3rd competition. The situation for pilots living in south Italy, south Greece, and south France is similar.

For pilots living in the Nordic or Baltic countries, it is almost impossible to visit many competitions in a reasonable distance and time. Therefore, to take part in three competitions will spend a lot of money. But it is also up to these countries to offer their own competitions, and I hope that will be possible from 2025…?

And additionally, some facts: In 2023, 524 pilots took part in the F5J CONTEST Eurotour. From them, only around 150 took part in 3 or more competitions. Within these 150 pilots is none from Nordic or Baltic countries, but happily from Spain, Portugal, UK, and other regions at the edges of Europe. The winner in 2023 took part in 8 competitions. From the top 20 pilots, 3 took part in 3 competitions; 6 in 4 competitions, and the rest in 5 or more competitions.

Overall, here I see no reasonable possibility and needs to increase the number of counted competitions. This will exclude too many pilots from a fair chance of participating in enough competitions to win the whole annual CONTEST Eurotour.

g) Influence of national regulations on national team selection

Just a problem to inform and think about, which has nothing to do with the scoring system itself but which has an impact on the size of some competitions and, by that, it has an influence on the scores pilots can get at these competitions.

There are countries that set national rules for the minimum size of competitions when selecting pilots for their national team, so that such a competition only counts for pilots from these countries if the competition was large enough.

For example, a limit of at least 40 pilots in one country (1) and at least 50 pilots in another country (2) are known. Where country (2) rewards larger competitions with more points. So, competitions with just 50 pilots are hardly worth it anyway.

And at this point, I would like to point out a big problem associated with this:

These national regulations mean that competitions in neighboring countries or on the edge of Europe are, so to speak, dried up and therefore become smaller and smaller if the number of participants falls below this limit.
I know of at least one country (3) that is particularly suffering from this. And another country faces the risk that the same thing could happen. After only +/- 50 pilots took part in the competition in country (3), it no longer made sense for pilots from country (2) to take part there, which is why all pilots from country (2) no longer went there. The consequence of this was that now there were only +/- 40 participants there and now the pilots from country (1) no longer go there. As a result, the number of participants in this country fell from over 50 to under 30 participants.

Of course, each country can decide its own rules as they see fit.
But in the spirit of sportsmanship, I would ask to reduce the requirements in both countries uniformly down to 35. Then there would be no more cascade effects and no more risk that such a competition does not count for pilots from these countries. Most probably then the actual number of participants would increase again to +/- 50.
In a sporting sense, this would help everyone.

I am pleased to report that country (2) has already reduced its requirements for 2024 from 50 to 40 participants, so that the cascade effect has stopped. Furthermore, country (2) has allowed another foreign competition, so that international participation can increase overall.

h) Influence of logger on the scoring system

Scoring system; accuracy and resolution of the logger and the pressure for pilots to win competitions or at least to get better ranking and the risk to lose models.

Maybe at first it sounds as if these things have nothing to do with each other. But you see again and again that pilots try to fly a 1000 from the lowest altitude at all costs, or that many pilots fly at the same time in the only row of trees in order to make up the time. And unfortunately, there are always crashes with the loss of the models.

If a scoring system has a big spread in points, then this could lead to more risky flying behavior of the pilots as we have already. That's is one reason why in the new scoring system (B) the range of %-points for the fly-off-participants has chosen in the small range from 98,5-100 %-points. The new scoring system (B) also made it possible to limit the extreme spread in results of up to over 20%, which was possible with the old system, to a maximum of 11,5%.

Additionally, please have a look at the technical specifications of the accuracy and resolution of the used barometer chip in the loggers. In the best case, you can expect an absolute accuracy of +/- 2 m and up to +/- 8 m depending on the version of the used barometer chip. And no one really knows how much influence a thermal region has on the pressure measurement when a pilot starts through a thermal? And no one really knows how much influence the motor run and the pressure differences into the fuselage have at the start?

Remark:
I have analyzed the results of the ECH 2022 with the assumption that the logger of one pilot has a systematic measurement error of +4 m and of another pilot a systematic measurement error of -4 m – just the possible normal tolerances. This I have analyzed for all top pilots of the ECH.

The good news under this assumption:
There could only have been 2 other pilots (places 15+16) in the fly-off.

The bad news:
There could possibly have been 9 pilots (places 6 to 14) “not” in the fly-off.
Of course, not all 9 at the same time, but just 2 of the pilots from these positions.
This could have affected 64% of fly-off participants.
So, the 3 winners could be completely different...

And this is “only” assuming the systematic measurement error “within” the specified accuracy.

Example of 2 identical flights with an extreme thermal situation of 2 pilots:
True starting height of both pilots = 30 m
Time 9:58
Landing points 50
Result: 633 raw points equals 1000 = 100.0%

Pilot 1 with a systematic measurement error of -4 m >>> new result = 635 raw points equals 1000 = 100.00%
Pilot 2 with a systematic measurement error of +4 m >>> new result = 631 raw points equals 993.7 = 99.37%

Systematic difference after 6 rounds = 3.78% (*…1.89% …0.95%)
Systematic difference after 10 rounds = 6.30% (*…3.15% …1.58%)

*Please note: This assumption is based on a systematic measurement error of the two possible maxima of the specification. And you do not fly each flight against the extreme other tolerance. There are good reasons to assume that the possible measurement errors are half of that or less (a quarter = +/- 1 m → This is the rounding that takes place in every case - even without measurement errors). But even that can decide the ranking, if you consider a super thermal competition, where the last entered into fly-off with 98,5%. Then the span of tolerance can already decide about being within the fly-off or not.

However, I have made a series of tests with my son just through a glider without motor run smooth over the ground and we got significantly higher altitudes as visible and possible. We repeated this with motor run and the results were worse. For sure, there are problems existing, and if I follow discussions of others then this information is not "news". And we are almost sure that a start through a thermal (= rising warm air with a lower density than the surrounding air) causes a height difference of many meters – as more as stronger a thermal is. But this cannot yet be officially and verifiably confirmed. Maybe someone else of you knows more?

i) Competition without Fly-Off

How to handle the scoring of a competition without fly-off ?
The FAI rules base on and strictly requires a fly-off.
However, due of weather reasons there could be the situation, that no fly-off can take place.
In a scoring system with bonus then no bonus will be provided. Or what to do, to make a fair scoring ?

j) Lack of FAI rules for small competitions

Just a notice. In the FAI rules, it is not explicitly stated that there is a minimum number of participants for a competition. However, in several places, it is explicitly written that the minimum size of groups should be 6 pilots (e.g., in the fly-off). Implicitly, this means that according to the 30% rule of fly-off participants, a competition should have at least a size of 20 pilots.

As I understand and have observed in different competition results, there were past competitions with less than 20 pilots included in the CONTEST Eurotour, especially in countries at the edges of Europe.

And if we want to create and start new competitions in other regions of Europe (such as the Nordic and Baltic countries), we will need to accept competitions with low numbers of pilots in the future.

Therefore, we will need to find a solution to handle such competitions in accordance with the rules. If necessary, we need to modify and clarify these rules together with the FAI.

For the F5J CONTEST Eurotour, there are now explicit competitions with 10 competitors allowed and the size of the fly-off is specified for smaller competitions.

This will also be important for other continents with similar problems (large distances and low numbers of pilots), such as the Nordic or Baltic countries.

Remark: I have found on this link - https://www.f3xvault.com/?action=event&function=event_list&disc=f5j – that in the USA in 2023, there were 70 competitions in 13 states with typically only 5-15 competitors and about 10 competitions with 30 to a maximum of 57 competitors. The overall average was only 14 pilots per competition.

k) Some comments on the Excel spreadsheets "Info - Data of competition 2023”

The following information can be found on the spreadsheet "Info - Data of competition 2023”:

- On average, there were about 45 (42) pilots participating in all competitions (min. 15 / max. 120).

- Approximately 1/3 of the competitions had more than 50-70 participants (excluding Samba Cup);
  approximately 1/3 had 30-50 participants; and
  approximately 1/3 had 10-30 participants.
  This classification could be for small, medium, and large competitions.

- On average, 94%*** was necessary to get into the fly-off (min. 77.43% / max. 98.63%).
  This resulted in an average result spread of 9% (min. 4.37% / max. 25.57%).

- On average, pilots from 6 nations attended the competitions (min. 2 / max. 14).

- Furthermore, it is possible to define a classification of weather conditions as follows:

  > 98.5% - super thermal
  97…98.5% - strong thermal
  94…97% - mixed weather/mostly thermal
  88…94% - mixed weather/mostly strong wind
  < 88% - really difficult/bad conditions

94%***
In the “first draft” for the new scoring system the value 94 was initially considered to draw the line between the fly-off rating and the rest of the field. However, that would have led to a very large point spread. A large point spread carries the risk that logger tolerances and errors could unfairly impact the order of the pilots. Therefore, the 98,5% approach was chosen, as explained in Section 2.

Perhaps it's just a coincidence, but in fact, it turns out that the big competitions had the best thermal conditions. One could think that the old points system had already deliberately led the pilots to only go to the most likely super thermal competitions.

If that were the case, then it was absolutely necessary to introduce a normalization of the competitions so that there will be an equal, fair chance for all competitions across Europe in the future.