

PROVISIONAL RULES

CLASS F3K - RADIO CONTROLLED HAND LAUNCH GLIDERS

5.K.1. General

A multitasking contest where RC gliders must be hand-launched and accomplish specific tasks. In principle the contest should consist of at least five rounds. The organiser may announce more rounds to be flown before the start of the contest. The jury can decide, if, due to e.g. weather conditions, less rounds than announced by the organiser (also less than five rounds) will be flown and will be considered as the final result.

In principle, the organiser should provide a sufficient number of well-trained, official timekeepers in order to allow enough simultaneous flights at all time. If this is not possible, the organiser may ask competitors not involved in flying or helping another competitor to operate as official timekeepers.

Each competitor is allowed one helper who should not become physically involved in the flight. The helper as well as an official timekeeper have to stand close to the pilot during the working time on the start and landing field. Team managers are not allowed to stand inside the start and landing field, they have to position themselves outside the start and landing field.

Handicapped persons may ask for assistance at launching and retrieving (catching) their model aircraft. This start helper has to be different in every round, meaning that every start helper can only be used once. The pilot has to touch the start helper before each launch of the model. During a competition with only one class, the competitors of less than 1.5 m height may be assisted for launching-catching.

If junior and senior classes are scored separately, the limit is 18 years of age for juniors.

The organiser should provide a transmitter impound where all transmitters or antennas are kept in custody while not in use during a flight or the corresponding preparation time.

5.K.2. Definition of model aircraft.

Model aircraft are gliders, with the following limitations.

Wingspan max. 1500 mm

Weight max. 600 g

Radius of the nose, minimum 5 mm in all orientations (see F3B nose definition for measurement technique).

The model aircraft must be launched by hand and are controlled by radio equipment acting on an unlimited number of surfaces.

The use of gyros and variometers onboard the model is not allowed.

The model aircraft can be equipped with holes, pegs or reinforcements, which allow better grip of the model aircraft by hand. The pegs must be stiff and remain a firm part of the model within the halfspan of the wing, neither extensible nor retractable. Devices, which do not remain a part of the model during and after the launch, are not allowed.

If the flying model loses any part during the flight, the flight is scored zero according to 5.3.1.7. The losing of a part during landing (ref. 5.K.6.) is not taken into account.

The pilot may change his model aircrafts at any times as long as they confirm to the specifications and are operated at the assigned frequency. Five model aircrafts in total are allowed for each pilot; it is allowed to change parts between these five models. The organiser has to identify the five models and all interchangeable parts of each of the five models. The pilot may only change model aircrafts, if both models are within the start and landing field. All spare models have to be positioned outside the start and landing field.

If the pilot lands outside the start and landing field, the model has to be retrieved back to the start and landing field either by the pilot or his personal helper, who is the only person allowed to help the pilot on the start and landing field; no other person, including the team manager is allowed to retrieve the model. If a model change is planned, the outside landed model also has to be retrieved back to the start and landing field before the model change can be done. A third person is not allowed to retrieve the model. While retrieving the model, it is not allowed to fly it back to the start and landing field. If a model change is planned, the outside landed model also has to be retrieved back to the start and landing field before the model change can be done.

Each competitor must provide a minimum of two frequencies on which his model aircraft may be operated, and the organiser may assign any of these frequencies for the duration of the complete contest. The organiser is not allowed to change the assigned frequency of a competitor during the event.

Para B3.1 of section 4 b (builder of the model aircraft) is not applicable to class F3K. Any ballast must be inside of the model and must be fixed safe.

5.K.3. Definition of the flying field: The flying field should be reasonably level and large enough to allow several model aircraft to fly simultaneously. The main source of lift should not be slope lift. The organiser must define the start and landing field before the start of the contest and all starts and landings should happen within this area. The border line defining the start and landing field is part of the start and landing field. Any launch or landing outside this area is scored zero for the flight.

Competitors may position themselves outside the start and landing field for flying their model, but starting the model is only allowed from within the start and landing field.

The starting and landing field should be big enough, so that each competitor has adequate space to conduct his starts and landing, at least 30 m distance to any person in the start direction. As a rough estimate, the organiser should consider about 900 m² per competitor, i.e. a square of 30m x 30m. This results in about 100m x 54m for 6 competitors in a group, 120m x 60m for 8 competitors in a group and about 150m x 72m for 12 competitors.

In general the long side of the starting and landing field should be perpendicular to the predominant wind direction.

5.K.4. Safety and mid-air collisions: In order to guarantee the highest level of security, any contact between a flying model and a person either on the start and landing field (except the pilot of the model) or outside the start and landing field will result in a zero score for the whole round. If the competitor is handicapped, his start helper is also allowed to touch the model during start and landing, e.g. catching the model.

In case of a collision of two or more models in the air, no re-flights or penalties for the involved competitors are granted, even if the models land outside the start and landing field, which results in a zero score for this flight.

A protest can be submitted to the jury including the names of at least 3 witnesses, if a model is obviously and intentionally flown into a model of an opponent while both models are in the air, or a person is obviously and intentionally touching or running into a model close to the ground. The jury then will ask the witnesses and decide on sanctions against the aggressing person or his whole team.

5.K.5. Weather conditions: The maximum wind speed for F3K contests is 9 m/sec. The contest has to be interrupted or the start delayed by the contest director or the jury if the wind is continuously stronger than 9 m/sec measured at two metres above the ground at the start and landing field for at least one minute.

In case of starting rain the contest should be interrupted or the start of a group should be delayed by the contest director. The contest director decides, when this will happen.

5.K.6. Definition of landing: A landing of the model (and thereby the end of a flight) is defined as, when:

- the model aircraft comes to a rest anywhere, or
- the pilot touches the model for the first time by hand or any part of his body (or if the pilot is handicapped, the same applies for his helper, if launching was made by this person).

In addition, a landing as defined above is considered valid, if:

- at least one part of the model aircraft touches the starting and landing field (or any ground based object within the start and landing field), or
- the pilot (or his personal helper) touching the model for the first time is standing with both feet inside the starting and landing area.

5.K.7. Flight time: The flight time is measured from the moment the model aircraft leaves the hands of the competitor (or his helper, see above) until a valid landing of the model as defined in 5.K.6. or the working time expires.

The flight time is official if:

- the launching happened from inside the starting and landing field and the landing is valid according to 5.K.6., and
- the launching happened within the working time of the task.

This means, that any flight is scored zero, if the plane is launched before the actual beginning of the working time (acoustic signal).

In those tasks, where maximum flight times are specified, the flight time is only scored up to the maximum flight specified.

5.K.8. Local rules: The contest director or organiser may introduce local rules, for example:

Local rules are only possible in case of safety issues, local flying areas, but not for changes of tasks, etc.

- A landing outside the start and landing field and within a certain area may result in a zero score for the whole round. The contest director and organiser have to ensure, that it is controlled, whether any model is landing in this area.
- The organiser or contest director may define certain security zones, where it is never or only above a certain altitude allowed to fly the model. The organiser and contest director have to ensure, that these security zones are permanently controlled by well-trained personal. In case a model is flying inside the security zone, a first warning is announced to the competitor. The competitor immediately has to fly the model out of the security zone as fast as possible. If in the same flight the model is flying inside the security zone, the flight will be scored zero.

5.K.9. Definition of a round: The contest is organised in rounds, each of which allocates a competitor a working time identified in the task list. The start and end of the working time are announced with a sound-signalling device. The competitors are arranged in as few groups as possible. A group should be a minimum of 5 competitors. The results are normalised within each group, 1000 points being the basis for the winner of the group.

For each round, the competitors receive at least 5 minutes preparation time. This preparation time should ideally start 3 minutes before the end of the working time of the previous group (or at the beginning of the last attempt in task "all-up-last-down"), in order to save time. After the working time including the 30 seconds landing window of the previous group is over, the competitors flying in the next group receive at least 2 minutes of flight testing time, which is part of the preparation time. During this flight testing time the competitors are allowed to do as many test flights inside the starting and landing field as needed for checking their radio and the neutral setting of their models; other competitors not flying in the next group are not allowed to do test flights. Any starting or landing outside of the starting and landing field is forbidden at any time during the preparation and working time.

At the beginning of a preparation time, organisers have to call the names and/or starting numbers of the competitors flying in the next group. Organisers may define a ready box next to the start and landing field, in which all competitors and their personal helper should be waiting during the preparation time.

Each competitor has to ensure that he's finished in time with his test flights and is ready to start when the working time of his group begins. The 5 last seconds before the start of the working time have to be announced by the contest director. If acoustic signals are used, the first moment the signal can be heard defines the begin and end of the working time.

An example using 10 minutes of working time is:

- 3 minutes before the working time of the previous group finishes: "call for preparation for the following competitors ..."
- immediately with the end of the working time (including the 30 seconds landing window) of the previous group and using that countdown: "2 minutes flight testing begins"
- "30 seconds remaining until your working time begin"

- “10 seconds remaining until your working time begins ... your working time begins in 5, 4, 3, 2, 1, signal ... halftime, 5 minutes working time remaining ... 2 minutes working time remaining ... 30 seconds working time remaining ... 10, 9, 8, 7, 6, 5, 4, 3, 2, 1, signal, end of working time, 30 seconds landing window ... 10, 9, 8, 7, 6, 5, 4, 3, 2, 1, signal, landing time over“

5.K.10. Final score: At least 2 rounds have to be completed, so that the final score is valid. If 5 or more rounds are flown the least score is crossed out, if 9 or more rounds are flown the least two scores are crossed out. If 14 or more rounds are flown, the least 3 scores are crossed out, if 19 or more rounds are flown, the least 4 scores are crossed out. If 24 or more rounds are flown, the last 5 scores are crossed out.

In case of a tie break the best crossed out score is considered to get a clear ranking. If then the tie break still exists, the next best crossed out score (if enough rounds are flown) is considered to get a clear ranking. If all crossed out scores were used, but a clear ranking can not be achieved, a separate fly-off just for the two involved pilots will be flown to achieve a clear ranking. In this case the contest jury will ad-hoc define one task that will be flown.

The organiser has the possibility to announce a fly-off prior to the beginning of the event in order to e.g. find a national, continental or world champion. The maximum number of competitors in a fly-off is limited to 12, the minimum number of pilots is 10-15 % of the total number of pilots of the preliminary rounds. A juniors fly-off can be done with a maximum number of 2/3 of the seniors fly-off. A separate juniors fly-off is not mandatory.

A fly-off has to consist of at least 3 rounds and max. 6 rounds. If more than 5 rounds are flown, the last score is crossed out.

If such a fly-off is flown, the points of the previous rounds are not considered, every competitor starts in the fly-off with zero points, i.e. making it possible that every competitor has the same chances to win the national, continental or world championship.

5.K.11. Definition of tasks: Detailed specifications including the tasks to be flown for the day must be announced by the organiser before beginning of the contest. The tasks of the program are defined below. Depending on the weather conditions and the number of competitors, the tasks and the according working time may be reduced by decision of the organiser as defined in the task description. No points are deducted for flying over the maximum flight time or for flying after the end of working time.

All competitors must land within 30 seconds after the end of the working time (acoustic signal) or for the task “all-up-last-down” after each attempt. If the model aircraft lands later, the last flight will be scored with 0 points.

TASK LIST

5.K.11.1. Task B (Last flight):

During the working time, the competitor may launch the model aircraft an undefined number of times, but only the last flight is taken into account to determine the final result. The length of the flight is limited to 300 seconds. Any additional release of the model aircraft annuls the previous time.

Minimum working time is 7 minutes.

5.K.11.2. Task C (Next to last and last flight)

Each competitor has an unlimited number of flights, but only the next to last and the last flight will be scored. The last flight has to be announced after the end of this flight to the timekeeper.

Maximum time per flight is 240 seconds for 10 minutes working time.

If the number of competitors is large, the maximum flight time may be reduced to 180 seconds and 7 minutes working time.

Example:	1 st flight	65 s
	2 nd flight	45 s
	3 rd flight	55 s
	4 th flight	85 s

Total score: 55 s + 85 s = 140 s

5.K.11.3. Task E(All up, last down, seconds):

All competitors of a group must launch their model aircraft simultaneously, within 3 seconds after the signal of the organiser. Maximum measured flight time is 180 seconds. The time keeper takes the individual flight time of the competitor according to 5.K.6 and 5.K.7., i.e. from the release of the model and not from the acoustic signal of the contest director. All competitors should start their model within 3 seconds after the signal of the contest director. Starting a model later than 3 seconds after the acoustic signal results in a zero score for the flight. The contest director or an official helper have to control, that all competitors start within the 3 seconds after the signal.

The landing of the model in each attempt has to be done within 30 seconds after the maximum flight time. If not, the flight is scored zero. The number of launches may be increased up to 5.

The preparation time between the attempts is limited to at most 60 seconds after the additional 30 seconds for landing. Thereby the competitor has at most 90 seconds after the maximum flight time of the previous attempt to retrieve or change his model, or to do repairs.

Each flight time of the 3 attempts of each competitor is to be added up and will be normalised to obtain the final score for this task.

No working time needed.

Example: Competitor A: $45+50+35 \text{ s} = 130 \text{ s} = 812.50 \text{ points}$
Competitor B: $50+50+60 \text{ s} = 160 \text{ s} = 1000 \text{ points}$
Competitor C: $30+80+40 \text{ s} = 150 \text{ s} = 937.50 \text{ points}$

5.K.11.4. Task H (Increasing time by 15 s):

During the working time, the competitor may accomplish as many launches as he likes. Each competitor must try to complete a flight of 30 seconds. Once this is accomplished, the next flight times must be incremented by 15 seconds. So flight times should be: 30 s - 45 s - 60 s - 75 s - 90 s - 105 s - 120 s. The longest flight time is 120 seconds. To reach any specific flight time, the number of launches is unlimited. The time of all achieved maximum flight times is taken into account. See the example below.

Working time is 10 minutes.

Example: (increment 15 seconds)

1 st flight	32 s	the max of 30 s is reached. Next flight should reach 45 seconds. Partial score is 30 points
2 nd flight	38 s	45 s not reached, score 0
3 rd flight	42 s	45 s not reached, score 0
4 th flight	47 s	the max of 45 s is reached. Next flight should reach 60 seconds. Partial score is $30 + 45 = 75 \text{ pts}$
5 th flight	81 s	the max of 60 s is reached. Next flight should reach 75 seconds. But the remaining working time is only 65 seconds.

Total score of the task is $30 + 45 + 60 = 135 \text{ points}$

5.K.11.5. Task I (Poker - variable target time)

For this task it is mandatory, that the organiser assigns official, independent, and well-trained time keepers to each pilot/helper pair, who checks the announced and achieved flight times. The time of the official time keeper is considered in the final scores, not the time of the helper.

If these official, independent, and well-trained time keepers are not available, this task can not be flown!

Before the first launch, each competitor announces a target time to the official timekeeper. He than can perform an unlimited number of launches to reach this time. If the target is reached, the target time is credited and he can announce the next target time - which can be lower, equal or higher - before he releases the model during the launch. If the target time is not reached, the announced flight time can not be changed. The competitor has to try until the end of the working time, to reach the announced flight time. Towards the end of the working time, the competitor has to announce a real time specified in minutes and/or seconds. Just calling "until the end of the working time" is not possible. The announcement can be repeated 5 times. 5 flights with a reached target are scored. The reached target times are added up.

Working time is 10 minutes.

Example:	Announced time	Flight time	Scored time
	45 s	1 st flight 46 s	45 s
	50 s	1 st flight 48 s	0 s
		2 nd flight 52 s	50 s
	47 s	1 st flight 49 s	47 s
	60 s	1 st flight 57 s	0 s
		2 nd flight 63 s	60 s
	60 s	1 st flight 65 s	60 s

Total 262 s

5.K.11.6. Task J (3 out of 6):

During the working time, the competitor may launch his model aircraft not more than 6 times. The maximum measured flight time is 3 minutes. The sum of the three longest flights is taken for the final score. Maximum single flight time is 180 seconds. Working time is 10 minutes.

5.K.11.7. Task M (Five longest flights- two minutes max time per flight)

Each competitor has an unlimited number of flights. Only the best five flights will be added up. Maximum single flight time is 120 seconds. Working time is 10 minutes.

5.K.11.8. Task P (A one, two, three and four minute flight, any order)

During the working time, the competitor may accomplish as many flights as he likes. He has to achieve four different max flight times of 60, 120, 180, 240 seconds in any order. This basically means that the four longest flights flown in the working time are assigned to the four max times, so that the longest flight is assigned to 240 seconds, the 2nd longest flight to 180 seconds, the 3rd longest flight to 120 seconds and the 4th longest flight to 60 seconds. Flight seconds longer than the assigned max time are not counted. Working time is 10 minutes.

Example:	Flight time	Scored time
1 st flight	63 s	60 s
2 nd flight	239 s	239 s
3 rd flight	182 s	180 s
4 th flight	90 s	90 s

Total score of this task would be $60 + 239 + 180 + 90 = 569$ s