F2C TEAM RACE JUDGES GUIDE –VERSION 5 AMENDED 2001

It is the intent of this Judges Guide to aid both the team race panel of judges and the competitors in realising a fair and enjoyable competition. The guide is an indication of the current consensus of the F2C rules as written in the Sporting Code. Problems with the rules or the Guide together with suggestions for improvements are welcomed by the Control Line subcommittee, and will be considered at the CIAM Plenary meeting in March.

1 TEAM RACE PANEL OF JUDGES.

The panel of judges is composed of three members, each of whom should have had recent experience in international competition or judging at that standard. Judges should be of differing nationalities for World and Continental Championships. Only one member needs to be of foreign nationality for Open International events, in an effort to reduce expenses for the host. All three judges must have a good understanding of a common language. It is recommended that the common language should be the same as the language used to issue warnings, as this will reduce delays and possible errors.

1.1 It is the duty of the Team race panel of judges to assure a fair competition between the teams and to disallow unfair actions which would result in placing one team at an advantage or another team at a disadvantage.

1.2 The judges responsibilities regarding issue of warnings, eliminations, re-flights only start with the GO signal; however to help in the smooth running of the contest they should assist the Circle Marshall by checking all other aspects of the contest are in accordance with the rulebook. Examples of this are: -

a) All mechanics wearing helmets
b) The correct 90 seconds' warm-up and 30-second countdown are allowed.
c) Competitors using the circle for unauthorised practice.

Transgressions should be brought to the attention of the Circle Marshall for him to rectify.

1.3 Judges should allocate the specific tasks of warnings operation, microphone use, note taking prior to commencement of the contest. They should also practice working together either by observing the official practice flights or preferably by viewing videos from recent previous championships. It is recommended that a video is situated in the judges tower, this should not be used by the judges before decisions are made nor will it be made available to teams before the end of the round but will be useful for:

- Enabling the panel of judges to review a decision after the end of a particular race where they feel that complaints regarding that decision warrant it.
- Later discussions between the panel of judges to aid better co ordination,
- Viewing by the FAI jury in the event of a protest,
- Viewing by teams with panel of judges for a better all-round understanding
- And finally to be available for the panel of judges to train on prior to the next championships.

1.4 The panel of judges is recommended to adopt the following procedure during races:

a) Before the start each judge selects one team he will watch at pitstops (preferably from a different nationality to that judge). His specific responsibilities are to check for: Starting before GO, landing model outside circle, pilot foot out, handle significantly off ground, etc. His decision on violations must be accepted by the other judges without discussion, and the appropriate penalties given.
b) For the remainder of the race all three judges should observe all three competitors. It is recommended that the judges adopt a running commentary of the race, as this will allow them to focus in on any infringements quickly.
c) Warnings/elimination should be given when verbal agreement of two judges is obtained and no verbal disagreement is heard from the third judge.
d) The panel of judges should give clear decisions immediately regarding teams that have been obstructed; it should not put the responsibility for fair play on the FAI jury who probably will not have observed the incident.

1.5 It is a central part of the rules that protests can be made by teams who feel they have not received a fair result. The panel of judges should encourage teams to use this facility.

1.6 It is equally important for the judges to observe model positions in flight in case collisions occur.

1.7 Warnings should be communicated to the teams quickly. However all warnings are effective at the lap or race time when the infringement occurs, and not when verbally communicated to the team. Pilots need to recognise that as soon as a warning is given the judges will expect the pilot to respond. Failure to correct his flying style will risk another penalty being given as a repeat of that same offence. A good example of this is where a pilot receives a warning for failing to overtake within 3 laps, but continues to attempt to complete the overtaking manoeuvre, this can result in a 2nd warning being given.

1.8 Warnings should be given using short standard phrases wherever possible, the more common ones are shown below thus "-------" under section 2. Verbal communication from the judges should be kept to a minimum to prevent pilot distraction. Teams should be called by their flying colour and not by name.

2 PHRASES USED BY THE JUDGES.

2.1 **"WHIPPING"** is the application of physical force to increase the speed of the model. This occurs when the model is behind the line perpendicular to the pilot's body (4.3.7.f). see also figs. 1 and 2 at the end of the guide. This is a function of the position of the pilot's handle (H) relative to the centre of the circle (or centre of rotation CR.) and the model (M). The CR. can be determined, as illustrated in fig. 2, by observing the rotation of the pilot's handle and taking the midpoint of the maximum left and right movement of the handle.

2.2 **"BLOCKING"** is defined as obstructing another pilot either by body position or arm position preventing the other pilot from taking his correct piloting location, thus slowing down his model. See fig. 1d and fig. 4. Blocking is caused by the position and attitude of the body of the blocking pilot. With the body between lines 3 and 4 blocking can be caused. Rotation of the shoulders can cause more (a) or less (c) blocking action. Warnings should be given as soon as the overtaking pilot is impeded. Delays can lead to more serious and potentially dangerous situations occurring. Pilots being blocked by a slower opponent will frequently attempt to clear the situation by crossing lines. Where the blocking pilot has received a warning for this but remains in the same position then the overtaking pilot should not be penalised for line crossing for a short duration whilst he clears the obstruction. Excessive blocking to directly prevent being overtaken is an elimination offence (4.3.9.m).

2.3 **"PIVOTING"** is defined as keeping the handle in the centre of the circle with the pilot's body behind the centre.

2.4 **"TAKING THE CENTRE"** is defined as the pilot physically keeping his body in the centre and forcing the other pilots to walk around him. This can also occur when the pilot does not return to walking forward after the completion of his overtaking manoeuvre.

2.5 **"LINE SHORTENING"** occurs when either

a) The centre of rotation is in front of the pilot's handle or
b) The handle is pulled back from it's correct position in front of the body.

2.6 **"ILLEGAL HANDLE POSITION"** occurs when the pilot does not fly in accordance with rule 4∃3∃7∃f. This is frequently a precursor to a blocking situation.

2.7 **"PILOT INTERFERENCE"** is defined as: -

- Holding
- Or pulling another pilot such that his normal activities are impeded,
- Or preventing another pilot from moving around correctly by occupying the "free space" by the raising of his arm/elbow.

Warnings should not be given when a pilot only touches another pilot to help his orientation.

2.8 **"PILOTS GO TO THE CENTRE"** due to the risk of the pilots rotational centre moving towards the edge of the 3.0m circle potentially causing problems of lack of space for landing/taking off pilots, this advice may be given. Warnings will not be given directly to pilots failing to respond to this advice. However, penalties will be given for other infringements that may result from pilots failing to respond to the advice.

2.9 **"STOP RACING – SAFETY"** when this command is given by the judges it must be immediately responded to by all the teams and the race is declared null and void (after the application of any appropriate penalties). This command will only be given when it is the view of the F2C judges that there is an immediate significant safety risk.

2.10 **"SERIOUS BREACH – DISQUALIFIED**" will be used by the judges where a team is guilty of multiple simultaneous rule infringements that need immediate action to prevent a more serious flying situation developing. See section 3.3 below for further clarification.

3 COMPETITORS' ACTIVITIES DURING A RACE.

3.1 Proper pilot activity is to attempt to walk a circle at the centre of the 3m centre circle so as to keep the controlling handle moving forward in the same direction as the model, and that circle should be as small as possible.

3.2 The pilot should keep his controlling hand on the centreline of his body with his hand in close proximity to his chest (approx. 10cms). The handle position is restricted to any place between the middle of his chest and top of forehead (rule 4.3.7.f). He is allowed to move his handle away from the body (forward), but still on the centreline in order to better control the model during overtaking for a maximum of 3 laps. Whenever needed the pilot's head may be removed from the centreline for better vision of his model. During takeoff and landing rule 4.3.7.f does not apply (up to 2 laps) however this relaxation does not permit a pilot to whip.

3.3 Rule 4.3.9.h states that teams shall be warned for any flagrant breach of the rules. Actions by either team member leading to a dangerous situation during a race shall be considered a flagrant breach. The following specific examples are given:

a) Pilot flies too high immediately on takeoff.
b) Pilot stands erect or raises hand above head immediately after takeoff and before fully joining other pilots in the centre.
c) Pilot does not immediately join other pilots in the centre.
d) Pilot does not lower his head and bend down during landing approach.
e) Pilot does not promptly bring his model below 2 m after engine has cut.
f) Pilot, when running model on ground for more than 1 segment during landing, does not attempt to avoid (hop over) the lines of other models that are refuelling and restarting.
g) Pilot flies the model at an effectively dangerous radius when passing over another mechanic, i.e. his handle should remain inside the 3 m centre circle until the last segment.
h) Mechanic releases his model with physical effort. (see takeoff FAI general rules)
i) Mechanic has the model or its lines significantly off the ground during repair, adjustment, change of segment, catch, refuelling or restarting.
j) Mechanic releases the model without properly checking that no other model is overflying his pit position (especially landing) causing it to bypass its mechanic in order to avoid a collision – re-flight for other team. Note if a collision occurs the team releasing its model is eliminated.

It is important to remember that warnings are given in these situations when the action(s) actually causes danger to other competitors or their models. Generally this means that when a competitor is flying solo and behaves as described above, he will not be warned, as danger to other competitors can only occur when they are racing. Judges cannot, however, wait until an incident/collision occurs before giving warnings – this would be patently unfair to the competitors who have had their flight obstructed and possibly model damaged. The responsibility of the judges to give warnings in these situations must be viewed as a

controlling mechanism to maintain a satisfactory standard so that a dangerous situation does not arise.

Rule 4.3.9 states "In the event of any serious breach of the rules, the F2C panel of judges may eliminate the team from the race" this should be restricted to: -

- Unsafe actions
- Unsporting actions
- Where multiple infringements are taking place simultaneously and the judges do not have sufficient time to award each warning separately. In these cases it is important that the individual offences are communicated to the team at the end of the race.
- In addition to those specifically listed under the elimination's part of rule 4.3.9.

3.4 When a competitor has been eliminated he should land his model immediately (within 10 laps). If he does not attempt to land and continues to prevent other competitors continuing without interference the Team race panel of judges will inform the FAI jury with a view to his disqualification from the whole contest. Teams that are eliminated in a race have the right of protest to the FAI jury. If the protest is upheld they will be granted a re-flight. Their original race time will not be counted, therefore, there is no advantage to be gained by flying on after elimination.

3.5 Rule 4.3.7.m states that during the start and refuelling pitstops the pilot must keep his handle and lines as close to the ground as defined by the F2C judges. Judges should normally interpret this as meaning below knee height with the pilot in a fully crouched position this will ensure that:-

a) The lines are sufficiently above the surface to prevent them catching on any obstructions at ground level.
b) The lines are sufficiently low enough to prevent them catching another model making a normal landing to safely overfly them.

However, teams must remember their responsibility not to prevent other competitors from flying, landing and pitting normally.
A normal landing is generally defined as having sufficient airspeed to clear the preceding pit segments by 0.5 metres in height and with no part of the model passing vertically above the pitting area as this would prevent the mechanic from continuing with his normal pitting activity. See fig. 5. There are legitimate occasions when the landing/taking off model may not be able to maintain this 0.5 metre separation, therefore, it would be a prudent course of action for the static pilot to place his handle and lines in direct contact with the ground on these occasions to prevent an obstruction taking place.

3.6 Rule 4.3.7.o states that the race is not complete until either 10 minutes have elapsed or *all* competitors have completed their race. *Therefore it is possible for teams to be penalised after they have completed their individual race provided that other competitors have not also finished.* The appropriate penalty, either warnings or disqualification as defined in section 4.3.9 must be applied by the jury. If this forms a 3rd warnable offence for a team then they will be automatically disqualified.
Note: - where the judges consider that the failure to control a model, after finishing a race, allowing it to damage another teams equipment was a deliberate act then the judges could recommend to the FAI Jury that the competitor be disqualified from the entire contest for gross unsporting behaviour.

4 STANDARDS OF JUDGING.

4.1 A contest consists of 3 distinct sections: - heats, semi-finals, final.
Each section poses its own unique problems for the judges and competitors.

The first couple of heats will have a significant effect upon the standard of the rest of the contest. It is important that both the competitors and judges are aware of this. The judges have to maintain an even standard throughout all the rounds of heats. It will be aided in this if the competitors in the early heats recognise this fact! Judges' decisions are made in response to

actions taking place in the flying circle. It is very important that the panel of judges has a unified understanding between themselves before the first heat.

Semi-finals are between the top placed contestants with very little difference in airspeed and ability between them. The judges should aim to keep a similar standard to the heats, however, this may not always be possible (nor is it essential) as the emphasis is likely to be different with teams having less speed differential, overtaking is more difficult, tension is higher, blocking situations are more frequent. Again the prime responsibility of the panel of judges is to maintain an even standard across all the semi-final flights.

The final is a unique race between the three best teams at the contest. It is double the distance but teams are still only allowed two warnings before elimination! It cannot be judged in exactly the same manner as the heats. The judges must issue warnings where safety is at risk, teams are gaining an unfair advantage or are obstructing other teams. But it should be more lenient on purely technical infringements that will have no direct affect on the result of the final. Where teams have already received two warnings and are equally guilty of a third warnable offence then the judges are recommended to allow the race to continue and be decided by the stopwatch. It is preferable that the results are determined by the competitors and not by a dictatorial panel of judges.

4.2 All competitors should recognise that variations on warnings will occur during the course of the contest and that the judges will miss/not observe some incidents. The panel of judges operates from a fixed location and must take this in to account, it should not give warnings for technical infringements where by virtue of position it cannot treat all teams equally except where there is a significant safety risk or gross misconduct.

4.3 The rules state that models cannot fly for more than 2 laps without the engine running. When this occurs close to the end of a race it is important that the panel of judges is given a clear signal from the timekeepers at the 98-lap stage in all races where the judges cannot directly observe the lap counting device.

5 GENERAL POINTS.

5.1 The draws for flying order should be made by the F2C event director in the presence of the judges as early as possible so that competitors are given the maximum time to prepare. The 2nd∃ and 3rd round of heats should be drawn immediately after completion of the preceding round. For the semi-finals both rounds are drawn at the same time using the following matrix.

5.2 Semi-final draws. If 3 competitors of one nation have qualified they are placed diagonally across the matrix (A); other multiple nations are placed in the matrix randomly across the % axis (B)

A B F	The 1st round is selected horizontally
B A D	The 2nd round is selected vertically.
C E A	In each case a random draw is made to determine segment choice.

5.3 All eliminating races with only 2 teams (for example if a team withdraws) will be put at the end of round in order to allow a 3rd team which is granted a re-flight to enter the race. If necessary, a new draw for starting positions will be made under the responsibility of the F2C judges.

5.4 In the case of re-runs there will be a new draw for starting positions (unless it is a complete re-flight of the same 3 teams).

5.5 Teams are not permitted to change their selected pitting segment after the start of the warm up period.

5.6 Rule 4.3.6.c states that the judges will call for volunteer teams to fill up (to make it a 3 up race) an eliminating race whenever there is a single contestant remaining for a re-flight. Competitors having an obvious interest in the semi-final stage or team classification should

not be accepted as volunteers wherever possible. At a World or Continental Championships the volunteering teams must be of different nationalities, also from the single contestant.

5.7 Rule 4.3.10.e relating to the position of standby teams not being allowed to claim an attempt is clarified as follows: -
The standby team has no right to claim an attempt under rule 4.3.8.a and 4.3.8.c.
Where the standby team is not responsible for the termination of a race they will remain eligible for any official re-flight of that race.

5.8 The F2C judges should take an interest in the processing of the competitors' models as part of their overall responsibility to ensure a fair and even standard for all competitors.

5.9 Rule 4.3.4.n states that *"the tank ------- must be accessible and capable of being measured accurately"*. As these units become ever more complex and unique the Judges will support the organisers in carrying out this activity in the following manner: -

- It is the competitor's responsibility to supply any specialist equipment other than normal flexible fuel tubing that is required linking the measuring burette with the competitors system.
- Organisers are only responsible for making 2 correctly executed attempts to measure the capacity of the system at the officially designated processing time.
- If the system cannot be verified within 2 attempts then the competitor will be allowed to return after the end of the official processing time to complete the verification of his system, with an allowance of 2 more attempts.

5.10 The alteration to rule 4.3.9.k approved at the 2001 CIAM plenary meeting states that *"A team shall be eliminated from a race if the mechanic---------- or steps into the flight circle with either foot or reaches further than 0.5 metres into the flight circle"*. This change was introduced to ensure that mechanics remain in a safe location when retrieving their model. Retrieving a model in this context should generally be taken as recovering the model from an area outside a pitting segment. The penalty of elimination should not be applied to mechanics who may have one foot slightly inside the flight circle or reach in to catch the model slightly over the 0.5metre stated limit. The reasoning behind this interpretation is that during a normal pitting activity mechanics are balanced on both feet and facing in the direction of other approaching models, they will, therefore, be easily able to move clear of any other approaching model. (See also 3.3.g above, which makes it the landing/taking off pilot's responsibility not to fly his model at an effectively dangerous radius.)
When a mechanic is retrieving his model from any area outside a normal pitstop, he is likely to be under pressure to do it quickly and may well have his back towards other models, it is in these circumstances that he is at risk and the elimination penalty should be applied.
Note also that the penalty should be applied where a mechanic carries out a non-normal pitstop such that he either excessively steps inside the flight circle or reaches so far inside that the judges determine that he has caused a significant risk to safety.

AMENDMENTS EFFECTIVE FROM JAN. 1993

1993.1 The number of semi finalists will vary dependent on the number of entries:-
up to 9 entries----------0 semi finalists
10 to 19 entries----------6 semi finalists
20 to 39 entries ----------9 semi finalists
over 40 entries ----------12 semi finalists
Where there are no semi finals all teams are allowed to participate in 3 eliminating races. Where there are semi finals the races shall always take place between 3 teams. Where this cannot be achieved because of withdrawal and/or reflights then the empty places in the race(s) will be made up by bringing forward up to the next best placed 2 competitors as appropriate. These teams cannot claim an attempt in the event of them failing to record a time, but any recorded flight shall be eligible to qualify for the final.

Figure 1.

Figure 1a
Normal handle position. Pilot slightly holding back his own handle, but not blocking his opponents. Radius 'r' must be as small as possible.

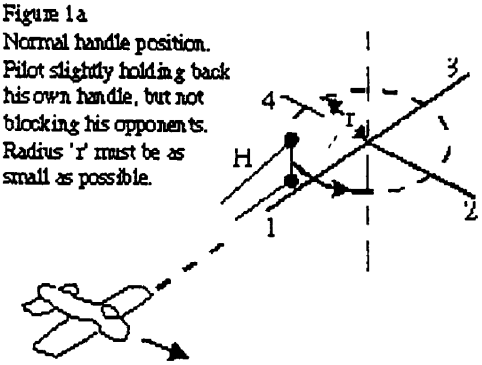


Figure 1b
Classical whipping position. If pilot walks forward, no blocking occurs.

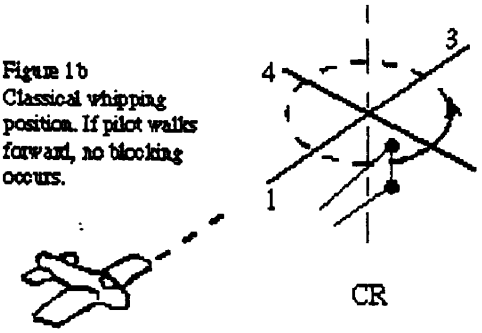


Figure 1c
Whipping and shortening of flying radius. Severe blocking his opponents may occur. This position is very often combined with walking backwards 'eg walking backwards after overtaking).

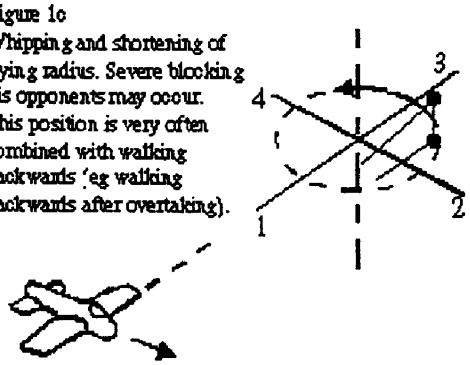


Figure 1d
Walking forward but in the wrong segment results in blocking of the opponents as well as shortening of the flying radius.

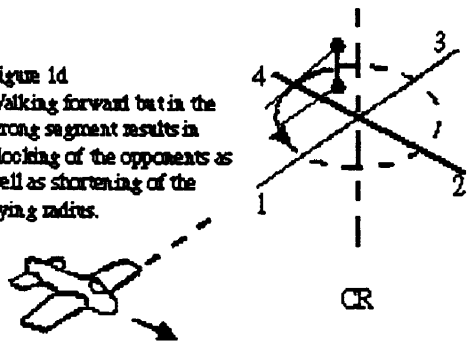
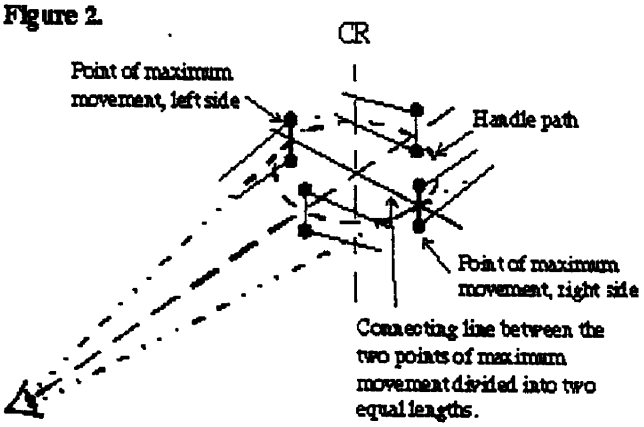


Figure 2.



With a little practice the CR is very easy to find in this way and – if one can – one can understand a lot more about what happens during a race.

Figure 3.

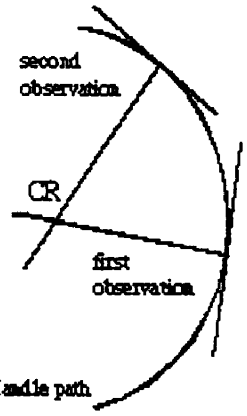


Figure 4.

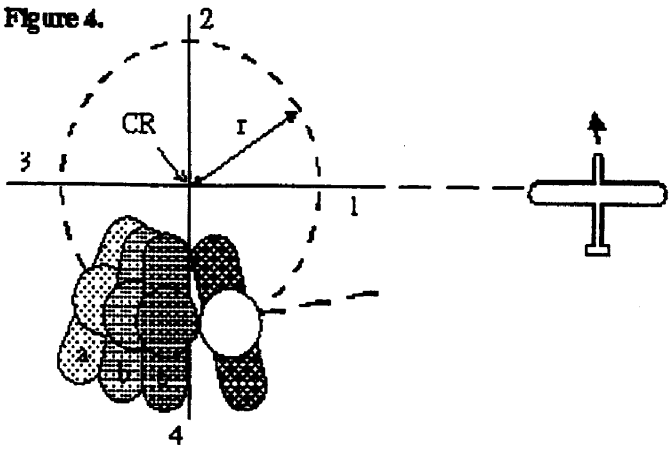
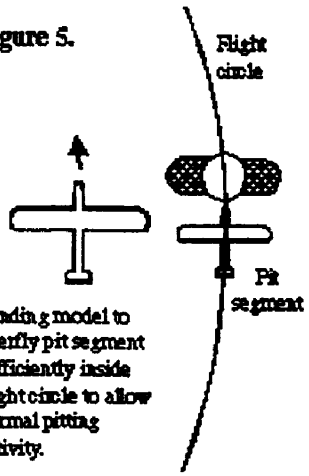


Figure 5.



Landing model to overfly pit segment sufficiently inside flight circle to allow normal pitting activity.